URBAN DATA STUDY

Using Data to Improve Instruction in the Great City Schools:

Documenting Current Practice

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Contents

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Introduction

A key lever for improvement in instruction and student support is the data that are available in urban districts. A considerable amount of information now exists about students' academic strengths and weaknesses, and the momentum to build and improve data systems is increasing at a rapid pace. Dramatic technological changes and the advent of test-based accountability systems have created a data-rich environment in which educators at all levels talk about being "data driven." However, no consensus exists among researchers and practitioners about what this term means, and there is little evidence connecting specific practices in using data to changes in teaching or student learning and actual improvements in student outcomes. In many schools and districts, educators give regular interim assessments but do not know how best to use the results that are available through the district data system to improve student outcomes.

In fall 2008, the Council of the Great City Schools and the American Institutes for Research launched a project funded by the Bill & Melinda Gates Foundation focused on understanding and improving the use of interim assessment data as a catalyst for instructional improvement. The overarching goal of this study is to establish principles of "best practice" in using interim assessment data to improve instruction and target support. This work encompasses two interrelated objectives: (1) to understand current practice across urban districts in terms of use and availability of data--in particular, the administration and use of interim assessments, and (2) to generate empirical evidence regarding the relationships between student achievement and data-use practices at the school and classroom levels.

This report shares findings to date that address the first objective: to document current practices of urban school districts in regard to interim assessments, data systems, and the use of data for decision making. The findings draw from two sources of information. The first source comprises surveys administered in summer 2009 to Curriculum Coordinators and Research Directors in the member districts of the Council of the Great City Schools about their use of interim assessments and data systems. The data from this survey provide a general overview of the state of current practice in using data to inform school- and classroom-level decision making across U.S. urban districts.

The second is a set of case studies based on site visits to four selected urban districts between February and April 2010. These site visits were conducted to explore how district administrators, principals, and teachers worked with interim assessment data to inform educational decision making. From interviews and focus groups we gleaned themes from both cross-site and site-

specific examples that furthered our understanding of current practice in the use of interim assessment data for instructional improvement.

The report is organized into two sections, based on the different sources of information. The first describes findings from the district survey, and the second describes findings from site visits to the four selected districts.

Part 1 – Context and Current Practices in Interim Assessment Use: Survey Results From Curriculum Coordinators and Research Directors

In June 2009, the study team administered two surveys about district interim assessments, data systems, and data use in member districts of the Council of the Great City Schools. In each member district, one survey was directed to the academic chief/curriculum coordinator (CC) and another to the research director (RD). These surveys were similar in their content and scope, but modified to reflect each group's role within the district. Both surveys were administered online and remained open through summer 2009. When the survey closed in September 2009, a total of 35 CCs and 54 RDs had completed their respective surveys for a response rate of 52 percent for the CCs and 81 percent for the RDs. The respondents represented a total of 62 of the 67 Council member districts (94 percent).

The surveys, developed by the American Institutes for Research and the Council of the Great City Schools, were designed to measure key dimensions of data use. These key dimensions are represented in the project's Theory of Action, shown in Exhibit 1. They flow from district-level (left side of the exhibit) to classroom-level (right side of the exhibit) data-use processes.

Exhibit 1. Using Data From Interim Assessments to Improve Student Achievement
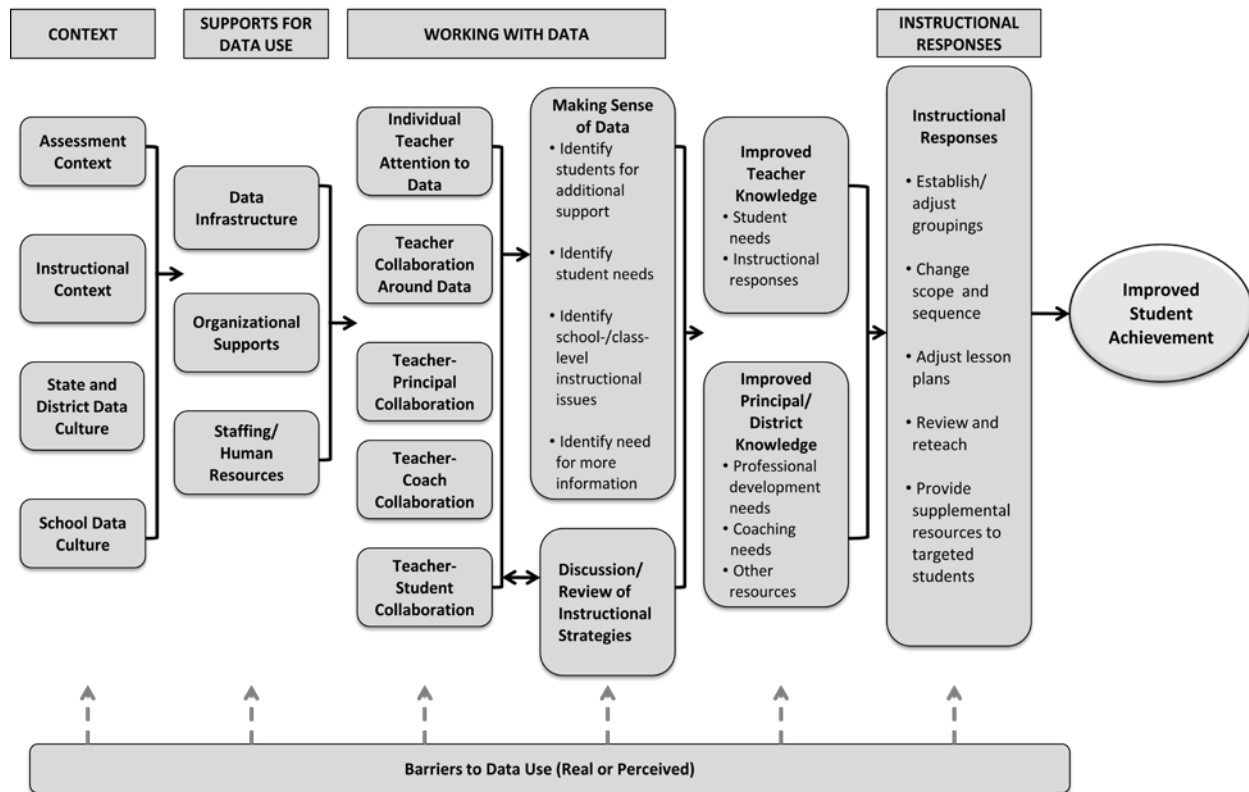
What follows is a summary of the survey responses from CCs and RDs, organized by the key dimensions of data use.

Context

The first dimension of interim assessment-data use is context, which includes district- and school-level factors that affect the type of data to which schools have access and how school-level personnel use these data to alter instruction. Key elements include (a) assessment context, (b) instructional context, and (c) district data culture.

Assessment Context

Assessment context includes the goals, expectations, and policies related to the development and implementation of interim assessments, including the types of assessments given and their purpose(s). An important aspect of the assessment context is the "quality" (e.g., the validity and reliability) of the interim assessments. Surveys of both CCs and RDs gathered information on the assessment context with items asking about how tests are administered, whether they are mandatory, and their purpose.

Results from the survey indicate that the use of interim assessments is prevalent in urban districts: 94 percent of CCs and 98 percent of RDs reported that their districts administer interim assessments throughout the school year to monitor student performance. The scope of the assessments is also consistent across the districts. All RDs indicated that interim assessments are administered in reading/English language arts in their districts, and 94 percent (51 of the 54) of
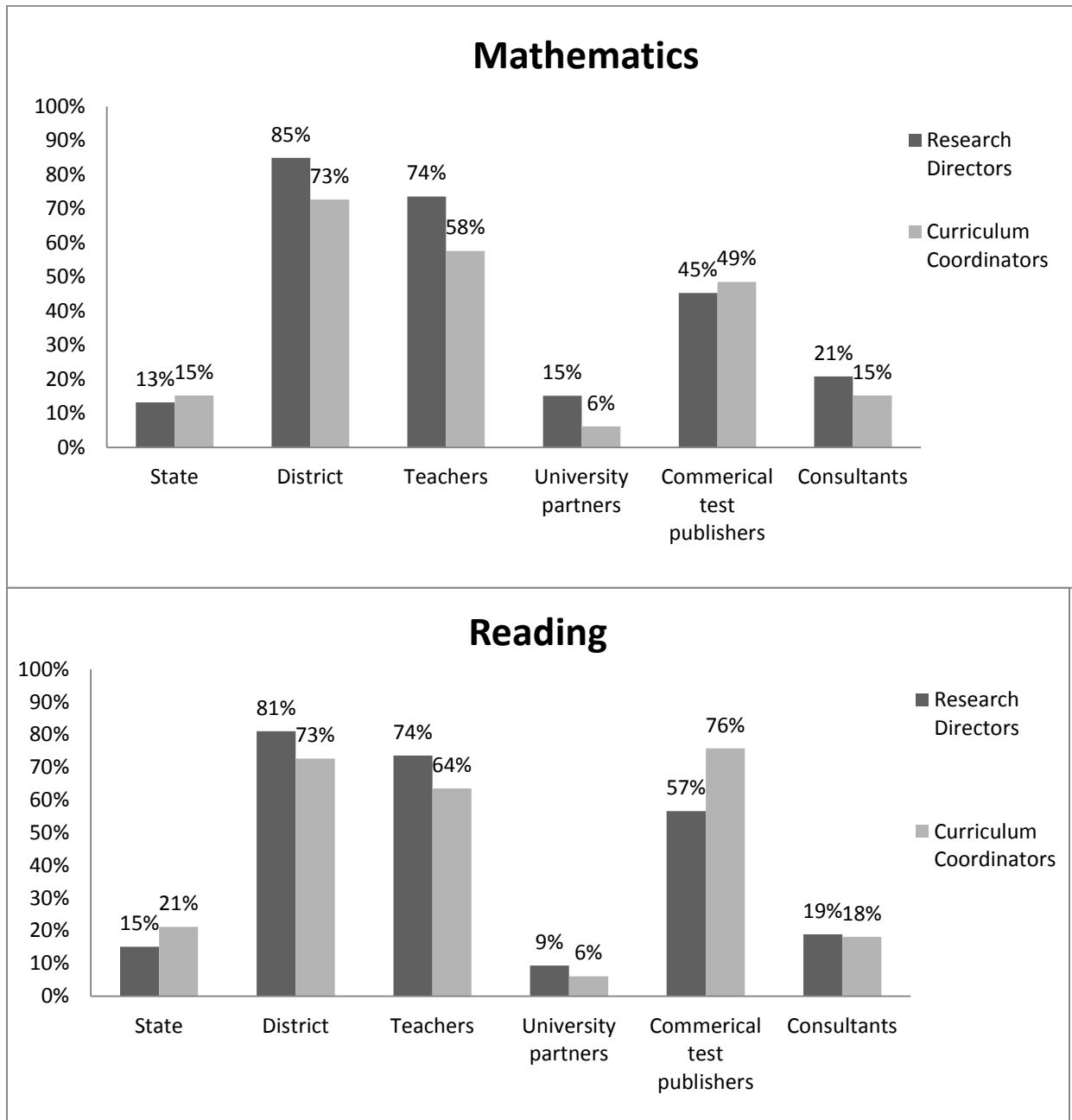
RDs reported that interim assessments are administered in mathematics. For both content areas, interim assessments are typically given three times a year, and the maximum reported administrations are seven a year.

Creating Interim Assessments

According to the RDs surveyed, interim assessments are created through a collaborative effort among district-level staff, teachers, and commercial test publishers. Over 80 percent of RDs reported that their interim assessments are constructed by (or with input from) the district (81 percent in reading/English language arts and 85 percent in mathematics). According to RDs, teachers also play a role in constructing the assessments in about 74 percent of the districts surveyed. Commercial test publishers were reported to have constructed interim assessments in reading in 57 percent of the districts and in mathematics in 45 percent of the districts, according to RDs. Curriculum coordinators largely agreed with RDs with respect to the role of the district and teachers in the construction of interim assessments. However, a higher percentage of CCs indicated that commercial test publishers help construct the assessments in reading (76 percent). These results are shown graphically in Exhibit 2 for mathematics and reading assessments.

The inclusion of teachers in test development was an encouraging finding from the surveys. Those results suggested that instead of being tests created by outside entities, most interim assessments are created with some input from the teachers who will be using them in their daily instruction.

Exhibit 2. Who Constructs Interim Assessments in Urban Districts?

Mathematics

Research Directors
Curriculum Coordinators

Category	Research Directors	Curriculum Coordinators
State	13%	15%
District	85%	73%
Teachers	74%	58%
University partners	15%	6%
Commerical test publishers	45%	49%
Consultants	21%	15%

Reading

Research Directors
Curriculum Coordinators

| Category	Research Directors	Curriculum Coordinators
State	15%	21%
District	81%	73%
Teachers	74%	64%
University partners	9%	6%
Commerical test publishers	57%	76%
Consultants	19%	18%

Assessment Formats

The types of interim assessments used in the districts are mostly traditional paper-and-pencil tests (96 percent), as reported by RDs. However, over half (59 percent) of the districts also reported using computer-based or computer-adaptive tests in some grade levels and content areas. When asked about the types of items used in the interim assessments, RDs indicated that most assessments are composed of multiple-choice items—60 percent indicated that most of their items are multiple choice and 26 percent reported that all of their items are multiple choice. Over half of RDs indicated that short-answer and extended-response items are also included in their districts' interim assessments (62 percent and 57 percent, respectively). Griddable

responses, or more complex, multi-step items, are the least likely to be used, according to RDs; 23 percent reported they are used some in the assessments and 64 percent stated that they are not used at all.

Grades Tested

Curriculum coordinators were asked about the frequency of interim assessments at each grade from kindergarten through grade 12. Responses indicated that in general, interim assessments are used more often in grades 3 to 9 than in the early grades (grades K, 1, 2) or later grades (grades 11 and 12). In kindergarten, half the districts surveyed implement mandatory interim assessments in reading (55 percent). The percentage of districts with mandatory interim assessments increased to over 66 percent for grades 1 and 2, depending on content area. By third grade, 80 percent of districts reported that interim assessments are mandatory at all schools in grades 3 through 8 in reading; 74 percent reported a similar requirement for mathematics. In the high school grades, those numbers decline significantly, until grades 11 and 12 where they bottom out at 24 percent in mathematics and 27 percent in reading. Exhibit 3 visually represents this inverted U-shaped pattern of districts implementing mandatory interim assessments in grades K through 12.

Exhibit 3. District Mandatory Interim Assessments in Mathematics and Reading, by Grade
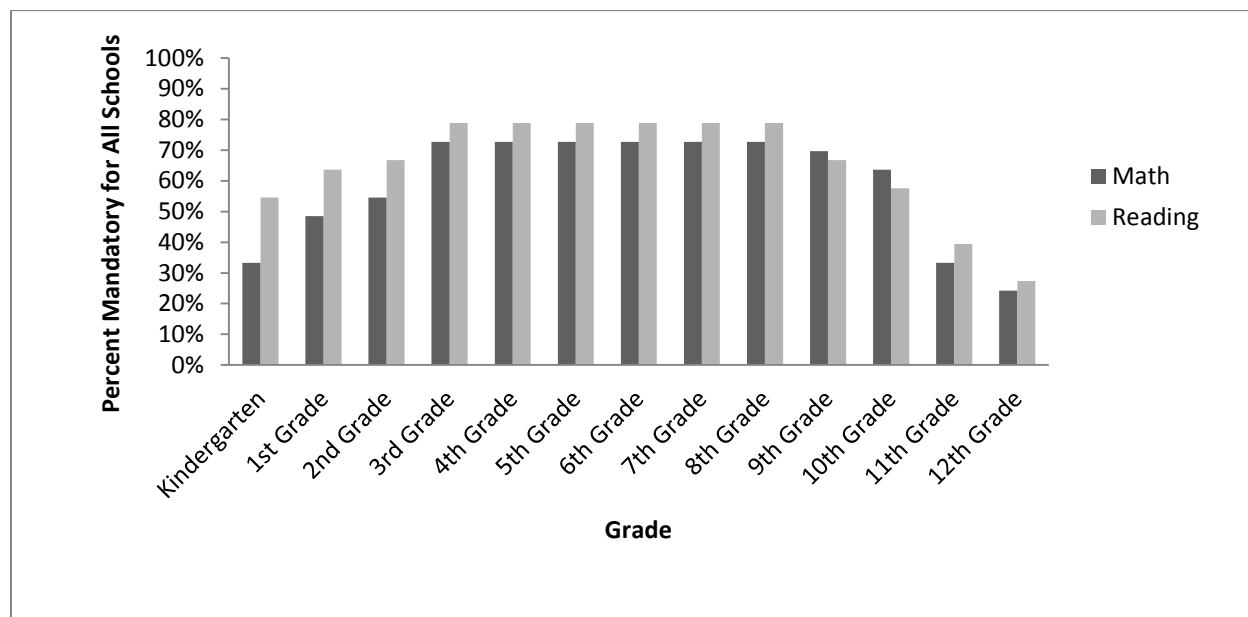

Purposes of Assessments

The purpose of these largely mandatory assessments, CCs and RDs agreed, is to help improve teaching practices and *not* for teacher accountability. Nearly all CCs (94 percent) and RDs (100 percent) strongly or somewhat agreed that the purpose of these mandatory assessments is to guide and inform instruction—and most indicated strong agreement (79 percent of CCs and 76 percent of RDs). In addition, 70 percent of CCs strongly agreed that interim assessments are used to measure progress toward performance on end-of-year state assessments. No CCs strongly agreed that the assessments are used to make decisions regarding teacher rewards or sanctions, and only 15 percent somewhat agreed that they are used to do so. (RDs were not asked this

question.) The percentage of CCs and RDs that either "agreed" or strongly agreed" with each purpose for their interim assessments is shown in Exhibit 4.

Exhibit 4. Purposes of Interim Assessments
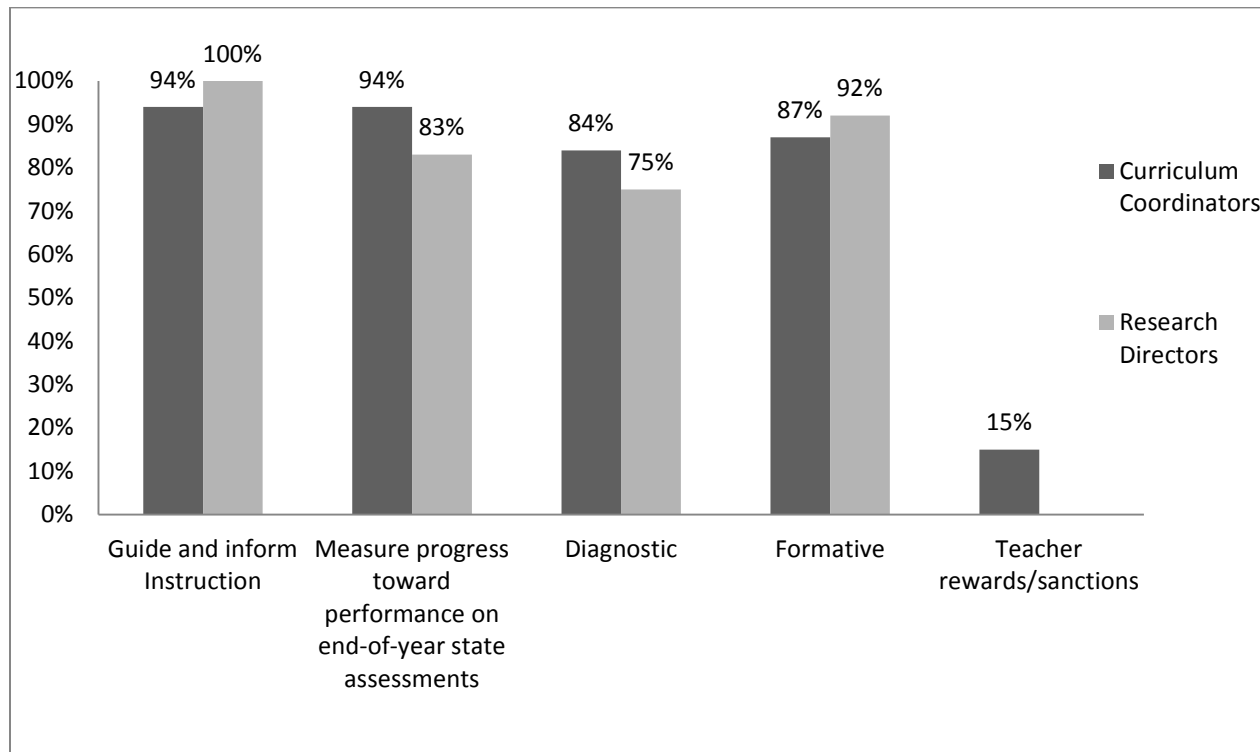
Instructional Context

Instructional context refers to the curricular and instructional environment in which teachers and principals collect and use data. To document instructional context, we surveyed CCs and RDs about the types of districtwide initiatives and structures that are in place to support data use. Survey items also gauged the extent to which the instructional context is consistent with, and supportive of, data use across the district.

Consistency and Alignment of Curriculum/Assessments

According to the district leaders surveyed, interim assessments supplement existing instructional programs, including districtwide curricula, pacing guides, and Response to Intervention (RTI) programs. Over 80 percent of CCs reported having districtwide reading/English language arts curricula in place at all grade levels: K–2, 3–5, 6–8, and 9–12. In mathematics, the percentages were even higher, with over 90 percent reporting districtwide curricula in grades K–2, 3–5, and 6–8 and 83 percent in grades 9–12. When asked about alignment, nearly all CCs strongly agreed that the district interim assessments are aligned with district content standards (94 percent) and state content standards (88 percent). RDs were also asked about alignment. Like CCs, most reported that the interim assessments are aligned with state and district content standards and pacing guides.

Use and Utility of Pacing Guides

Districtwide pacing guides in both reading/English language arts and mathematics are also widespread. In reading, 80 percent of CCs indicated that their districts have pacing guides in grades K–2 and 3–5, 86 percent in grades 6–8, and 66 percent in grades 9–12. In mathematics, more than 85 percent of CCs reported that they use districtwide pacing guides in grades K–2, 3–5, and 6–8, and 77 percent reported that pacing guides are in place in grades 9–12. Nearly all (97 percent) CCs reported that they either agreed or strongly agreed that the interim assessments are aligned with current pacing guides. When asked whether the district's pacing guides are too rigid to allow teachers to reteach or adapt their instruction to respond to results of interim assessments, 79 percent somewhat disagreed or strongly disagreed, indicating that CCs believe that the district pacing guides are flexible enough to enable teachers to respond to interim assessment data in the classroom.

Response to Intervention (RTI) Initiatives

When asked about RTI initiatives in place within their districts, nearly all (94 percent) CCs indicated that there are RTI strategies in all or some schools in the district. Over half (52 percent) of CCs reported that the district encourages frequent assessment of students in intervention programs to determine progress and readiness to exit the intervention to a great extent, while 27 percent reported that the district encourages assessment to a moderate extent. Further, 76 percent of CCs reported that the district interim assessments are used to support RTI strategies to a moderate or great extent in their districts.

District Data Culture

District data culture includes the attitudes, direction, and support at the district level regarding the use of data in general and interim assessments in particular. To measure district data culture, our surveys included items aimed at understanding how districts do or do not create a culture of data use that should theoretically support the interim assessment process in terms of setting goals and clear priorities and establishing concrete supports.

Overall, CCs reported that their district provide concrete supports to encourage the use of interim assessment data to increase student achievement. For example, 88 percent agreed or strongly agreed that the district has invested substantial resources to support the use of data to guide instruction and decision making. Nearly all (94 percent) reported that district leaders and staff meet with staff to set goals for the school at the beginning of the school year. Most (86 percent) also agreed that district leaders and staff commit their time by meeting at regular intervals throughout the school year to discuss student achievement data and its implications for instructional decision making. Eighty-five percent of CCs agreed or strongly agreed that district leadership expects teachers, principals, and central office staff to use student achievement data in general to guide and inform instruction. Similarly, 70 percent strongly agreed that these expectations are in place with specific regard to interim assessment data. Most CCs who responded to the survey also agreed or strongly agreed that their district has articulated clear goals for the use of data (82 percent).

Supports for Data Use

This dimension is related to the amount of investment and support that exist at the district level, but focuses on the tools and resources that are available at the school level. The surveys for RDs

and CCs included items about districts' infrastructure for accessing, disseminating, and analyzing data by district- and building-level staff.

Data Infrastructure

Development of Data Systems

The average number of years that districts reported having a data system in place was 4.3 years, with a range from 1 to 15 years. When asked about how their systems were developed, the RDs reported a combination of responses. A total of 45 percent reported that their data systems were "off the shelf" commercial products, while 49 percent reported their systems were created by a vendor working in collaboration with the district. Just over 30 percent of the RDs reported that their district developed its data system in-house. These responses were not mutually exclusive and therefore do not add to 100 percent, and they indicate that districts used a variety of external and internal options to create their data systems.

Dissemination of Data

Online dissemination of results is common. Nearly all CCs (94 percent) and RDs (87 percent) indicated that data reports of interim assessments are made available online. Almost all RDs (94 percent) reported that staff throughout the district—district staff, principals, and teachers—have access to online results. However, in some districts surveyed, there are delays between testing and the dissemination of results. About half (48 percent) of RDs reported that their district provides immediate online access to results after the administration of interim assessments. Fifteen percent indicated that results are available online within 1 to 2 days, and 17 percent reported that results are available within 3 to 7 days. Eight percent of RDs reported that it takes 1 to 2 weeks, and another 4 percent indicated that online access to results is not available until more than 2 weeks after the administration of interim assessments. Exhibit 5 shows the percentage of districts that disseminate interim assessment results in different time frames.

**Exhibit 5. Dissemination of Online Interim Assessment Results**
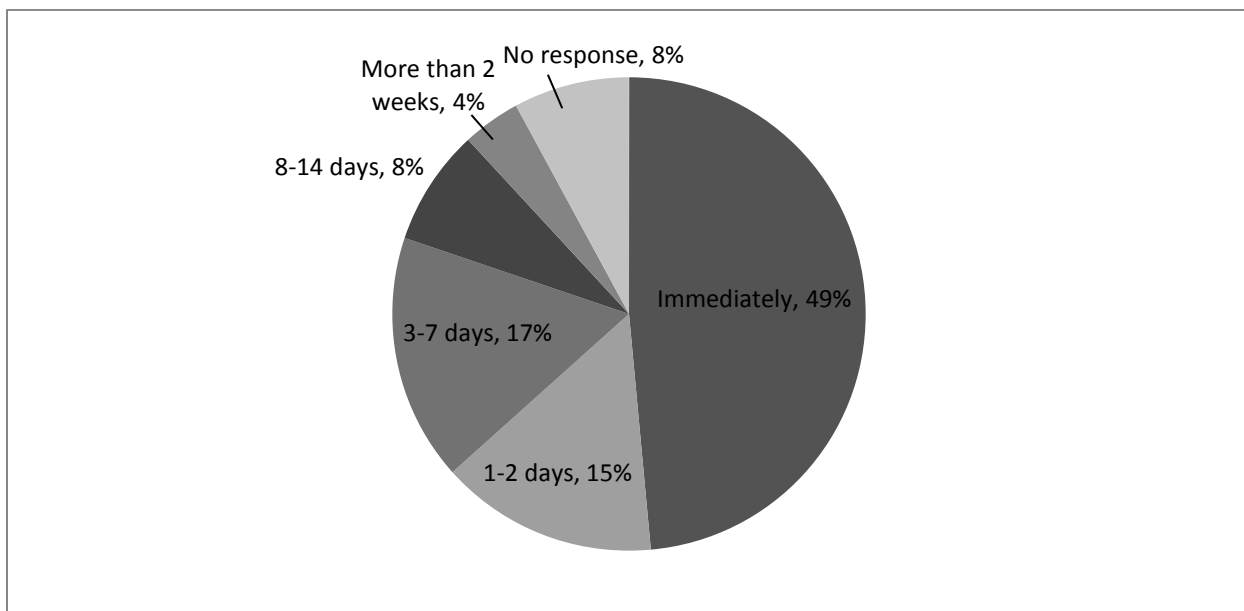
Accessibility and Ease of Use

Nearly all CCs (94 percent) reported that their district's reports of interim assessment results are easy to use. RDs indicated that the reports contain disaggregated results by content strand (83 percent), topic or skill (76 percent), individual items (74 percent), individual students (89 percent), student groups (70 percent), teacher/classroom (94.3 percent), and school (94.3 percent). Most reports also contain graphical or other visual displays of data (76 percent). Further, 85 percent of RDs reported that the district data system can be used by district-level users to create customized reports. Most RDs reported that district staff, principals, and teachers have access to the data system from off-campus computers (78 percent for district staff, 67 percent for principals, and 61 percent for teachers). However, despite the reported capacities of the systems, only 67 percent reported that principals actually use the data system in this way; even fewer (43 percent) reported that teachers create customized reports from the district data system.

According to RDs, teachers and principals have different levels of access to student data, with principals able to view more interim assessment data than teachers. Almost all reported that teachers have access to data for their own classroom (94 percent), and most indicated that teachers can access historical data for individual students in their classroom or school (70 percent). Similarly, almost all RDs indicated that principals have access to classroom-level data (91 percent), and most reported that principals can access historical data on the students in their school (74 percent). According to RDs, principals have greater access to classroom-level data than do teachers: 91 percent reported that principals have access to data for *each* classroom in their school, whereas only 15 percent reported that teachers can access the interim assessment data for classrooms other than their own. According to RDs, although most districts give principals and teachers access to data for *their* school as whole (91 percent and 72 percent, respectively), only a minority of districts give principals and teachers access to data for *other* schools in the district (25 percent and 13 percent, respectively). These results are shown in Exhibit 6.

Exhibit 6. Access to Interim Assessment Data in Urban Districts
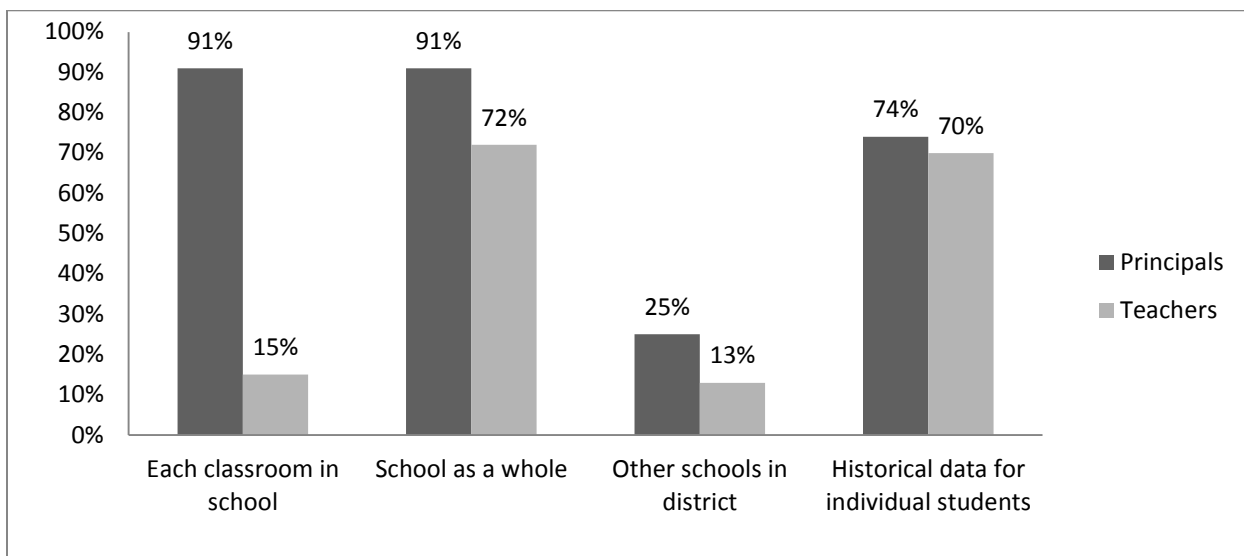
Organizational Supports

In addition to being asked whether an infrastructure is in place that provides access to interim assessment data, CCs were asked about the tools the district provides to facilitate the actual use of interim assessment data. This dimension of practice refers to logistical and operational supports for data use, including scheduling and allocating time for reviewing and discussing interim-assessment data and their implications for instruction. A majority reported that the district provides concrete supports, such as action plans, to facilitate the use of data (58 percent), as well as tools or protocols to help staff understand results (88 percent) and tools or protocols to help school staff plan instructional responses (76 percent). When asked about the extent to which these tools are actually used in day-to-day practice throughout the district, most CCs reported use to a "moderate" or "great" extent. Specifically, the percentage of CCs who reported that the extent of use is moderate or great in their district was 58 percent for action plans, 88 percent for tools or protocols to help staff understand results, and 85 percent for tools or protocols to help school staff plan instructional responses.

Staffing/Human Resources

CCs were asked about the training and professional development offered to staff on the use of interim assessments. Overall, their responses indicated that nearly all districts offer training and professional development opportunities focused on using either the interim assessment data or the data system for accessing interim assessment results to teachers (97 percent), principals (91 percent), and coaches (94 percent). Most CCs (79 percent) agreed that district staff members are also offered the same training and professional development opportunities.

A majority of CCs (61 percent) indicated that this training is voluntary, with a focus on using the data system and interpreting the results of interim assessments (82 percent and 85 percent, respectively). Seventy percent of CCs indicated that the training focuses on developing an instructional response based on the data. Nearly two-thirds (64 percent) of CCs indicated that the training consists of multiple training sessions offered throughout the school year. Only one (3 percent) CC indicated that the district offers a one-time training for teachers, and only one (3 percent) indicated that an annual training session is offered for teachers. Exhibit 7 shows the frequency of training offered by the surveyed districts.

Exhibit 7. Frequency of Training in Using Interim Assessment Data Offered in Urban Districts

One-time training session, 3.00%
Annual training session, 3.00%
No response, 9.10%
Upon school's request , 21.20%
Multiple training session, 63.60%
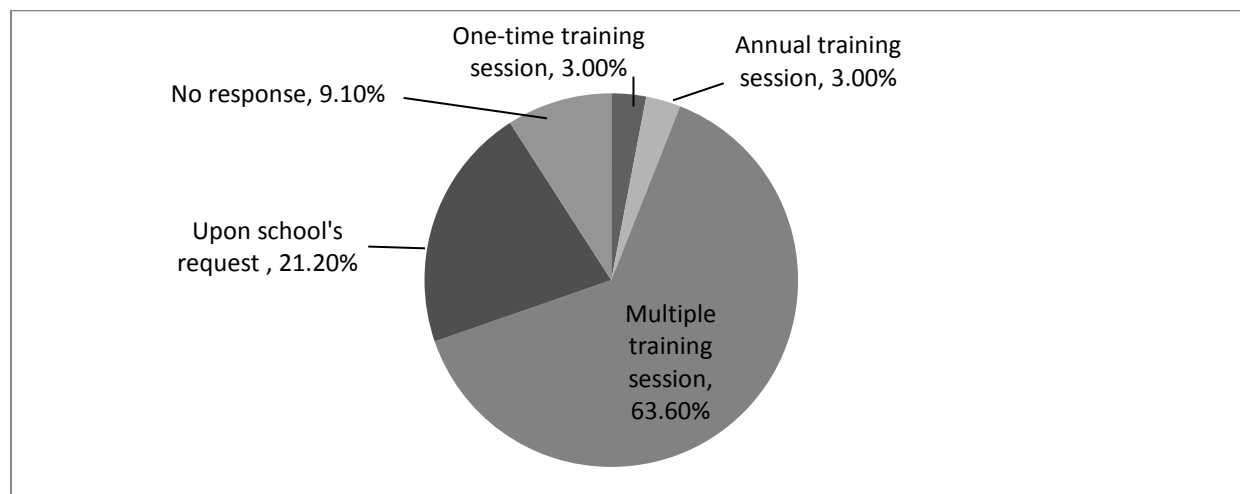
The district survey data suggest that the formal training sessions on using data are typically brief. Nearly half (45 percent) of CCs reported that training ranges from 1 to 2 hours; 27 percent reported that training is provided in a half-day session. Six percent reported that their district provides 1-day trainings; 6 percent reported giving 2-day trainings, and 6 percent reported training lasting 3 days. Only 3 percent of CCs reported training lasting more than 3 days.

Beyond providing formal professional development sessions, 89 percent of CCs reported that their district employs or assigns support staff, such as data coaches, who are responsible for helping schools work with student performance data, including interim assessment data. When asked whether the data support staff report to the district central office or to the schools, 23 percent of CCs reported that they report to the central office and 7 percent to the schools, and 65 percent indicated that the data support staff report to both the central office and the schools. Just over half (58 percent) of CCs reported that all data support staff in their district receive formal training to support the use of interim assessments. Another 32 percent of CCs reported that some but not all of their data coaches receive formal training.

Summary of Curriculum Coordinator and Research Director Survey Results

This study's surveys of curriculum coordinators (CCs) and research directors (RDs) suggested that according to district leadership, promising data use practices are in place in many urban districts. Almost all districts are using districtwide periodic assessments of student achievement in reading and mathematics, most often to guide and inform instruction and to measure progress on performance on the end-of-year state assessments. Responses indicated that districts generally support data use and have clear data-use goals for their schools, principals, and teachers. In general, most districts reported that interim assessment data are easy for teachers and principals to use. Professional development on data use is provided for principals and teachers by most districts. In addition, most CCs and RDs reported that districts provide support staff to aid schools in their use of interim assessment data.

The results of these surveys provide an overarching context of how urban districts use interim assessments. The surveys additionally provided a basis for the selection of a smaller sample of districts for further study. The next section of this report shares findings gleaned from case studies of four districts.

Part 2 – Context and Current Practices in Interim Assessment Use: Results From In-Depth Site Visits to Four Urban Districts

Introduction

To select four districts for further study, we established inclusion criteria. Specifically, we used the district survey data and additional supplemental information to identify districts that met four criteria: (1) the district had administered interim assessments continuously for the past 3 years; (2) the district planned to continue administering interim assessments for at least the next several school years; (3) the district administered interim assessments at least three times in a school year; and (4) the district data system had the capacity to meet the requirements of our quantitative study that will link school- and classroom-level data-use practices with student

achievement. The selected districts also had to be willing to participate in the in-depth study, which included both a school-level survey component and a 2-day site visit.

Using these criteria, we identified four districts of different sizes from varied geographic regions that agreed to participate. In this section, we describe findings from the site visits that further document current practices in data use in urban districts. Having learned from the previously described district survey that most districts are especially focused on administering interim assessments in grades 3 through 9, we defined our focus for the in-depth qualitative and quantitative study of interim assessment practices at the elementary and middle school levels, specifically in grades 4, 5, 7, and 8.

Methods and Sample

During each site visit, the research team conducted a series of focus groups and interviews with district and school administrators, teachers, and school support staff. District administrators included research directors, content specialists, and instructional coaches. We also conducted separate focus groups for principals, middle school mathematics teachers, middle school reading teachers, and elementary school teachers. Focus groups were composed of 4 to 10 people, randomly selected to participate. The total sample of the site visits included 56 teachers, 28 principals, and 40 district-level staff. Protocols used to guide the interviews and focus groups were developed by the study team to ensure the systematic collection of information in each district about all aspects of the key dimensions of data use (see Theory of Action, Exhibit 1).

We also collected artifacts related to interim assessment data at the time of the site visits, such as sample data reports, district pacing guides, and sample data meeting materials. All sessions were audio-recorded and transcribed. Data were coded using the theory of action as a guide and were analyzed to identify common themes.

Organization of Results

This section begins by providing a brief description of the background and general context under which each district is implementing the interim assessments. Then, similar to the survey results, the cross-site themes from these site visits are organized into four broad categories outlined in our theory of action: (1) context; (2) supports for data use; (3) working with data; and (4) instructional responses. In each section, we provide an overview of key themes that emerged from the site visits, provide examples of current practices regarding data use, and illustrate how districts are working to integrate interim assessments into their efforts to build and sustain a data-driven culture with the end goal of promoting academic success for all students.

Background on the Four Districts

District 1

As of 2010, District 1 serves about 90,000 students in 126 schools and has a staff of about 6,500 teachers. The district adopted interim assessments in 2003. Initially, the assessment was a survey test that covered all the content that students were expected to learn during the school year. This test was administered three times a year to determine to what extent students were making progress toward meeting state and district standards in reading and mathematics. Having the same or similar content across each administration allowed staff to measure student progress on the same content over the course of a school year.

District 1 transitioned to a new interim assessment model in 2008. Now, each assessment is intended to reflect the content that, according to the district curriculum and pacing guide, has been taught to students up to that time. That is, the district moved from a pre-test/post-test system to a system where the assessments cover different content strands at different points in the year. This transition started with high schools and was later adopted in middle and elementary schools. In addition, the assessment used to be administered online but the district has switched to paper-based administration.

These changes to the interim assessment occurred against a backdrop of significant changes being implemented throughout the district. One key change was the transition from a site-based management system to a more centralized management model, particularly for curriculum, assessment, school schedules, and budgetary practices. Another recent change was the adoption of districtwide curriculum maps in 2009.

District 2
District 2 is one of the largest school districts in the country, serving around 311,000 students in 324 schools, with a staff of about 14,800 teachers. The district is divided into four areas that vary geographically and demographically. From the district's perspective, each area requires different levels and types of support regarding data use. In this district, schools maintain site-based decision-making autonomy; this autonomy carries over into the interim assessment process and likely contributes to the variation in data use.

In District 2, the development of the interim assessments stemmed from the need to determine whether students are meeting benchmarks defined by the district as well as the need for more immediate data regarding student progress during the school year. With the previous testing structure, the district could use only the prior year's state accountability test to plan for the upcoming school year. The interim assessments have evolved over the past 2 years and are reportedly better aligned with state standards and the district pacing guides and more strongly correlated with the state assessment.

In this district, "common assessments"—generally developed by teachers with some guidance from district administrators—are also used in some schools and administered approximately twice a year. They often reportedly compete with the interim assessments, particularly in mathematics, because teachers believe that they are better aligned with their mathematics curriculum and pacing guides than are the interim assessments. The adoption of common assessments, while useful for some teachers in their instructional decision making, may present some challenges to the district's efforts to achieve a consistent measure of districtwide strengths and weaknesses.

District 3
As of 2010, District 3 serves close to 98,000 students in 155 schools and employs more than 6,000 teachers. The district's vision for data use is driven by nine broad organizational standards focused on collaborative and data-driven decision making. District 3 began implementing interim assessments in 2005 to get a better sense of where students were academically before the end-of-year state exam. Its interim assessment program appears to be different from those of other districts in several ways. First, the assessments include open-ended questions. As a result, significant effort is put into training staff on how to score these questions to ensure that the

results are consistent from school to school. Second, the district created a data management system in-house and therefore reported having more flexibility than other districts to modify the system to meet the needs of staff.

This district currently operates under a school-based management model; therefore, individual schools have some degree of autonomy in how much they use data as a driving force for instructional changes, and the understanding of interim assessments and how they should be used varies from school to school. However, the district has built the capacity to systematically monitor school-based activities through a number of structures, including the data management system, district staff collaborations, subject- and grade-based planning, professional development, and leadership meetings.

District 4
District 4 is a medium-sized school district that serves close to 24,000 students in 53 schools. Interim assessments have been in use in this district for over 10 years. The decision to adopt district interim assessments stemmed from a history of low student performance that had placed the district among the lowest performing districts in the state.

Initially, buy-in was low and teachers did not see the purpose or potential benefits of interim assessments. Despite the challenges, the district worked to encourage buy-in from schools, and one participant noted that buy-in has improved during the past 7 years. This improvement has been attributed, in part, to the development of collaborative relationships that allow teachers and principals to be part of the decision-making process surrounding interim assessments.

The district's management model includes significant oversight of the interim assessment process and has reportedly helped promote a level of consistency in expectations and practices across the district, which likely influences the data culture. Principals described the cultural changes that have taken place, stating that their teachers are meeting expectations for data use, are more engaged in the interim assessment process, and are becoming "better consumers of data." They also reported that teachers are more proactive about discussing assessment results with one another, are better able to formulate hypotheses about student strengths and weaknesses on the basis of data, and hold themselves accountable for improving student achievement.

The district's hiring practices at the administrative level are additional evidence of how it has taken steps to create a more sustainable data-driven culture. Several district-based staff reported that experience using data was a requirement for their position, suggesting a commitment to data use in the district.

Context
The following section describes common themes in the assessment context across the four districts, including test development and the goals and expectations that districts have created to facilitate the use of these assessments in their schools.

The development of the interim assessments is a collaborative process that involves both district and school-based staff. Although the exact composition of the teams that design interim assessment varies across districts, all districts seem to recognize the value of including teachers in this early stage of the interim assessment process. These are usually the more experienced

teachers (i.e., lead teachers), and they help identify appropriate items for inclusion in the assessment. In District 3, where the assessments include open-ended response items, most team members receive training on item writing, and teachers help develop these test items.

Interim assessments are designed to be aligned with district pacing guides, curriculum, and state assessments and are reportedly reviewed and revised to ensure quality and alignment. All districts reported that alignment is a priority. However, perceptions of the degree of alignment are highest at the district level and lowest among teachers. In all districts, it was reported that district administrators solicit feedback from teachers and staff regarding the quality of items, including issues pertaining to alignment.

Districts reported facing a number of challenges in their efforts to align key aspects of their instructional programs. For example, in District 1, alignment with the curriculum and pacing guide remains a work in progress given that the guides were new to the district and a number of different programs were being implemented across schools. Thus, having one pacing guide that is aligned to each program is challenging.

In District 4, most items on the interim assessments are reportedly aligned with content taught during the previous 9-week period; however, some items (about 15–20 percent) revisit previous content areas. These questions represent high point-value items on the state assessment as well as content areas in which the district has had low performance in the past.

Districts reported similar goals for their interim assessments. Across districts, the primary goals for interim assessments focus on creating a culture of data-driven instruction where data are used as a tool to help guide programmatic decision making and instructional practices. District administrators reported the following goals:

- *To increase accountability for what is taught in the classroom.* Pacing guides have been developed to help teachers pace their instruction and to encourage them to teach the state standards. Interim assessments are designed to assess whether teachers are meeting this expectation.

- *To ensure more consistent monitoring of school and student progress.* Interim assessments allow staff to get a sense of where students stand academically during the year instead of waiting for results from the state assessments administered at the end of the year.

- *To provide teachers and staff with a tool that will help guide instructional practices in the classroom.* Teachers are expected to use the assessment data to identify content areas that need more emphasis, identify students who may need additional support, and inform their instructional practices.

- *To prepare students for and predict their performance on the state assessment.* Some districts reported a fairly high correlation between interim assessments and their state assessments. In District 4, interim assessments are purposely designed to be more

difficult than state assessments.[1] The belief is that if students do well on interim assessments, they will also perform well on state assessments.

- *To inform school improvement planning.* All the districts use interim assessments to varying degrees as part of schools' improvement planning. Data help identify schools' strengths and weakness and are used as a progress-monitoring tool to assess whether schools are meeting the goals outlined in their improvement plans.

Communication about the districts' goals and expectations for the use of interim assessments emerged as a challenge in all districts. In many cases, there seemed to be a lack of understanding among teachers about the rationale and expectations for using interim assessments. When teachers were unclear about these goals, they questioned the validity of the assessments and seemed less likely to engage in meaningful use of the data. For example, some teachers reported that they give interim assessments because they are required to do so but do not really focus on the results and continue to rely on other measures of student achievement (e.g., teacher-created tests, unit tests). In some instances, teachers viewed interim assessments as a tool to evaluate teachers instead of a tool to help improve instruction. The lack of communication—that is, consistent messaging of purpose and use—likely has implications for the ability of schools to create a data culture in which teachers feel safe to collaborate with one another around student data.

One example of a breakdown in communication emerged in District 1 and involves using interim assessment data to make decisions about student retention. District administrators reported that schools are cautioned against using the interim assessments as the sole measure for making decisions about student retention (vs. promotion to the next grade). Instead, the district recommends that these data be triangulated with at least two other data sources to help identify the best placement for students. However, it appears that this message has not been clearly communicated across the district. Although school-based staff believed that high-stakes decisions should not be based solely on the interim assessments, some were under the impression that this policy is strictly endorsed by the district and did report using interim assessment cut scores to make decisions about student retention and placement.

Another example of communication challenges was found in District 2, where an administrator described the breadth of professional development opportunities available to improve staffs' data literacy but noted that many staff members are not aware of these opportunities and therefore do not take advantage of them. Similar examples of breakdowns in communication could be seen in all four districts, suggesting the widespread need for more focused efforts aimed at educating staff about district goals and expectations for interim assessment data use.

Supports for Data Use

The four districts we studied have a number of support mechanisms in place to encourage and facilitate data use. In general, supports fall into three broad categories: data infrastructure, organizational supports, and staffing/human resources and professional development.

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[1] District leaders described this as a strength. However, teachers viewed this as a flaw and felt that the difficulty level has a negative impact on student efficacy and motivation.

Data Infrastructure

Each district has a data management system that serves as the primary vehicle for the access, dissemination, and analysis of interim assessment data. In three of the four districts, the data system was purchased from an outside vendor, and the districts worked in collaboration with the vendors to design a system that meets their needs. In the fourth district, the system was created in-house. The data systems in all the districts have broad capabilities, including:

- *Immediate availability of data*. Data access is important because timing is critical to teachers' use of student achievement data to guide instruction. The data systems in all the districts make assessment results immediately available. However, other factors influence the timeliness with which teachers gain access to results. In three of the four districts, schools can scan their answer sheets and the results are immediately available for download. However, the mode of dissemination varies by district, and online access is the primary mode of dissemination in only two of the districts (Districts 1 and 3).

  In District 3, results are scanned into the system and are available for immediate access. District 1 also reported immediate turnaround time, an improvement that took place during the 2009–2010 school year when the district switched from online to paper-based assessments and scanners were issued to all schools. Having scanners onsite allowed schools to process paper answer sheets and obtain results right away. With the online system, schools had to wait for the district to process test results and school staff reported that it took 1 to 2 weeks (sometimes longer) for these results to be made available.

  In the other two districts, teachers generally receive paper copies of the assessment reports. District 4 does not have the infrastructure to allow all teachers to retrieve their own student data from the system. Instead, several staff members in each school (e.g., lead teacher, principal, assistant principal) are trained to access the data system, print reports, and distribute them to the teachers. When this process is carried out as intended (i.e., answer sheets are scanned and reports are printed and distributed shortly after tests are administered), teachers get their results within 1 to 2 days after testing. However, some teachers reported that it takes weeks to get assessment results back. In these instances, the delay seems to be a result of school-based procedures, not the data system.

  In District 2, schools have the option of online or paper-based administration. Schools that choose paper-based assessments can scan answer sheets on-site or can have them scanned by the district. With on-site scanning, results are available immediately within the data system; results from tests scanned by the district are posted online and available to schools within 3 days after receipt. Whether the tests are administered on paper and scanned at the school, at the district, or online, the district prefers that teachers log in to the system to access their data and take advantage of the analysis and reporting features. However, most schools choose to receive printed reports—but it takes an additional 1 to 2 weeks for schools to receive the printed reports.

  Furthermore, in District 2, the use of the data system appears to be heavily influenced by past problems with the technology infrastructure. Teachers reportedly had such a negative experience when the system was first brought into the district (i.e., frequent crashing, slow processing speeds) that, according to one district administrator, "*Many teachers*

won't give it a second chance." Despite significant usability improvements, direct system use (i.e., teachers logging on to create their own assessments, teachers taking advantage of the new reporting features) does not appear to be widespread, a situation with clear implications for the timing and use of interim assessment results.

- *The storage of longitudinal data.* To varying degrees across the four study districts, data systems store longitudinal data that allow staff to track students' progress over time. For example, in at least one district, student achievement is tracked across schools so that if a student transfers to a new school within the district, staff members have immediate access to his or her records and do not have to wait for paper copies. Some districts can also track teachers by their students' scores over time to identify instructional strengths and weaknesses. Finally, school and district trend data are available to show whether progress is being made toward identified goals.

- *The ability for teachers to create their own formative assessments.* All districts reportedly encourage the use of formative assessments that are administered on a more regular basis than the district interim assessments (i.e., weekly or biweekly). All four districts' data systems are set up to facilitate the development of these assessments. Teachers have access to item banks that are aligned to the various content areas and/or state standards. This feature allows more frequent feedback about students' progress and gives teachers additional information to help them pinpoint content areas that need more attention. Using the data system to create these assessments also gives teachers access to user-friendly reports that clearly display student results. Like the data from interim assessments, these data can be used to help inform classroom instruction.

- *The ability to monitor system use.* Some, but not all, of the districts' systems can monitor system use, although the extent to which the information is useful varies. The most common type of monitoring is tracking whether assessments have been administered. With this feature, district leaders can identify which schools have not administered their interim assessments and follow up with these schools to ensure compliance. Another available feature is the tracking of school-level staff's use of the system (i.e., logon data). In District 2, this feature is available but produces little useful information because teachers often rely on printed reports from either the district or the designated staff person whose role is to log on to access reports.

The data systems' reporting features help facilitate the review and analysis of interim assessment data. All the districts' data systems can disaggregate data into different categories. This feature provides teachers with tools (in the form of standardized or customized reports) to aid data analysis and saves time because teachers do not have to organize the data themselves. The following levels of disaggregation are consistent across districts:

- Standards and/or specific content areas
- Student groups
- Individual students
- Teachers/classrooms
- Grade level
- Individual items

In addition, the reports generated by the system are typically color-coded to further assist with data analysis. For example, different colors are used to represent each level of mastery, and a visual scan of the report can immediately indicate a problem area or identify a specific student who is struggling in multiple areas. In general, teachers across districts agreed that the reports created by their data systems are user-friendly.

Districts recognize the importance of having an efficient technology infrastructure and have worked to improve their data systems. Many changes to the technological infrastructure were based on feedback from school staff. In general, these changes were designed to make systems more user-friendly and to promote data use. For example, in District 2, which faced significant technological problems when it first adopted the data system, the system's user interface was improved and now is faster and operates with fewer glitches. In addition, new reporting features were added to facilitate data analysis. In District 3 where the system was created by the district, system managers have the flexibility to make changes and have made improvements based on perceived needs or staff requests. Here, data managers reported that they get many individual requests from staff about improvements to the system's reporting and analysis features but try to focus on improvements that will benefit the most people. In all the districts, it was reported that reports can be created automatically or with very little manipulation by the user. Districts that we studied also reported plans for continuous improvement, including integrating their data systems to allow access to all student data and a more comprehensive analysis of data.

Organizational Supports

According to district staff, all districts have adequate infrastructure in place to administer, score, and disseminate interim assessment data. However, our study hypothesizes that teachers and other school staff also need the appropriate organizational structures in place to analyze and engage in fruitful discussions about data and to respond instructionally. The expectation that data discussions will occur was reported by administrators in all districts; however, the extent to which this actually happens varies by schools within each district and is influenced by other factors, such as competing initiatives and the extent to which data-driven decision making is viewed as a priority in the school.

Data discussions generally occur during grade-level or subject-area meetings; however, there is variation in the frequency with which these discussions take place. Given that time was often cited as a common challenge to effectively working with data, having structured time set aside during which teachers could discuss data was viewed as beneficial.

Grade-level or subject-area meetings present a natural opportunity for teachers to discuss student data. Although data are not always on the agenda, many teachers reported that their schools allot specific times to focus on student assessment data. This practice varies across schools within each district.

District 1 provides an example of a district's efforts to create a more consistent process for discussing data in all schools. In some schools, conversations are ongoing and take place weekly, biweekly, or monthly. For example, one teacher in District 1 commented:

We meet as a grade level team every day so we have half an hour every day to collaborate with each other. We probably focus on data in three of the five days and that would be your [district interim assessments] or any assessments we actually have. We come together; we use inter-rater reliability; we make sure we're kind of on the same page. When we are setting interventions, it is all of our kids, so it's hard for us to actually work by ourselves because we intertwine so much.

In contrast, other teachers in this and other districts reported that they discuss interim assessment results only around the time the assessments are administered and that there are no consistent follow-up discussions. District administrators reported that in an effort to address this issue, they plan to implement professional learning communities in elementary and middle schools during the upcoming school year. One of the goals of this initiative is to encourage dialogue about data among staff and to ensure that all teachers are given the opportunity to engage in these discussions.

District 4 currently implements a common planning time as part of its data use initiative. During this time, it is expected that staff will have conversations about data. The district has created guidelines for how this time should be spent, and district administrators work directly with schools to help them use the time effectively. Teachers reported that this common planning time is useful in helping them have meaningful discussions around interim data analysis and responses to the data. In some schools, teachers are given tools that help guide their work with assessment data. For example, at one school, teachers complete a form after each meeting in which they reflect on their data. Not only do these types of tools appear to encourage more structured collaboration around data use, they also promote accountability by requiring documentation that allows school administrators to monitor whether and how teachers are engaging in data use.

Despite notable variation by school, teachers and school leaders in all four districts reported that they have seen noticeable changes in the level of sophistication with which teachers and school staff view and discuss data. Much of this change was attributed to the increased opportunities to engage in such discussions.

Buy-in from school leadership appears to be critical for creating an emphasis on the effective use of interim assessment data. A common theme among teachers who reported less emphasis on data use in their school is the lack of support from their school leaders. In these schools, teachers acknowledged that data use is not a priority. They also reported little to no organizational support for data use or consistent collaboration between teachers and school staff and few opportunities for training on data analysis or implementing instructional strategies based on data. According to one teacher in District 1:

We know that our leadership is aware of the scores but there are no conversations of school-wide initiatives. My personal planning as a teacher is for my students and my instruction and I don't share it with colleagues because we don't sit down on the same table and talk about "let's look at the entire grade level." So those conversations don't exist.

In contrast, there was evidence of strong administrative knowledge and support for data use in other schools. For example, one teacher in District 3 reported:

In our school, my administrator, my principal, is very savvy and is very assessment oriented and very data oriented. And so we actually have a room that we would call a data room, and we utilize that data for embedded [professional development] to plan strategies.

Staffing/Human Resources and Professional Development

One goal of the site visits was to document the ways that districts provide professional development to help build capacity for effective data use. In the four districts, professional development and training on using data are offered in a variety of settings, ranging from districtwide teacher/staff training that occurs before the start of the school year to sessions that target school leadership and one-on-one sessions with individuals or small groups of teachers. In general, the data-related professional development available appeared to be well received by teachers and other school staff, but in all districts, staff expressed the need for more training to build capacity for data-driven decision making. The following key themes regarding professional development emerged from interviews and focus groups with district staff.

In each district, staff at both the district and the school level are designated to support data use and to increase the district's capacity for data-driven decision making. At the forefront of these efforts are district-based content specialists[2] and school-based lead teachers and/or resource teachers. These individuals have direct and continual contact with teachers and administrators and often serve as the bridge between school and district staff. For example, in District 3, resource teachers provide embedded professional development on an informal but continuing basis. They facilitate data analysis sessions and help develop instructional responses based on the assessment results. In District 2, project facilitators are available to help schools use data more effectively. They do much of their work with schools that need improvement and tend to work more exclusively with teachers. Project facilitators work to encourage schools to use the district's data-management system by educating staff about the available features. In District 1, instructional coaches were identified as the main providers of professional development at the school level. Part of the instructional coach's responsibility is defined as helping teachers review data and develop instructional strategies. District content coaches are also available to work with teachers on data use.

Most districts implement a train-the-trainer model in which district-based staff train school leaders (i.e., principals, assistant principals, lead teachers, resource teachers, instructional coaches). Once trained, it is up to these leaders to share their knowledge with teachers and school staff through formal and informal training. For example, in District 4, content specialists are available to work directly with lead teachers and resource teachers to show them how to analyze the data and develop strategies for remediation with the expectation that they will share this information with other teachers. In District 3, lead teachers are trained by the district to facilitate trainings on scoring assessments at the school level.

This model is intended to be an efficient way to ensure that all staff get the professional development that they need, particularly in very large districts. Across districts, this model appears to work well in some schools. One teacher provided an example of how she took what

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[2] These individuals have different titles in each district (e.g., content coaches, instructional coaches), but their qualifications and responsibilities are similar.

she learned during a "data retreat" and shared the information with other teachers. The group then worked collaboratively to come up with a plan to address problem areas in her subject. In other schools, data-driven decision making is not a priority of school leadership and data use is neither supported nor encouraged. Sometimes, competing initiatives shift staff attention to other issues, leaving less time to focus on data training. In general, the effectiveness of the train-the-trainer model seems to depend on the buy-in of school leadership.

Districts provide differentiated professional development at the request of school leaders. Within districts, we ascertained great variation in schools' capacity for data-driven decision making. In response to this variation, districts have set up systems in which ongoing training and support for data use are available at the request of school leaders. This is intended to ensure that schools receive services that are tailored to meet their unique needs.

For example, in District 1, the data support team conducts the aforementioned data retreats. These retreats are half-day sessions in which accountability coordinators compile comprehensive data for a particular school and meet with the school's team to discuss how to use the data for school improvement planning. School leaders select the teams, which range from 2 to 40 people and often include school administrators, the instructional coach, content leaders, and department chairs.

Districts leaders tend to be more proactive with schools that are most in need of improvement. With these schools, certain professional development activities involving data use are mandated or "strongly suggested." In some schools where leadership is less supportive of a data-driven culture, administrators may not be aware of the school's professional needs regarding data use. These school administrators are generally less likely to seek out available professional development opportunities. Some teachers in our focus groups acknowledged that data use is not a priority at their school and that there is little support for it. For this reason, they believed, they receive little to no training on this topic.

Teachers expressed the need for more training on data analysis and specifically on using data to inform instructional practices in the classroom. Most teachers stated that their data training has focused on how to use the data system that houses the interim assessments, not on data analysis or how to use data to inform instructional practices. This training is usually part of the districtwide training that occurs before the start of the school year. In one district, teachers noted that there is too much time between their training on the data system and the administration of the first interim assessment. That is, by the time they need the information, they have forgotten most of what they had learned. Also, teachers reported that they rarely receive training on how to translate student results into changes in instructional practices. This could be one area of improvement across all four districts.

Working With Data

We also hypothesize that reviewing and analyzing data are critical in helping teachers make sense of assessment results, identify appropriate ways to use data to inform instructional practices, and ultimately improve student achievement. The following themes regarding how districts work with data emerged.

At the district level, data analysis generally focuses on identifying districtwide strengths and areas in need of improvement. These include analyses by grade level, content area, and school. The following example illustrates how this process occurred in one of the districts.

In District 2, data coordinators examine data by using a research-based diagnostic tool to determine where breakdowns in learning have occurred. For example, by looking at the percentages of students or classrooms that perform poorly on a particular standard, they can determine whether the problem involves the curriculum or the content or whether there is an issue with instructional delivery. Armed with this information, they are better able to identify professional development needs.

The review and analysis of data occur through collaborations between district administrators and school staff and are ways that districts leaders demonstrate support and promote a data-driven culture. Although there was variation in the nature of these collaborations, they occurred in each of the four districts on a fairly regular basis.

For example, in District 2, district-based staff called academic managers, are responsible for a specific geographic area in the district. They work directly with school administrators in their region to examine data and identify strategies for inclusion in the school improvement plan. These sessions may also include a review of the data to assess whether specific strategies outlined in the previous plan were effective.

In District 4, the accountability model involves meetings between the district's central office staff and school leaders. In these meetings, staff focus on the review and analysis of data from interim as well as other assessments, in conjunction with descriptive data (e.g., student and teacher absenteeism, the number of qualified teachers), to identify schools' strengths and weaknesses. This process also involves gathering classroom observation data, which are used to provide feedback to teachers. Using school data, the teams develop a plan of action for improvement. The amount of time that the district team spends working in a school (e.g., providing professional development, following up with staff on the implementation of strategies) depends in part on the school's adequate yearly progress (AYP) status. Most schools are visited monthly, but struggling schools receive more frequent (biweekly) visits and more intensive intervention and monitoring. In some cases, districts drill down in the data to the level of individual teachers and students. For example, it was reported that student scores of teachers within a school may be examined longitudinally to identify whether consistent patterns are present that could signal a need for targeted professional development.

In District 1, district accountability coordinators serve as the data-support team for principals, school leadership councils, and instructional coaches. The accountability coordinators hold data retreats, described under Organizational Supports. The data retreats provide a forum in which the accountability coordinators and teams of school administrators, the instructional coach, content leaders, and department chairs meet for an in-depth analysis and discussion of how to use the data for school improvement planning. Although participation in data retreats is not mandated across the district, struggling schools are required (or "strongly suggested") to attend. Interviewees at both the district and school levels viewed the retreats as a positive experience.

Collaborations between school-based staff around the review and analysis of data are important in guiding how teachers view and discuss data and seem to facilitate discussion about how to use this information to inform instruction. As noted under Organizational Supports, schools across districts hold grade-level or subject-area meetings that sometimes include discussions about data. During these meetings, teachers, instructional leaders, and principals discuss data in an effort to understand the areas in which they need to focus to help move students forward.

The various reports obtained from the data system serve as the first step in the data-analysis process. Reports that seem to be most helpful are those that clearly group and highlight key information such as which students are performing below mastery levels, which content areas or standards require additional attention, and which test items are the most problematic for students. With these types of reports, teachers can immediately identify students in need of interventions and specific skills areas that need additional focus. According to one teacher from District 1:

> *We have data dialogues twice a month and in those data dialogues we have decided as a team what areas to focus on and once we feel that the students have shown that they are proficient for all teachers because we're there by grade level and not necessarily by department, then we move on to a different area that has been identified as a need for all of our students.*

Yet for data to be used effectively, we hypothesize that teachers need to go beyond diagnosing problem areas and identify ways to address the problem areas in the classroom. Thus, an important part of the data discussions involves sharing ideas about instructional practices. The extent to which this occurs across the four districts is not completely clear from our site visit data. However, there is evidence that these discussion are occurring. For example, one teacher in District 2 described how this type of discussion played out in her school:

> *The conversations were around what are you doing in your class that I'm not doing in my class that maybe we could share with one another? And then we would drill down even deeper to the student level. Specifically, let's look at your own class and within that class, what are the standards that students are meeting, what are the standards that are being exceeded and then what are those that we really need to reteach? And the neat thing about that is that it has led its way into the RTI process of the school. So I would say that the data became very, very integral in planning and basically just knowing where students were.*

School-based collaborations clearly do not exist in all schools within a district. Each district has teachers who reported little to no discussions about data and what to do in response to observed patterns in the data. As a result, these teachers either review their classroom data independently or do not focus on data at all.

Item analysis has become a common analytic strategy used across districts. Reviewing student performance on individual items was often cited as an analytic strategy that staff use to make sense of their data. Staff in most districts reported receiving professional development on this topic. In some schools, item analysis is reportedly used to move beyond the question of *what* items students missed and to explore potential reasons *why* students scored poorly on certain

items. Sometimes the focus is on the content addressed by the question (Did I teach this?) or the language/wording and vocabulary (Did my students understand this question?). In most cases, the specific reports created by the data system facilitate these analyses by providing teachers with a graphic depiction of the items that students struggled with the most.

Instructional Responses

We hypothesize that the interim assessment process cannot have a positive impact on student achievement unless instructional changes are made in response to the data. The site visit data indicated that data-based decisions occur to varying degrees at the classroom, school, and district levels. Classroom-level instructional responses describe changes that teachers make as a direct response to the information generated from interim assessment data. School-based decisions describe practices that reflect how individual schools respond to their data and may include incorporating interim assessment data into school improvement planning initiatives or other school-based initiatives. Finally, district-level decisions refer to districtwide changes that are based on interim assessment data, such as adopting new curricula or offering districtwide professional development. In the next sections, we report cross-district themes regarding the types of instructional responses that emerged at the classroom, school, and district levels.

Classroom- or Teacher-Level Instructional Responses

Teachers implement a number of different instructional strategies in response to interim assessments. Common strategies included reviewing/reteaching course material, using differentiated instruction, and adjusting student groupings. Classroom-level responses to interim assessment data are reported in all four districts; however, the nature and extent to which teachers implement these strategies vary. In District 4, staff often referred to the process by which they respond to student academic needs that emerged in the data as "remediation." The primary remediation strategies mentioned are differentiating instruction and reviewing and reteaching problematic content. Other common instructional practices that teachers use based on the interim assessment results are changing student ability groups (both mixed-ability and same-ability groupings), identifying students for pull-out tutoring (more common in Title I schools), and sharing results with students. All strategies are employed with an end goal of improving student knowledge in specific content areas and increasing student performance on state assessments.

- *Differentiated Instruction.* Approaches to differentiated instruction vary, although a common aim is to identify students for more targeted instructional interventions within the context of either a classroom or a school. Teachers discussed differentiating instruction in different ways, including in the classroom during large-group instruction by asking specific questions of individual students, during small-group instruction, and in one-on-one settings. In District 4, for example, differentiated instruction involves creating tiers on the basis of specific student need. In other districts, differentiating instruction occurs through the regrouping of students within the classroom. Although many teachers in all four districts reported specific strategies for differentiating instruction, a number of teachers had difficulty articulating exactly *how* they implement this instructional strategy.

- *Reviewing/Reteaching*. We found that all four districts use reteaching as a way of providing instructional supports to students—that is, covering a topic area again for the

entire class or those who need it. Teachers have to find creative ways to integrate this material into their lessons. For example, some teachers incorporate review topics into student warm-ups or morning exercises as a way to reinforce those concepts (i.e., District 1). Others incorporate the content into homework exercises. Additional strategies include using reteaching during regular classroom instruction time as an opportunity to address the reasons students may have missed certain items on the assessment.

In some cases when a lesson needs to be retaught, teachers reported calling in a different teacher to reteach that content, which they referred to as "class swapping." In District 2, teachers described a process in which grade-level teams switch classrooms depending on the teacher's strengths or weaknesses. For example, if Ms. Moore's students all passed the "topic sentence" item on the interim assessment but Mr. Frank's students all scored lower, Ms. Moore would teach Mr. Frank's class her lesson on identifying a topic sentence. This class swapping does not occur in every school in District 2, but rather in a few where there appeared to be high levels of teacher collaboration and trust among staff.

- *Student Groupings.* Grouping or regrouping is also used as a form of instructional supports for students. For example, teachers in District 3 create specific student focus groups with students who missed certain questions on the interim assessments and provide small-group instruction that is based on student needs identified from the assessment results. Districts 2 and 4 reported grouping students into both same- and mixed-ability small groups for remediation. Groupings are also adjusted for students who outperform their peers on interim assessments. For example, in District 4, teachers reported forming intervention groups to provide enrichment to these students.

- *Identifying Students for Tutoring*. Most of the districts also provide remediation in the form of tutoring through a referral system. Staff work one-on-one with individual students or in small groups, and tutoring sessions are conducted before, after, and during the school day, depending on district policies. Pull-out tutoring occurs but is reportedly more common in schools with supplemental Title I funding, where there are designated Title I staff who can work one-on-one with students who performed poorly on the interim assessments. However, not all schools within a district have this staff and therefore the availability of tutoring depends on school-level capacity. Some districts hire additional staff to help teachers use this instructional response. For example, District 1 hires expert teachers to travel from school to school to work directly with students who performed poorly on interim assessments.

- *Sharing Results with Students.* This practice was reported in all the districts and is done primarily to increase student engagement and motivation by allowing students to become active agents in their own learning. This is often done on a one-on-one basis when teachers share the correct answers with students who may have missed items on the interim assessments. Assessment results are also used to help students set goals. However, in some schools, results are shared with students through data walls or data boards, where students' scores are posted publically. In District 3, one teacher described how they involved students in this process:

We actually have what we call data folders for the kids where they're responsible for their own—for recording their information from each [interim assessment] in areas of reading, math, social studies, and science. So they keep just a little manila folder, and they track themselves. So it gives them a visual, helps them stay accountable.

Time was cited as one of the most important barriers to effective data use. Across all four districts, teachers reported that they do not have enough time to analyze assessment data, develop instructional strategies, and implement these strategies in the classroom. One teacher noted:

… I mean I feel like I'm so overwhelmed with everything else …. So I do put the grades on there and I do look at it and my intention is to go back and reteach or re-touch on this but with pull-out field trips and everything else, it's like I got to keep it moving. So I don't really have the time that I would need to go back and do that but that's my intention.

Perceived pressure to keep up with district pacing guides seemed to contribute to this problem. Teachers reported that they often struggle to find the balance between finding time to reteach or integrate specific content areas that students did not understand into their lessons while continuing to adhere to the pacing guide. Although some teachers reported that they do have some time built in to review and reteach, this was not the norm. Teachers also noted that taking the time to review problem areas has implications for how students perform on the next interim assessment. Specifically, when teachers spend time covering old material, they are not focusing on the content that will be covered in the next interim assessment. Thus, the next round of assessment results could reflect the fact that the material has not been covered rather than actual student knowledge.

School-Level Data-Driven Decision Making

Schools use interim assessment data to develop and evaluate their school improvement plans. Each district has schools that use interim assessment data to help drive their school improvement processes. This is often done in collaboration with district administrators who help monitor progress toward the goals that are explicitly outlined in these plans. For example, in District 2, area academic managers meet with principals to discuss the fidelity with which they address their school improvement plan, examine data to determine whether progress has been made, and use data to identify areas that still need improvement. Principals are expected to discuss how their initiatives align with the data as they prepare to develop these plans.

School administrators also reported using interim assessment data to explore how their students are performing in relation to students in other district schools. They then include specific strategies, based on those results, in their yearly school-improvement plans (e.g., targeting school-level professional development, adopting schoolwide initiatives in a content area, providing supplemental lesson planning materials for content areas in which students need additional support).

District-Level Data-Based Decision Making

Our site visits also sought information about how districts use interim assessment data to make decisions. The following describes common themes regarding district-level responses to data in the study districts.

All districts reported using interim assessment data to identify professional development needs. Providing targeted professional development is a common response by districts to their interim assessment results. In District 2, for example, assessment results are used to highlight teacher strengths and weaknesses, which are then incorporated into the district's professional development planning for the school year. In District 2, one teacher stated that "*everything we do with professional development stems from data.*" Similarly, in District 1, administrators use interim assessment results to identify professional development needs, develop targeted training for teachers, and identify areas to include in teachers' individual career professional development plans.

Like those in Districts 1 and 2, administrators in District 3 use interim assessment data to target professional development for teachers. In District 3, however, the professional development sessions typically involve one-on-one or grade-level meetings between teachers and district-level data specialists. In this effort, district specialists provide guidance to school-based administrators or lead teachers who in turn use this guidance to help teachers improve instructional practices. In these sessions teachers are offered professional development on core content strands tested in the interim assessments.

In District 4, we found that the data use–related professional development offers concrete instructional response training that is based on interim assessment results. The mechanism for these sessions involves a district-level instructional coach meeting one-on-one with teachers to provide tailored support to help teachers translate interim assessment results into teaching strategies. Often instructional coaches will model effective teaching strategies in teachers' classrooms, meet one-on-one with teachers to review results, and help teachers design new lesson plans to reteach problematic material in a new way.

Districts use interim assessment data to evaluate districtwide initiatives and take action on the basis of these evaluations. The districts we visited are all implementing a number of initiatives aimed at improving student achievement (e.g., RTI, reading programs). Given that interim assessments, for the most part, are administered districtwide, they can serve as a useful tool for measuring progress. In District 1, an administrator reported that interim assessment results are used to help evaluate a new districtwide initiative designed to improve students' reading of informational texts. As another example, an administrator in District 2 reported that the results of the interim assessments revealed that schools using a particular curriculum performed better on these assessments than other schools. As a result, the district made that particular curriculum more widely available.

Summary

The findings from these four district site visits reveal that each district has a number of structures in place that are designed to promote a data-driven culture and support the use of interim assessment data. Evidence of the emerging data culture in these districts extends beyond the use

of student data to drive instructional practices in the classroom and includes the district's use of data to make programmatic changes and to identify staff professional development needs.

Although we present themes that are common across all or most districts, it is important to note that each practice mentioned above varies between and within districts. The unique cultures of individual schools, along with gaps in communication, may present some challenges for promoting a consistent approach to data-driven practices, particularly in districts where site-based decision making gives schools a significant amount of autonomy regarding decisions that have a direct impact on data use.

Despite these challenges, districts continue to demonstrate the importance of using data by allocating resources to assist schools, making staff available to respond to data-related requests, and making sure that data are an integral part of school improvement efforts.

In general, buy-in appears to be improving as districts continue to refine their policies and procedures and as teachers and school administrators continue to engage in meaningful dialogue about data. More importantly, most staff appear committed to doing what it takes to improve student achievement.

Conclusions and Recommendations

This study began with a scan of 67 urban districts regarding data use practices and interim assessment initiatives. We followed this scan with a set of deep dives into four example districts selected not because they are exemplary or different from other districts, but because they have demonstrated a consistent commitment to data use that may be representative of many other districts around the country.

From the district survey, we learned that most urban districts are implementing districtwide interim assessments as a way to gauge student progress at regular intervals in a consistent way throughout the school year. Technological infrastructure, including longitudinal data systems, are in place and continually improving across districts, providing the means for teachers, principals, and other staff to access results and manipulate data in real time. Using data to inform decisions is a stated priority by urban districts around the nation.

From a more in-depth study of four districts, we learned that the ways these priorities are communicated varies and that, at the school level, different data cultures and perceptions about the importance of data exist among both school leaders and classroom teachers. These differences seem to influence the extent to which teachers and principals actually make use of interim assessment data. Nevertheless, many promising practices related to collaborating around data review and analysis, discussing instructional responses, and providing targeted professional development were noted in all districts.

In sum, the district surveys and site visits revealed a number of key findings of potential interest to urban districts as they move forward with their own interim assessment strategies. From these key findings, we provide a preliminary set of recommendations:

- **Improve communication with school-level staff by clearly articulating the goals of the interim assessment strategy.** In our site visits, there was an apparent disconnect

between district administrators and teachers regarding perceptions of the interim assessments and how they are to be used. This appeared to stem, in part, from a lack of clarity regarding the usefulness of the interim assessments. Setting clear goals and identifying a concrete method for disseminating this information to all staff may lead to a greater understanding of the rationale behind this initiative, increased buy-in, and more consistent implementation across schools.

- **Continue to work to garner support from principals and other school leaders.** Support for using data among school leaders appears to be critical to achieving buy-in from teachers. Our site visits revealed that school leaders set the tone for how staff perceive the importance of using data and the role that data can play in improving instructional practices. As districts continue to work to build a data-driven culture, gaining or maintaining the support of principals and other school administrators should be at the forefront of their efforts. The process of building support must be continual and ongoing, not something done once when interim assessments are first introduced.

- **Allow enough time to gauge the effectiveness of interim assessment strategies.** Buy-in is increasing at all levels (district staff, principals, teachers) as districts work out the kinks in their approach to using data to inform instruction. However, this process may take years before there are high levels of consistent, meaningful data use at the school level. Districts should not abandon their interim assessment strategies before they have had a chance to take root within schools. Instead, they should engage in an ongoing evaluation of whether implementation of the interim assessment strategy appears to yield improvements in student achievement over time.

- **Report interim assessment results as quickly as possible, and increase teacher access to varied forms and levels of data.** For teachers to make the best use of the data, they must have access to assessment results in a reasonable amount of time. Our preliminary results suggest that the larger the time lapse is between administration of the assessment and teacher access to the results, the less teachers focus on and use the data. When teachers have immediate access to assessment results, they can address issues such as student misunderstandings of concepts before they have moved too far along in the curriculum. Also, providing teachers with access to various forms of data may facilitate their analysis and potentially lead to better use of assessment results in the classroom.

- **Provide structured time for teachers to review data and consider how the results should inform their instruction**. Setting aside time for discussions about data is one way in which districts and schools can demonstrate their support and commitment for a data-driven culture. When used in ways that seemed appropriate to teachers and principals and accompanied by sufficient guidance and oversight by the district, this time was reportedly useful for teachers and school staff. Having structured time helps create a collegial environment where teachers are comfortable sharing student data and discussing instructional strategies. This time can also provide a forum for informal professional development (e.g., modeling data analysis and data use strategies).

- **Increase opportunities for professional development on how to use student achievement data to inform instructional decisions.** The success of any interim

assessment initiative rests on the capacity of teachers to implement effective instructional strategies based on the knowledge gleaned from the data. While examples of this were found in all districts, it is clear that this is an area of growth and that more training is needed to fully support these efforts.

In closing, we emphasize that the goal of this report is to describe the current challenges and promising practices in interim assessment use in urban districts, as reported by district leaders in 62 districts and as observed in four case study sites. As such, this report does not identify which of these practices are most likely to be effective for improving student outcomes. Illuminating those "best practices" is a primary goal of this research project, however, and in future reports we will address this issue by using statistical models to analyze the relationships among data use practices and student achievement in reading and mathematics.