CPRE

Evaluation of the GE Foundation-Supported Demonstration Schools Initiative in Milwaukee Public Schools, SY 2012-2013

WORKING PAPER

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GE Foundation

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Executive Summary

This evaluation report summarizes the evidence of the implementation and early impacts of the GE Foundation (GEF) Demonstration Schools Initiative in the Milwaukee Public School district (MPS) conducted by the Consortium for Policy Research in Education (CPRE) during the 2012-2013 school year. The Demonstration Schools Initiative provided intensive support to 10 MPS elementary and middle schools implementing the Common Core State Standards (CCSS) in mathematics and English language arts. This evaluation was designed to answer two overarching questions:

1. How did MPS implement the Demonstration Schools Initiative in Year One, and what factors shaped implementation?
    a. What were the perceptions of coaches, teachers, and principals regarding the implementation?
2. Is there evidence of teachers' adoption of the instructional shifts associated with the CCSS?

As designed, the GEF Demonstration Schools Initiative establishes instructional coaches as key agents of change. Their function is to target and customize the support needed at the building, grade, and teacher levels to shift teachers' understanding and practice to align to the CCSS. The principals' role is to protect and support the work that coaches are leading in their buildings. They can coordinate and deploy resources by calibrating existing school processes, structures, and expectations to support CCSS work. In concert, the effort of principals and coaches should result in teacher-level changes in professional interaction and instructional practice that improves student learning. Additionally, as part of their participation in the program, Demonstration Schools have the expectation to maintain an "open door" policy for other MPS school staff, district staff, board members, and community members to visit and learn about the work happening there. In this way, the schools serve as models for other district schools embarking on CCSS implementation.

The findings presented in this report are based on data from school stakeholders: principals, coaches, and teachers. For this initiative, coaches focused much of their one-on-one time with a key set of teachers, which CPRE termed Common Core Fellows (CC Fellows) in this report. Researchers interviewed a total of 10 principals, 22 coaches, and 22 CC Fellow teachers; many were interviewed more than once. Pre and post-surveys were sent to all principals, coaches, and teachers at the Demonstration Schools; surveys were also sent to all the teachers in 14 comparison schools not receiving GEF support. Finally, CPRE developed an online coaching log that coaches used to record their daily activities.

The findings presented in this report include: an overview of coaching activity; impacts on CCSS knowledge and practice; coach-teacher relationships; factors that influence coach role and

responsibility; factors that influence overall implementation, and culturally responsive coaching and teaching. This executive summary focuses on some of the broad findings in the full report.

This evaluation found that teachers in the Demonstration Schools ended the 2012-2013 school year with significantly higher CCSS knowledge in both ELA and mathematics than did teachers in the comparison schools, even after adjusting for fall 2012 knowledge. Additionally, within Demonstration Schools, even after adjusting for prior knowledge, CC Fellows had greater CCSS knowledge than the other teachers in the Demonstration Schools. Furthermore, these other Demonstration School teachers had more knowledge than teachers in the comparison schools.

There is also evidence this knowledge has been translated into changes in teacher classroom practices. Especially with CC Fellows, teachers and coaches reported that they are changing their curriculum and instructional practices to align with the CCSS. Such changes included incorporating more informational texts, familiarizing themselves with the standards, and greater discretion in choosing curricular resources when planning lessons. Amidst this overall pattern of change, there were also reports of teachers and administrators who were more resistant to change. Several coaches reported that they will be incorporating more teacher and administrator buy-in as one of the goals for the upcoming year. Another challenge is that the misalignment between the MPS curriculum and pacing guides, and the CCSS required heavy lifting for teachers and coaches who found themselves having to locate and create curriculum and instructional resources to build aligned lessons.

The Demonstration Schools coaches were instrumental in facilitating changes in the 10 Demonstration Schools. CPRE researchers found that the 22 coaches were essential CCSS advocates and resources in their schools. Overall, most teachers found their respective coaches to be accessible, approachable and dependable. Most respondents surveyed found coaches' feedback and the resources that they provided to be helpful. Still, coaches desired more time working with teachers in their classrooms. Principals can help by protecting coaches' one-on-one time with teachers and by participating in school-wide professional development (PD) sessions.

Overall, principals, teachers, and coaches valued the grade-level teacher team meetings afforded by GEF support. Teachers and coaches used the time to develop lesson plans, expand their understanding of the CCSS, and learn from one another. Across the board, participants noted they would appreciate more time collaborating with one another and developing their curriculum. Teachers would also like to spend more time in meetings on concrete activities like developing lesson plans and looking at student work in depth.

Coaches reported that the PD provided to them from the MPS-GE Foundation grant office developed their understanding of the CCSS more deeply. Perhaps more highly regarded was the opportunity the weekly meetings provided to collaborate with one another to share knowledge, implementation strategies, resources, and emotional support. Furthermore, coaches reported learning and collaborating with coaches across subjects, especially with their coaching partners

in each school. Looking to next year, coaches hoped for PD that would deepen their facility with the CCSS even further to better serve their schools. They were also concerned about challenges resulting from coach turnover: one coach left, three coaches retired, and one coach was promoted.

Overall, the data presented in this report shows that the first year (SY 2012-2013) of the MPS Demonstration Schools Initiative has been successful in many critical ways (e.g., secure coach-teacher relationships, teachers' increased use of the CCSS). MPS Demonstration Schools, with their respective administration, coaches and teachers, have accomplished much. Further, there is more work to do within the 10 schools. If MPS is to continue or expand the Demonstration Schools Initiative, there are still important steps the district and schools must take to maintain the progress and momentum from this year and strengthen the initiative moving forward. The findings in this report have implications for MPS Demonstration Schools, the district as a whole, and districts nationwide as they develop structures, systems, and habits of interaction that make CCSS implementation standard practice among educators.

Introduction

In the fall of 2012, Milwaukee Public Schools (MPS) implemented the Demonstration Schools Initiatives program—an initiative funded by the GE Foundation (GEF) *Developing Futures* program that provided intensive support to 10 MPS K-5 and K-8 schools implementing the Common Core State Standards (CCSS) in mathematics and English language arts (ELA). The Foundation provided funds primarily for the following interventions for each school:

- » 1 full-time mathematics instructional coach
- » 1 full-time literacy instructional coach
- » Time for teacher collaboration during the school day
- » Substitute teachers to facilitate teacher team meetings
- » 2 hours/month for after school PD provided by coaches
- » 2-4 hours/month of PD for principals
- » 1 part-time Parent Engagement leader (hired in spring 2013)

In addition, two culturally responsive teaching coaches served all 10 schools, providing school-level and individual support on culturally relevant, standards-based teaching. As part of the program, all Demonstration Schools coaches participated in weekly PD and planning meetings led by MPS-GEF program managers. MPS implemented the Demonstration Schools Initiative this year (SY2012-2013) with intention to determine how the model can either be continued in current schools and/or scaled up in other schools.

In this Demonstration Schools model, instructional coaches are key agents of change. Their function is to target and customize the support needed at the building, grade, and teacher levels to shift teachers' understanding and practice to align to the CCSS. For this initiative, coaches focused much of their one-on-one time with a key set of teachers, termed Common Core Fellows (CC Fellows) in this report. The principals' role is to protect and support the work that coaches are driving in their buildings. They can coordinate and deploy resources by calibrating existing school processes, structures, and expectations to support CCSS work. In concert, the effort of principals and coaches should result in teacher-level changes in professional interaction and instructional practice that improves student learning. Additionally, as part of their participation in the program, Demonstration Schools have the expectation to maintain an "open door" policy for other MPS school staff, district staff, board members, and community members to visit and learn about the work happening there. In this way, the schools serve as models for other district schools as they embark on CCSS implementation in service of change beyond the Demonstration Schools.

This report summarizes findings from the evaluation of the Demonstration Schools Initiative in MPS conducted by the Consortium for Policy Research in Education (CPRE) during the inaugural year of the Demonstration Schools Initiative (SY 2012-2013). Findings are based on multiple, comprehensive data collection efforts conducted over the course of the year. The research design and methods used in the evaluation are explained in detail below, followed by key findings and recommendations for future implementation.

Research Design

The success of the Demonstration Schools Initiative to improve student learning hinges on the work done by coaches and teachers, and the factors that exist to help facilitate their work. The evaluation of MPS is therefore designed to answer the two overarching questions:

1. How did MPS implement the Demonstration Schools Initiative in Year One, and what factors shaped implementation?
   a. What were the perceptions of coaches, teachers, and principals regarding the implementation?
2. Is there evidence of teachers' adoption of the instructional shifts associated with the CCSS?

The first question included investigating (among other things) how coaches allocated their time in schools, the nature of interaction between teachers and coaches, and which coaching strategies seemed to be effective. Since the initiative hinges on the work done by coaches and teachers and the factors that facilitate or hinder their work, the perception of principals, coaches, and teachers are central to the evaluation design. The second question includes gathering data about teachers' knowledge of CCSS, and how teachers and coaches described changes in practice. To answer these questions, CPRE used multiple data collection methods involving MPS teachers, instructional coaches, and principals.

Data Collection

The findings presented in this report are based upon analysis of survey responses, qualitative interview data, and coach log entries. For an overview of data collection for the 2012-2013 school year, see Table 1.

Surveys

In the fall, a total of 42 MPS schools received an invitation to apply to be one of the 10 Demonstration schools for the SY2012-13. MPS determined the list of eligible schools by: 2012 DPI List of Focus Schools, Wisconsin Knowledge and Concepts Examinations (WKCE) scores, and Measures of Academic Progress® (MAP) scores. In order to apply, schools needed support of 75% of faculty and staff. A total of 30 schools applied, and various stakeholders convened to determine which schools would receive the initiative. Stakeholders used weighted scores based on school culture, potential for collaboration, PD readiness, grant alignment, and overall observations. Using the overall scores, stakeholders ranked schools as high, middle, and low and chose the top schools in each category. Those schools became the 10 Demonstration Schools. From the 20 schools that were not chosen for the initiative, CPRE used the weighted scores, as well as WKCE scores, to find the 14 comparison schools used in this study.

Web-based surveys were administered to all faculty members in both the demonstration Schools and the comparison schools in both the fall of 2012 (pre-survey) and spring of 2013 (post-survey). The surveys asked about beliefs about the CCSS, teachers' preparation to implement the CCSS, CCSS-aligned practices, and coaching support. The survey also included a section of factual questions about both mathematics and English language arts standards (ELA), which were used to assess teachers' knowledge of the CCSS. In fall 2012, 683 school teachers and coaches were administered surveys, and 549 completed them, for an 80% response rate. For the follow-up survey, the response rate was 62%.

Table 1: Overall Data Collection for SY 2012-2013

Participant	Data collection	Month
Teachers – Demonstration Schools	Baseline and follow-up surveys	Oct. and May
	Interviews (2)	Feb. and April
Teachers – comparison group (non-Demonstration Schools)	Baseline and follow-up surveys	Oct. and May
Coaches – Demonstration Schools	Baseline and follow-up surveys	Oct. and May
	Interviews (3)	Oct., Feb., April
	Coach log	Oct.-June
Principals – Demonstration Schools	Survey	June
	Interviews	Oct.

Interviews

CPRE conducted in-depth interviews with Demonstration Schools staff including 22 coaches, 22 teachers, and 10 principals throughout the 2012-13 school year (three site visits and several phone interviews). For a total of interviews conducted, see Table 2. Interviews with coaches and principals in the fall focused on obtaining a general understanding of the GE Demonstration Schools Initiative, the different school contexts, and the initial experiences of principals and coaches with the program. A second round of interviews with coaches in the spring of 2013 focused on progress made, coach-teacher relationships, and supports and challenges to the coaching process.

CPRE also chose four of the Demonstration Schools to serve as more in-depth case studies of the GEF initiative. All four schools were deemed "average" by the district based on standardized test scores and had similar percentages of students on free or reduced lunch (85%-98%). Schools

varied in student enrollment. Researchers chose two large schools (20 teachers or more) and two small schools (19 teachers or fewer).

Table 2. Number of Interviews Conducted for each Type of Respondent

	Fall 2012	Early Spring 2013	Late Spring 2013	Total
Principals	10	-	-	10
All Coaches	22	22	-	44
Focus Coaches	-	-	9	9
CC Fellows	-	21	22	43
Total	32	43	31	106

At these focus schools, researchers conducted an additional round of interviews with coaches (n=8) in late spring that further explored the relationships between coaches, teachers, and school context. CPRE also conducted two rounds (February and April 2013) of interviews with a sample of teachers at these four schools. Each of the eight coaches recommended two to four teachers who received more intensive one-on-one coaching support than other faculty at those schools–their CC Fellows. These 22 CC Fellows worked predominantly with one coach (math or ELA), but also continued to work with the second coach. Researchers focused on these teachers because they would have the most exposure and experience regarding the coaching process, compared to teachers who worked with coaches on a more limited basis. These teachers also experienced the PD (whole school PD and coaching during teacher team meetings) provided to all teachers. Interviews with CC Fellow teachers explored their experiences in implementing the CCSS with their students and working with their coaches. Topics included instructional goals, classroom dynamics, specific coaching practices, and collaboration.

Coach Logs

CPRE developed a web-based log tool for Demonstration School coaches to track daily coaching activities. Each coach's log was password protected, stored on a secure server, and accessible only to individual coaches and researchers to maintain trust and confidentiality. Additionally, coaches expressed a desire to have a repository where they could monitor their activities and progress and download their own coaching data, which this application allowed. Coaches were encouraged to enter their activities daily. The log prompted coaches to choose activities from a drop-down list of 17 options (see Table 3). It is important to note that these activities were developed by CPRE in collaboration with the coaches to ensure their relevance and secure a

shared understanding of categories for consistency of data. Following the entry of each activity were prompts for more information about that activity including the duration of the activity, the teachers they worked with (when applicable), the objective of the activity, and voluntary open-ended sections for coaches to track purpose, progress, goals, and notes.

Table 3: List of Activities in Coach Log

Direct coaching activities
Modeled a lesson in a classroom
Observed a teacher
Co-planned (one-on-one): for a particular classroom
Co-taught a lesson
Coaching discussion or provided feedback to teacher (one-on-one)
Group coaching activities
Worked with a teacher team
Provided PD session: to school or large group of faculty
Substituted in a classroom so a teacher could observe a colleague in another classroom
Other activities
Prepared for coaching or prepared to provide PD
Gathered resources for teachers (e.g., lessons, instructional materials)
Performed administrative tasks for coaching (scheduling, paperwork, email, calendars, CPRE log)
Data collection, preparation, analysis, and/or reporting
Attended leadership, strategy or planning meetings (with learning teams, principals, other coaches, external partners, union, central office staff)
Knowledge-building (professional learning for self)
Parent engagement: planning or providing information for parent engagement activities
Other: coaching activity
Other: non-coaching activity (recess duty, non-coach substitute teaching, school assembly)

Data Analysis

Surveys

In this report CPRE used the survey data to address two questions. First, did teachers in the Demonstration Schools have more knowledge of the CCSS as a result of their participation in the GEF-supported initiative, relative to that of teachers in the comparison schools? Second, were the impacts of the initiative even greater for teachers who were the focus of the GEF- sponsored initiative?

To address these questions, CPRE asked teachers on the pre-survey seven CCSS content knowledge questions in ELA and three in mathematics. On post-survey CPRE asked teachers eight CCSS content questions in ELA and seven in mathematics. The content knowledge questions included an array of easy, moderate, and hard close-ended questions about details of the standards appropriate for each teacher's grade level. An example of a grade-level appropriate ELA question was: Approximately what proportion of student reading at your grade level should be informational text? An example of a grade-level appropriate mathematics question was: Which of the standards below should be a major focus of instructional time?

Interviews

All interviews were transcribed and analyzed thematically. For this study, analysis occurred in waves between the three data collection points throughout the school year. First, researchers inductively created memos from the fall 2012 interviews with principals and coaches to determine emerging themes that would inform further interview protocols and analysis. After interviewing coaches and teachers in subsequent site visits, researchers coded the transcripts, attaching specific themes to corresponding sections in the transcripts. This process allowed researchers to retrieve data on specific topics from across groups or subgroups as needed.

Because of the evaluation's focus on how the relationship between teachers and coaches mediates classroom implementation of the CCSS, the research team used data collected in the fall combined with existing empirical literature on instructional coaching to construct indicators of effective coach-teacher relationships (see Table 4). For each of the 22 CC Fellow teachers interviewed from the four focus Demonstration Schools, researchers used these indicators to construct a profile of the teacher's relationship with their primary coach. Each of the 22 dyadic indicator-based profiles is constructed from an analysis of both teacher and coach interview data. Each indicator is explained more fully in its corresponding section of the findings section of this report.

Finally, researchers coded transcripts from the last round of interviews and integrated the data into each dyad profile. Researchers then organized the profiles on a continuum of challenging to successful coaching relationships, examining commonalities and differences among the profiles.

Table 4. Indicators for Effective Instructional Coaching

Construct	Indicator
Adaptive coaching	Coach identifies needs of teacher. Coach utilizes a variety of strategies/activities to address needs/goals. Coach uses cues from teachers to determine coaching approach.
Coaching for specific content	Coaches focus coaching on specific standards or content. Coaches use student work to ground discussions/learning.
Consulting with teachers	Coach provides teacher with clear direction. Coach focuses feedback on evidence (data, observations, student work), not interpretation. Coach validates teacher attempts at change/new practices. Coach provides opportunities for teachers to reflect on their practice and encourage a problem-solving stance. Coach listens to teacher carefully (i.e., does not "know it all" or "lecture").
Trust/relationship building	Teacher has confidence in the coach. Coach maintains trust in terms of evaluative versus peer roles, confidentiality, and safe emotional space. Coach is accessible. Coach is dependable/follows through. Coach is positive/enthusiastic. Coach is responsive to teacher requests. Coach is approachable.
Shared understanding	Teacher and coach share an understanding, priorities, or goals for the CCSS work to be done.
Building teacher/school capacity	Coach works on developing teacher autonomy and leadership building.
Leveraging teacher teams throughout school/grade level	Coach has a format for teacher meetings. Coach has goals or foci for teacher meetings.

Coach Logs

Coach log data were first examined to determine the quality of the information. Of specific concern was the representativeness of the entries and how reliably they could be interpreted, since the accuracy of the data depends completely upon how consistently and accurately coaches entered their activities. Researchers next looked at the distribution and duration of the different types of activities using multiple filters including individual coaches, type of coach (ELA, mathematics, and culturally responsive teaching, or CRT), school-level coaching.

To uncover potential unevenness of reporting by coaches, researchers examined the distribution of reporting within individual coaches, across coaches, across schools, between ELA and mathematics coaches, and over time. The total number of activity "events" reported was 9,873. The total number of hours of activities reported was about 13,111. On average, each coach's reported activity events comprised 4.3% of all activities reported, with most coaches (17) falling between 3-5% (range=2-10% after accounting for one coach who left mid-year, and the coach who replaced her). Similarly, each coach reported an average of 570 hours of activities, which is 4.4% of the total hours reported. Overall, ELA and mathematics coaches reported at similar rates. Thus, it appears that no single coach's data significantly skews analysis of the whole set.

Limitations of This Evaluation

While this report is based on an extensive amount of in-depth data collection over the course of nine months, and includes data from numerous sources and respondents, one limitation of this evaluation is that all data are self-reported. The opinions and perceptions of participants influence their behaviors, as well as give us insight into their particular experience of the Demonstration Schools Initiative, thus the data are still valid and useful. However, having more observational data would have been ideal for comparison and validation purposes.

When using coach log data, caution is warranted. The logs are self-reported by coaches and coaches submitted logs with varying degrees of specificity. For example, approximately 10% of the activities entered did not have a corresponding duration entered with them. So while these activities are included in analyses of counts of activity events, they do not show up in analyses involving hours spent on certain activities. However, in conjunction with interview and survey data, the daily information from coach logs is a valuable source of information that helps build a comprehensive view of the work of instructional coaching in Demonstration Schools.

Pieces of this evaluation focus on a very specific subset of CC Fellow teachers in four of the Demonstration Schools. Compared to other teachers in their respective schools, they received the most intensive amount of coaching and so their experiences likely differed from other teachers. To expand the scope of the teacher experience and enhance representativeness,

CPRE invited all Demonstration School teachers to share their knowledge and perspectives in baseline and follow-up surveys. Furthermore, surveys of teachers in comparison schools balance the sample and help us distinguish the "Demonstration School experience" from the broader MPS experience.

Findings

This section presents findings from the analyses of data collected from surveys, interviews, and a web-based coach log during the evaluation of the first implementation year of the GEF Demonstration Schools Initiative in MPS (SY 2012-2013). Findings are organized by the following categories:

» Overview of coaching activity;
» Impacts on CCSS knowledge and practice;
» Coach-teacher relationships;
» Factors that influence coach role and responsibility;
» Factors that influence overall implementation; and,
» Culturally-responsive coaching and teaching.

Respondents were assigned random identification codes to protect their confidentiality.

Overview of Coaching Activity

Results from an analysis of the coach logs revealed the types of activities, related by varying degrees to their role as a Demonstration School coach, that coaches were in engaged in daily (see Figure 1). Direct coaching activities (modeling, co-teaching, observing, providing feedback, co-planning one-on-one, and providing whole school PD) accounted for about 28% of the hours coaches reported. Coaches also provide consultation with content and numerous resources, as well in-class support. According to the coach logs, the most hours (21%) were spent attending leadership or planning meetings. This amount is most likely because coaches spent one day per week in GEF-specific meetings with other coaches. These meetings were for coaches' PD, program communication, and collaborative planning. Regular teacher team meetings accounted for 10% of their time. Preparing for coaching or PD, completing administrative tasks (e.g., scheduling, emailing), and gathering resources for themselves or teachers accounted for 19% of their time. Nine percent of the reported hours were spent in "Other coaching activities" such as participating in GEF walkthrough activities, preparing videos of instruction, attending parent-teacher conferences, conducting interventions with students, creating student work displays, and helping with testing. Finally, coaches reported spending about 4% of their time participating in non-coach related activities such as substituting for teachers or lunch duty.

Of the direct coaching activities (modeling, co-teaching, one-on-one co-planning, coaching discussions/feedback, observations, providing PD, and attending teacher team meetings), teacher team meetings were the most frequently reported, and observation, modeling, and co-teaching were the next most frequent (See Figure 2). There was little difference in how mathematics

Figure 1. Percentage of Hours Spent on each Coaching Activity across all Coaches
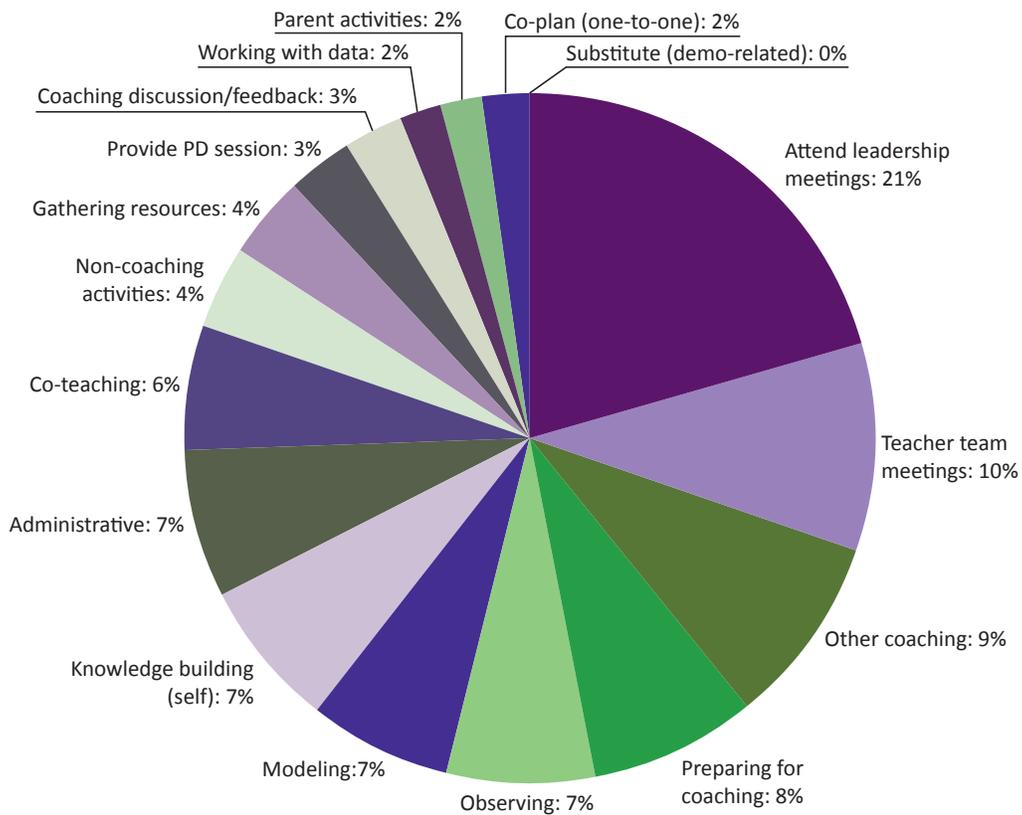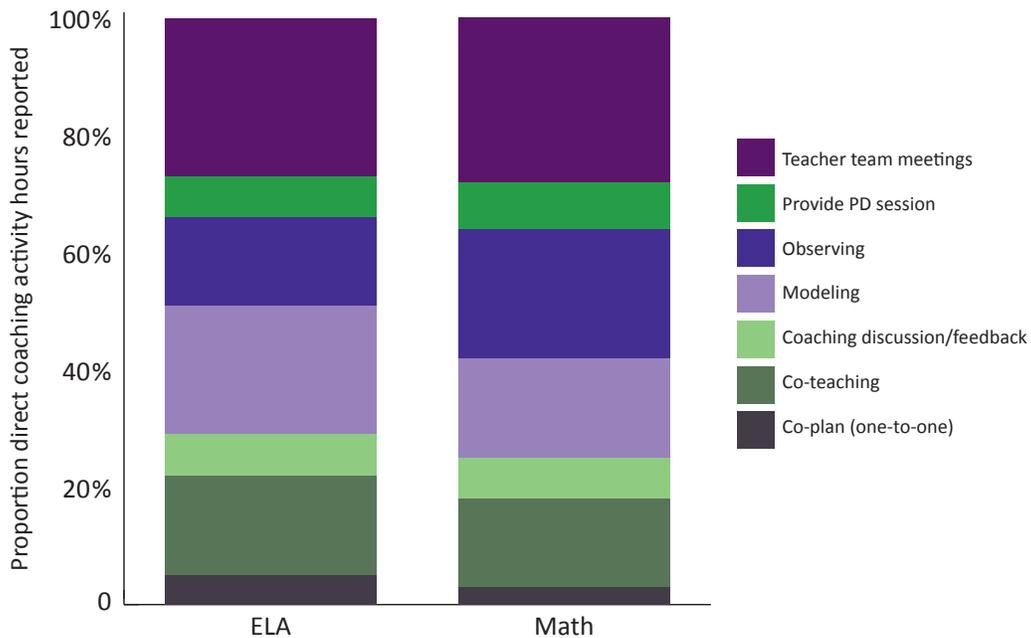

Figure 2. Breakdown of Direct Coaching Activities between ELA and Mathematics Coaches

and ELA coaches spent their reported time on direct coaching activities. Mathematics coaches reported spending more hours observing (7% more) and fewer hours modeling (5% fewer) than ELA coaches reported. Other coaching activities were reported at similar amounts between mathematics and ELA coaches.

Thus, the coach logs point to a fairly even use of various coaching activities and no significant differences between ELA and mathematics coaching activities. Notably, non-coaching activity accounted for only 4% of coaches' time. This outcome is promising, particularly given coaches' reports of being pulled away from coaching responsibilities in past MPS coaching assignments.

Impact on Teachers' CCSS Knowledge and Practice

Impacts on CCSS Knowledge of Demonstration School Teachers

Overall, CPRE found higher CCSS knowledge among teachers in Demonstration Schools in relation to comparison school teachers, both on the pre-survey and the post survey. Table 5 shows the pre- and post-survey means and standard deviations on the CCSS knowledge tests in both ELA and mathematics for both Demonstration School and comparison school teachers.

Looking first at CCSS knowledge at the beginning of the 2012 school year, as the Demonstration School treatment was beginning, CPRE found that the demonstration Schools had significantly higher levels of starting CCSS knowledge in both ELA ($t=5.95$, $df=525$, $p= .000$) and mathematics ($t=3.87$, $df=525$, $p= .000$) than did teachers in the comparison schools.

Researchers conducted comparisons of the follow-up CCSS knowledge of teachers in the Demonstration and comparisons schools, adjusting for their prior levels of knowledge. Overall, researchers found that teachers in the Demonstration Schools ended the 2012-2013 school year with significantly higher CCSS knowledge than did teachers in the comparison schools, even after adjusting for fall 2012 performance in both ELA ($F=25.17$, $df=1$, $p= .004$) and mathematics ($F=25.01$, $df=1$, $p= .000$). This indicates that the initiative had impact on teachers' CCSS subject knowledge in Demonstration Schools above and beyond any knowledge they may have started the year with.

Table 5. Mean Performance on pre- and post- Common Core Knowledge Test of Teachers in both Demonstration and Comparison Schools (with standard deviations in parentheses).

	Fall 2012		Spring 2013	
	ELA	Mathematics	ELA	Mathematics
Number of items	7	3	8	7
Demonstration Schools	.25 (.23)	.56 (.50)	.31 (.24)	.66 (.44)
Comparison Schools	.15 (.20)	.46 (.59)	.21 (.22)	.47 (.41)

Impacts on Teachers with Different Levels of Treatment in Demonstration Schools

The second question of interest was whether teachers who were the focus of coach efforts (CC Fellows) in the Demonstration Schools gained more knowledge than other teachers in the Demonstration Schools, with both groups also being compared to teachers in the comparison schools. To address this question we conducted an analysis of covariance, comparing the three group means after adjusting for performance on the pre-survey knowledge test.

Table 6 shows the unadjusted means of each of the three groups on the pre-survey and post-survey. We can see that on both the pre-test and post-test, in both ELA and mathematics, the order of performance was the same, with the CC Fellows performing, on average, higher than other teachers in the Demonstration Schools, and both groups scoring higher than teachers in the comparison schools. Initially, it appeared that the CC Fellows had greater understanding of the CCSS prior to the implementation of the initiative.

Thus, we then conducted analyses that compared the three groups' CCSS knowledge performance on the post-test adjusting for their performance on the pre-test. In ELA, we found that–even after adjusting for starting performance, the CC Fellows scored significantly higher than the other Demonstration School teachers (mean difference=.146, standard error=.029, p=.000) who, in turn, scored significantly higher than did teachers in the comparison schools (mean difference=.088, standard error=.014, p=.000). In mathematics we found the same pattern, with the CC Fellows scoring significantly higher than the other Demonstration School teachers (mean difference=.181, standard error=.073, p=.013) who, in turn, scored significantly higher than did teachers in the comparison schools (mean difference=.156, standard error=.031, p=.000). Thus we conclude that, after adjusting for prior knowledge, the CC Fellows had

greater CCSS knowledge than did other teachers in the demonstration schools and the other Demonstration School teachers had more knowledge than did teachers in the comparison schools.

Table 6. Mean Performance on pre- and post- Common Core Knowledge Test of Teachers in both Demonstration and Comparison Schools (with standard deviations in parentheses).

	Fall 2012		Spring 2013	
	ELA	Mathematics	ELA	Mathematics
Number of items	7	3	8	7
CC Fellows in Demonstration Schools	.45 (.27)	1.27 (.99)	.46 (.18)	.82 (.36)
Other Teachers in Demonstration Schools	.23 (.27)	.54 (.50)	.29 (.23)	.64 (.45)
Teachers in Comparison Schools	.15 (.20)	.46 (.59)	.21 (.22)	.47 (.41)

Teacher Change

The data reveals the majority of Demonstration School teachers made a concerted effort to understand the CCSS, and apply the standards to their teaching. As a result of working with coaches, many Demonstration School principals, teachers, and coaches reported that teachers increased their understanding of the CCSS, revised curriculum and instructional practices to align with the standards, and/or developed self-awareness of necessary steps for full implementation. The following section examines overall teacher change, as well as instructional changes specific to mathematics and ELA.

One significant change reported by Demonstration School teachers was increased liberty to narrow and deepen the curriculum. According to teachers and coaches, in prior years MPS teachers were required to follow district curriculum and pacing guides based on textbook programs. This year, rather than focusing on any one particular program, MPS expected Demonstration School teachers to align their lessons to the CCSS. According to the district, coaches were given permission to narrow and deepen the curriculums to align to the CCSS versus following the curriculum and pacing guides for the district. Respondents indicated they now felt less pressure to maintain an established pace, which allowed them to focus on areas of low student performance before moving on to new material. As one teacher stated:

> Now we have narrowed down the broader spectrum of my curriculum, we
> have narrowed it down to a specific focus...where it teaches [fewer topics] but
> in a deeper way and I feel the students are learning [fractions] better. (Teacher
> M1)

The increased focus on CCSS and flexibility from the district pacing guides enabled teachers to re-evaluate their curricular resources and activities. Teachers reported being more selective and purposeful in choosing instructional activities and lesson planning. Several teachers reported using fewer worksheets and deviating from the textbooks when the content did not align with the CCSS. When asked if there were any instructional materials that no longer worked in the classroom, one teacher replied:

> Yes, like little busy worksheets that really they don't need...Just because it
> says it's part of the lesson or they're not really helpful to what we're doing;
> like the workbooks are almost intact. There's very, maybe one of ten to twelve
> sheets that I will use and sometimes I send them home. (Teacher T1)

Rather than taking a single textbook and going through in book order, another teacher "stopped going lesson-by-lesson." Instead, the teacher started "taking what I need out of the lesson so that I can address the Common Core." (Teacher G1)

In addition to changing how they used curricula, teachers, coaches and principals reported that many teachers attempted new instructional strategies as well. These strategies were more student-centered and supportive of the CCSS. One teacher explained, "I think we've been doing more meaningful things...for example, OREO writing." [1] (Teacher U2) Thus, we find that overall, instead of using worksheets and commercially prepared materials, Demonstration School teachers were more purposeful in identifying and using curricular resources that align with the CCSS, and increased the use of student-centered learning activities.

Coaches encouraged teachers to shift their instructional practices. For example, one coach described coaching strategies used with a teacher who preferred direct instruction:

> There's another teacher, [who] has been teaching for awhile, I think, and
> [who] teaches in a very traditional way where [the teacher] does a lot of
> the talking and the kids do a lot of the listening, and there's not a lot of
> discussion or exploration. So for [this teacher] I just try to model: Here's
> how to do this in a manageable way in your classroom to get the kids more
> engaged and actively involved in what they're doing. (Coach B2)

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1   OREO writing employs a specific writing format that stands for opinion, reason, example, and opinion.

Other coaches and teachers described similar strategies, where coaches encouraged the use of alternate forms of instruction, such as small groups or student-centered discussions. Principals also noted the change, "The teachers shifted their strategies as well planning due to the support as a demonstration site." (Survey Principal J)

Engaging with new content, revising curricular materials, and developing new instructional strategies increased teachers' familiarity and competence with the CCSS. Furthermore, several teachers noted that the GEF initiative increased their self-awareness of the necessary trajectory for full implementation of the CCSS. One teacher reflected on her work with a coach, stating:

> I think that [the coach] has come and presented a lot of culminating type activities, and I'm realizing that I don't really do that. And so I'm thinking alright, that's another thing that I need to work on, and maybe, you know, I really need to pay more attention to writing that into my lesson plan. (Teacher L2)

The process of examining gaps between curricular resources and the CCSS, with encouragement and support from coaches, prompted teachers to reflect on and modify their instruction.

Teacher Change in Mathematics and ELA

Some evidence of change among the CC Fellows was aligned with content-specific instructional goals established over the course of the year by the GEF coaches, the GEF/MPS Grant Office, and GEF consultants. This section describes the most significant subject-specific changes (ELA and mathematics) among Demonstration School teachers that were reported.

Mathematics

CC Fellows reported increased familiarity with the mathematics standards, leading to increased alignment of their lessons with the CCSS. An elementary-level teacher commented,

> Well I can tell you the difference between last year and this year is [that] I focus more on the standards...I hit the key points that are in the Standards. For instance, we are working on powers of 10 at this time, so that's my focus. We just finished fractions, and on the Common Core Standards it said that they wanted students to know that there are numbers on a number line and that they wanted them to understand that. (Teacher E1)

This teacher, along with others, felt the standards provided a narrower focus for mathematics instruction, enabling them to more effectively align lessons. Although some general teachers resisted implementing the standards, both coaches and teachers noted that the CC Fellows appeared to significantly incorporate the mathematics standards into their instructional practices.

Respondents also reported that teachers began to look beyond their respective grade-level mathematics standards; teachers examined what students are expected to learn in previous and future grades. One teacher explained the value of the process:

> I would like to continue understanding or continue internalizing the connection across the [grade] levels. I would like to see, okay, this is our grade and they are focusing on this. We have the standards but I would like to continue in order to make sure, Okay, this is the strength the student brings to my level. (Teacher M2)

The process of connecting the learning progressions across grades helped teachers develop a better sense of the implications of the standards for themselves and their students. The investigation of grade-level progressions in mathematics provided teachers with a sense of continuity and direction for their students.

Over the course of the year, some respondents realized they needed to expand their own mathematics content knowledge to better support students' mathematics learning. Teachers were particularly interested in learning multiple strategies for mathematics procedures. One teacher stated that she

> [had a] different way of looking at math...Because when I was going through in the olden days, there was only just that one way to do math. But the different strategies that [my coach] has given me to help me and to help the children, because what we have done is I showed them the old school way, and then we've done the new school, and then it gives the children a choice, what's easier for them. (Teacher F2)

Many teachers mentioned that working with mathematics coaches increased their mathematical content knowledge. Some teachers also reported enrolling in mathematics instructional classes at the local universities.

ELA

A major focus for CCSS-ELA implementation this year was increasing teachers' familiarity with text dependent questions. A text dependent question requires students to carefully read text in order to find information embedded in that text that will help them answer the question. Although some teachers reported previous use of text dependent questions, PD and coaching made them more cognizant of the practice. One teacher explained:

> We just kind of did questions before. Now, there's a name for it and we're really focusing on this activity and you're reading the questions, finding the

key words. Before it was like you ask questions, you go through a story. Now
it's more focused and you can see like, okay, this is what we'll work on, this is
the specific skill. (Teacher I2)

Teachers also reported being more active in constructing questions that required students look to the text for answers.

Another major shift for Demonstration School teachers this year was the increased use of informational texts in ELA lessons. As a result, Demonstration School teachers began to direct their students towards more non-fiction. Teachers' responses were largely positive towards this shift. One said, "The focus on non-fiction text and locating evidence in a text is an exciting shift. It is a transferable skill to the world of work." (Survey Teacher 135) Another teacher reflected on how classroom planning changed due to the increased emphasis on non-fiction:

One of the things I changed this year with the planning would be to bring in
more informational text depending on what the subject is for that week…
Some of them are already informational, which is great, and I can just add
to that. Some of them may be not informational, and so you have to look at
something that could be paired with it that would go along with it, and try to
bring more of that. (Teacher S2)

The use of informational text has carried over to other subjects as well. The data indicates that some teachers connected ELA with science and social studies as a way to bring in more informational text. A respondent noted that "I feel like the CCSS give me more freedom to teach across [the curriculum]." (Survey Teacher 127) Several teachers used science terms as part of their academic word wall; other teachers integrated ELA texts into their classes' science projects. One teacher spoke about how doing "close reads" with the ELA coach helped her apply similar teaching strategies in science. The teacher spoke about applying ELA strategies to conducting science projects:

I was aware of how to do it through [working with Coach R] with the close
reads and things, you can apply that in History, Science, Math–everything. So
we put it there and we took our time and we took a day or two for each one
and now I have more kids completing the science projects with confidence;
they're all excited about it. (Teacher P2)

In general, teachers and coaches enthusiastically described their integrative projects that aligned with the CCSS. Furthermore, participants often noted positive responses from students.

Implementation of the CCSS requires teachers to develop conceptual understanding of the new standards. It also necessitates modification of current instructional practices, curricular materials,

and other teacher resources. Through their work with coaches, Demonstration School teachers made important progress towards their understanding and implementation of the CCSS. As evidenced above, instructional staff increased their understanding of the standards and revised general instructional resources and practices to better align with the CCSS. Teachers also enacted subject-specific change in mathematics and ELA instruction. Teachers attributed the majority of teacher change to the work of GEF coaches.

Coach-Teacher Relationships

Because coaching is a key lever in shaping teacher instructional practices, the quality of the professional relationship between coach and teacher influences the coaching experience. As noted in the research design section, CPRE conducted a review of the coaching literature and developed seven indicators that may reflect a strong coach-teacher relationship: adaptive coaching, coaching for specific content, consultation, relationship building, shared understanding, teacher and school capacity, and teacher team leverage. This section examines the 22 pairings between coach and teacher, as well as the surveys from Demonstration School teachers, to determine if there is evidence of the indicator. This section gives a broad overview of each category as well as general findings. A more detailed presentation of the findings can be found in a separate report, *What Works in Coaching: CPRE Evaluation of the GE Foundation-Supported Coaches in Milwaukee Public Schools, SY 2012-2013*.

Adaptive Coaching

Adaptive coaching is the ability for coaches to change and individualize their coaching strategies when working with teachers. In terms of adaptive coaching, CPRE examined three broad factors: identifying the needs of teachers; using different strategies to address needs, and recognizing cues from teachers to determine approach.

To maximize coaching effectiveness, coaches may want to differentiate support depending upon the teacher's degree of experience and familiarity with the topic (Lipton & Wellman, 2007). For example, newer teachers may need more in-class support and modeling, while more veteran teachers may need more resources. Coaches tried to determine what each teacher needed by trying to understand their classroom, and the data indicates that they were generally successful. Of the teachers surveyed, approximately 90% of CC Fellows either agreed or strongly agreed that their respective coaches understood their classroom needs, and approximately 83% of general teachers also either agreed or strongly agreed. One teacher noted, "I have experienced an opportunity to work with coaches that understand and respect the differences within my classroom. They respect my input and allow me to do what is best for my kids." (Survey 41) Understanding the teacher and his or her classroom before coaching can give coaches an idea of what direction to take and strategies to use with each individual.

Teachers perceive coaching activities differently–some teachers prefer for one approach while others prefer another type of approach–so certain combinations may have more potential to influence change than others (Mangin, 2006). For example, as teachers exhibited more mastery or confidence with implementing the CCSS, some coaches began taking a more "hands-off" approach (Coach H3) with some of the teaching fellows, working less intensely with them. Instead, coaches transitioned to providing additional classroom resources and information for

teachers. "She knows I don't need that much assistance," said one teacher, "so she'll just offer suggestions. She's real respectful in terms of where you are performing, so I like that." (Teacher A2)

Most teachers reported that coaches' approaches and strategies met their needs. Data shows that 82% of teachers who took the survey felt that their ELA coaches used coaching activities (e.g., modeling, co-teaching, co-planning, etc.) that were appropriate for their needs. Of teachers surveyed, 90% indicated that their mathematics coaches used activities that were appropriate for their needs.

Coaching for Specific Content

A predominant focus for the Demonstration Schools Initiative is the dissemination and implementation of the CCSS to teachers and their instruction. This section examines the ways coaches focused on specific content and how coaches used student work to ground learning.

Coaching that focuses on subject matter or content skills may have a greater impact on students than those programs only focused on teaching behaviors (Kennedy, 1998; Shidler, 2009). There is a preponderance of data that shows that GEF coaches focused their efforts on the CCSS and the content that aligned to the standards. With teacher team meetings and after school PD, coaches had an established time to center information and teacher work on the standards. In those meetings, "[the coach] started with the Common Core Standards and to make sure that we as a group or as a team for the middle school [grades], we understand what the shifts of the Common Core Standards really mean." (Teacher B1)

Even when working with teachers outside of group PD and team meetings, coaches focused on standards. One teacher described the coaching experience for understanding the CCSS-Mathematics:

> We get the standards, look at the standards for math, we break them apart, find out where I am or what I'm struggling with; and then we look at the book or on the computer… [the coach says,] "Let's look at our standards for this month," and then, so that it always stays at the forefront of my mind. (Teacher C2)

Effective PD also "engage[s] teachers in concrete teaching tasks and [may] be based on teachers' experiences with students" and uses student work to ground teaching and learning (Supovitz, 2001, p.83). Of teachers surveyed, approximately 80% of CC Fellows reported they felt fairly well or very prepared to use student work to plan instruction. About 72% of other teachers said they felt fairly well or very prepared to use student work to plan instruction. In the post-survey, of those teachers surveyed 75% of CC Fellows, and 65% of general teachers said they felt fairly

well or very well prepared to analyze student work in relation to the CCSS. Though a majority of teachers felt they could use student work, the overall data in for this indicator were mixed. Almost every coach mentioned having discussions with teachers about what they had seen in the classroom, but these conversations were informal. "Sometimes it is 'What did we see in the classroom' that we talk about student work versus actual hard copy papers of an assessment or something." (Coach H3) Coaches and teachers also most commonly mentioned MAP test results and Classroom Assessments Based on Standards (CABS) as the means of examining student work and progress.

However, there was little data to indicate that coaches and teachers examined student work in depth– looking at student work in a way that lets teachers determine gaps in learning from previous units or lessons, or where teachers can improve instruction for the next lesson. In those few responses, coaches and teachers met and discussed the results of a unit or lesson, found examples of student mastery and determined how to bring other students to that level. One coach described her process for teacher teams to look at student work: "They have to bring that student work with them and we talk about the student work and what next steps and what instructional strategies worked. And we have teacher teams so that they're building from each other." (Coach N3) Most coaches and teachers have mentioned that they wanted to look at student work more in-depth in the upcoming year.

Consulting with Teachers

A key aspect of the coaching experience is the instruction that occurs between coach and teacher. This section explores the ways that the literature found to be effective for instruction: having clear direction, giving feedback, validating practices, helping problem solve, and listening.

When consulting with teachers, establishing a clear focus on "standards for teaching and learning" can give teachers a sense of direction and established concrete goals to reach (Lipton & Wellman, 2007, p.31). With the Demonstration Schools Initiative being new in the 2012-2013 school year, teachers reported that they wanted a broad agenda of expectations and goals. A sense of direction in coaching could be especially important when there is still some uncertainty regarding the overall initiative. Overall, teachers felt that coaches had given them clear direction. Of the teachers surveyed, approximately 95% of CC Fellows agreed that their coaches gave them a clear sense of what they should be working on. Of teachers surveyed, 85% of general teachers said ELA coaches give clear direction, and 92% of general teachers said mathematics coaches give clear direction.

Providing feedback in a constructive manner can help teachers further strengthen their skills, as well as provide a model for teachers to emulate when they become leaders. One of the ways feedback can be constructive is by relying on multiple points of data, such as teacher observation

and student work (Lipton & Wellman, 2007; Shidler, 2008) Because coaches are employed as teachers, similar to the teachers with whom they work, coaches reported they try to be careful not to be in an evaluative position. Thus, coaches have been trying to give feedback to teachers as peers. The survey data indicates that coaches on the whole have been successful. Most surveyed teachers (>90%) indicated that feedback from their mathematics and ELA coaches was helpful. About 68% of those who found coach feedback helpful *strongly* agreed that this feedback was helpful.

Lipton and Wellman (2007) also note that actively listening to teachers, and working collaboratively to solve challenges can also make for effective coaching. A consistent theme in the data, was coaches letting the teacher's comfort and engagement set the pace for interactions. Coaches described listening carefully to teachers, accepting different levels of comfort with the process. Their descriptions of coaching practices include multiple examples of respecting the expertise of the teachers, and letting them own their own growth.

> I think [the teachers] accept my message … because we're not forcing at them. We're saying you have to teach to the Common Core, but look there's lots of leeway in how you address these standards. And I think that because we approached it that way they've been a lot more accepting of our beliefs and what we're trying to do, so they're not seeing it as something that we're forcing on them. They're seeing it more as an opportunity to be professional and showcase their own kind of thinking. (Coach L2)

In general, these coaches tried to listen to their teachers and collaboratively approach their work with teachers in the schools. However, there were instances where teachers did not feel that their coaches were listening to them. When this happened, teachers perceived a lack of response or communication from their coach, and they were less likely to want to continue working with the coach.

Teachers may have more investment in the initiative when they receive more positive feedback. Coaches noticed the teacher buy-in increased when projects were successful and were informed so:

> I think for some teachers who see the positive feedback, our excitement about what they're doing and being able to be very descriptive about certain pieces of it. I think that creates, again, that energy, that confidence and then they're willing to go forward and do more and create more. (Coach R3)

Effective PD encourages "questioning and experimentation" (Supovitz, 2001), rather than relying on a specific curriculum. Moreover, the literature notes that teachers learn more when they can test out their new knowledge. With the CCSS being so new, coaches were asking teachers to "experiment" in their planning and classrooms with what they had learned. Indeed, 100% of

CC Fellows and 91% of general teachers surveyed agreed that their mathematics coach made them feel comfortable to try new things. Similarly, 94% of teachers (both CC Fellows and general teachers) felt that their ELA coach made them feel comfortable to try new things.

With content that focuses on teacher experience, Shidler (2008) found that a component of effective coaching is consulting for reflection. Of teachers surveyed, 92% of teachers surveyed agreed that their ELA and mathematics coaches encouraged them to reflect on their teaching and/or students. All of ELA and mathematics CC Fellows responding to the survey reported that their respective coaches encouraged reflection.

Trust/Relationship Building

The relationship and trust between coach and teacher is an important factor to effectiveness (Lord, Cress, & Miller, 2008; Gigante & Firestone, 2008). The CPRE team deconstructed trust into some key indicators that would signal the existence of trusting, mutually beneficial relationships between coaches and teachers. Some of those indicators include accessibility, human relation skills, flexibility and individual interaction with the coach (Poglinco et al., 2003).

Teachers would need to have confidence in coaches' knowledge, expertise, and ability to help them as a foundation to the relationship. Interview and survey data indicated that most teachers were confident in their coaches' knowledge, expertise, or ability to help them. Most teachers (57-73%, CC Fellows and general teachers) surveyed strongly agreed that they had confidence in their coach's ability to help them improve instruction, with 92% agreeing overall.

Much of the affirming data comes from teachers seeking coaches out for resources, validation, or consultation. Some teachers explicitly stated that they find their coaches "knowledgeable," "helpful," or "having great ideas." One teacher's confidence came from the fact that she knew the coach had taught before, and therefore, understood what it was like to be in a classroom. Almost all teachers spoke about seeking out their coach for help when they needed support, a testament to their confidence in their coaches' ability to help them. Many also said that their coaches had "great ideas" and that the coaches were adept with the use of the CCSS: "I feel very comfortable asking her for help. I completely trust her abilities. I don't doubt anything that she tells me. Like I said, she's very, very knowledgeable." (Teacher O2) The few teachers who indicated less confidence in their coach felt they did not need coaching help to begin with, or they felt that coaches lacked understanding of their classrooms or coaching needs. However, even in these instances, teachers were confident to some degree of their coaches' work. For example, a teacher felt that the coach was very effective for other teachers, if not for herself.

Coaches would also need to be or provide a safe space for teachers to experiment, show weakness, and learn without fear of reprisal. About 31% of teachers surveyed said that they felt their relationship with their ELA coach was more evaluative than collegial. About 38% of teachers

said that their relationship with their mathematics coach was more evaluative than collegial. Mathematics CC Fellows were slightly more likely (about 10%) than ELA CC Fellows and general teachers to rate both mathematics and ELA coaches as more evaluative than collegial.

The interview data also affirmed that coaches were not viewed as evaluators, despite it being a concern from some teachers at the beginning of the school year. Teacher felt reassured when coaches told them in the beginning that they are not in their schools to evaluate them. "I think they respect me enough...they know I'm not being evaluative; that I'm posing a thought" (Coach H3). Another teacher described the relationship when coaches entered the school as not "'I'm coming over you, I'm coming as a supervisor over you.' It was more of a colleague mentality and I just think that we just kicked off from there, so that worked well." (Teacher B2) As coaches strived to communicate they were non-evaluative, the positive feedback from teachers supported their efforts.

Teachers need to be able to access coaches. Access includes the ability for teachers to be able to easily connect with coaches in person, via email, telephone, and so forth. Nearly all teachers in interviews and 96% of teachers surveyed said their coaches were accessible. Teachers described "popping in" to coaches' offices for quick feedback or ideas, especially those teachers whose classrooms were located close to coach offices. Alternatively, some teachers mentioned that their coaches were frequently in their classrooms, sometimes multiple times per week. Visiting classrooms multiple times a week appeared to be easier at smaller schools where coaches had fewer teachers to service. Some coach-teacher pairs even communicated outside of school hours through email or text:

> Sometimes if I go to her during my lunchtime, if I ask her for something
> quick, she's really good about getting back with me. She put things in my
> mailbox so we communicate that way; she emails me, so we talk frequently.
> (Teacher E2)

Teachers mentioned limited time as the most common challenge to accessibility. Due to scheduling of coach PD, coaches were only at their school sites four days a week. During the times they were in the building, coaches also were working with other teachers and were meeting other responsibilities. Teachers understood that the limited time was not the fault of anyone in particular. Both coaches and teachers tried to compensate for limited time by being flexible and meeting after school, or contact via email, notes, or phone.

Accessibility contrasts with approachability in which teachers not only are able to access their coach, but feel comfortable doing so. Coaches may portray an open, accepting, friendly demeanor. They may also explicitly encourage teachers to reach out to them for help or information. Except for a couple of coach-teacher pairs, teachers overwhelmingly found their coaches to be approachable. Teachers described coaches as "friendly," "open," "easy to talk to," "warm and understanding," or "non-threatening." This response seemed to be connected to the

way teachers perceived coaches' personalities. For example, one teacher said, "She's pretty even-keeled and she's got a nice way about her." (Teacher D1)

From the interviews, it also appears that coaches deliberately tried to project approachability by letting teachers know that they were available for help. In the words of one teacher, the coach is "also open to, 'What would you like help with?' versus, over my [many years of] experience, people who just tell you what you need to do, and I really don't need that." (Teacher A1) Furthermore, coaches who demonstrated positive attitudes or enthusiasm were more approachable and enjoyable to work with. They set the tone for the work to be done, especially when it was challenging.

Finally, coaches maintained positive relationships with teachers and increased teachers' confidence in them by responding to teacher requests and needs promptly and consistently. Teachers not only felt heard, but also well-supported by their coaches. They trusted their coaches to complete collaborative tasks, which increased the likelihood they would work with the coach again in the future. Of teachers surveyed, 93% felt that their ELA coaches followed through with collaborative work, and 93% of teachers felt that their mathematics coaches followed through.

Shared Understanding

Having a shared understanding involves the degree to which teachers and coaches share beliefs about teaching and learning and, more specifically, the degree to which they share a vision about carrying out the implementation of the CCSS. CPRE researchers hypothesized that the greater shared understanding along either of these dimensions would facilitate coaching and collaboration. Of the 14 coach-teacher pairs who discussed shared understanding during interviews, 9 indicated that they and their coaches were in agreement on the approach to take when implementing the CCSS in their classrooms and schools. For example, one coach successfully worked with a particular teacher because they both valued and understood project-based learning activities. Another teacher described her and her coach as "being on the same page" about the CCSS work. Similarly, another teacher noted:

> We collaborate really well so we have a lot of those conversations. We're very similar in the way we teach with our attitude with the kids, so when she gives me a lesson or finds something, I can totally relate to it versus it's not so out there for me. (Teacher R2)

Coaches found teachers who shared enthusiasm about the content or the CCSS easy to coach.

Building Teacher and School Capacity

As part of the Demonstration Schools model, one of the goals was for those teachers with intensive coaching to become resources and models for other teachers in the school–thus building both teacher and school capacity. At the individual level, the literature emphasizes coaching for teacher autonomy and independence (Lipton & Wellman, 2007). At the school-wide level, teacher leadership can result in having teachers participate in school curriculum work, professional development of colleagues, and participation in school change (York-Barr & Duke, 2004)

Several coaches have noted that some of their CC Fellows had "graduated" and needed only minimal or occasional support from their coach. The next step for many of the CC Fellows is to be able to share their knowledge with other teachers in the building. For example, some teachers were beginning to lead group PDs to a larger group of teachers within their school. A teacher stated:

> And as a matter of fact she is also bringing the ELA person from central office to–they were supposed to talk to us at our last GE meeting, but she was ill and cancelled. But instead we have one of our own teacher], who you might meet later, did it with writing circles and that was all interesting. (Teacher T2)

This activity may indicate that schools are beginning to build capacity within their own faculty and sharing their expertise. Despite progress in this direction, teachers and coaches noted that there were some challenges to building leadership capacity. Coaches explained that some teachers still were not confident in their knowledge to want to share with others, and some teachers shared that being a teacher-leader consumed much of their already limited time.

Leveraging Teacher Teams throughout School/ Grade Level

Teacher team meetings, also known as grade-level meetings, have potential to be opportunities for teachers to build capacity, learn new content, or examine instruction collaboratively. To effectively use this time, coaches should establish a format for the meetings and develop shared norms (Bean, 2009). Additionally, coaches can provide and maintain focus for these meetings to keep teachers oriented around a shared goal.

Most teachers valued grade-level meetings for both mathematics and ELA. Of teacher survey respondents nearly 100% of ELA CC Fellows reported that grade-level meetings with their ELA coaches were a good use of their time. Approximately 79% of the other teachers reported that grade-level meetings with their ELA coaches were valuable. Interestingly, ELA CC Fellows were

just as, if not more, likely than mathematics CC Fellows to value grade-level meetings with their mathematics coaches. Approximately 87% of general teachers valued grade-level meetings with their mathematics coaches. It is possible that teachers' content deficiencies in mathematics led to increased appreciation of mathematics support.

Teachers reported wanting to spend more of their time in teacher team meetings planning for upcoming lessons and units or looking at student work. Several teachers mentioned that, at times, they can be inundated with information and resources at the teacher team meetings, but they are not given enough time to work together to determine its classroom application.

Both coaches and teachers expressed a desire to maintain and continue the relationships they have built with one another this first year of the Demonstration Schools Initiative. Coaches have taken the time to understand the unique characteristics of their schools and teachers, enabling them to devise coaching strategies that best fit their needs. One teacher said, "I'm hoping it's like this next year," and explained how coaches in years before the Demonstration School were "here one day, two days trying to tell you new things, which, of course, there's always room for new things, but then goodbye, and they're gone and it's gone. And it's the next year, and you've learned it or you haven't." (Teacher T2) Other teachers also expressed wanting to continue their progress with their coaches.

Factors Influencing Coach Role and Responsibility

A wide range of factors affected both the role of the CC Demonstration School coaches, as well as the ways they carry out their responsibilities. The role of the coach is to be a school-embedded Common Core expert. Their responsibilities are to provide school-wide training and support through direct instruction during PD sessions and facilitation of teacher team meetings. Coaches' responsibilities also include supporting individual teachers, with an emphasis on the CC Fellows. Despite the similarities in role and responsibility for the coaches, coaches must navigate the unique challenges and strengths of each MPS school. This section of the report highlights the factors, which coaches identified, that influenced coaches' ability to fulfill their role and responsibilities within demonstration schools. These factors were not present or relevant at all schools, but together help identify the key strengths and challenges facing coaches at their school placements. This section explores the following factors: commitment to initiative, balance of coaching duties, PD for coaches, and collaboration among coaches.

Coaching Factor 1: Commitment to Initiative

The level of a school's commitment to the Demonstration School model appeared to be a significant factor in the ease and speed with which coaches were able to work. Becoming a Demonstration School required at least 75% consensus of each school's faculty to participate in the program. Nonetheless, the commitment of individual teachers to the initiative varied within and across demonstration schools. The level of enthusiasm towards the initiative was apparent to most coaches when they arrived in the fall. Coaches who entered schools with high staff buy-in (as identified by the coaches) seemed to feel more welcomed. One coach explained:

> The teachers have been very welcoming, very excited to get support… The schools around them are high achieving and they want to outdo that. They want to be one of those good, achieving schools, so they're really on board with moving their students. (Coach R3)

Another coach described the school as full of "people wanting to really improve and try new things and [they ask me], 'Am I doing this right?' and 'Can we talk about this?'... I mean, that's very exciting to me." (Coach A1)

In the majority of schools described as highly supportive of the initiative, their coaches consistently described positive coaching experiences with the staff. The data therefore suggests that coaches had a more positive and potentially successful experience working in schools with greater teacher support of the Demonstration School model. Conversely, some coaches

experienced difficulty working in their schools. Participants at sites identified as having lower teacher buy-in for the initiative were described feeling less welcomed by the staff. One coach reflected, "When we came in October and [the other coach] and I did a whole staff meeting and people had their arms crossed. We did not feel welcome at all." (Coach B2)

For many schools engagement of the staff gradually increased throughout the year. Some coaches were familiar with their school sites, having either worked at the school previously or having knowledge of the staff through other district roles. However, the majority of coaches reported being unfamiliar with their new sites, and they described taking a slow approach to get to know the school.

> I think this year it's a little bit harder too, because we're all in new schools.
> It's not like working with people you've worked with for years. You have to,
> first of all, build some trust and you have to know a little bit about the person
> and what they've been doing in their rooms and their style of teaching and
> functioning. They have to believe that you have something to offer them.
> (Coach J1)

Many coaches took several weeks to observe in classrooms without giving feedback as a means to get to know the staff and students. The coaches wanted to understand the atmosphere of the school, the strengths and needs of the teachers that would influence coaching practices, and the student population. As time progressed, coaches built relationships with many in the building. A coached described the gradual change: "Everybody else that I have touched or worked with are excited and want to see me. And that is a huge change than when we came in October." (Coach E2)

While periodic teacher resistance appeared to be fairly typical across schools, coaches were able to overcome some of the issues by developing relationships and becoming part of the school community. Trust is an essential component for successful implementation of coaching models (Bryck & Schneider, 2002; Rhodes & Beneicke, 2002). Teachers are more likely to work with coaches when they know and trust them. Therefore, it was important for coaches to be seen as a member of the school community because it helped them develop personal relationships with teachers that supported their coaching work. Coaches cited that a common strategy for developing relationships within the school community was participation in routine and special school events. Eating lunch where teachers congregate, for instance, was seen as an effective way to develop relationships with teachers while also offering opportunities for impromptu coaching sessions.

> I try to make a point of going and eating my lunch every day during the
> teacher lunch hour when a lot of them are in there because that's where I get
> a lot of my questions. And then people overhear that, then they think, 'Oh,
> maybe she's not so bad after all. Maybe she is a good resource.' (Coach M2)

Other coaches attended school events such as community nights, staff dinners, and school performances as deliberate steps to develop relationships.

Though teacher buy-in increased for many as the year progressed, a small number of teachers still resisted working with the coaches. Some coaches attributed the teacher responses to the initiative to previous challenges within the school or district. For example, one coach hypothesized that teachers were exhausted from their workload and therefore less available to implement new standards. "I think teachers are overworked; there's so much to do… I think they're maxed out, and so it's like you don't want to throw one more thing on, even though you know it would help," the coach said. (Coach C2) Several other coaches attributed the lack of buy-in to teachers not fully understanding what the Demonstration model would entail.

At the end of the year, one coach reflected, "Some teachers are still very resistant to the Common Core itself and then to coaches and GE separately." (Coach N3) Another coach expressed frustration over the lack of buy-in from a teacher team at the end of the year, saying that the grade level was "not accepting this year… I knew I was modeling to a wall… So next year my plan is, if I'm still here… I want to be with that group, because everyone else in the building that we work with has seen the beauty of the change." (Coach H3). Coaches noted that these teachers participated less during PD sessions or had "closed their classroom door" to the coaches.

It is important to note that most teachers interviewed and surveyed appreciated the time and effort of coaches, and were enthusiastic about the Demonstration School model:

> Our coaches were extremely dedicated and have worked very hard to impart a great deal of information to us. They have been willing to support us in any way that we needed. I feel that they have laid the groundwork for us this first year so that we can continue to grow next year. (Survey Teacher 85)

Numerous respondents stated that the change they saw happening in their schools could not have been accomplished without their coaches.

When principals validated the roles and responsibilities of coaches, they demonstrated the school's commitment to the initiative and signaled the expectation of teachers' commitment as well. Coaches have reported that principal support for their work can have an influence on how the school responds to their coaching. The level of principal participation in monthly GEF PD sessions illustrates the role principals have in fostering teacher buy-in. Teachers were encouraged, but not required, to attend the monthly after school PD sessions; several coaches noted that participation among teachers varied. Principal attendance may increase participation. "I think just as far as effectiveness of the training and what not, when the principals are present, I think that definitely helps because the principals are encouraging and showing that it's important," said a coach (Coach U2). When principals attended the GEF PD sessions their understanding of the initiative increased, which in turn could help them to align goals and messaging to what

teachers were learning and reinforce coaches' efforts. In contrast, when principals did not attend PD, it generated difficulties for coaches:

> The principal really is a challenge, is a hindrance… [the principal has] not attended a single professional development that's been offered as our after school training…So [the principal] doesn't learn with the teachers, doesn't collaborate with the teachers…and it really is a challenge. (Coach P2)

In addition to attending PD sessions, some coaches reported that their Demonstration Schools already had some infrastructure to conduct PD sessions, and this facilitated their work. For example, coaches reported that some principals generated their own sessions that aligned with those of the coaches. Teachers and coaches responded positively to PD from administration when it aligned with and supported the initiative. In the words of one coach:

> The principal is also doing a [professional development] session. I think that's key with the principal showing that [the principal is] an instructional leader. … It's showing that [the principal is] credible and knowledgeable about the standards. (Coach R1)

Other coaches reported that scheduling PD was easiest for coaches in schools that already had a system of embedded PD in place. One coach said:

> Even before we came, [the principal] gives our staff two hours of collaborative planning a month, but [the principal] will pay them, after school… [The principal] sets the tone, I think, for the building that way. And, this is important to [the principal]; I think it makes it important to the majority of the staff. (Coach C1)

Whether the structures for PD existed prior to the demonstration school model or not, coaches needed administrators to support their schedule once it was in place. From the data, researcher found that coaches valued when principals helped them set up a consistent PD schedule for the year. Thus, PD could be arranged in a timely manner and appropriate space. In sites where principals and coaches did not collaborate as well on PD sessions, it resulted in mixed and missed messages about timing and scheduling, general teacher frustration, loss of PD time, and confusion around the initiative and goals. Such outcomes have the potential to undermine teachers' confidence in the initiative and decrease commitment.

Coaching Factor 2: Balance of Coaching Duties

Coaches wanted to dedicate most of their time to working with teachers and collaborating with other coaches. Both coaches and teachers reported having a very limited amount of time to accomplish their work with teachers in the schools. Being assigned additional work, such as

lunch or recess duty, filing reports, or generating additional documentation for the school can use up valuable time coaches could be spending in classrooms. One coach explained, "I feel like I'm not doing my job when I'm not in the classroom, but there's so much other [work], like preparing and gathering resources and communicating." (Coach U3) Coach log data indicated that time spent on direct coaching activities (i.e., modeling, providing feedback) varied by school, generally ranging from 7-14% of coaches' time spent at those schools (see Figure 3 on next page). (This could be due to school factors or to reporting, however. The coaches at this school also reported on the less frequently than other coaches.) It is important to keep in mind that coaches at larger schools spent more time in teacher team meetings than those at smaller schools. This left less overall time for coaches at larger schools to participate in other coaching activities.

Coach log reporting also showed the distribution of activities not related to coaches' roles at their schools. As the Figure 4 below shows, coaches' reports of non-coaching activities are highest at three schools in particular.

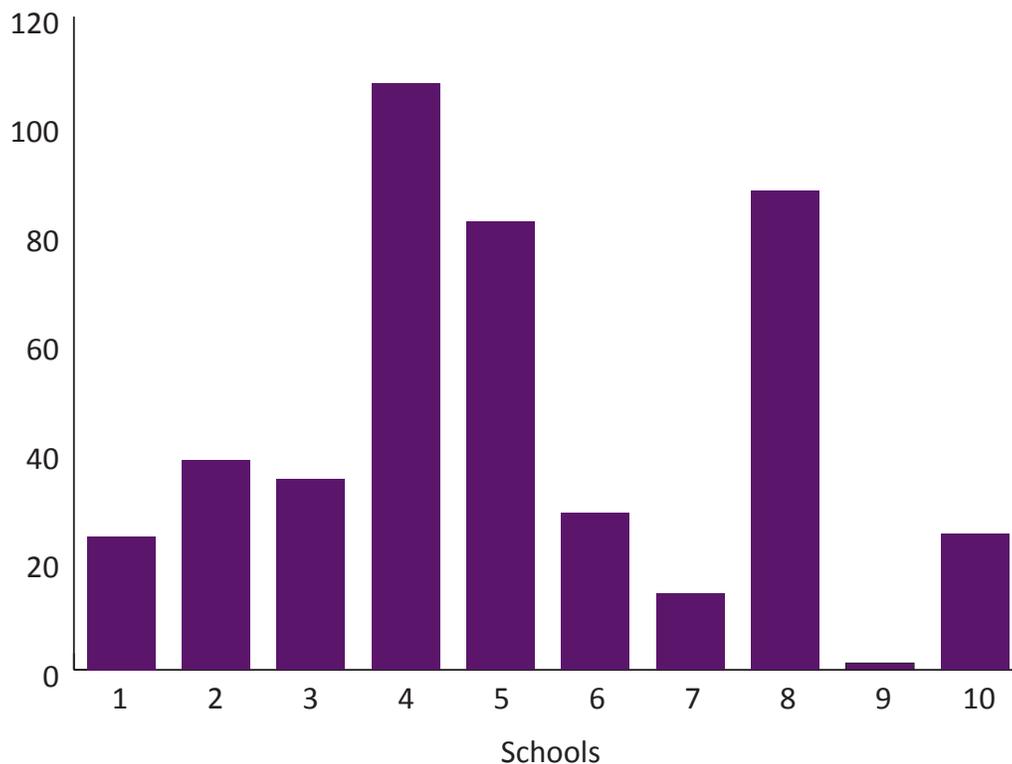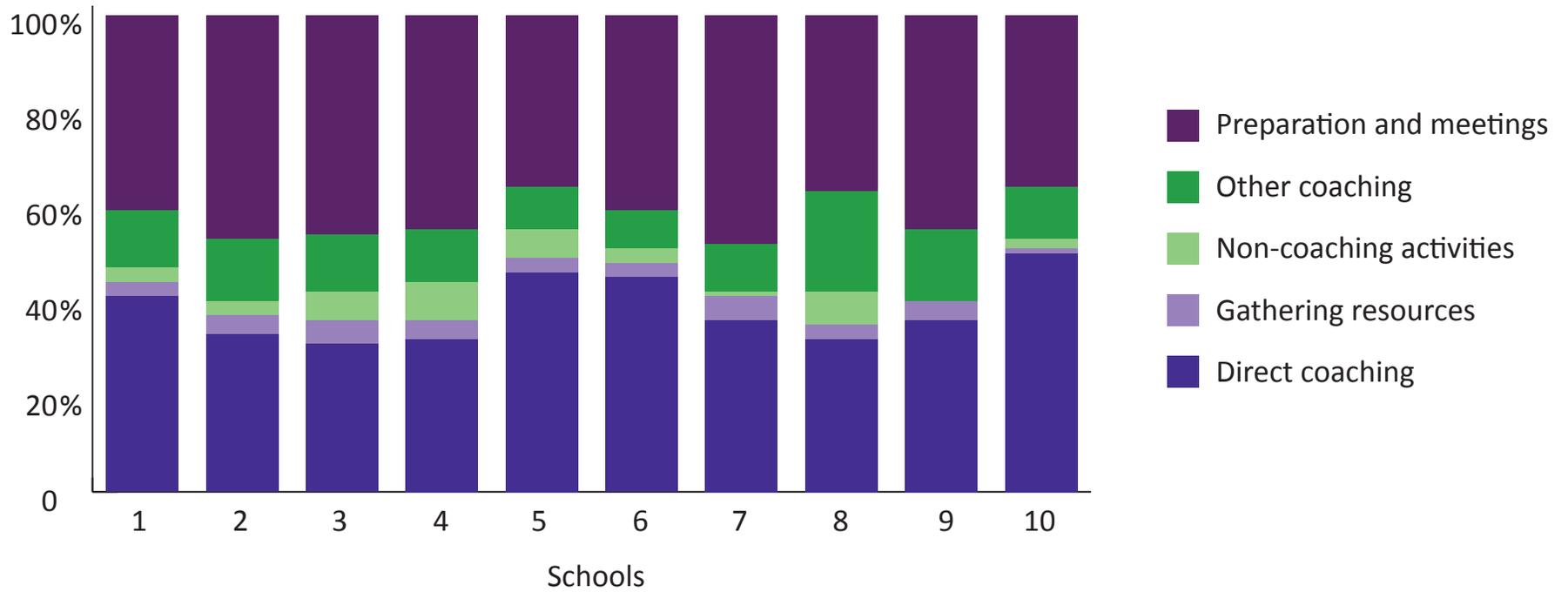**Figure 4. Hours Reported for Non-Coaching Activities by School**

Figure 3. Proportions of Overall Coaching Activities by School

Again, differences could be due to differences in reporting by coaches. However, the results illustrate that some schools may be more proactive or adept at protecting coach time for instructional improvement. From the data, CPRE found that school leaders are essential to protecting the time of coaches by limiting additional duties. "One of the things that our administrator has protected us from is doing recess duty, doing bus duties… Our principal has been very, very good about protecting our time," a coach said. (Coach F1) Coaches consistently expressed appreciation of administrators who respected the specific responsibilities of the GEF coach role. Conversely, coaches may need to be empowered to advocate for their role when the responsibilities they have been tasked with are encroached upon.

In addition to competing demands for coaches' time during the school day, coaches sometimes managed the conflicting expectations about their role that are held by district staff, the GEF program office, principals, and teachers. This misalignment can result in dissatisfaction on everyone's part:

> The problem that we're having with coaches in general with this program is the role has been not very well defined to teachers. And teachers within this school and other schools have different expectations based on experiences in the past with coaches. …so people have different expectations that are not necessarily getting filled. And after talking with other schools obviously [the coach] has things that [the coach] needs to do for GE… And we have different expectations as teachers where the principal has her expectations for coaches that are in her building. (Teacher N2)

Conflicting expectations can lead to misunderstandings among the different stakeholders.

Coaching Factor 3: Professional Development for Coaches

Regardless of coaches' prior experiences, the position of the GEF Demonstration School coach presented new challenges for the cohort. They needed an in-depth understanding of the CCSS in their content areas. The coaches also wanted to determine how they were going to explain and support understanding of the CCSS for their school staff. Additionally, it was essential that they continued to develop their skills as coaches. To meet these needs, the MPS-GEF program staff held an initial five-week intensive CCSS PD course followed by CCSS GEF PD sessions throughout the school year. In addition to GEF PD sessions, coaches also attended PD with the other coaches in the district. These sessions provided opportunities for coaches to develop their expertise in collaboration with their colleagues and gain needed preparation for their new placements in Demonstration Schools.

Coaches felt the five-week CCSS PD sessions provided by the MPS-GEF program, before they were placed at schools, were valuable in teaching them about the CCSS and preparing them to share that knowledge with teachers. "The PD was good," stated one coach, "I got a clear cut latch on to what the [Common Core] shifts are and kind of the direction that we need to go." (Coach B1) The coaches particularly valued time to generate materials they could use with teachers, such as text dependent questions, pacing guides, PD presentations, and assessment rubrics. For many, this was a chance to test sample lessons and ideas before using them with teachers. This coach described the process of developing ELA curriculum during the training, stating:

> We spent about three and a half hours…creating our own text dependent questions and walking through using our HMH Journeys materials, going through and figuring out which questions we want to keep, which ones we didn't want to keep within the teachers' manual, and then drafting our own questions as a team. And then using that qualitative rubric to kind of say, "Are these good? Are these not so good? How do we feel about it?" …When I go to a teacher, I've already practiced having those conversations. (Coach P1)

The coaches appreciated the time to work through curriculum in the training.

Although coaches valued many aspects of the training, some coaches reported feeling unprepared when they started working at the Demonstration Schools. One coach said,

> I learned so much, and the training was strong, but we did a lot of thinking and planning for hypothetical schools at that time… Then I got here and I'm like "What do I do? I have no idea." Because we planned all of those things for a hypothetical school, and now we're in the school and I'm like "Is that even going to really work?" (Coach L2)

The relative newness of the CCSS, not knowing their assigned schools, and the change in coaching model–focusing on the CC Fellows–were some of the reasons coaches reported feeling unprepared.

Both mathematics and ELA coaches felt that for the first year much of the content of PD was strong and appropriate to their needs. Though they have made great gains in understanding the standards and increasing their own knowledge, it can still be a challenge trying to understand the CCSS in order to meet the expectations of the teachers at their school. Schools looked to their coaches to be experts on the CCSS, but many coaches reported that they felt that they were only slightly ahead of the teachers.

> I have learned more this year than in any previous year coaching. In order to stay just ahead of the teachers and the content they were working on, I had to spend a great deal of time studying the standards, engaging in conversations with other coaches, finding resources, etc. It has been extremely rewarding, but also exhausting. (Survey Coach Q)

Another coach reported:

> One specific challenge I've encountered is knowing the answer to some of
> our CCSS questions. There were times we needed specific advice on a close
> read protocol or an evidence based answer strategies, and we didn't have
> someone with more experience to call on. (Survey Coach R)

It is not surprising then that several coaches pointed out the high-quality presentations that occurred throughout the school year and particularly valued having access to experts in the field train them:

> We had Harvey Daniels out, we had Doug Buehl out, I mean good people out.
> And they've come to give us, right from them, the official authentic versions
> of literature circles and the writing circles, and now inquiry circles, which is
> really good, too. (Coach R1)

Coaches reported wanting more experts to help train them, especially with those people who have a depth of knowledge regarding the CCSS.

> I need more professional development that is given by people who really
> understand CCSS. The coaches are working together trying to figure this out
> but it feels like the blind leading the blind. I get frustrated when I run into
> "walls" and I know it can be avoided. (Survey Coach D)

PD for coaches also focused on coaching and communication strategies to use with teachers. Response to this PD on coaching was mixed among participants. Some participants liked the training, which they described as intensive and extending over several days. They liked learning multiple techniques for coaching, which afforded them more flexibility with their coaching approach. "It was two full days of coaching techniques. Yeah, so that was really helpful," one coach reflected. (Coach A2) Other coaches, however, felt that it offered too narrow a format for coaching than was needed in the Demonstration Schools. "It's only one kind of coaching, so it was kind of putting all our eggs in one basket. And I think we need more than that." (Coach R2) The same coach suggested other models of coaching for the district to consider in future PD, for example, "We need some of that side by side coaching so it's more an active model of input on the teacher's part." (Coach R2) Other coaches did not suggest specific models of coaching, but noted they valued learning a variety of techniques to use.

Both mathematics and ELA coaches also wanted PD to cover a wider range of content for multiple grades. A number of coaches were working for the first time in their careers with particular grade levels and wanted to develop gaps in their expertise: "Another challenge is building my own content knowledge at so many grade levels to support teachers and students." (Survey Coach B) The ends of the grade bands, K and 8th grade respectively, were most commonly identified

as challenging for coaches to master. A mathematics coach reflected, "If there was a way to get more content specific support at–especially at middle school grade, that's something that I wish that we had more of a time to talk about." (Coach I1)

Overall, coaches were concerned about their PD in the upcoming school year (SY 2013-2014). Many felt that they are familiar with the CCSS language and identifying the shifts, but wanted to move beyond surface level explanations to understand how to better implement CCSS in demonstration school classrooms, specifically. One coach explained, "We need the next level of implementation, question/answer, resources…" (Coach R3) Teachers looked to their coaches as experts in the CCSS, and coaches felt pressure to be familiar enough with the standards to meet the expectation of "expert."

At around the same time CPRE was finishing data collection for this year (SY2012-2013), several coaches reported that they were going to different PD conferences in the summer, including the 2013 GE Foundation *Developing Futures*™ In Education Conference.

Coaching Factor 4: Collaboration among Coaches

Coaches made clear that a major benefit of the bi-monthly PD sessions was the opportunity to collaborate with other GEF coaches both within and across content areas. Coaches liked learning from and working with their colleagues. They relied on each other to answer questions and provide support as needed. The words of this coach echo the sentiment of the majority of the GEF coaches:

> One of the greatest strengths of our group is that we're able to call upon one another…I feel like our team has built this cohesive group, this bond that what one of us doesn't think of or get, the other one will usually share that out. From there it seems like the pieces are just slowly falling into place and we're moving in the right direction. (Coach M3)

Collaboration with coaches in different content areas helped coaches better understand the CCSS. In the past, coaches reported that ELA and mathematics coaches did not work closely together during MPS PD. The collaboration across content areas enabled them to learn more about content outside of their areas of expertise. One coach said, "They took us through the modules, both in literacy and in math, which I thought was really helpful for us to see, as a whole what the shifts looked like in both content areas." (Coach Q1)

Furthermore, many coaches felt that collaboration between mathematics and ELA coaches in PD helped them develop essential relationships with their colleagues before they started working together in schools. They could provide curricular and emotional support for one another and

indicated they felt like part of an established GEF team. One coach explained this collaborative support, saying:

> It's a tight team, and that's the nice part about this, too... That's what I wanted to present to the staff: that we're a team, that we're together, that math and literacy are not separate, that you can teach them somewhat together, and that this is GE and we're all together. (Coach F1)

Entering schools as a coaching team helped coaches present a unified message of the initiative and the CCSS. Coaches who were unfamiliar with their new school placement indicated they felt more secure entering with a known colleague. Additionally, the coaches indicated that they relied on each other to share resources, generate ideas, and plan. For example, one coach said

> To me it's ideal and it's great to have [a coaching partner]. Every day we try to connect for twenty minutes and eat and we end up talking and eating and going over what… went on, and it's our time to just connect and talk things through. "Where are you going with this?" "Are you seeing this?" "Are you having this problem?" "Can I help you with this?" (Coach M2)

Coaches' sense of community led them to create a support network among themselves, even communicating outside of formal PD sessions, such as meeting at lunch or talking on the phone outside of school hours.

> We have lunch, but we're trying to eat. So we really need time to talk about "How are you starting? How are you getting into classrooms? What about the teachers that really aren't very welcoming? We're doing some of that on our own... Every day, we're on the phone to each other. "What did you do today? What did you do in classrooms?"... That's good support, too." (Coach B2)

 Another coach shared similar comments, stating, "I depend on [my colleagues] a lot…I talk to other coaches about [GEF]; I talked to one on the phone last night. I talked to a former coach, so my relationship with coaches is really important to me." (Coach D2)

The coaches reported that they valued collaboration so highly that they wanted even more opportunities to work with each other during PD sessions throughout the year. "I think as GE coaches, we need more time to just talk to each other, because what we're finding is that the sessions that are planned are pretty packed," said one coach. (Coach B1) The coaches wanted time to collaborate during PD because they valued their colleagues' expertise and wanted to learn from each other. One coach explained:

> I just wish that we [the coaches] all had more time to share our ideas and what's working and what's not working… think that we learn better when we know that people are doing the same job that we are and we get ideas from

them. Because I know what my strengths and weaknesses are and I know that there are other coaches out there that my weaknesses are their strengths. And so I'd really like to be able to pick their brains a little more and say "Hey how can I set that up in my school?" or "How can I set that up for myself, knowing that that's such a strength of yours," but we don't ever have time to do that. (Coach M2)

Another coach also described wanting to learn more about the strategies other coaches were using, as a form of knowledge sharing across the cohort. The coach said:

What I would like to see is just time for all the GE literacy coaches to meet in a room and just say "How's it going? What are you doing," and then talking about some of the experiences, the things maybe that didn't work, things that did work, starting points. (Coach A2)

Regarding the PD coaches received, overall coaches felt that the GE Grant Office provided them with a strong foundation of knowledge of the CCSS. The also appreciated the opportunity to work with experts in the field as well as the opportunity to work with one another in a collaborative fashion. Moving forward, coaches would like to see their knowledge and skills develop further, and would like to see their own PD become rigorous and specific to their needs.

Factors Influencing Overall Implementation of the CCSS Initiative

The previous section discussed factors that influence the roles and responsibilities of coaches specifically. Using the data from teachers, coaches, and principals, CPRE researchers also found that non-coaching factors also played an essential role in shaping the overall MPS Demonstration Schools Initiative. In the following sections, researchers will identify the significance and role of other major implementation factors, including: leadership, curriculum and instructional resources, classroom characteristics, student characteristics, time for teacher learning, and the influence of other initiatives.

Implementation Factor 1: Leadership

The role of building administrators is to organize the multiple stakeholders of their schools and orient them to pursue a common vision, in this case the use of the CCSS and corresponding instructional shifts to improve student learning in their building. Across Demonstration Schools, and across leadership styles, researchers found aspects of leadership that influenced the implementation of the CCSS within schools. The most significant factors included principals'

support and understanding of the initiative, accessibility and visibility, empowerment or disempowerment of staff, instructional leadership, and vision setting.

Principal support and understanding of initiative

The level of principal support of the initiative was a major factor in implementation of the Demonstration School model. In many schools, the principal appeared to have buy-in for the model, and was enthusiastic and supportive of the initiative. Some coaches attributed the implementation successes to the principal's encouragement of the initiative. One coach said, "Principal support is really key to doing any of this stuff because I can talk and model but when I leave if it's not an expectation that that's going to continue then it just falls. And so that's a big deal." (Coach N1) Another coach explained:

> I have felt welcomed since the first day we were here. The principal is extremely supportive and very much honors our time and our work and our professionalism. [The principal] does refer to us and asks us questions and makes sure [the principal] on track with everything. So that's a great relationship. (Coach P2)

Coaches' from multiple demonstration schools reported similar experiences with their principals, indicating a base of support from administrators.

Initially, coaches encountered challenges when school leaders lacked a clear understanding of the initiative. One coach reflected on the buy-in at the school, stating, "I think the staff has more buy-in than the principal… I think it stems back to, 'This is my school. This is my way,' and [the principal] is not familiar with [the initiative]." (Coach H1) Coaches reported that principals who appeared to lack understanding of the initiative also tended to lack commitment to it.

Principal understanding of the initiative played a very important part in ensuring consistency of messaging and lines of communication for teachers and for coaches. When there was a conflict between principal understanding and others' understanding of the initiative, it could cause stress and confusion throughout the school, thereby impeding implementation. One coach said, "Some of [the principal's] messages are completely contradictory to what the message we're given. So I think it puts teachers than in a strange spot." (Coach P2) In some schools, teachers heard different messages from principals than from coaches, which generated confusion among the instructional staff as to which course of action was correct.

Several principals noted how their understanding of the Demonstration School model clarified from the beginning of the Demonstration Schools Initiative to the end of the year:

> Initially, I really didn't know what it meant to be a Demonstration School. I thought it would be a lot of outside visitors coming to see what we were

doing. As we have progressed this year around implementing the Common Core State Standards, I think my teachers are gaining a deeper understanding of what it means to let the standards be central to the teaching. (Survey Principal H)

Other principals noted "The mission, goals and objectives are better understood by both administration and staff" (Survey Principal A) and "I have a greater understanding of the expectations." (Survey Principal B) From the data, it appears that not only have some administrators' understanding increased, but faculty understanding as well.

This change in understanding could be due to working with coaches, attending after school PD, or principal PD sessions–to help with understanding the initiative. Principals had their own monthly PD session with the GEF Grant Leadership team.

> [We've] got this professional development time. What is it that they can do that's going to be something relevant for teachers, because I think around this whole idea of Common Core, it's new to me. It's new to teachers. In fact yesterday was only my second time getting anything around Common Core outside of just superficial kind of stuff. And to some degree, it still is a bit superficial. But I think that more I hear it, the more I'm starting to understand it. (Principal H)

One coach explained the change throughout the year:

> In the beginning, I think the administration felt it still necessary to follow district mandates (follow pacing guide, use only Journey's resources) and this was giving the teachers a mixed message. Now [the principal] seems to understand better; so that's good! Also, it took a long time for administration to understand that we are not the "fixers" of teachers. [The principal] often wanted us to go into classrooms with teachers who needed "fixing" and that wasn't a valid use of our time." (Survey Coach G1)

Principal accessibility and visibility

 Respondents felt more supported by principals who were accessible and visible to them. Accessibility is the degree to which an administrator is available to staff, either in person or through email and phone communication. Accessibility of administrators was particularly important to coaches, as they valued regular meetings to maintain communication and plan for upcoming work. Most Demonstration School leaders had regular meetings with coaches to stay apprised of progress. Coaches who met frequently with their principals felt they were more effective in supporting coaching and implementation because they were aware of the coaching process in their buildings. Teachers also reported that accessibility was important, especially in terms of communication, such as frequency and speed of principal response to teacher emails

and requests.

Visibility is the extent to which an administrator is visually present to staff in the building. Visiting classrooms, attending school events, or walking through the buildings are instances of visibility. One coach explained that their principal "is very visible to the staff and to the students, which I think is really great" and that this principal is "wonderful to work with," and "very supportive" of coaches and teachers. (Coach B2) The visible presence of a principal in the school conveys their interest and investment in teachers' and students' work and progress. Another coach explained:

> [The principal] is a strong lead…[and] is very into looking at kids and kids' work and how it's going in all the classrooms…[The principal] wants to know how it's going with what teachers and what's working, what's not working maybe, and movement, growth, changes. (Coach J2)

The appreciation of visible administrators was shared by other instructional staff. A teacher noted about that the principal was very much aligned with the way the participant teaches, "[the principal] is very visible and [is] in rooms checking plans and coming in. [The principal] has observed me three times." (Teacher R3)

Coaches and teachers believed the principal's visibility created a more supportive, engaged climate. A coach described a principal as:

> Very hands on, engaged principal, all over the place. High energy, lots of time in and out of the classrooms, all over the building, very visible. Wants… people to move, wants to see students engaged, and attaches reading material to the bulletins, current articles that are discussed at staff meetings. (Coach J1)

It is likely that principals who were more present throughout their buildings also had more awareness of progress in their buildings, which allowed them to stay informed. At the same time, it also signaled to teachers that principals were paying attention to them, and principals could set and follow up on expectations accordingly.

Principal empowerment of staff

Many coaches valued having the support and flexibility from their administration to implement their position without significant oversight. These leaders trusted coaches and teachers to make decisions, while also providing appropriate oversight. A coach said,

> If we present [the principal] with an idea or [the principal] asks us to do something [they] will leave the details up to us and trust that it will get done. And so that is, it's empowering in some ways, and it just feels good that you have that kind positive, effective relationship with [the principal]. (Coach Q2)

Teachers also noted when the principal empowered them to help make decisions and gave teachers the freedom to let the CCSS guide instruction instead of the district pacing guides.

Principal as instructional leaders

Coaches valued having instructional leaders–administrators with prior experience with curriculum and instruction–in their schools, as they believed these principals were best positioned to understand and support the initiative. "I think one of the other strengths is [the school staff] were lucky in getting [this principal] because [they are] an instructional leader. [The principal] understands the curriculum. [The principal] understands what's going on in the classrooms," reflected one coach. (Coach K1) In contrast, principals with less knowledge of instructional practices seemed to need more time and PD to fully understand the initiative. Schools with instructional leaders had fewer reports of conflicting messages from principals and coaches.

Principal as vision setters

GEF coaches valued when school leaders set clear and consistent vision for their staffs. In some schools, the principal established performance expectations for students and teachers.

> I think [the principal] is pretty explicit [with] expectations. I think [the principal] is walking around the building quite often…saying, 'I'm looking for these things. I'm looking for students to be engaged in their learning'… So, it's really explicit: 'here's our expectation.' (Coach A1)

In these schools, the coaches indicated it was easier to start working with teachers because there was an established system of goals and school-wide expectations. Schools without a clear vision from administrators presented challenges for coaches. The teachers did not have a unified understanding of their goals as a staff, nor were they accustomed to working collaboratively to meet those goals. In the case of Demonstration Schools, vision-setting required principals' to understand the initiative and goals that are aligned with the initiative's objectives.

MPS Demonstration School leaders had complex yet vital roles in advancing the GEF initiative. The impact of their position varied, depending on the strategies and characteristics of principals' approach to the GEF initiative. The most significant factors included principals' support and

understanding of the initiative, accessibility and visibility, empowerment or disempowerment of staff, instructional leadership, and vision setting.

Implementation Factor 2: Curriculum and Instructional Resources

The adoption of the CCSS required demonstration schools to assess the alignment of existing curriculum and resources to the new standards. While the central office provides curricular guidance to district schools via curriculum and instruction plans (which include pacing guides), called the Comprehensive Math and Science Plan (CMSP) and Comprehensive Literacy Plan (CLP), the plans do not necessarily align to the content and pacing called for in the CCSS. One principal explained: "We had our pacing guides and we were following district targets, but the connection between the district and state targets and Common Core was not being made as purposely as this year." (Principal A) Therefore, CPRE researchers found that, without existing aligned resources such as lessons or instructional materials, both coaches and teachers committed much time and effort to adapting and identifying such resources. This section examines how coaches assisted teachers to implement standards in their classrooms without "off the shelf" aligned resources and teachers' reaction to the curricular changes associated with the CCSS.

Alignment with CLP and CMSP pacing guides

Demonstration School coaches and teachers in this study felt neither the CLP nor CMSP pacing guides fully aligned with the CCSS. Prior to this year, teachers were held tightly accountable for adhering to the guides. As coaches facilitated teachers' implementation of the new standards, teachers needed reassurance that they could deviate from district models.

ELA coaches were less likely to view the ELA pacing guide as misaligned than mathematics coaches were to view the mathematics pacing guide as misaligned. For example, one ELA coach said, "I don't think that there's a misalignment. I think there's a misunderstanding about the documents… We're being allowed to have some creativity and to try things out to help the district move forward." (Coach B1) In comparison, the misalignment between the CCSS-Mathematics and CMSP caused considerable work and frustration for coaches:

> The district tried to take these books, and like a square peg in a round hole,
> they tried to fit them to the common core, instead of saying to teachers,
> "You're going to have to look for some materials." So the pacing guides were
> really pretty bad. (Coach L2)
>
> As mathematics coaches in the GE Squads, we've been freaking–is probably
> the nicest way to put it–at the pacing guides that MPS had put out. Fairly

early on at some grades when we came into this school in October, we
noticed that they wouldn't be getting into these big focused areas at their
grades until later in the year and that that didn't really leave enough time for
them to really hit that idea in enough time that they should have. (Coach Q2)

Since the MPS pacing guide did not adequately reflect the standards, the data indicates that
mathematics coaches took on the additional task of generating a new version that Demonstration
School teachers could use. Coaches then used the revised guides in grade-level team meetings
to review and explore the CCSS. This was essential for the success of the initiative, but added to
the workload of the coaches. According to a mathematics coach:

As we [coaches] met and worked through those pacing guides the first couple
months, [we] kind of realized that the way the district set it up isn't necessarily
the best way to roll out the standards for the year. So we've been meeting as a
team and revising the pacing guide each month and kind of coming up with
an alternative version. (Coach B2)

The revised pacing guides were a critical component of mathematics coaches' work with teacher
teams, especially in the beginning of the initiative. In the words of another mathematics coach:

We spend a lot of time at grade-level meetings, particularly actually studying
individual standards. So the GE coaches have created a pacing guide
according to the standards. So when we meet as grade levels and we look
at where we should be, we study those standards. We'll pick two or three of
them where we actually study them." (Coach L2)

Teachers found the new mathematics pacing guide to be helpful in their daily planning. A
teacher noted "The math coach has provided us with a monthly pacing guide, which is helping
a lot because that way we can research, if we need extra help in order to deliver our lesson more
appropriately and look for problems for examples." (Teacher M2)

Since these interviews were conducted, publisher Houghton-Mifflin Harcourt gifted MPS GEF
Demonstration Schools with new K-5 textbooks: *Math Expressions 2013*. This textbook purports
to be aligned with the CCSS, but respondents' early interactions with the new books yielded
concern that they are not aligned:

We just all got the new *Math Expressions* book. The teachers were like "Yay!
We get to follow it from page 1 to page 700." And then we're like, "No.
They're not really that great." So it's been kind of disappointing for teachers
the past couple of weeks since we got the new books and we're telling them
that they're not any better than what we had. (Coach N3)

Even though the new textbooks may not fully match the CCSS, teachers and coaches still
appreciated having mathematics resources that will support some of their work with the new
standards.

Flexibility and narrowing of the curriculum

Because there was not aligned curriculum in ELA or mathematics, MPS granted Demonstration Schools flexibility from the pacing guides. Overall, coaches responded positively to the flexibility. An ELA coach reacted positively to the flexibility, stating "That was exciting to hear that, you know, to start to see that curriculum as a tool to get to the skills and strategies that are going to meet those standards, but not as your be all end all." (Coach A1)

Teachers also appreciated the flexibility of curriculum to meet CCSS. Teachers reported being required to follow the district pacing guides in previous years. One teacher explained that if a teacher was not on pace, they were told, "'You are not doing what we are supposed to be doing.' We are penalized or sent something." However, this teacher's experience in a Demonstration School this year was different: "now we have the freedom. If we are doing what we are supposed to be doing, we can extend time in order to go deep with that concept we are trying to convey." (Teacher M2) Some teachers were still uncomfortable with the pacing flexibility. Several teachers noted that they had become so used to the requirements of previous years, that the Demonstration Schools Initiative required them to "re-adjust" their thinking: "It is hard to let go of the other materials and ways of teaching used in the past. We are so used to being compliant with the district expectations that we are nervous to let go of the required materials." (Survey Teacher 144) Some teachers were still concerned about ramifications of not adhering to the CMSP or CLP despite an overall belief that it could be beneficial to student learning.

On the other hand, this flexibility appealed to staff who had previous experience creating their own materials, or were very interested in implementing the CCSS, and were excited to create and organize their own lessons and units. In many schools, the staff responded positively to the change. A mathematics coach explained:

> When we told them, "You are focusing on the Common Core and that comes first," and when we told them that they understood that they were allowed to go and get other resources, they were like, "Yes, this is the way we like to teach anyway. This is better for us because we feel like we can develop lessons and find resources that fit the Common Core and fit our students better than what we have. (Coach L2)

Another teacher explained, "I felt I had more freedom to plan thematic units that I could align to the standards. I also felt I could spend more time on areas we lacked in to work towards better understanding of the subject matter." (Survey Teacher 25) This response was echoed in other schools, particularly as teachers started to recognize the benefits of adapting curriculum to the needs and interests of their students. Respondents reported that the CCSS allowed teachers to focus their curriculum and instruction, so they can go further in-depth on certain topics. According to teachers, the narrowing of the curriculum is designed to ensure students develop proficiency in key skills. Teachers reported that they are appreciative of specificity of CCSS:

> But more or less I think about, "Here are the standards; get rid of the noise and then focus more on that," and it's awesome because I thought we weren't getting to proficiency with a lot of the kids. There was just so much and it was just "stick to the schedule; go through this book; get through the book." And now I think we're working towards getting [the students] proficient and solid in multiplication, division. I feel really confident, not only that they know the facts like kind of rote facts, but they can take a problem and figure out the steps. (Teacher R1)

Schools with a prior history of teacher-designed curriculum seemed to be the most enthusiastic about creating new materials for the initiative. As mentioned previously, however, developing curriculum required work that teachers found challenging, and in some cases, resented.

Finding time to locate and create resources

Despite the flexibility to shape lessons and curriculum to align to the CCSS, there were still key challenges including the time it took to find and create new resources and difficulty locating CCSS-aligned materials. The burden was even more significant in schools with fewer resources, such as a well-stocked library or access to trade books for different grade levels. Both teachers and coaches discussed the increased workload, resulting in staff working more on their own time. One coach said:

> When I'm home at night my time is like maybe looking through my materials and running to the library, creating the materials that we don't have. We don't have a big library here; we don't have text sets, you know? There's a lot of things we don't have, so it's creating your lesson plans; it's creating the materials that you're going to share with them or if you're going to model– having that all in place…and that's very time consuming. (Coach J2)

Working outside of school hours is an established aspect of teaching. The staff in the Demonstration Schools, however, indicated the initial demands of the first year of CCSS implementation took more personal time than in previous years. As the year progressed, coaches and teachers began to develop systems to streamline the process of developing curriculum. This included dividing the labor among a grade-level team or structuring time during the day to incorporate necessary tasks. As explained by an ELA coach:

> I'm pulling resources. I'm down in the library getting books. I'm printing out reading A to Z books. I'm designing the stations. I can't do all of that. We're already here 12 hours a day most days. Reality sets in and I'm like you know what, I've got to use some of the time during the day to get this done. That's just a reality. (Coach K2)

Many teachers felt that they were being asked to develop mathematics curriculum in addition to their other teaching responsibilities, and this additional responsibility seemed to overburden teachers with already limited time. For some teachers, the mildest adjustment was to rearrange lessons in the textbook to align with the order of the standards. However, most teachers also had to find supplemental resources and activities to compensate for missing content. One participant noted:

> I think the absolute most difficult thing is just to come up with your own lesson and trying to find the time to go online to find things–to come up with you own math curriculum. Right now though with the geometry what we have done is pulled some lessons from Saxon and we're just kind of using that as a guide but not doing like the complete, complete thing and having [students] do kind of different activities. (Teacher G1)

This challenge was more common in schools where teachers had less experience designing curriculum, as these staff members were less adept at finding resources for instruction. Teachers, with help from their coaches, have tried to be resourceful when supplementing their mathematics or ELA curriculum by using chapters and lessons from other curricula, accessing online resources for activities, and using other teachers for ideas.

Having more time to develop CCSS- aligned lessons and assessments, was also important for teachers to implement the standards in their classrooms. This year teachers found the time in grade-level meetings valuable, especially because it provided planning time. However, the two hours was not enough time to engage in planning the way they desired.

> It's the culminating activity that we're coming up with, you know, we're designing this [lesson], finding time to write those TDQ's [text dependent questions] once a week, you know, that's another thing coming up with the culminating activity since we only do have a short time once a month to collaborate. I think that's the biggest issue is the time. (Teacher G1)

> I had to do a lot of research to find activities or lessons that connect to the standards, especially in math. It was very time consuming! (Survey Teacher 42)

Lack of materials

In addition to having an aligned curriculum, having instructional materials and technology were key to implementing CCSS in classrooms. Many teachers spoke about a general lack of materials and resources to teach mathematics according to the CCSS. One survey respondent noted "I think we lack the resources (materials, technology) to instruct using the CCSS with fidelity. " (Survey Teacher 122) Manipulatives, technology, and general school supplies were some of the items teachers felt they needed. One teacher explained:

> I buy my own calculators. I spent $250.00 on calculators. You can ask the kids to get them but they cannot get it–so what; you're going to say, "Oh, it's your responsibility?"…That will not work here. I [also] buy my pencil sharpeners and all. I buy a lot of pencils. (Teacher B1)

Several teachers mentioned spending their own funds, or spending time outside of school obtaining resources.

Overall, despite the challenges found with the resources and curriculum in this section, both coaches and teachers appeared to have learned much through the process. As one coach said, "It gets frustrating ... I think there are times where you just wish you could go to the shelf and open a book and have something there. But I do think being able to be creative helps inspire some of them [the teachers]." (Coach B2) Similarly, one teacher explained the process she and her colleagues went through to understand the standards:

> The more time you spend getting to know the standard, and preparation, planning, that makes it easy. You cannot, you know, just go in the book and do the activity, and expect it to align; you really have to think and you really have to plan a lesson and get your resources together. I don't think it's been very easy; especially this being our first year. (Teacher U1)

This effort to have a more uniform curriculum was generally seen by teachers as a positive change that will ensure students are learning the same things. Despite, the dearth of available resources and curricula, nearly all teachers surveyed strongly indicated that ELA and mathematics coaches provided appropriate curriculum resources for them (92-100%). Survey results also indicated that this curricular work may have developed Demonstration School teachers' skill at identifying aligned materials. According to the end of the year survey, 84% of ELA CC Fellows felt fairly well or very well prepared to select materials to help students meet the CCSS. Seventy-three percent of mathematics CC Fellows and 65% of general teachers felt similarly.

Factor 3: Classroom Characteristics

The daily work lives of teachers occur in classrooms full of students with varying needs and abilities. Failure to consider the classroom in light of CCSS implementation is to preclude understanding of a program like the Demonstration Schools Initiative. The ways classrooms are managed, organized, and sized influences teachers' ability to shift instruction.

Classroom management was a significant factor in the implementation of the Demonstration School model. Coaches expressed it was easier to work with teachers who had established effective classroom management techniques that engaged students and maintained order. For example, one coach explained the teachers s/he worked closely with "have all the things that

you need to be a good teacher. They have good classroom management." (Coach B) Effective classroom management facilitated coaches' work in the classrooms by reducing distractions and enabling both the coach and the teacher to focus on instruction and content, rather than behavior.

In contrast, coaches noted that they found working in classrooms with weaker management more challenging. Modeling and co-teaching lessons was more difficult when student behavior was disruptive. The coach said, "Here at our school, it's lively, you know? We're full-spirited, and I see that as a huge challenge in trying to implement any instruction." (Coach C2) Another coach elaborated on the difficulties of working in classrooms with less successful management in place:

> Managing student behavior is… an issue because… it's very hard for me to go into a classroom and model best practices when I'm also trying to focus on modeling management strategies or putting a management plan in place that hasn't been there all year. So it's hard for me to focus on the really good math when I also am trying to focus on "Okay, you shouldn't be getting up and sharpening your pencil in the middle of my lesson, and I shouldn't have to stop and tell you that when I'm in the middle of my lesson." (Coach B1)

As a result of challenges with behavior management, it appears many coaches used classroom management as a primary consideration in their selection of the CC Fellows they would work with this year. Teachers who maintained control in their classrooms may have had more support from coaches than those teachers with less established classroom management

Multi-grade classrooms, called "splits" in MPS, generated challenges for both coaches and teachers in the Demonstration School. Coaches described difficulty knowing how to support the teachers' use of curriculum when teaching two different grades in the same room since it required those teachers to be familiar with the CCSS for both grades. Furthermore, implementing CCSS in the classroom adds responsibilities and requires more time for split teachers in terms of planning and instruction. This was especially difficult with mathematics teaching because, as respondents explained, the CCSS are almost entirely different for each grade. To ensure coverage of the CCSS, one split classroom teacher explained, "to make sure my students were getting what they needed I decided this year that I would do two completely separate math groups…it's very challenging." (Teacher D1) Also, some split classroom teachers in the demonstration schools were required to attend grade level meetings for each grade they taught.

Factor 4: Student Characteristics Influence Implementation

Several teachers reported that they would like more assistance connecting the CCSS to those students with different needs [i.e., special education and English language learners (ELL)]. Despite most teachers (91%) reporting that they believed implementing the CCSS could help them improve their students' performance, about 50% felt that the CCSS *do not* take into consideration special education students.   One teacher surveyed expressed her concern for implementing CCSS with special education students:

> I also feel like there needs to be separate classes and instruction on how to best implement the standards for students with special needs. How can we better break down the content? How can we cover all of the standards these students need to be successful when they may have processing or developmental delays that require intensive re-teaching or breaking down of topics? These things need to be addressed and they haven't been. (Survey Teacher 53)

Similarly, approximately 56% of teachers surveyed felt that the CCSS do not take into account ELL. For those students who are ELL, teachers noted that the standards are still applicable, but additional support and PD may be needed ensure quality implementation. "I feel well-prepared to use CCSS to further learning among my English language learners. More support, however, is still needed in the area of effective co-teaching among ESL and general educators." (Survey Teacher 90)

Involving special needs and English as a Second Language (ESL) teachers in the demonstration initiative can be valuable to implementation. Specialists such as library media specialists, and art teachers reported wanting to be more involved in the work happening with the CCSS.

One teacher noted that as a specialist:

> I felt I had to insist to be part of the positive change our school was experiencing. Many times I felt disconnected from the work the staff was doing as I was not a part of the monthly planning sessions and even though I asked for minutes of the meetings, they were not made available consistently. (Survey teacher 119)

Grade level teachers also expressed a desire to see special education and ESL teachers more in their meetings as well. One teacher spoke about the importance of having their special education and ESL teachers at the meetings:

> They're supposed to also have deep conversation or invite them during our meetings, regular meetings. They are not there. Invite the ESL teacher to that grade level meeting. That way you have a common ground to approach this [work]. (Teacher M2)

When special education and ESL teachers were included in meetings, both groups of teachers found the collaboration to be valuable. One respondent wrote, "Collaborating with my grade level peers has been invaluable to me. Getting the staff on the "same page" and using the same strategies across grade levels and subjects has been very helpful to my students with special needs."

Factor 5: Teachers Need Time to Learn and Process New Information

With all of the new information teachers receive on the CCSS and content in after school PDs, one-on-one interactions, and teacher team meetings, many teachers reported feeling overwhelmed. One teacher explained that when her coach gives her resources and suggestions, "sometimes I feel a little bit overwhelmed because maybe it was too many, but sometimes I feel like there was no time to sit and process." (Teacher N2)

Teachers need time, not only to learn new information, but to implement it as well. A teacher explained that getting the information was only part of the process:

> It takes time because I hear something, and then it takes a while like alright what does that look like in [my grade] and then I have to think about it, and then to actually try it. You know what I mean? So, things take time anyway. (Teacher T2)

Some teachers felt like they did not have enough time to implement what they just learned in a PD session:

> There [were] a lot of meetings and sometimes I just felt like I needed time to process through the information and get it into place before the next item was presented. Those of us who were on committees, meeting after school with our grade level teams, and meeting with our teaching partners had little time to "process." (Survey Teacher 20)

Not having enough time to process information and implement new ideas in their classes made some teachers feel overwhelmed at the work that needed to be done. By the time the next information session happened, teachers had not processed the information from the previous session.

Factor 6: Competition with Other Initiatives

The number of other initiatives occurring in schools may influence the Demonstration Schools Initiative in some schools. At several schools, staff was involved in numerous programs, such as after school tutoring or meeting SAGE requirements. One coach noted: "Having the million programs here really bothers me and I think it overwhelms and I wish that there was a way that we could say 'We're going to focus on the Common Core.'" The coach continued to explain how different initiatives demanded effort from staff, "I thought right away that we don't need that right now. We're really doing well in what we're doing and [the other initiatives are] going to throw somebody over." (Coach S3) Too much competition with other initiatives can either take away time and effort towards the Demonstration Schools Initiative or halt momentum that the initiative may be gaining.

In conclusion, many factors influenced the role of the Demonstration School coaches, ranging from school leadership to curriculum and resources to time available for teacher learning. These components, in turn, shaped how coaches approached their work and responsibilities at their individual schools. Although all factors were not present or relevant at all schools, together they illuminate the key strengths and challenges coaches encountered at their school placements. In the future, the district and individual schools may find it useful to use participant reflection on these factors as a guide for supporting and enhancing coach implementation in the Demonstration Schools.

Culturally Responsive Coaching

In addition to the mathematics and literacy coaches, two culturally responsive teaching (CRT) coaching positions were included in the implementation of the MPS-GEF Demonstration Schools Initiative during the 2012-2013 school year. The positions were based on the text *Culturally Responsive Standards-Based Teaching* (Saifer, Edwards, Ellis, Ko, & Stuczynski, 2010). The two CRT coaches were hired from within the district and attended training with the GEF mathematics and ELA coaches on coaching and CCSS. Once the initiative began, each CRT coach worked with five Demonstration Schools, selected for geographic proximity. The coaches divided their time between their school sites four days a week, and attended district PD on the fifth day. Near the end of the year, one coach relocated, leaving the district. The position was not filled; the remaining coach finished the year working with her original group of five schools.

The district created the CRT coaching positions for two key reasons: they wanted to facilitate understanding of diversity in the schools and they wanted to support the implementation of CRT within the CCSS. The district, including the Demonstration Schools, consists of diverse groupings of students and teachers. The CRT coaching was intended to further staff understanding of student diversity and increase culturally responsive teaching within classrooms. One coach explained the rationale, stating with the new positions:

> The district would have a systemized, strategic approach to motivating and giving teachers the skills to be able to understand how to integrate culturally relevant curriculum into their instruction. And that doesn't just mean culture and race; it's social justice, it's gender issues, it's family structure, homosexuality. It's anything that plays a role in who kids are today, and who their families are today, and recognizing those things and taking a huge leap from just recognizing it. It's incorporating it into the curriculum that you teach. (Coach T1)

The second major objective of CRT coaches was to support teachers' integration of culturally responsive teaching with their implementation of the CCSS. Incorporating CRT with the CCSS was a logical progression from the perspective of the CRT coaches. The intent of the CRT and CCSS alignment was to reduce the burden on the teachers, enabling them to implement culturally responsive instruction into work they already were doing with the new standards.

CRT coaches used three main coaching strategies to meet these objectives in the Demonstration Schools: large-group PD, collaboration and support with smaller teacher teams, and individual teacher support. The coaching model employed by the CRT coaches was very similar to that of the other GEF mathematics and ELA coaches, differing only in that the CRT coaches worked across multiple sites and therefore had less time with each individual school. Although each CRT coach employed slightly different methodology in her work, the two closely aligned within the overall

structure of the coaching position. In the following section, the researchers will examine the implementation of each strategy, including observable outcomes, strengths, and challenges.

PD was the primary means for CRT coaches to work with the broadest range of staff in Demonstration Schools. CRT PD sessions were offered at least once at each school site as well as during district banking days–those days schools utilized for staff PD. PD sessions were designed by the CRT coaches to incorporate six elements of culturally responsive standards based (CRSB) instruction: 1) becoming student centered, 2) promoting transformational teaching, 3) connecting and integrating culturally responsive standards- based practices, 4) fostering critical thinking, 5) building relationships and community, and 6) incorporating assessments and reflection. Interactive sessions that included videos, gallery walks, and instructional tools, taught attendees these CSRB elements.

Staff who attended CRT PD found the sessions to be valuable. Teachers cited different aspects useful, such as learning about "the importance of planning activities that are aligned to CCSS and aligned to students' lives." (CRT administered survey, Participant 29) Another teacher reflected, "There are a lot of resources available to assist me with culturally based teaching. It's really important to teach our students to learn about others." (CRT administered survey, Participant 4) Attendees described sessions as engaging and accessible. The coaches valued PD because it enabled them to reach a large number of staff at one time. Due to the successful reception of the initial CRT PD, coaches and teachers wanted more sessions. One coach explained, "because people are so new at [CRT] they don't understand it [yet], so having more time to do professional development would have been really good." (Coach U3) Based on the feedback from the first year of implementation, additional time for large-scale, CRT PD would benefit both coaches and schools in the future.

CRT coaches also worked with small groups of teachers in each school as a means to further develop culturally responsive standards based planning and instruction. Coaches met with teams of teachers, usually by grade level, in each of their assigned Demonstration Schools. The majority of teacher teams self-selected to work with the CRT coaches, either by directly requesting support from the coaches or expressing casual interest. Coaches therefore tried to take on a flexible approach based on the needs and interests of each team, collaboratively planning instructional activities. One coach described the process of meeting with teacher teams, stating:

> What we do is design together based on what the teachers want, the content
> that the teachers are working on. We design a unit that would allow them
> to integrate culturally responsive teaching into the Common Core, into the
> Common Core-aligned instruction that they're doing. (Coach T2)

Teachers who participated in small group work with CRT coaches largely valued their collaborations. One teacher wrote, "The support from our Culturally Responsive coach was also helpful in planning cross-content units that were student centered and increased family

involvement." (Survey Teacher 4)

Teacher progress was difficult to track due to the lack of consistent time coaches spent in each school; nonetheless, both coaches identified change within their teams. The coaches anecdotally described teachers' increased use of the six essential elements of CRSB instruction, increased collaboration in teacher teams, and changes in the response of students in the classroom. One coach reflected on the observable changes in classrooms of the teacher teams, explaining:

> Now there are opportunities for [students] to think deeply together as a group, have dialogue around concepts and around academics. But what I'm also seeing is [teachers and students are] now talking about issues that are pressing, or of concern in their communities, and integrating that into the content, which I think is exciting. (Coach T2)

Although coaches and teachers valued time to meet in teams, scheduling meetings was challenging. In some schools, CRT coaches were able to meet with teacher teams already gathered for GEF mathematics and ELA coaching. Both coaches preferred joining their fellow GEF coaches, as the organizational structure of the teacher team meetings facilitated their work. It was not possible to arrange for collaborative CRT, ELA, and mathematics teacher team meetings at all schools, however, due to a lack of substitute teachers or conflicts with the coaches' schedules. At these schools, CRT coaches worked with teacher teams to find mutually available times to meet. Both coaches and teachers desired regular times to meet, as they all felt it would support consistency with implementation. One coach reflected, "I would really like to just have regular time to meet with teachers every week, every grade level … because it's been a real struggle to keep it consistent." (Coach U3) Both coaches attributed the challenge of scheduling to working across multiple sites, thereby reducing time at each school.

In addition to PD and teacher teams, CRT coaches also worked individually with multiple teachers. As with teacher teams, coaches selected teachers based on expressed interest or need from teachers. The two coaches took slightly different approaches to one-on-one support, but both helped plan, model, and/or co-teach culturally responsive lessons in classrooms. One coach said, "My goal ...when I started going into classrooms, was just to go in and model for teachers that you can talk about issues that you might have thought that you can't talk about." (Coach U1) While there is less data on response from individual teachers who worked with CRT coaches, those who did reflect responded positively to the collaboration. Overall, teachers who worked with CRT coaches felt the work was beneficial. Teachers reported increased awareness of student and community differences, expressed interest in culturally responsive instruction, and identified the CRT coaches as supporting their understanding of CCSS implementation.

To continue CRT coaching effectively, CRT coaches need more time in individual schools. Both coaches described the challenges of working in five different sites. One said, "We are being spread too thin… We have way too much to do with five schools, and then they want to see all

the progress, and they want to see what's going on, and it's very unrealistic that we're going to be able to make much of a dent with five schools." (Coach U1) The other coach agreed, noting that working in multiple sites meant they were not able to meet the needs of all the teachers who wanted to work with them. Both felt the initiative would be improved by increasing the number of CRT coaches in the district, thereby enabling each to work more extensively in individual schools. Teachers in the district also requested more CRT coaches. One wrote in a survey:

> There are not enough funds allocated for Culturally Responsive teachers in GEF schools. One CR teacher for 5 schools is far too minimal… It is crucial to provide guidance for teachers to explore biases and ways to teach from a culturally responsive perspective. To focus only on academic content of the CCSS - and not take into consideration the demographics of the city in which our students live - is too much of a "one shoe fits all" approach. (Survey Teacher 5)

Other administrative and instructional staff also expressed interest in increasing the time CRT coaches work with schools. Regardless of the structure for future years, however, findings suggest the first year of implementing culturally responsive coaches in Demonstration Schools was viewed positively by participants.

Conclusion and Recommendations

The evaluation of the GEF Demonstration Schools Initiative sought to describe the characteristics of the initiative during its first year, the factors that shaped implementation of the initiative, and to look for evidence of instructional changes associated with the CCSS in schools. Extensive interview, survey, and coaching log data provided insights into participants' understanding and perceptions of the CCSS, coaching, and the general implementation of the initiative.

Overall, the data presented in this report shows that the first year (SY 2012-2013) of the Demonstration Schools Initiative has been successful in many critical ways (e.g., secure coach-teacher relationships, teachers' increased use of the CCSS). MPS Demonstration Schools, with their respective administration, coaches and teachers, have accomplished much. Further, there is more work to do within the 10 schools. If MPS is to continue or expand the Demonstration Schools Initiative, there are still important steps the district and schools must take to maintain the progress and momentum from this year and strengthen the initiative moving forward. The findings in this report have implications for MPS Demonstration Schools, the district as a whole, and districts nationwide as they develop structures, systems, and habits of interaction that make CCSS implementation standard practice among educators.

The concluding section of this report summarizes the significant progress MPS made this last year. It includes a set of recommendations that address some key challenges identified in the report. It also focuses on ways in which MPS can strengthen the overall initiative.

Progress

This evaluation found that teachers in the Demonstration Schools ended the 2012-2013 school year with significantly higher CCSS knowledge in both ELA and mathematics than did teachers in the comparison schools, even after adjusting for fall 2012 knowledge. Additionally, within Demonstration Schools, even after adjusting for prior knowledge, CC Fellows had greater CCSS knowledge than did other teachers in the Demonstration Schools. Furthermore, these other Demonstration School teachers had more knowledge than did teachers in the comparison schools.

There is also evidence that this knowledge has been translated into changes in teacher classroom practices. Especially with CC Fellows, teachers and coaches reported that they are changing their curriculum and instructional practices to align with the CCSS. Such changes included incorporating more informational texts, familiarizing themselves with the standards, and greater discretion in choosing curricular resources when planning lessons.

The Demonstration School coaches were instrumental to facilitating changes in the 10 Demonstration Schools. CPRE researchers found that the 22 coaches were essential CCSS advocates and resources in their schools. Overall, most teachers found their respective coaches to be accessible, approachable and dependable. Most respondents surveyed found coaches' feedback and the resources that they provided to be helpful.

Overall, principals, teachers, and coaches valued the grade-level teacher team meetings afforded by GEF support. Teachers and coaches used the time to develop lesson plans, expand their understanding of the CCSS, and learn from one another. Across the board, participants noted they would appreciate more time collaborating with one another and developing their curriculum.

Coaches reported that the PD provided to them from the MPS-GEF Grant Office developed their understanding of the CCSS more deeply. Perhaps more highly regarded was the opportunity the weekly meetings provided to collaborate with one another to share knowledge, implementation strategies, resources, and emotional support. Furthermore, coaches reported learning and collaborating from coaches across subjects, especially with their coaching partners in each school.

Recommendations

1. **Maintaining and/or increasing buy-in from staff is still important.** CPRE researchers found that teacher buy-in for the Demonstration Schools Initiative varied from enthusiastic to resistant. For those teachers who were enthusiastic, maintaining that buy-in will be important. Implementing the CCSS has proved to be difficult work, and teachers reported needing encouragement and acknowledgement for the work they have accomplished. Principals and coaches may want to be wary that they do no overburden those teachers who are most enthusiastic, which can lead to teachers feeling overwhelmed and/or disheartened.

    For those teachers who are resistant, it is important to note that a coach possessing all of the qualities found in our effective coaching indicators (e.g., be approachable, give useful feedback) can still be unable to build a working relationship with a resistant teacher. It is possible that other factors play a role in teacher perception. However, CPRE researchers saw some simple strategies employed in some Demonstration Schools that had increase teacher buy-in. For instance, principals' and other teachers' support can signal the importance of coaches' work to resistant teachers. Another way to engage resistant teachers is by creating opportunities for coaches and teachers to be in close physical proximity–e.g., eating lunch in teachers' lounge, participating in school/ teacher activities. Being in close proximity can provide more opportunities for teachers to meet and get to know coaches, to see them working with other teachers, or to ask for

help. As each teacher is different with different classroom context, an open dialogue with teachers and actively listening to their concerns and suggestions may be a way to determine ways to best maintain and increase that teacher buy-in.

2. **Protecting the time coaches spend working with or preparing to work with teachers is one way to ensure one-on-one time.** Coaches' time, and the way they spend that time, is an important factor in this initiative. Coaches reported they would prefer their time be spent working with teachers or preparing to work with teachers. Depending on the school, coaches' time can be committed to non-coaching activities (e.g., lunch duty, covering for classes, or paperwork). Having mutual understanding among stakeholders (i.e., MPS leadership, administration, coaches, and teachers) about the role and responsibility of coaches can be a way to limit misunderstandings and conflicts regarding the way coaches spend their time. Another recommendation is for MPS leadership to find a way to streamline coaches' administrative duties. Given the number of systems coaches have in place to document their work already, such as the coaching logs and PD website, it would be helpful for administrators to consider how they might reach the same goals without adding to the coaches' workload.

3. **Coaches need their own high-quality professional development to maintain and expand both CCSS content knowledge and coaching/instructional strategies**. Though the MPS-GEF Grant Office provided strong PD to further increase coach understanding of the CCSS and their own coaching skills, leadership will need to determine ways to strengthen PD by building upon previous knowledge. With coach turnover, MPS leadership may also have to determine a way to maintain and sustain the cadre of experienced coaches while incorporating new coaches who have not had the same CCSS PD experience.

4. **Give teachers time to process new information once they receive it. Teachers in this evaluation described feeling cognitively overwhelmed at times by the demands of learning and unpacking the CCSS.** With the vast amount of information on the CCSS, teachers also wanted a filtering system–a way to determine which pieces of information were key and which were supplementary. Teachers need time to put new knowledge into practice in their classrooms, too. To minimize overload, coaches may build discussion time into teacher-team meetings or one-on-one sessions with teachers. Discussion time could focus on topics discussed in the previous meeting, so teachers are able to ask questions or share how their classroom implementation went. Coaches can also help teachers prioritize information, determining which information is vital for the teachers more immediate needs.

5. **Prioritize lesson planning and analyzing student work during teacher team meetings.** Teachers reported that with their limited time they would like to utilize their teacher team meetings for more concrete activities and minimize the amount of time coaches spend simply disseminating information. Without "off-the-shelf" CCSS curricula, teachers felt like they were recreating a curriculum and regardless of their level of comfort with that responsibility, they needed time to plan. Furthermore, collaborative planning with colleagues increased the efficiency of the process and alignment across classrooms. Although data on the ways Demonstration School coaches and teachers used student work was mixed, there was an overall consensus that more time should be spent looking at student work.

6. **Strive for unified, consistent messaging and communication about implementation expectations, responsibilities, and roles to teachers.** Ideally, teachers should hear the same messages from their coaches, the MPS-GEF Grant Office, their principals, and to the extent possible, from the district. Aligned, clear communication will enhance consistent application of the initiative across the district. Training on strategies to improve messaging and communication about the initiative should include Demonstration School administrators.

7. **Find ways to provide feedback to both teachers and coaches. Feedback is an integral component to reflection and learning.** At the end of the year, coaches began using the Common Core Classroom Observation Guide (developed by CPRE) as a way to structure conversations about teaching practices with teachers with some success. This tool is one way to provide feedback, but requires a time for coach and teacher to sit with one another to talk about the lesson. Both people need to find and make time to do so. Likewise, despite strong collaboration between GEF coaches, coaches noted that it can be difficult to give critical feedback to other coaches at their respective schools. Upcoming PD sessions for coaches may address non-evaluative, constructive ways of offering and receiving feedback.

"This has been a very challenging and demanding year. Change is never easy--but it is always worthwhile when accompanied by growth and improvement." (Teacher 32)

As this report makes clear, in many ways the GEF Demonstration Schools Initiative in MPS has shown promise in its methods for CCSS implementation. MPS–district leaders, administrators, coaches, and teachers–deserve recognition for their efforts implementing this new, uncharted reform. Throughout the evaluation, it was clear that student success was the prime motivator compelling stakeholders to put in additional hours and effort. Being the first year, there is still much work that needs to be done to move the district further along in implementing the CCSS, and to scale up the Demonstration School model. Though the amount of work can be daunting, if teachers and coaches have the support of district leadership and administration, there is potential for continued success.

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