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Building a Collaborative, Data-Driven School Culture to Improve Instructional Quality

Executive Development Program Case Study #2

This case study illustrates how one principal's National Institute for School Leadership (NISL) Executive Development Program (EDP) experience and NISL coaching helped him to build a collaborative, data-driven school culture focused on instructional quality and student achievement. Upon his arrival, the principal described the middle school as one with a culture of teacher isolation, little accountability for teacher collaboration and classroom-level results, and little to no common planning time. Staff members were siloed and did not have the tools necessary to use data to guide their instruction. The principal decided to implement professional learning communities (PLCs) and common assessments to motivate teachers to examine student data. He built

capacity in his leadership team to help lead PLCs, and they, in turn, helped build teachers' capacity to take ownership of such communities. He provided training and support to his staff on how to collect, analyze, and use data to guide instruction. He used staff feedback and observations to guide his continuous improvement efforts and better meet the needs of both his staff and students. Although the principal struggled to overcome a school culture in which teachers were unaccustomed to working together and teacher capacity limitations, among other implementation challenges, over the course of two academic years, teachers began collaborating between and within subject areas and grade levels, sharing their classroom data with each other regularly. In all, the principal's efforts appeared to have strengthened trust among teachers and their resolve to improve instruction for students.

Putting Professional Learning to Work

This case study report accompanies the report *Putting Professional Learning to Work: What Principals Do with Their Executive Development Learning* (available at www.rand.org/t/RR3082). The main report presents findings from part of RAND's evaluation of the National Institute for School Leadership Executive Development Program, a leadership program for sitting school principals. The evaluation included nine in-depth case studies to examine what improvement efforts principals attempted in their schools and what strategies they applied to reach their goals.

All the case study reports are available at www.rand.org/t/RR3082.

Overview

This case study features Joseph Hollister,[1] who was a sixth-year principal at the time he started the EDP. He drew on his 12 months of EDP experience and two years of NISL coaching to build more effective PLCs and implement common assessments at Sugar Hill Middle School (SHMS).

This is one of nine case studies RAND researchers conducted as part of an overarching study of the effects of the EDP and paired coaching on principal effectiveness and, ultimately, on student outcomes.[2] We selected the nine principals from among 26 best-practice candidates nominated by NISL. To read more about how we selected cases and our methods of analysis, please see the main report, *Putting Professional Learning to Work: What Principals Do with Their Executive Development Program Learning*, at www.rand.org/t/RR3082.

To describe the changes that occurred in SHMS, we first set the stage by describing the school context in the year before Principal Hollister assumed leadership. We then describe how he developed his Action Learning Project (ALP), through which he applied the concepts learned in the EDP to his school. Following this, we describe the first and then second

year of changes he enacted,[3] highlighting the connections between his actions and core EDP principles and concepts (shown in the text boxes). After summarizing his accomplishments and plans for continuing the improvement work, we conclude with a discussion of key factors that facilitated or hindered change.

The timeline in Figure 1 shows the key activities described in this case study. The activities above the horizontal blue arrow are Principal Hollister's individual actions, and those below are school improvement activities in which staff at SHMS engaged.

Context for Principal Hollister's School Improvement Effort

Joseph Hollister became the principal of SHMS in the summer of 2016. Previously, he was the principal for five years at the upper elementary school that fed into SHMS and, before that, a mathematics teacher at SHMS for ten years.

Situated in a town in Mississippi, at the time of this study SHMS was a small Title I school serving about 400 students in grades six through eight, 58 percent of whom were nonwhite and 83 percent of whom qualified for free or reduced-price lunch. SHMS enjoyed strong support from the district, and the principal was granted considerable autonomy with respect to curriculum, instruction, and management decisions. In 2015–2016, just before Principal Hollister took the helm, the school improved from a state-graded failing school to a "C"-rated school.

Principal Hollister arrived at SHMS during a time of transition. The previous principal had served for eight years, and the previous assistant principal (AP), who had served as the primary instructional leader, left earlier in 2016. Moreover, the mathematics and English language arts (ELA) departments had changed their curricula three times in the three years leading up to Principal Hollister's arrival. At the district level, a new superintendent was installed in 2015, and he required all schools in the district
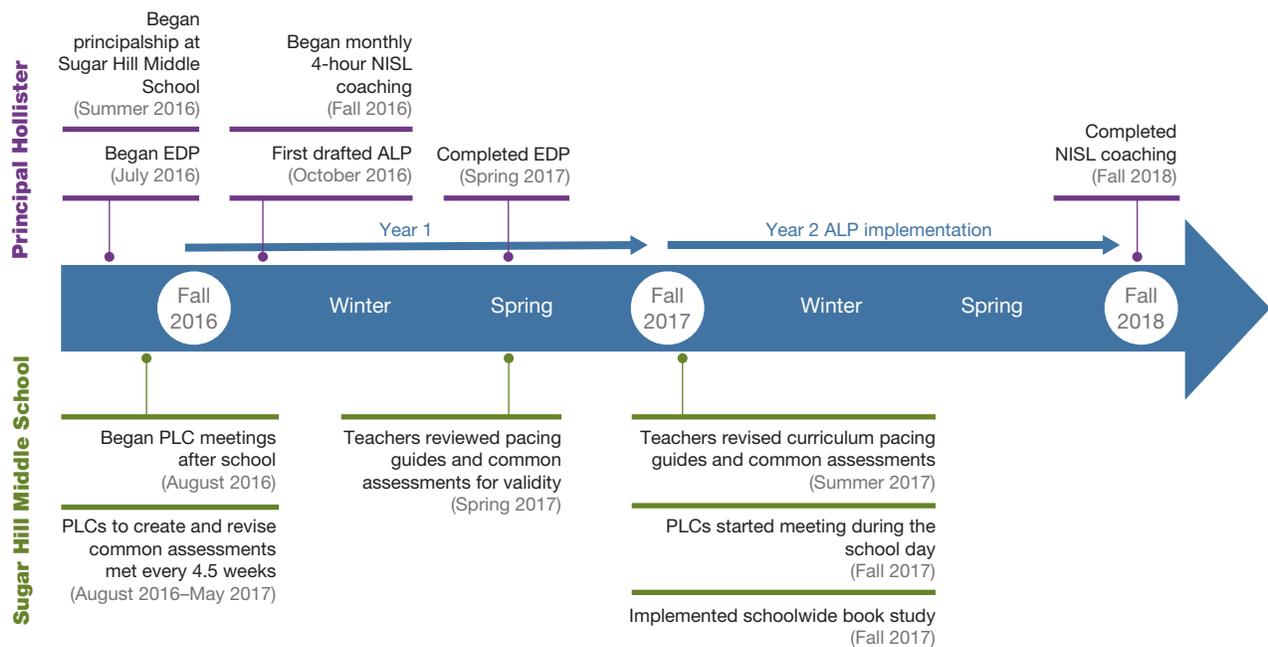
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[1] Names of individuals and schools are aliases to protect confidentiality.

[2] To gather perceptions of how Principal Hollister worked to improve his school, we conducted a series of interviews and focus groups over two school years. We visited SHMS for day-long visits in May 2017 and May 2018 to individually interview Principal Hollister and key implementers of his school improvement effort, including his assistant principal and school counselor; to conduct five focus groups with teacher leaders and other selected teachers; and to observe classes. In addition, we conducted hour-long phone interviews with Principal Hollister in September and December 2017. At these four points, we also interviewed Principal Hollister's NISL coach. Finally, in spring 2018, we interviewed Principal Hollister's direct supervisor, the district superintendent. The information we present in this case study report is drawn from our coding of transcribed interviews and school documents we collected. We note limitations in our data: (1) Our data were all qualitative in nature and mainly self-reports, and (2) because we spoke with selected individuals, their views may not necessarily represent the views of all staff at the school.

[3] Throughout the case, *Year 1* refers to the school year (or part thereof) in which the principal first started implementing the ALP. *Year 2* and *Year 3* refer to subsequent years of implementation. Each year may not be a full 12-month year.

Figure 1. Timeline of Key Activities Related to Principal Hollister's School Improvement Effort

Principal Hollister

Began principalship at Sugar Hill Middle School (Summer 2016)

Began monthly 4-hour NISL coaching (Fall 2016)

Completed NISL coaching (Fall 2018)

Began EDP (July 2016)

First drafted ALP (October 2016)

Completed EDP (Spring 2017)

Year 1

Year 2 ALP implementation

| Fall 2016 | Winter | Spring | Fall 2017 | Winter | Spring | Fall 2018 |

Sugar Hill Middle School

Began PLC meetings after school (August 2016)

Teachers reviewed pacing guides and common assessments for validity (Spring 2017)

Teachers revised curriculum pacing guides and common assessments (Summer 2017)

PLCs to create and revise common assessments met every 4.5 weeks (August 2016–May 2017)

PLCs started meeting during the school day (Fall 2017)

Implemented schoolwide book study (Fall 2017)

to adopt practices related to teacher collaboration, common assessments, and PLCs. Principal Hollister considered how to align SHMS's goals and initiatives with district priorities while building trust and collaboration among teachers, many of whom were weary of adopting additional initiatives.

Designing the Action Learning Project

Principal Hollister began the EDP in summer 2016, just as he became principal of SHMS, and completed it one year later. Three months into the EDP, principals began the iterative process of designing and starting to implement an ALP.

A NISL coach supported Principal Hollister during his year in the EDP and for one subsequent year. His NISL coach had more than 30 years of experience in public schools, with previous roles as a science teacher, AP, principal, and mentor to principals. Principal Hollister and his coach met monthly, alternating between phone calls and in-person meetings. The in-person meetings lasted the entire school day, during which the coach helped Principal

Hollister articulate strategies and action steps in support of his ALP, performed observations, and assisted in evaluating aspects of the ALP. The coach often reminded Principal Hollister of NISL and EDP resources available to him (e.g., books, the NISL wheel, the NISL flip chart, the performance analysis frameworks, and the cycle of inquiry) and encouraged Principal Hollister to draw on research-based tools to address challenges.

Using Data, Prior Experiences, and District Priorities to Inform Focus of School Improvement Effort

Principal Hollister used data from his school and EDP diagnostic tools, drew on his prior experiences, and considered district priorities before ultimately deciding on teacher collaboration as the focus of his ALP.

First, even though the school had risen to a "C" grade prior to his start, data from his school showed lagging academic performance. Only 74 percent of eligible students were graduating from SHMS. SHMS

had state exam scores below the district and state averages and Measures of Academic Progress universal screening scores below the national average. These results instilled a sense of urgency among the administration and teachers to improve instruction.

Second, the EDP diagnostic assessments confirmed two areas of weakness. One related to communication among teachers. Principal Hollister attributed this weakness to the lack of a forum for teacher collaboration and a lack of common planning time. He therefore planned to create PLCs and provide teachers with both grade-level and subject-area common planning periods during the school day. The second area of weakness was the lack of common formative assessments. To improve this, Principal Hollister felt that SHMS needed common formative assessments tied to student performance targets, so he initiated common monthly assessments for all subject areas.

The creation of PLCs to encourage collaboration became the focus of his ALP. PLCs provided the time and space for teachers to work together, particularly to review and analyze data from the monthly common assessments to inform their instruction. Principal Hollister had experience implementing PLCs at his previous school and had seen immediate benefits. Installing PLCs also reflected the new superintendent's requirements for all schools in the district. Beginning in the 2015–2016 school year, the superintendent led the district's principals through team meetings to create, develop, and monitor PLCs in schools. With district support, Principal Hollister attended two professional development conferences about PLCs in the years leading up to and during his

principalship at SMHS. Overall, Principal Hollister hoped PLCs would help build a collaborative and data-driven culture at SHMS that would elevate student academic performance while also meeting the district requirements.

Developing a Vision and Strategies to Improve Collaboration and Encourage Data-Driven Instruction

With assistance from his NISL coach, Principal Hollister began crafting his ALP in fall 2016. He considered his school's context and district priorities in doing so. For example, drawing on the recent improvement to a "C" grade, Principal Hollister made it a schoolwide goal to become an "A" school. He wanted the PLCs to serve as way to get to the "A." Principal Hollister's **vision** and **strategic** intent were articulated in his ALP goal:[4]

> The intent of this project is to create schoolwide PLCs to ensure high levels of learning for all students. All teachers will be part of a PLC that shares and analyzes data, collaborates on best practices, tracks individual student progress, and participates in professional development. These activities will benefit student learning.

Principal Hollister identified **key strategies** to achieve his ALP vision. His primary strategies were (1) establishing PLCs for teachers of the same subjects, (2) building capacity in his leadership team and teachers for effective collaboration, and (3) developing common assessments in all subject areas to foster a culture of data use at his school. His strategies required putting in place structures and supports, soliciting feedback, and making adjustments over time to best fit the needs of his staff and school. **Action steps** for establishing PLCs included garnering support and buy-in from teachers, rearranging the school schedule to make time for PLCs, and modeling effective collaboration strategies. For the common assessment strategy, action steps included

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EDP Tool

Using NISL's Instructional Leadership Instrument, school leaders are to assess personal strengths and weaknesses in leadership across several major areas—focused on consequences, behaviors, and beliefs. The Instructional Leadership Instrument is intended to help school leaders define who they are as a leader and where they want to be.

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[4] Terms in bold indicate key components of the ALP that principals were to develop and articulate.

increasing the rigor of the initial drafts of the assessments and aligning the assessments to curriculum pacing guides.

Because Principal Hollister tied his ALP goal to district priorities, he received district **support** for his ALP, including autonomy to make instructional, curricular, and staffing decisions as needed. District support was crucial in garnering teacher buy-in because teachers regarded PLCs as aligned with district expectations and became convinced that PLCs would help them become an "A" school.

The First Year of Implementing the Action Learning Project

Principal Hollister's first year as a principal at SHMS (2016–2017) coincided with the implementation of his ALP. He established grade-level PLCs and subject-area PLCs; one met once per month, and the other met once per week after school hours. Although he invited teachers to add items to the agenda for the PLCs, the meetings were largely led by him, his AP, or the department chair. The first major activity over the summer, as shown in Figure 2, was for teachers in each subject area to develop or revise common assessments that they would administer every four-and-a-half weeks. The PLCs then turned to analyzing student performance on these
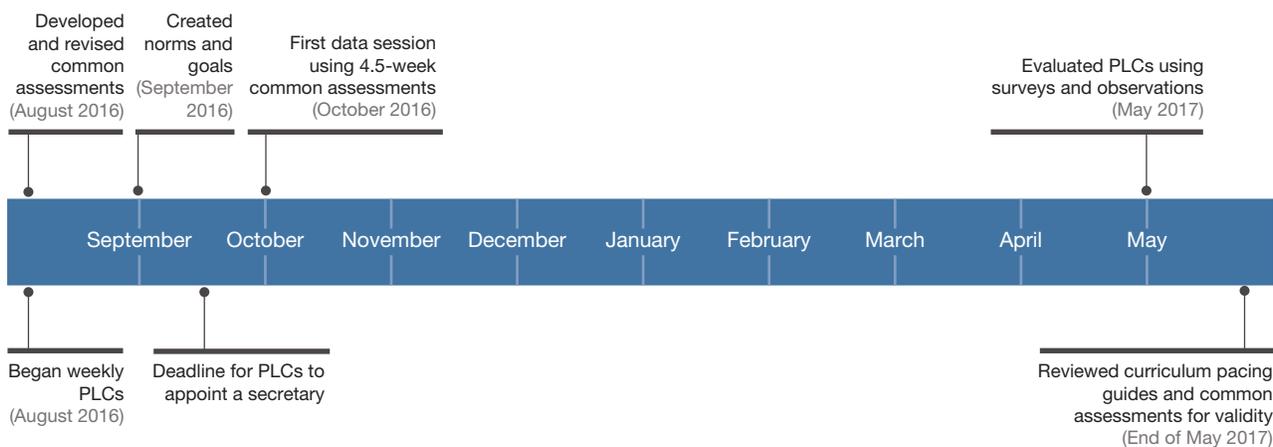
assessments. Sometimes teachers analyzed items by standards to identify concepts to reteach or reinforce.

Principal Hollister's goal for the first year of the PLC was to first build trust among the teachers and a culture of data use so that, in the next year, teachers would share their class's data and discuss what was and was not working instructionally in their classes. Over the course of the year, teachers engaged more actively in PLC sessions, and the school began adopting collaboration and data as part of its core. Below, we trace the strategies that led to these changes.

Strategy 1: Building Trust and Rapport with Teachers

Garnering support for PLCs and ensuring that teachers were meaningfully participating were ongoing processes in Year 1. Teachers fondly remembered Principal Hollister from his time as a teacher at SHMS several years prior, including his commitment to doing what was best for students. This prior relationship appeared to help veteran teachers place trust in the PLCs more quickly than might otherwise have been the case. When Principal Hollister identified teachers who were unsure about PLCs, he engaged in one-on-one conversations to understand their concerns and slowly gained their support. Principal Hollister and his AP also sought to build trust with

Figure 2. Year 1 Professional Learning Community and Common Assessment Timeline

Developed and revised common assessments (August 2016)

Created norms and goals (September 2016)

First data session using 4.5-week common assessments (October 2016)

Evaluated PLCs using surveys and observations (May 2017)

September   October   November   December   January   February   March   April   May

Began weekly PLCs (August 2016)

Deadline for PLCs to appoint a secretary

Reviewed curriculum pacing guides and common assessments for validity (End of May 2017)

teachers through frequent classroom observations. Post-observation feedback to teachers always first emphasized positive teacher behaviors.

To generate buy-in and excitement for PLCs, Principal Hollister first provided opportunities for the most enthusiastic teachers to lead the PLCs. For example, he sent one supportive teacher to a writing conference in the middle of the year. She returned from the conference and helped the PLC create grading rubrics in writing. In the following year, he planned to continue selecting PLC facilitators this way, saying, "I want the ones that are really going to take off and run with this and can get other people on board and create buy-in."

Initially, many teachers were uncomfortable with sharing their classroom data with their colleagues. Some classes had lower proficiency scores than others, so some teachers were anxious about comparing scores and being associated with poor results. Until teachers became comfortable enough with one another to share results and not feel that they would be judged, Principal Hollister settled on having teachers analyze student assessment data across all teachers rather than by classroom. As the year progressed, however, some teachers began to trust each other and shared their individual classroom data. Principal Hollister described this change as follows:

> As the trust grew, [the teachers] became more willing to share [their own data]. And I think that's the key to it. It really got to the point . . . three-quarters through last year, we were able to start using a data wall where we can put all of our data up there, for everybody to see. And I think it almost got to the point where it's not my kids and your kids, but these are our kids.

Strategy 2: Creating Structures for PLCs and Communicating Expectations

Principal Hollister's second strategy was to develop the structures for implementing PLCs. He decided that his leadership team, which was composed of himself, the AP, and department chairs, should lead and model PLC activity in the first year. They would create the agenda for each weekly PLC. The same leadership team members would serve as the PLC lead facilitators. When Principal Hollister and his AP observed the PLCs, they would provide regular input, feedback, and strategies.

Over the summer of 2016, the leadership team reviewed protocols from *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement* and established the following guidelines for PLC implementation in Year 1:[5]

1. The leadership team will collectively convey the priority of PLCs to teachers and communicate high expectations about teachers' active attendance in PLCs.
2. PLCs will meet after school once per week in subject-alike groups, once per month in grade-alike groups, and schoolwide once every couple of months.
3. Each PLC will create norms and goals by September 1.
4. Each PLC will elect a secretary to record minutes at each meeting by mid-September.
5. The leadership team will create the general agendas each week for the PLCs.
6. The leadership team will convey the focus of data-specific meetings (such as setting student growth targets based on common assessment data).

In August 2016, SHMS began implementing PLCs as designed. Figure 2 displays the PLC implementation timeline in Year 1.

Despite putting structures in place at the beginning of the school year, teachers still needed to be reminded to focus PLC efforts on instruction and

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[5] Richard DuFour and Robert Eaker, *Professional Learning Communities at Work: Best Practices for Enhancing Student Achievement*, Bloomington, Ind.: National Educational Service, 1998.

assessment data, rather than attending to housekeeping items. To promote a consistent message about the importance of PLCs, the leadership team met to discuss a communication strategy that focused on the opportunities PLCs would afford and that conveyed high expectations for participation. As part of the messaging effort, in the middle of the year, Principal Hollister renamed the all-staff meeting "schoolwide PLC" to cohere with the content-area PLCs and to signal the focus on data and instruction.

Despite relatively strong teacher buy-in, holding PLCs at the end of the school day was a persistent challenge. Attendance was steady but not as high as Principal Hollister would have liked because of competing after-school obligations. Teacher fatigue also meant that some teachers could not engage as deeply as they would if the PLC meetings were held during the school day. Overall, teacher absences and disengagement disrupted the progress of the PLCs.

Strategy 3: Developing and Revising Common Assessments

Principal Hollister's third strategy was for teachers to develop and revise monthly common assessments for each subject area. When Principal Hollister became principal, common assessments already existed for ELA and mathematics, but those assessments did not align with the rigor of the state assessments; meanwhile, the other subject areas did not have common assessments at all. Thus, one of the first tasks of the subject-alike PLCs was to create or revise common assessments, which teachers would administer to students every four-and-a-half weeks. Teachers developed assessments in August 2016 and first

administered them to students in September 2016. Teachers then discussed and analyzed the data from these assessments in their PLCs throughout the year.

The common assessments were supposed to be aligned with the school's curriculum pacing guides so that it would be clear to teachers which units to teach, when to teach them, and which accompanying assessments to administer. During the fall semester of the 2016–2017 school year, Principal Hollister realized that teachers were using the common assessment dates as their pacing guide instead of using the pacing guides to direct which units to teach and when. One reason for this, he learned, was that teachers found the existing curriculum pacing guides inadequate and outdated. Thus, toward the end the 2016–2017 school year, teachers reviewed and revised the curriculum pacing guides to align with the district standards in each subject.

Teachers welcomed the opportunity to develop and revise common assessments and the pacing guides. It gave them an opportunity to work with subject-alike teachers to identify what students should know before moving on to the next grade level and how to assess that knowledge or skill. According to teachers, students appeared to welcome the common assessments as well. Teachers produced individual data reports for their students and presented these as "data letters" to parents during parent-teacher conferences. In these data letters, teachers benchmarked students' progress against those from other classes and the district.

Strategy 4: Monitoring, Modeling, and Coaching for Effective Collaboration and Data Use

Principal Hollister's ultimate vision was that teachers would work together in PLCs to share best practices and instructional strategies and then implement those practices in their classrooms. But he knew that he first needed to show teachers how to reach his vision. Some teachers did not fully understand how to analyze their classroom data or how to use the data to adjust their instruction. As a result, Principal Hollister planned to visit PLCs and teachers' classrooms to observe and provide guidance.

Principal Hollister's ability to observe PLCs in Year 1 was hampered by timing. All the PLCs were after school at the same time in Year 1, which meant that he and his AP could not observe more than two PLCs each week. When he was available, he coached PLC groups on data use. He accustomed teachers to collecting data through the monthly common assessments and demonstrated how to analyze and use these data to drive instruction and write lesson plans.

Throughout the first year, Principal Hollister and his AP also observed teacher classrooms on a regular basis. The district required that principals formally observe at least ten teachers per month, but Principal Hollister and his AP tried to informally observe at least a couple of teachers daily. They provided informal feedback after classroom visits to encourage teachers to implement the best practices shared during PLC meetings, including using data to inform instruction. Teachers were weary of the frequent classroom visits initially, but eventually found the feedback sessions useful. The administrative team built trust with teachers and eased any tension by communicating that the informal observations and feedback sessions were not part of their formal evaluation process. Overall, after building some capacity in analyzing and interpreting data throughout Year 1, teachers began tracking students' progress monthly and created individualized growth targets for low-performing students based on these data toward the end of Year 1.

EDP Core Concept

Use classroom observations and other data to identify opportunities for mentoring of individuals, professional development for teaching teams (PLCs), and improving one's own leadership practice.

The NISL coach accompanied Principal Hollister on PLC and classroom observations during her in-person visits, with the goal of helping Principal Hollister develop instructional leadership skills. For example, she noted that Principal Hollister sometimes dominated conversations in the PLC meetings; she coached him to ask questions and facilitate the conversation instead. Principal Hollister reported learning to step back and allow teachers to run their PLCs while offering guidance and support.

The Second Year of Implementing the Action Learning Project

In Year 2, Principal Hollister continued to make changes to the PLCs, guided by feedback from staff and the NISL coach. He focused more deliberately on building staff capacity and getting them to work collaboratively and effectively. He distributed leadership more frequently, handing off PLC-related preparation and activities to his AP, the department chairs, and teachers who had embraced the PLCs. Also, now that teachers were accustomed to analyzing, interpreting, and discussing their data from common assessments, Principal Hollister put more emphasis on using the data effectively.

Principal Hollister reported that he would have implemented PLCs even if he had not enrolled in the EDP, but he also acknowledged that the program helped him become more strategic in his implementation. For example, instead of running the PLCs himself, the EDP helped him consider building leadership capacity in his AP and teachers. The EDP also helped him learn how to convey his knowledge to others, when coaching others to interpret and use data.

Strategy 1: Increasing Collaboration Time for Teachers

Based on feedback from his staff about the PLCs in the prior year, Principal Hollister moved the PLC meeting times into the school day in Year 2. This change however, required Principal Hollister and his leadership team to make some sacrifices. For example, the leadership team collectively decided in summer 2017 to eliminate a tutoring program for low-performing students that took place during teachers' prep periods to allow for common planning time. Teachers agreed that improving instruction to advance all students' learning was more valuable than tutoring that focused on remediation. Using teachers' prep periods for common planning time also made teachers' schedules less flexible, but teachers saw the benefit of PLCs and agreed to the changes. They appreciated no longer having to stay after school to attend a PLC. With the change, teachers now met for 48 minutes per day, five days per week. They used three to four days each week to meet with colleagues and work on lesson plans. The other one or two days were reserved for the subject-alike PLC meetings. Principal Hollister reflected on this change:

> By the end of the day teachers are tired, [and] most of them have families. A lot of them have young children. Now, they're just a lot fresher [in the PLCs that occur during the school day]. There's a lot more engagement. I think they knew how hard we had to work to give them common planning, but us showing it was important to us enough to make the sacrifices, then that makes it more important to them.

The NISL coach also described this change in schedule between Year 1 and Year 2:

> [Principal Hollister] knew PLCs weren't working at the end of the year. . . . So being able to create a schedule that allowed for teachers to

> have that real conversation in the middle of the day and how they had those conversations . . . [allowed] teachers . . . to collaborate.

Strategy 2: Providing Models of Effective Collaboration Within PLCs for Teachers to Strive Toward

Principal Hollister observed all the PLCs in the beginning of the year to monitor their effectiveness. With the change in schedule to holding PLCs during the school day and at different times depending on the subject area, Principal Hollister was able to observe multiple PLCs each week.

To support his observations and help raise the quality of PLCs, the NISL coach brainstormed with Principal Hollister on what made an effective PLC and what it may look like in the context of his school. Principal Hollister considered PLCs effective when teachers had conversations about problems of practice, discussed strategies they could use in the classroom, and returned to the next PLC to debrief their implementation of the strategies. Aware that the level of collaboration among the teachers in each of the PLCs varied in the first year, in Year 2 Principal Hollister worked to encourage teachers to be more collaborative. He often modeled best practices of how to work in teams and guided discussions during his observations, while being careful not to dominate the activity. In addition, the NISL coach suggested that Principal Hollister revisit the book *Learning by Doing: A Handbook for Professional Learning Communities at Work*,[6] first introduced as part of a district in-service for teachers, and use the tools within the book to help teachers learn collaboration

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[6] Richard DuFour, Rebecca DuFour, Robert Eaker, and Thomas Many, *Learning by Doing: A Handbook for Professional Learning Communities at Work*, 2nd ed., Bloomington, Ind.: Solution Tree, 2010.

strategies. Principal Hollister drew on the book's idea of PLC quality being on a continuum. He handed out a figure from the book so teachers could track their progress along this continuum. This provided the PLCs with a "map" for improvement, and Principal Hollister was able to use the continuum to assess each PLC.

Strategy 3: Increasing Teacher Ownership and Shared Leadership of the PLCs

After implementing PLCs for one year, the leadership team members felt that they had to build a sense of ownership within the PLCs. At the beginning of the school year, the leadership team asked PLCs to revisit their norms and goals, allowing teams to adjust these as needed to fit the needs of each PLC. PLCs elected new chairs and secretaries and began rotating notetakers. Rotating notetakers built a sense of ownership and engagement among the members of the PLCs. Moreover, rather than having the department chairs lead the PLCs, Principal Hollister encouraged the most enthusiastic teachers to nominate themselves to chair PLCs so they could continue to convey positive messages about the role of PLCs in improving instruction. Finally, instead of the leadership team setting the agenda each week, Principal Hollister had each PLC nominate an agenda setter. This person created and posted the agenda on Google Drive ahead of the meeting; Principal Hollister, the AP, and other PLC team members could edit it. Thus, setting the agenda became more of a team effort in Year 2.

Strategy 4: Revising Common Assessments to Reflect Increased Rigor and Focus on Literacy

Principal Hollister originally intended for teachers to update the common assessments regularly in Year 1, but so as not to overwhelm teachers with changes, he shifted to asking that teachers revise them during summer 2017 in their PLCs.

Teachers worked to align the common assessments to the pacing guides they had revised. They also aimed to include aspects of literacy into the common assessments. Both the district and school test results from the previous year indicated that students needed to improve their literacy skills, so literacy became a focus for the district and for Principal Hollister. Finally, teachers' revisions took into account the score distributions on the assessments from the previous year. Teachers noted, for example, that the average score on their common assessments was very high, suggesting that the tests were too easy for students. Accordingly, Principal Hollister encouraged teachers to make the assessments as rigorous as the state assessments. To achieve this, teachers reviewed common assessments from high-performing schools in the district as a guide.

Overall, during summer 2017, mathematics and ELA teachers wrote new, more challenging questions for their common assessments, while science, social science, and elective teachers pulled items from other, more established, assessments to reflect increased rigor and focus on literacy in their assessments.

## Strategy 5: Continuing to Focus on Using Data to Improve Instruction and Creating Individual Growth Plans for Low-Performing Students

Starting in Year 2, low-performing students in the district were required to take the district-benchmarked i-Ready mathematics and ELA formative assessments. Teachers were responsible for analyzing and using i-Ready data, and PLCs evolved to included analysis of i-Ready data for these students as well.

As teachers became better at collecting and discussing data, the focus turned to building teachers' capacities to use data effectively to improve instruction. Recall that in Year 1, Principal Hollister expected the teams to analyze the data from the common assessments every four weeks and develop instructional strategies to address low-performing students' strengths and weaknesses. To help teachers with this process, Principal Hollister introduced a nested model of data analysis in Year 2, as displayed in Figure 3. Teams started by looking at schoolwide data to find school-level weaknesses. They then moved to grade-level and content-level data to find trends for the current year that might explain the school-level weaknesses. Then, teachers examined classroom-level data using the common assessments to identify positive and negative trends. By Year 2, teachers were comfortable with sharing classroom-level data attributed to individual teachers within the PLCs. Teachers then began analyzing data at the student level using data from the common assessments and pinpointing students' strengths and weaknesses within the trends identified in earlier stages in the analysis. This approach helped teachers prioritize the knowledge and skills to target at the student level as they began to draft individualized student growth targets for low-performing students.

Figure 3. A Nested Approach to Data Analysis

School-level data analysis

Grade- and content-level data analysis

Classroom-level data analysis

Student-level data analysis
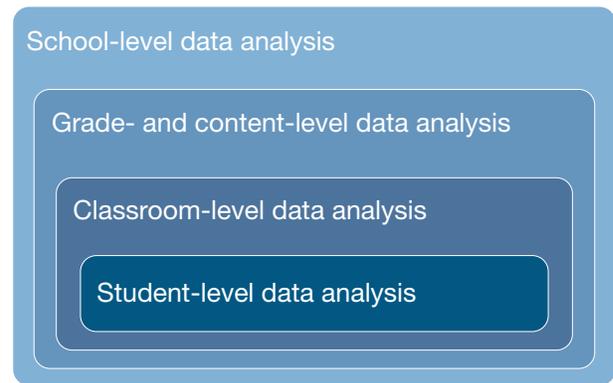
Strategy 6: Implementing a Faculty-Wide Book Study Focused on Collaboration

In Year 2, the district required all principals to implement a book study as part of the schoolwide PLCs. Principal Hollister wanted to select a book that would help his staff become more effective in working together as teams. With assistance from the NISL coach, Principal Hollister selected *The 17 Indisputable Laws of Teamwork*.[7]

To launch the book study, Principal Hollister modeled Socratic seminars to the faculty, using Chapter 1 of the book. He asked teachers open-ended questions about the chapter to help them see how they could apply some of the concepts in their own practice. The AP then modeled this method using Chapter 2. After the principal led the schoolwide PLC meeting for Chapter 3, each subject-alike PLC group took turns leading the remaining chapters in the book. According to both Principal Hollister and the teachers we interviewed, the book study helped teachers practice self-criticism instead of criticizing others, which strengthened collaboration among the staff. Although some teachers were skeptical of the book study at first, they came around because the book offered practical and relevant strategies. In short, teachers became more comfortable sharing

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[7] John C. Maxwell, *The 17 Indisputable Laws of Teamwork : Embrace Them and Empower Your Team*, Nashville, Tenn.: Thomas Nelson, 2001.

their struggles with each other as a result of the book study.

Evidence of Progress

At the end of the first school year (2016–2017), Principal Hollister initiated an effort to elicit input from staff members in order to ameliorate the PLC process. As part of this effort, he administered surveys to teachers based on DuFour and Eaker's *Professional Learning Communities at Work* that asked PLC members to assess their satisfaction with the communication, norms, goals, and data use in their PLCs. Then, the NISL coach observed each subject-area PLC. She observed the topics discussed and the roles of various staff members, including who led and participated in conversations. She then debriefed Principal Hollister on her assessment of the PLC's strengths and weaknesses, where each PLC rated on DuFour and Eaker's PLC continuum, and what kind of supports teachers needed to improve the effectiveness of the PLCs.

Results from the survey and the NISL coach's assessment suggested that there was considerable progress from the beginning of the first year. Principal Hollister described some of the observable impacts of PLCs:

> The PLCs have just opened up communications so much. They've got our teachers talking, sharing between content areas, within content areas. I think it has really helped our vertical alignment because the sixth-grade teachers know what the seventh-grade teachers, who know what the eighth-grade teachers, are teaching.

Despite the apparent success, PLCs still needed a lot of work to meet the standards of high-quality PLCs. For example, teachers became increasingly willing to share information about their classes with each other as the year progressed, but not all PLCs or teachers made the same levels of progress. Principal Hollister noted,

> I would say from the PLCs that I've observed, some teams are further along than others. . . . And it appears that the teams that were supported most with implementing the PLCs

last year in English and math is where you see more collaboration on best practices and conversations around individual student progress.

Although the PLCs continue to be a work in progress, this case study demonstrates the strategies and steps that were implemented over the course of two years that led to a shift toward effective teacher collaboration and the use of data to guide instruction.

Plan for Upcoming Years

Even after a second revision in summer 2018 to increase the rigor of the common assessments to match that of state assessments, Principal Hollister was still dissatisfied. He planned to hire a third-party organization to draft the common assessments for all subjects in the 2018–2019 school year. He planned to use those new assessments as a learning tool for the teachers to compare the level of rigor between the new assessments and the assessments the teachers created.

Principal Hollister also planned to expand the focus of his PLCs to include the middle- and high-performing students. He initially had teachers focus on low-performing students, and teachers had been expected to set growth targets for low-performing students as they examined their common assessment and i-Ready data. By Year 2, there was some concern that focusing just on low performers ignored the needs of students performing at or above grade level. As a result, in Year 3, Principal Hollister planned to institute a new formative assessment to replace the i-Ready assessments that would be administered to all students, so middle- and high-performing students would have individualized growth targets and enrichment activities in Year 3 and beyond.

Factors That Facilitated and Hindered Change

Facilitators of Change

Our analysis indicates that the following factors facilitated Principal Hollister's implementation of his school improvement effort:

- **Prior experience implementing PLCs.** Principal Hollister brought experience implementing PLCs and working with data, as well as the willingness to convey that knowledge to others, when he joined SHMS. He applied lessons learned from his previous implementation of PLCs to avoid pitfalls this time.

- **Respect for the principal as an instructional leader.** Many teachers had positive experiences with Principal Hollister when he was a teacher at SHMS. According to his staff, Principal Hollister was passionate about instructional leadership and wanted to teach others. When he became principal, he took the time to model best practices for teachers and train his AP on data use. His staff appreciated this willingness to teach them, which created buy-in for the PLC and common assessment processes.

- **Motivated staff.** When Principal Hollister became principal, the school had just improved to a "C" school from a failing school. Teachers and students were proud of this achievement, and Principal Hollister leveraged this momentum. He encouraged his staff and students to continue to strive until they become an "A" school. This helped motivate his staff to go above and beyond in improving their instruction, which included buying into PLCs and expanding common assessments.

- **Receptivity to teacher feedback.** Principal Hollister engaged in a continuous improvement process that involved seeking input from his staff and students. He administered annual teacher surveys to assess how the PLC and common assessments were working and what needed to be changed. He made changes to the processes based on feedback from his staff, which helped them own the process as well. Teachers felt supported and engaged because of Principal Hollister's willingness to listen to their suggestions, such as to move the PLC from after school hours into the school day.

- **Guidance from the EDP and coach.** Principal Hollister was receptive to coaching and professional development to improve his leadership skills. He applied what he learned from the EDP and his NISL coach to help him meet the goals of his ALP. For example, for the district book study requirement, he selected a book that he learned about through the EDP, and his NISL coach suggested that the tools in the book be used for collecting evidence to move toward becoming a high-quality PLC. In addition, Principal Hollister's NISL coach encouraged him to build capacity in his AP and teachers instead of running PLCs himself. Principal Hollister was very receptive to that suggestion and made capacity-building a key focus of Year 2.

Challenges Hindering Change

Several factors challenged Principal Hollister as he implemented his ALP to effect instructional change:

- **Prior culture unaccustomed to teacher collaboration.** Principal Hollister fought a long-standing culture of teacher isolation and little accountability for teacher collaboration or classroom-level results. When Principal Hollister first came to SHMS, teachers did not collaborate often and were accustomed to using any common planning time they had for "update" or housekeeping meetings. Principal Hollister spent most of Year 1 changing habits around collaboration to improve instruction. By Year 2, Principal Hollister was still trying to troubleshoot issues within the PLCs, including how to handle teachers who were resistant to change. Some PLCs were further along than others, and by the end of the second year, he was deciding whether to continue to build capacity with the few struggling

teachers or replace them with those who would buy in to the process.

- **Limited teacher capacity to raise the standard of student assessments.** Common assessments were a major strategy of Principal Hollister's ALP, but despite repeated attempts at increasing the rigor of the common assessments, teachers did not successfully develop common assessments with the same level of standards as the state assessments. Principal Hollister planned to outsource the development of common assessments to remedy this problem in Year 3.

- **Instinct to do rather than to coach.** Principal Hollister built and refined his coaching skills over time, changing his habits and mind-set from being a manager to being a coach. For example, with assistance from his NISL coach, he learned to refrain from providing answers and instead learned to ask questions so that teachers could reflect on their practice and make the necessary changes.

- **Logistics of scheduling PLCs.** Implementation of Principal Hollister's ALP presented a logistical challenge. Principal Hollister started out by having the PLCs after school. Although attendance at the PLC meetings was mandatory, teachers had competing obligations after school, and not all of them could attend consistently. It was therefore difficult to gain momentum for the PLC process. This challenge was overcome by holding PLCs during the school day in Year 2, but doing so carried the cost of cutting tutoring time for low-performing students.

Conclusion

Principal Hollister leveraged his prior experience as a teacher at SHMS and his prior attempt at implementing PLCs in another school to create buy-in for the PLC process and his vision of turning SHMS into a data-driven school. Early on, he established structures to ensure that PLCs were uniformly organized and required the development of common assessments in every subject area. Later, he supported teachers in their efforts to collaborate more effectively by implementing a book study on PLCs and encouraging them to assess their progress along a continuum. With collaborative structures and routines in place, Principal Hollister turned to instructional improvement in earnest. This involved having teachers iteratively design common assessments and redevelop curriculum pacing guides with attention to alignment with the district standards. Along the way, with the guidance of his NISL coach, Principal Hollister engaged in continuous progress-monitoring. In all, Principal Hollister instilled a culture of high-quality, ongoing collaboration and built his teachers' capacity for collecting, analyzing, and using data to guide their instruction. Although some challenges remained, early evidence suggested an increase in the level of collaboration among his teachers and better curriculum alignment across grades.

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About This Document

This study was undertaken by RAND Education and Labor, a division of the RAND Corporation that conducts research on early childhood through post-secondary education programs, workforce development, and programs and policies affecting workers, entrepreneurship, and financial literacy and decision-making. This study was sponsored by the U.S. Department of Education via its Investing in Innovation and Supporting Effective Educator Development grant programs.

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