The Data-Driven School Transformation Partnership: A Project of the Bay State Reading Institute

Summative Implementation Evaluation of the Bay State Reading Institute's Data-Driven School Transformation Partnership

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Introduction

This report serves as the summative implementation evaluation of The Data-Driven School Transformation Partnership: A project of the Bay State Reading Institute and Massachusetts Elementary Schools, funded though a 2010 Investing in Innovation (i3) development grant. The sample of participating Bay State Reading Institute (BSRI) Initiative schools that comprise the analysis include 25 i3 schools[1] (e.g., schools formally included in the i3 implementation and impact evaluation) and 21 additional BSRI schools (non-i3 schools) that were implementing the BSRI Initiative in one or more years between 2011 and 2015 but were not formally included in the i3 evaluation.

Data was gathered from the sample of 46 schools through the dual administration of a **teacher survey** and a **full day site visit**, conducted in alternating years for non-i3 schools and annually (in 2012, 2013, 2014) for i3 schools. As a result, the evaluation report is based on survey and site visit data for 25 schools in 2012, 27 schools in 2013, and 33 schools in 2014[2]. Due to the nature of our data collection strategy, longitudinal findings are drawn from a cohort of 19 schools with data from 2012 and 2014 and summative findings are drawn from the most recently collected data (e.g., from 2013 or from 2014) for all 46 schools.

The BSRI Logic Model that serves as the basis for the evaluation analysis and the organization of this report is provided in Appendix A. Additional information pertaining to the implementation index (a required aspect of the i3 implementation evaluation), the site visit protocol, the 2014 teacher survey, and a detailed description of core components of the BSRI Initiative are provided in a stand-alone supplement to this report, available upon request.

The report is organized as follows:

Part 1. A brief synopsis of the formal i3 implementation evaluation findings, including the final implementation fidelity scores and findings aggregated to the full sample.

Part 2. Implementation Findings – BSRI Outputs: Descriptive findings regarding the extent to which BSRI provided principal and literacy coach coaching to schools and the extent to which schools implemented core components, including a BSRI-recommended core curriculum, a BSRI-recommended writing approach, a 90 to 120-minute reading block, additional time for writing, and use of multiple assessments and literacy interventions.

Part 3. Implementation Findings – Short Term Outcomes: Descriptive findings regarding the extent to which schools put into place key structures (e.g., meetings, walkthroughs, goals, systems for progress monitoring and grouping students) that drive improvements in literacy instruction and student achievement.

Part 4. Implementation Findings – Medium Outcomes: Descriptive findings regarding principal, reading coach, and teacher behaviors related to the use of BSRI components and literacy strategies.

Pat 5. A summary of key themes and longitudinal trends that may inform subsequent evaluation work, including the impact analysis.

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[1] The i3 implementation evaluation formally includes 28 schools; however, 3 schools dropped out between 2011 and 2012 and were not included in the full evaluation report due to lack of data.

[2] The data collection was organized in this way to maximize the reach of the evaluation study within limited funding and a desire to minimize the impact on schools.

Part 1. BSRI i3 Implementation Evaluation Findings

Table 1 displays the i3 implementation findings for schools in years 1, 2, 3, and 4 of program implementation. For each year, fidelity of implementation was aggregated to the sample size (e.g., 28 schools with year 1 data, 18 schools with year 2 data) for four key components: Coaching of Principal, Material Adoption, Professional Development, and Coaching of School-based Literacy Coach. To develop implementation fidelity scores for each component, evaluators and BSRI leadership collaborated to develop an Implementation Index, comprised of multiple indicators for each component keyed to data collection instruments. Composite measures of High, Moderate, Low, and No Implementation were identified and used to assess school-level implementation (see Appendix B). Finally, BSRI program staff identified an implementation threshold for each key program component that represented "implementation at the sample level" to assess the overall implementation of core components, across schools. A detailed Implementation Index and weighting of indicators within each construct and logic model component was developed and is available upon request.

Final Implementation Results

Table 1. Implementation Fidelity Results for i3 schools

Key Component	Component Threshold for Implementation	Year 1 (28 schools)	Year 2 (18 schools)	Year 3 (10 schools)	Year 4 (6 schools)
Coaching of Principal	75% of schools with high implementation	89.3%	94.4%	80.0%	67.7%
Material Adoption	75% of schools with high implementation	53.6%	61.1%	87.5%	83.3%
Professional Development	60 % of schools with high or moderate implementation	89.3%	100%	100%	100%
Coaching of School-based Literacy Coach	75% of schools with high implementation	85.7%	77.8%	60.0%	83.3%

Coaching of Principal. Among the six schools with four years of implementation data, two schools[3] did not receive the allocated number of principal coaching visits in 2014.

Material Adoption. As anticipated, the percent of schools implementing core program components (e.g., a 90 to 120 minute reading block, use of assessments and interventions) started relatively low (at 53.6 percent) and increased over time as schools continued to implement BSRI.

Professional Development. The threshold for providing professional development for new staff at the onset of program implementation and new teachers in years 2, 3, and 4 was met.

Coaching of School-based Literacy Coach. Four[4] of the 10 schools in year 3 did not receive the allocated number of days from a BSRI literacy coach.

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[3] Whelan Memorial ES and McKay Arts Academy

[4] John C. Crosby ES, Abraham Lincoln ES, Morningside Community School, and Beebe ES

Part 2: Implementation of BSRI Outputs

BSRI schools receive intensive support from a **BSRI Principal Coach** and a **BSRI Literacy Coach** throughout their involvement in the initiative and schools are expected to **implement a specific set of core components (e.g., a BSRI-recommended core curriculum and a dedicated reading block)**, including the use of **multiple assessments** and **interventions** that meet the needs of all students. In addition to required **summer professional development**, the principal and literacy coach are the primary conduits of professional development, ongoing support, and interaction with school leaders and teachers and the core components represent the key structural features of BSRI's theory of action.

Questions regarding the Implementation of BSRI Outputs

- How often do BSRI Principal and Literacy Coaches visit and interact with schools?
  - What is the content of BSRI coaching support?
  - What is the perceived impact of BSRI coaching support, from the perspective of principals and teachers?
- To what extent do schools implement BSRI core components?
- To what extent do schools actively use designated assessments and use assessments to group students and provide targeted interventions to students?

Descriptive Finding #1: Frequency of Principal and Literacy Coach Visits

BSRI provides consistent coaching of the school principal and school-based literacy coach that matches the description of coaching provided in the BSRI logic model. On average, BSRI Principal Coaches visit schools approximately 10 times each year and the BSRI Literacy Coach visits schools approximately 16 times per year. There is planned variance in the number of coaching visits provided to each school, as BSRI leadership annually determines the anticipated allocation of principal and literacy coach visits for each school, based on need and existing district capacity to provide literacy support (See Table 2, including the standard deviation for each measure).

Site visit data provides evidence that as principals and school-based literacy coaches gain a strong working knowledge of BSRI practices, BSRI leadership intentionally decreases the number of BSRI Principal Coach visits as part of the gradual release of responsibility to principals. Of the 10 schools in the program for 3 or more years, the number of BSRI principal visits decreased from 11.2 per year to 9.4 per year.

Table 2. Number and percent of BSRI Principal and Literacy Coach visits	2012 (12 schools)	2013 (27 schools)	2014 (41 schools)	Combined 2013 -2014
Average # of BSRI Principal Coach Visits/School	10.4	11.2	9.0	10.0
Standard Deviation	*3.1*	*4.4*	*3.5*	*3.8*
Average # of BSRI Literacy Coach Visits/School	20.7	14.7	14.7	16.2
Standard Deviation	*2.4*	*7.4*	*7.7*	*7.3*
For Schools with Consistent Data between 2012 and 2014	(10 schools)		(10 schools)	
Average # of BSRI Principal Coach Visits/School	11.2		9.4	
Average # of BSRI Literacy Coach Visits/School	20.5		19.7	

Descriptive Finding #2: Content of Coaching Support

The content of the support provided by BSRI Principal and Literacy Coaches is consistent across schools and across years and closely matches the stated implementation inputs provided in BSRI's logic model. There is clear and consistent evidence that BSRI is providing principal and literacy coaching as intended.

Content of BSRI Principal Coaching

During a typical visit (as reported in nearly every school) the BSRI Principal Coach meets with the principal (and often with the BSRI Literacy Coach and school-based literacy coach) to identify key instructional issues relevant to the literacy instruction in the school and that serve as the focus of the walkthroughs scheduled that day. The Principal Coach participates in classroom walkthroughs with the principal and debriefs with the principal regarding observations and how instructional feedback is provided to teachers. Additionally, the Principal Coach typically leads data team meetings (although some schools noted that the principal coach was gradually releasing this responsibility to the principal) and supports the principal in thinking through issues or obstacles related to literacy instruction. Approximately half of reporting BSRI schools explicitly stated that they see the BSRI Principal Coach (and BSRI in general) as a source of additional materials, resources, and information (e.g., best practices from other schools; supporting visits to other schools). And many principals noted that the BSRI Principal Coach was always available via email to answer questions and provide timely support and advice.

Content of BSRI Literacy Coaching

The BSRI Literacy Coach works closely with the BSRI Principal Coach and participates in many of the same activities, such as classroom walkthroughs, data team meetings, and debriefing sessions with the principal and school-based literacy coach. Additionally, BSRI Literacy Coaches consistently (across all schools and in each year) model instructional strategies and lessons and provide professional development to teachers through whole-school activity or in grade-level team meetings. Over 50 percent of schools reported that the BSRI Literacy Coach supported the school-based reading coach in using and interpreting assessment data, including the placement of students in groups and targeting interventions.

In reviewing the detailed notes from site visits, the evaluation team noted one potential distinction between the work of the Principal Coach and the BSRI Literacy Coach. While it is clear that the BSRI Principal Coach is actively "coaching" and supporting the principal, the BSRI Literacy Coach tends to work more directly with individual teachers (e.g., through modeling lessons or in grade-level teams) rather than formally "coaching" the school-based literacy coach. The site visit data suggests that while the work of the Principal Coach is remarkably consistent across schools, there may be more variability (intentional or not) in BSRI Literacy Coach actions, ranging from supporting individual teachers and to building the capacity of the school-based reading coach to serve as an instructional leader in the school.

Descriptive Finding #3: Perceived Impact and Effectiveness of Coaching Support – BSRI coaching is positive, useful, and effective.

Based on teacher survey responses and site visit interviews and focus groups, school principals, coaches, and teachers report that BSRI coaching and support is positive, useful, and effective. Multiple principals noted that they value the BSRI Principal Coach as a trusted partner who has enhanced their professional growth and the work in the school. The perceived value of the BSRI Literacy Coach was voiced in slightly different terms, with a few (less than 10) schools (and in particular, teachers in these schools) noting that they needed more support from the BSRI Literacy Coach. In instances when BSRI support was not perceived as effective, or when BSRI

management recognized that a different coaching style was needed, BSRI assigned a new principal or literacy coach to the school[5].

Descriptive Finding #4: Implementation of Core Components – BSRI schools are successfully implementing the recommended core curriculum and a dedicated reading block but are less successful in implementing a BSRI-recommended writing approach or allocating dedicated time to writing instruction.

Material adoption is comprised of four core components that serve as the foundation of BSRI's approach to improving literacy instruction and student achievement:

1. Implementation of a BSRI-recommended core curriculum;
2. Implementation of a 90 to 120 minute dedicated reading block;
3. The use of a BSRI-recommended writing pedagogy; and
4. Providing additional time dedicated to writing instruction.

Chart 1 displays the overall percent of schools implementing each program component in 2013 or 2014. The data represents the percent of schools <u>fully implementing</u> the program component (as described in BSRI materials and document through site visit observations and interviews) or achieving <u>full or partial implementation</u>.

Chart 1. Material Adoption: Percent of Schools with evidence of Full Implementation or Full or Partial Implementation of Core Components
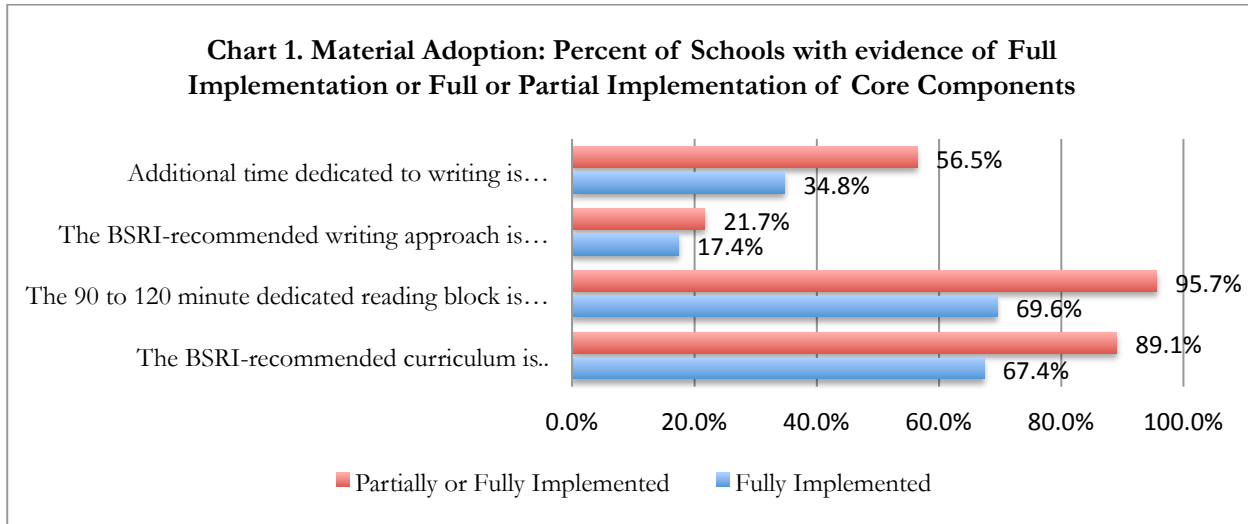
The **BSRI-recommended core curriculum** was implemented fully or partially (e.g., in use in at least 50 percent of classrooms) in 87 percent of all BSRI schools. The percent of schools at full implementation is less than anticipated due the fact that 7 schools went from full implementation of the BSRI-recommended curriculum (Reading Street) to partial implementation in 2014, primarily due to the emergence of the Common Core State Standards.

Nearly all schools (100 percent in 2013 and 97 percent in 2014) had implemented **a 90 to 120 minute reading block** after one or two years as a BSRI school. For instance, 8 of the 9 schools without a 90 to 120 minute reading block in 2012 successfully implemented a reading block by 2014 (the other school dropped out of BSRI in 2013).

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[5] Analysis of site visit data found only 4 instances of schools explicitly stating having an issue with a BSRI coach that required a shift, although the actual number of intentional shifts may be higher.

Implementation of a **BSRI-recommended writing approach** and **additional time for writing** was less evident across schools. Overall, less than 25 percent of BSRI schools used a BSRI-recommended writing approach in 2012, 2013, or 2014. Through 2014 only 10 of 46 schools were using a BSRI-recommended approach to writing instruction. Analyzing the data across years suggests that many schools found it difficult to implement and maintain a specific writing approach. Of the 19 schools for which we have data from 2012 and 2014, 5 schools stopped or shifted their writing approach (e.g., they moved from using a BSRI-recommended writing approach to little or no implementation of a writing approach in 2014), while 4 schools went from low implementation to successfully implementing a BSRI-recommended writing approach.

Overall, only 5 schools received a rating of Full Implementation for all of the four core components in any given year[6].

Descriptive Finding #5: Use of Interventions – BSRI schools are using a wide variety of interventions and schools tend to use an increasing number of interventions over time.

BSRI schools are using a wide variety of literacy interventions to support all students. An analysis of the distribution and use of literacy interventions is provided to inform future analysis and program development. Overall, BSRI schools met the threshold for using interventions (and assessments as well, see Descriptive Finding #7); however, there is wide variance in the actual types of interventions used across schools, suggesting that schools may have very different approaches to how interventions are used.

The use of literacy interventions among BSRI schools increased over time, both in terms of **frequency of use** (e.g., how many teachers reported using a specific intervention) and the **actual number of interventions available** and **used** by students. The number of interventions used by more than 25 percent of BSRI schools increased from 7 interventions in 2012 to 12 intervention in 2014. Similarly, the percent of teachers within individual schools using specific interventions tended to increase over time. Chart 2 provides a snapshot of the most frequently used interventions across BSRI schools, from 2012 to 2014. The percent of schools **actively using** reciprocal teaching (meaning that at least 50% of the teachers in these schools were using the practice) increased from 80 percent to 97 percent in 2014. Similarly. The percent of schools **actively using** Lexia increased from 61% to 79% from 2012 to 2014.

Chart 2. Percent of schools in which the listed intervention is "actively" used by over 50 percent of teachers

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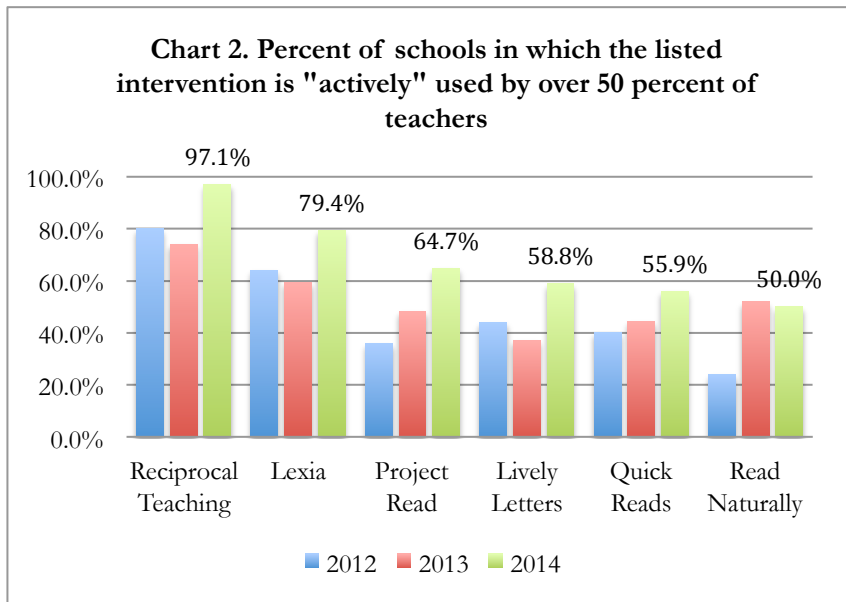
[6] Ayers and Reingold in 2012, Linden in 2013, and Hannah and Salemwood in 2014

Descriptive Finding #6: Use of Interventions – Schools are using multiple interventions to support students, although the number of interventions used varies considerably across schools.

Schools exhibited a wide range with respect to the **types of interventions** used and **how many interventions were used and available to students in the school**. To better understand how schools may be using interventions, we used teacher survey items on the use of interventions to organize data into two "levels of accessibility" for interventions. We classified an intervention as "Actively Used" if the intervention was identified as being used by 50 percent or more of the teachers in the schools. We classified an intervention as being "Accessible" to students if the intervention was being used by at least 20 percent of the teachers in the school (but less than 50 percent). On average, schools were **actively using** approximately 6 interventions (mean=5.8) and had **access** to almost 12 interventions (mean=11.7). Table 3 shows the range of schools using interventions at varying levels, which we tentatively label from High to Low, with respect to overall use and access to interventions.

Table 3. Categorization of Schools by the Number of Interventions Actively Used and Available

Intervention Level of Use	Number of Schools	# of Interventions in Active Use	# of Interventions Available	
High	5	11.9	14.6	
Mid High	22	6.2	13.6	It is unclear what the optimum number of interventions used by a school might be, to best serve its students.
Mid Low	6	4.4	10.7	
Low	13	3.2	4.9	
	Average	5.8	11.7	
	Standard Deviation	*2.8*	*4.0*	

The data prompts a question for which we do not have a definitive answer. Specifically, what is the optimum number (or distribution) of interventions in a school that provides for differentiation while also focusing intervention supports? For instance, it may be that schools actively using multiple interventions (the five schools identified in the "high" category) are actually more fragmented, or less focused than mid-high or mid-low schools[7].

Descriptive Finding #7: Use of Assessments – Multiple assessments are frequently used to monitor and place students in reading groups; however, multiple assessments are not consistently used by all teachers.

Of the 46 BSRI schools, 36 (78 percent) used assessments (predominately DIBELS and GRADE) to monitor and place all students (inclusive of Special Education and English Language Learners) in groups at least 2 to 3 times a month. The remaining 10 schools reported using assessments to monitor students on a monthly or slightly less than monthly (e.g., every 6 weeks) basis. There was little change in the frequency of assessment use over time (between 2012 and 2014), suggesting that most schools were able to quickly implement this component of the BSRI initiative. While most schools reported using assessments to monitor and place students at least 2 to 3 times a month, the teacher survey data shows that the **actual number of teachers using assessments** (to monitor and place students in reading groups and to target interventions to students) **varies across schools and is lower than BSRI's stated implementation threshold** (75 percent of teachers using the assessment). Table 4 displays the overall percent of teachers using DIBELS and GRADE for the

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[7] The five schools with the highest number of interventions actively used and available are: East Gloucester, Hannah, Beeman, Centerville, and North Beverely.

2014 school year (33 schools).

Table 4. Percent of teachers reporting that they use the assessment to…

	…Monitor the Progress of Students	…Place Students in Appropriate Reading Groups	… Assign Interventions to Students
DIBELS	87.6%	74.4%	74.1%
GRADE	56.3%	47.6%	40.6%

A close analysis of teachers reported use of assessments highlights significant variance across schools and pinpoints a number of schools that do not appear to be using assessments as intensively as depicted in the BSRI logic model. Consider the following data points:

- On the high end of schools' use of assessments, there are 15 schools in which over 60 percent (and greater) of the teachers actively use DIBELS **and** GRADE to monitor and place students in reading groups. In contrast, there are 10 schools in which less than 50 percent of teachers use DIBELS or GRADE and rely predominately on DIBELS as the primary assessment.
- Eight (8) of the 46 BSRI schools rely predominately or solely on DIBELS to place students in groups and to assign interventions to students. Specifically, these are schools in which less than 30 percent of teachers use GRADE.

Descriptive Finding #8: Relationship between Interventions and Assessments – We found no statistical relationship between schools' Use of Assessments and Use of Interventions.

We analyzed data within and across implementation years to examine whether there might be a connection between how schools frequency and use of assessments (Descriptive Finding #7) and the number of interventions actively used and available to students (Descriptive Finding #6). We found no statistical relationship between the use of assessments and the number of intervention actively used and available to students.

Part 3: Short Term Outcomes – School Structures and Practices

The BSRI theory of action posits that specific practices and structures will be used as a result of the implementation of BSRI outputs. These short term outcomes include the **school's understanding of BSRI as the focus of school-wide efforts to improve literacy instruction**, changes in the **allocation of time and related team meeting structures** (e.g., grade-level team meetings, date team meetings, walkthroughs) designed to improve literacy instruction, and **progress monitoring of students through multiple assessments and targeted interventions**. These structures and practices enable the principal, school-based reading coach, and teachers to provided high quality literacy instruction to all students.

> **Questions regarding the implementation of School Structures and Practices**
> - Do BSRI schools understand BSRI as the focus of improvement efforts and as a guide for literacy instruction?
> - To what extent do BSRI schools utilize a data management systems to monitor students, place students in reading groups, and provide targeted interventions to all students, as needed?
> - To what extent do BSRI schools allocate time to allow for coaching, professional development, data meetings, and walkthroughs?

Descriptive Finding #9: BSRI schools consistently understand BSRI as the focus of efforts to improve literacy instruction and students' academic achievement.

Overall, leaders and teachers in BSRI schools see BSRI as the focus of improvement efforts and leaders consistently describe how various initiatives and organizational changes align with BSRI (See Table 5). Site visit observations show that approximately 15 percent of schools (n=4) do not see BSRI as the focus of improvement efforts. Out of three years of site visits, only two schools[8] stated that BSRI was not the focus of improvement efforts during 2 or more years of site visits.

Table 5. The number of schools that state that BSRI is the focus of improvement efforts

	2012 (25 schools)	2013 (27 schools)	2014 (33 schools)
Principal and over 75% of teachers state that BSRI is the focus of improvement efforts	16 (64.0%)	22 (81.5%)	24 (72.7%)
Principal and 25 to 75 % of teachers state that BSRI is the focus of improvement efforts	5	1	5
Principal and less than 25 % of teachers	1	0	2
The principal does not state that BSRI is the focus	3	4	2

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[8] Garfield and Crocker

Descriptive Finding #10: BSRI schools are consistently using assessments to monitor and place students in reading groups and for interventions.
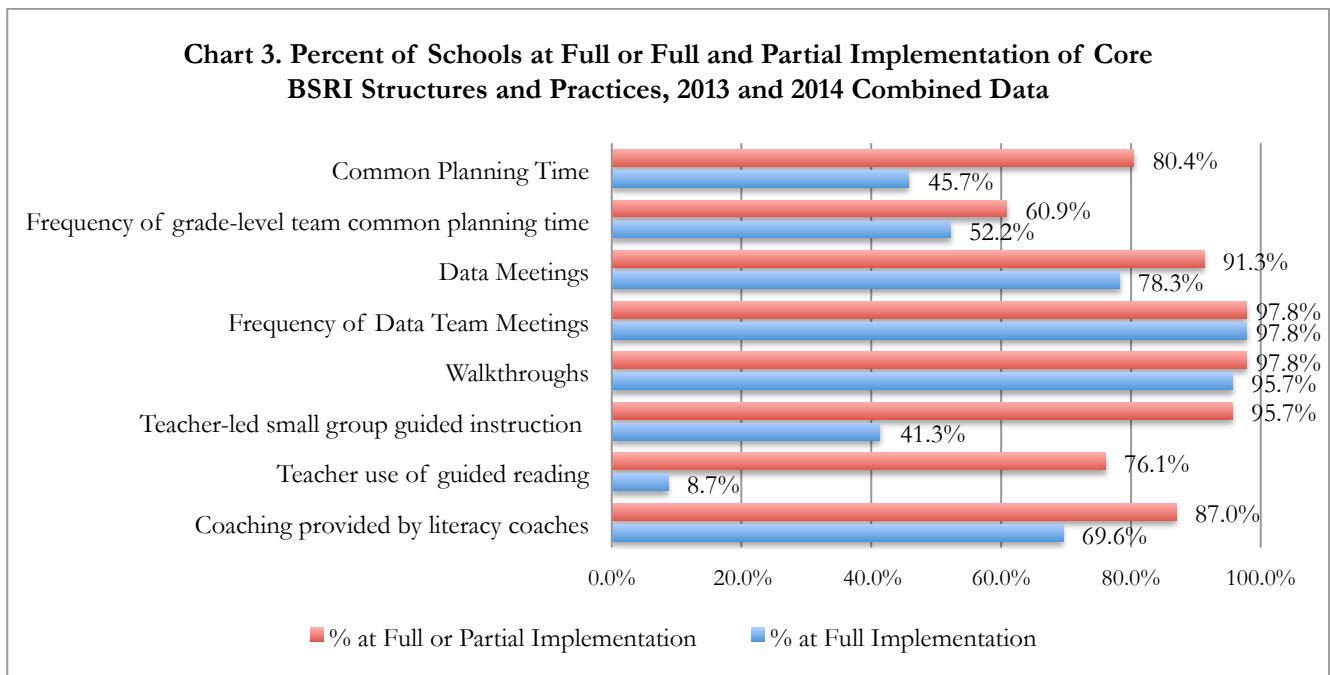
As detailed in Descriptive Finding #7, 78 percent of BSRI schools have assessments in place (predominately DIBELS and GRADE) to monitor and place all students in groups at least 2 to 3 times a month. The remaining 10 schools reported using assessments to monitor students on a monthly or slightly less than monthly (e.g., every 6 weeks) basis. However, data shows that there were 10 schools (in 2013 or 2014) in which less than 50 percent of teachers used DIBELS or GRADE and relied predominately on DIBELS as the primary assessment.

Descriptive Finding #11: Structures and Practices are in place to support data use and improvement of literacy instruction.

The site visit protocol and the teacher survey include items that measure **the extent to which the school allocated time towards certain practices** defined by BSRI as essential to improving literacy instruction and **whether leaders and teachers actively use these structures and practices**. The site visit data provides an external view of whether these structures and practices are being used in each school and across schools. Teacher survey data regarding the use of these practices is a measure of actual teacher use of these structures and practices. The site visit and teacher survey data closely align and the site visit data is presented below as it provides a concise picture of school-level implementation. Chart 3 (below) and Table 6 provide annual and summative findings from the site visit data depicting the percent of schools judged to be "fully implementing" and "fully and partially implementing" each practice.

Key structures and practices that reflect an intentional allocation of time towards practices that support literacy instruction.

- Teacher-led small group guided instruction at a teaching table
- Teacher use of Guided Reading
- Coaching provided by literacy coaches
- Walkthroughs
- Use of Data Meetings
- Frequency of Data Team Meetings
- Use of Common Planning time
- Frequency of grade level common planning time

Chart 3. Percent of Schools at Full or Full and Partial Implementation of Core BSRI Structures and Practices, 2013 and 2014 Combined Data

Practice	% at Full Implementation	% at Full or Partial Implementation
Common Planning Time	45.7%	80.4%
Frequency of grade-level team common planning time	52.2%	60.9%
Data Meetings	78.3%	91.3%
Frequency of Data Team Meetings	97.8%	97.8%
Walkthroughs	95.7%	97.8%
Teacher-led small group guided instruction	41.3%	95.7%
Teacher use of guided reading	8.7%	76.1%
Coaching provided by literacy coaches	69.6%	87.0%

■ % at Full or Partial Implementation   ■ % at Full Implementation

Looking at 2013 and 2014 date, **classroom walkthroughs**, **data team meetings**, and **common planning time** were documented as well-established practices in nearly all BSRI schools (44 of 46 schools reported using Walkthroughs, 42 of 46 schools had partially or fully established regularly scheduled data team meetings, and 43 of 46 had structured grade-level common planning time). Schools reported convening data team meetings in accordance with BSRI expectations (e.g., 3 times a year) while only 60.9 percent of schools convened grade-level common planning time meetings weekly or at least 2 or more times a month. Of particular note is evidence that the full implementation of common planning time among BSRI schools declined in 2014 to 33 percent (11 of 33 schools) from 84 percent in 2012 and 67 percent in 2013.

BSRI schools are using key instructional practices (**teacher-led small group instruction** and **guided reading**) although full implementation of these practices (e.g., evident in all classrooms and with a high degree of fidelity) was observed in less than half of BSRI schools. Specifically, teacher-led small group instruction was reported as fully implemented in 19 of 46 schools (41.3 percent) and teacher use of guided reading was reported as fully implemented in 4 of 46 schools (8.7 percent).

Table 6. BSRI Implementation of structures and practices intended to support literacy instruction.

	2012	2013	2014	Most Recent Year (2013 or 2014)
	n=25	n=27	n=33	n=46
Teacher-led small group guided instruction				
Full Implementation	28.0%	37.0%	45.5%	41.3%
Full or Partial Implementation	96.0%	88.9%	100.0%	95.7%
Teacher use of guided reading				
Full Implementation	16.0%	22.2%	6.1%	8.7%
Full or Partial Implementation	80.0%	70.4%	75.8%	76.1%
Coaching provided by literacy coaches				
Full Implementation	64.0%	63.0%	72.7%	69.6%
Full or Partial Implementation	96.0%	88.9%	87.9%	87.0%
Data Meetings				
Full Implementation	100.0%	96.3%	72.7%	78.3%
Full or Partial Implementation	100.0%	100.0%	87.9%	91.3%
Walkthroughs				
Full Implementation	68.0%	85.2%	97.0%	95.7%
Full or Partial Implementation	80.0%	100.0%	97.0%	97.8%
Common Planning Time				
Full Implementation	84.0%	66.7%	33.3%	45.7%
Full or Partial Implementation	96.0%	92.6%	75.8%	80.4%
Frequency of Data Team Meetings				
Full Implementation	100.0%	92.6%	97.0%	97.8%
Full or Partial Implementation	100.0%	96.3%	97.0%	97.8%
Frequency of common planning time				
Full Implementation	64.0%	63.0%	45.5%	52.2%
Full or Partial Implementation	76.0%	74.1%	54.5%	60.9%

Part 4: Medium Outcomes – Leadership and Teacher Behaviors

Improving literacy instruction is predicated upon leaders (the principal and school-based reading coach) and teachers actively using BSRI structures, practices, and strategies. The principal is expected to demonstrate effective **collaborative use of data and effective instructional leadership**. The school-based reading coach is expected to **manage the assignment of students to reading groups and of interventions to students**, as well as provide **effective instructional leadership**. And teachers are expected to **establish a productive classroom environment and use BSRI instructional strategies**, including using data to inform instruction and interventions. Overall, BSRI strives to help schools cultivate an environment that is conducive to the active sharing of ideas, strategies, and practices among teachers and ensure that teachers receive targeted, teacher-specific support as needed to improve literacy instruction.

> **Questions regarding Leadership and Teacher Behaviors**
> - How are principals supporting teachers and what are the distinguishing features of principal instructional leadership?
> - How are school-based reading coaches supporting teachers and what are the distinguishing features of reading coach instructional leadership?
> - What constitutes "effective" instructional leadership in BSRI schools?
> - To what extent are teachers actively using BSRI instructional practices?
> - To what extent are schools cultivating a culture that is conducive to improvement and the sharing of ideas and best practices?

The analysis of Principal and Reading Coach Leadership is organized around the following **leadership behaviors** (listed below) and a set of **Leadership Attributes** (listed below, with greater detail provided in Appendix C). Our analysis of leadership behaviors includes a description of leadership trends among all BSRI schools followed by a more detailed analysis of differences in leadership behaviors across schools that may inform program improvement as well as subsequent evaluations and research.

Table 7. Principal and School-Based Literacy Coach Measures of Leadership Behaviors and Actions

Leadership Behaviors	Description
Frequency of Principal and School-based Reading Coach **Interactions** with Teachers	How often does the principal visit teachers in classrooms?
Content of Principal and School-based Reading Coach **Interactions** with Teachers	What is the content/focus of principal visits? • Peer Observations, Formal Observations, Informal Observations, Provide Informal Feedback
Principal or School-based Reading Coach **Leadership Attributes**	Teacher perception of leadership in the following areas: • Student Specific Focus • Accountability to instructional expectations • Shared Decision Making • Instructional Expectations and High Standards • Deep understanding of literacy instruction and how students learn
Principal or School-based Reading Coach **participation in common planning time**	Frequency of participation
Principal or School-based Reading Coach **participation in Data Team Meetings**	Frequency and Impact of participation
Impact of one-on-one meetings b/w principal and teachers	Reported impact

Descriptive Finding #12: Principal and Reading Coach Behaviors

Table 8 provides a high-level descriptive summary of principal and reading coach behaviors, based on the 2014 teacher survey data. The descriptive data provides a starting point for understanding current leadership practices in BSRI schools and how different levels of principal and reading coach leadership may impact teacher behaviors and schools' overall ability to improve literacy instruction.

Table 8. Leadership Trends among all BSRI schools

Leadership Behaviors	Principal	Reading Coach
Frequency of Principal and School-based Reading Coach **Interactions** with Teachers	17 percent of teachers report that principal visits classroom once a week or more. 57 percent report that principal visits classroom less than once a week but more than once a month.	14 percent of teachers report that literacy coach visits classroom once a week or more

Content of Principal and School-based Reading Coach **Interactions** with Teachers	Most frequent types of interaction:
	  Formal Observation: 51 percent of the time.
	  Informal Check In: 62 percent of the time.
		Most frequent types of interaction:
		  Informal Check In: 33 percent of the time.
		  Model Instructional Strategies: 30 percent of the time.

Principal or School-based Reading Coach **Leadership Attributes**	Between 80 and 90 percent of teachers "somewhat agree" or "strongly agree" with Leadership Attribute items (Appendix C).	Between 70 and 100 percent of teachers "somewhat agree" or "strongly agree" with Leadership Attribute items.
Principal or School-based Reading Coach **participation in common planning time**	40 percent of teachers state that the principal participates in CPT at least once a month or more. 20 percent of teachers state that the principal never participates.	17 percent of teachers state that the literacy coach participates in CPT at least once a week 54 percent of teachers state that the literacy coach participates in CPT at least once a month. 21 percent of teachers state that the literacy coach never participates in CPT.
Principal or School-based Reading Coach **participation in Data Team Meetings**	70 percent of teachers "somewhat agree" or "strongly agree" that principals lead data team meetings.	No applicable question
Impact of one-on-one meetings b/w principal and teachers	26 percent of teachers feel that one-on-one meetings with the principal impact their literacy practice to a great or very great extent.	61 percent of teachers feel that one-on-one meetings with the literacy coach impact their literacy practice to a great or very great extent.

Descriptive Finding #13: Significant differences in Principal and Reading Coach Behaviors

Research shows that Instructional Leadership, in combination with professional development, timely assessments, and targeted interventions, is crucial to improving literacy instruction. However, principals and literacy coaches may have different perspectives of what instructional leadership means to them individually and how they subsequently turn their beliefs into action (e.g., by visiting classrooms and providing feedback to teachers). To the point, most if not all principals likely believe that they are providing instructional leadership, but their practices and interactions with teachers may differ substantially.

To explore whether leadership actions differed significantly among BSRI schools, we used the constructs and items listed in Table 8 to identify two "clusters" or groups of schools that scored significantly different across multiple leadership items. We ran the cluster analysis separately for Principal Leadership items and for School-Based Literacy Coach items. Each analysis highlighted two groups (Group A and Group B) that scored significantly different on most of the applicable items, with schools in Group A having statistically higher measures on leadership items and schools in Group B scoring lower[9]. The emergence of two clusters/groups provides statistical evidence that principal and school-based leadership behaviors vary across schools.

The following display highlights the key differences between Group A and Group B, focusing on the **distinguishing characteristics** of principal and literacy coach actions.

Display 1. Differences in Principal Leadership and School-Based Literacy Coach Leadership Behaviors

Principal Leadership	School-based Literacy Coach
Schools in Group A are characterized by:	Schools in Group A are characterized by:
• Significantly **higher frequency of principal visits to classrooms***, although both groups are between "once a week or more" and "less than once a week but more than once a month".	• School-based coaches engaging in more frequent **peer observations, formal observations, and informal check-ins*** and generally visiting classrooms more frequently.
• Principals using **informal check-ins** as a means of visiting classrooms and supporting and monitoring teachers (66 percent compared to 54 percent)****.	• Significantly higher percentages of teachers reporting that **meetings with the school-based coach were helpful** and that **improving literacy is a priority of the school-based coach***.
• Principals using **one-on-one meetings to provide implementation support** to teachers that is seen as having a positive impact on teachers' work (e.g., teachers report that one-one-one meetings are having a positive impact on implementing literacy strategies between a great extent and a very great extent)****.	• Significantly higher percentages of teachers reporting that the school-based coach:
• Higher levels of agreement among teachers that **the principal is effective in data team meetings****.	o Is knowledgeable about **research-based instructional strategies and practices***.

• Higher levels of agreement on **all Principal Attribute items***. Although all averages are between "Somewhat Agree" and "Strongly Agree" (except for daily visits which is between "Somewhat Disagree" and "Somewhat Agree") there is a significantly higher level of agreement in Group A schools on all leadership attribute items.	o Is knowledgeable about the **progress of all students in the building***.
	   o Actively supports them in **implementing BSRI strategies and interventions***.
	   o Provides **direct instruction to students****.

*Significant p<.01; **Significant p<.05

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[9] The terms "high" and "low" are used as descriptors of the relative differences in means across leadership items. For many of the leadership items, it is clear that a "higher" score is better (e.g., greater levels of trust among teachers, principals perceived as having a strong understanding of literacy instruction). However, a "high" score on some items may not automatically be a better score (or evidence of more effective leadership). For instance, whether or not the frequency of principal visits to classrooms is directly related to improved literacy instruction is still an open question.

Analysis of Principal and Literacy Coach Leadership Behaviors[10]

The frequency of principal visits to classrooms appears to be a clear leading indicator of principal leadership. Schools in which the principal visits classrooms frequently and provides feedback through formal and informal check-ins are also schools with higher levels of shared decision-making among teachers, higher levels of trust, and a greater sense of shared instructional expectations. There is also a close link between the frequency of principal visits and teachers' perception of the principal as an effective leader of data team meetings. Whether or not the principal participates in common planning time does not have a statistical relationship to other factors of principal leadership.

With respect to the effectiveness of school-based literacy coaches, the data shows that schools in which the literacy coaches are more actively engaged in peer observations, informal check-ins, and formal observations (in other words, they use a variety of strategies to monitor and support teachers) are also schools in which teachers perceive meetings with the literacy coach to be useful and effective. Similarly, teachers' perception of the literacy coach's knowledge base (regarding literacy strategies, students in the building) and the extent to which the literacy coach actively works with students are leading indicators of effective instructional leadership. However, the extent to which literacy coachers participate in common time, co-teach, and model instructional strategies was not significantly different across groups.

Descriptive Finding #14: Teacher Behaviors

The analysis of changes in teacher behaviors is limited to 18 schools (including the i3 schools) that took the teacher survey in 2012 and 2014. Earlier descriptive findings (#s 5, 6, 7, 9, 10, and 11) provide strong evidence that BSRI schools have implemented core program components and using BSRI-recommended literacy strategies and interventions. To the extent that formative assessments, new and more interventions, and a 90-120 minute reading block were new to schools and teachers, we can say with some certainty that teachers' behaviors have changed over time, in that they are now using new literacy strategies and using data to inform interventions. However, a more precise measure of changes in teacher behavior is whether shifts in teaching behavior lead to changes in students' experience in the classroom, and ultimately to changes in student work (in the classroom and in assessments).

The teacher survey includes a set of items designed to measure how often students are engaged in specific instructional strategies (although still from the perspective of the teacher). In the survey, teachers were asked to assess what percent of the day students are engaged in the following instructional activities:
  - **Teacher-led whole group instruction (e.g., initial instruction, "I do")**
  - **Teacher led small group instruction (e.g., a teaching table, "We do")**
  - **Student directed work: Individual practice**
  - **Student directed work: Small group work**
  - **Targeted intervention with another adult, in or outside of the classroom**

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[10] Appendix D provides a listing of BSRI schools (based on 2014 survey data) that clustered in Group A and Group B for Principal behaviors and Literacy Coach behaviors. A number of future research questions may stem from this analysis, including an analysis of various ways that principals and literacy coaches interact with each other and with teachers to develop an effective instructional guidance system.

Table 9 and charts 4 and 5 provide the descriptive data from the 2012 and 2014 teacher survey. The following item was the only item found to differ significantly between 2012 and 2014:

- The percent of teachers reporting that students engaged in a targeted intervention with another adult, in or outside of the classroom increased from 16.2 percent to 19.1 percent.

Table 9. Percent of Teachers reporting that their students engage in the listed activity 25 percent or more of the time or 50 % or more of the time.

Survey Prompt: During your ELA/literacy class, approximately what percent of the time are your students engaged in:	2012	2014
Teacher led whole group instruction (e.g., initial instruction, "I do")		
Students engaged in activity 25% or more of the time	29.0%	31.3%
Students engaged in activity 50% or more of the time	15.6%	17.5%
Teacher led small group instruction (e.g., a teaching table, "We do")		
Students engaged in activity 25% or more of the time	57.9%	58.9%
Students engaged in activity 50% or more of the time	32.8%	33.1%
Student directed work: Individual practice		
Students engaged in activity 25% or more of the time	45.3%	47.3%
Students engaged in activity 50% or more of the time	22.2%	22.3%
Student directed work: Small group work		
Students engaged in activity 25% or more of the time	53.9%	54.8%
Students engaged in activity 50% or more of the time	27.6%	26.1%
Targeted intervention with another adult, in or outside of the classroom		
Students engaged in activity 25% or more of the time	36.9%	33.1%**
Students engaged in activity 50% or more of the time	16.2%	19.1%**

Chart 4. Percent of teachers reporting that students are enaged in ...*instructional practice...* **25 percent or more of the time**
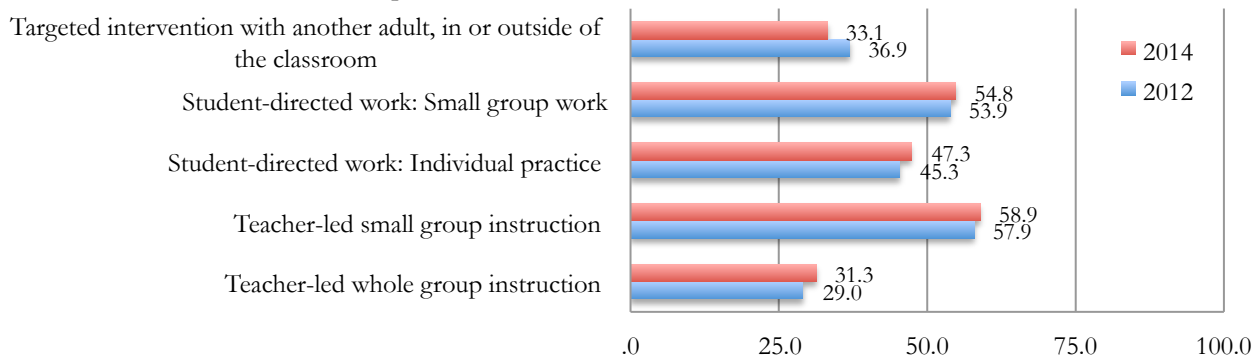
Chart 5. Percent of teachers reporting that students are enaged in ...*instructional practice...* **50 percent or more of the time**
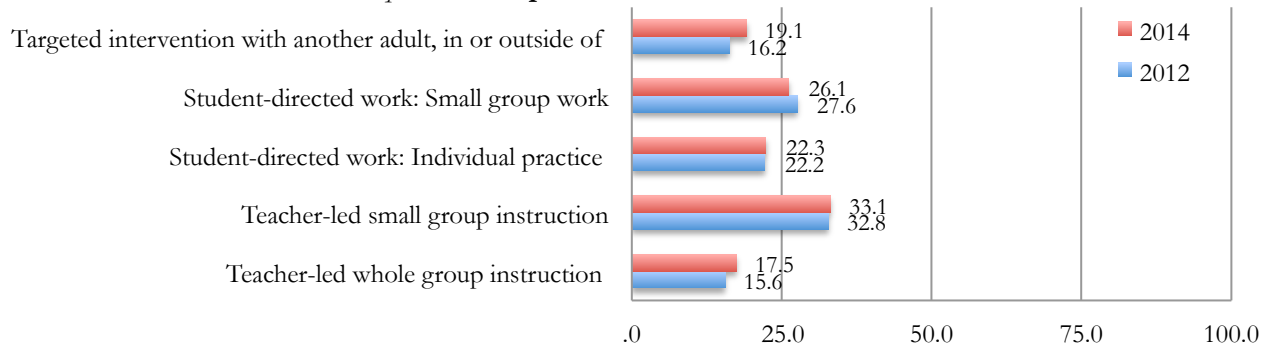
Descriptive Finding #15: BSRI efforts are supporting the development of a school-based culture that is conducive to teacher sharing of best practices and continuous improvement.

Two questions were inserted into the site visit protocol beginning in 2013 to collect data on the culture of the school and the extent to which teachers felt that they received the support needed to improve their instruction. During the site visit, teachers were asked to respond to the following prompts:

1. When asked to modify instruction or engage in new activities…do you receive support that is ongoing, targeted to your needs, and intentionally developed by school leaders to support teachers?
2. To what extent does the culture of the school provide an environment in which you (teachers) feel safe to actively engage in the sharing of practices, strategies, and ideas about how to improve the school and the school provides the conditions for you (teachers) to engage in such activities?

As part of the site visit protocol, site visitors were asked to review the collective responses of teachers obtained through multiple focus groups and then rate the school for each item. As displayed in Table 10, 22 of 45 schools (48.9 percent) received the highest rating for teacher support (*Teachers receive support that is ongoing, targeted to their needs, and intentionally developed by school leaders to support teachers*) and 26 of 45 schools (57.8 percent) received the highest rating for school culture (*the school culture provides an environment in which teachers feel safe to actively engage in the sharing of practices, strategies, and ideas about how to improve the school and the school provides the conditions for teachers to engage in such activities*). Of the 15 schools that received site visits in 2013 and 2014, four moved from a lower rating to the highest rating, suggesting that **BSRI efforts are supporting the development of a school-based culture conducive to teacher sharing of best practices and continuous improvement.**

Table 10. Percent of Schools demonstrating evidence embedded teacher support and culture that enables sharing of practices and ideas	Percent of Schools in each Category (n=45 schools)
ITEM: When asked to modify instruction or engage in new activities…do you receive support that is ongoing, targeted to your needs, and intentionally developed by school leaders to support teachers?	
Teachers receive support that is **ongoing**, **targeted to their needs**, and **intentionally developed by school leaders to support teachers (n=22)**.	48.9%
Teachers receive ongoing support, but it may not be targeted to individual needs or intentionally developed by school leaders (n=10).	22.2%
Teachers receive some support when asked to modify instruction or engage in new behaviors, but the support is not ongoing, to intentionally developed and targeted to individual needs (n=10).	22.2%
Teachers receive little to no support from leaders or colleague when asked to modify instruction or change behavior (n=3).	6.7%
ITEM: To what extent does the culture of the school provide an environment in which teachers feel safe to actively engage in the sharing of practices, strategies, and ideas about how to improve the school and the school provides the conditions for teachers to engage in such activities?	
The school culture provides an **environment in which teachers feel safe to actively engage in the sharing of practices, strategies, and ideas** about how to improve the school and the **school provides the conditions for teachers to engage in such activities (n=26).**	57.8%
The school culture provides an environment in which teachers sometimes, but not always, feel safe to actively engage in the sharing of practices, strategies, and ideas about how to improve the school. The school provides some support and conditions for teachers to engage in such activities (n=14).	31.1%
The school culture provides an environment in which teachers feel safe to share ideas and take risks, but do not actively engage in the sharing of practices, strategies, and ideas about how to improve the school. A lack of trust among teachers or a lack of conditions (e.g., planning time or meeting time) may be the reason that teachers do not engage in sharing and collaboration (n=2).	4.4%
The school culture does not provide an environment in which teachers feel safe to share ideas and take risks. As a result, teachers do not actively engage in the engage in the sharing of practices, strategies, and ideas about how to improve the school (n=3).	6.7%

Summary of Key Themes and Trends

BSRI Outputs and Support

Overall, BSRI provides schools with significant coaching support for principals and literacy coaches as intended and as described in the BSRI logic model. Coaching strategies are consistent across schools, and BSRI intentionally modifies the intensity of coaching (e.g., days) according to school need and district capacity. Teachers and leaders overwhelming see BSRI coaching as positive, useful and effective.

BSRI schools are successfully implementing the recommended core curriculum and a dedicated reading block but are less successful in implementing a BSRI-recommended writing approach or allocating dedicated time to writing instruction.

BSRI schools have adopted and are using a wide variety of interventions, although there is considerable variance in the number of interventions used by individual schools. On average, schools are **actively using** approximately 6 interventions (mean=5.8) and had **access** to almost 12 interventions (mean=11.7). However, there were a set of schools actively using 12 or more interventions and another set of schools that actively used between 3 and 4 interventions.

BSRI schools are using multiple assessments to monitor and place students in reading groups as described in the BSRI logic model. However, while most schools reported using assessments to monitor and place students at least 2 to 3 times a month, the teacher survey data shows that the number of teachers using assessments (to monitor and place students in reading groups and to assign interventions) varies across schools and is lower than BSRI's stated implementation threshold (75 percent of teachers using the assessment).

Short Term Outcomes: School Structures and Practices

Overall, leaders and teachers in BSRI schools see BSRI as the focus of improvement efforts and leaders consistently describe how various initiatives and organizational changes align with BSRI, which bodes well for the ongoing implementation and sustainability of BSRI and improved literacy instruction in BSRI schools.

BSRI schools have consistently implemented and are using key structures and practices that support literacy instruction. Walkthroughs, data team meetings, common planning time, and teacher-led small group guided instruction are implemented in nearly all schools, although common planning time was used less frequently than other practices. Teacher use of guided reading was implemented in over 75 percent of schools yet documented as being fully implemented in only 4 of 46 schools.

Medium Outcomes: Leadership and Teacher Behaviors

Across schools, BSRI principals and literacy coaches are generally perceived as holding teachers accountable to instructional expectations, promoting shared decision making, setting high standards and shared instructional expectations, and carefully tracking student academic progress.[11] However, there are clear differences in principal and literacy coach actions across schools.

Principal Actions. The extent to which a principal visits to classrooms is a leading indicator of effective principal leadership. Schools in which the principal visits classrooms frequently and provides feedback through formal and informal check-ins are also schools with higher levels of shared decision-making among

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[11] Between 80 and 90 percent of teachers "somewhat agree" or "strongly agree" with Leadership Attribute items for their principal and between 70 and 100 percent of teachers "somewhat agree" or "strongly agree" with Leadership Attribute items for their literacy coach.

teachers, higher levels of trust, and a greater sense of shared instructional expectations. There is also a close link between the frequency of principal visits and teachers' perception of the principal as an effective leader of data team meetings.

Literacy Coach Actions. Schools in which the literacy coaches are more actively engaged in peer observations, informal check-ins, and formal observations (in other words, they use a variety of strategies to monitor and support teachers) are also schools in which teachers perceive meetings with the literacy coach to be useful and effective. Similarly, teachers' perception of the literacy coach's knowledge base (regarding literacy strategies, students in the building) and the extent to which the literacy coach actively works with students are leading indicators of effective instructional leadership.

Teachers' behaviors and actions changed with respect to the technical implementation of BSRI structures and practices, in that teachers became active users of multiple assessments, engaged in data team meetings, received feedback from principals, and used multiple interventions. However, teacher survey data found little evidence that the actions and behavior of teachers—as measured by the impact on students' engagement in key activities—changed over time (between 2012 and 2014). The one item that demonstrated a significant increase over time was the percent of teachers reporting that students engaged in a targeted intervention with another adult, in or outside of the classroom (from 16.2 percent to 19.1 percent).

School Culture and Support for Teachers

According to 2013 and 2014 site visit interviews and focus groups, BSRI schools are developing a school-wide culture that provides an environment in which teachers feel safe to actively engage in the sharing of practices, strategies, and ideas about how to improve the school and 71 percent of BSRI schools (32 of 45) are places in which teachers receive ongoing support. However, we encourage BSRI leaders to consider what might be an acceptable threshold for these items. For instance, there are clearly some schools in which (according to site visitors) the culture is not conducive to the sharing of ideas and are places in which teachers do not receive targeted support. While a few of these schools subsequently withdrew from the BSRI initiative, there remain eight schools (as of 2013-14) that were rated low on one or both items.

Future lines of inquire:
1. What is the long-term impact of schools not implementing a BSRI-recommended approach to writing and providing dedicated time for writing instruction?
2. What is the optimum number of interventions available to students and actively used by teachers and students? How many interventions does a school need to provide targeted support to all of its students?
3. With respect to assessments: Is it necessary that most or all teachers frequently use multiple assessments? Or is it enough for the school (e.g., the literacy coach or lead teachers) to actively use multiple assessments?
4. How is common planning time currently used as part of the BSRI approach (e.g., looking at data, looking at student work, modifying literacy instruction) and what are the implications of common planning time not being used as frequently?
5. How can the findings related to principal and literacy coach leadership be leveraged and/or incorporated into the work of the BSRI Principal Coach and BSRI Literacy Coach?
6. What are alternative ways to assess changes in teacher instruction practice over time that might reflect the efforts underway in each school? For instance, an evaluation that more closely tracked the amount of time students are engaged in different activities might find differences over time.