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# Fostering a Culture of Effective Data Use to Support Students' Personalized Learning

## Executive Development Program Case Study #8

**T**his case study illustrates how one principal's National Institute for School Leadership (NISL) Executive Development Program (EDP) experience and NISL coaching helped him shift the mind-set and practice of staff at two elementary schools during their merger into a single, new school. Specifically, he instilled a culture of using data to adjust and customize instruction to better meet students' needs. His key strategies included adopting a strong formative assessment component within a new reading curriculum, establishing structures to enhance teacher collaboration on data use, coordinating a more deliberate rollout of complex initiatives, providing continuous support to garner teacher buy-in, and monitoring of progress. Although teachers' capacity to use data to inform instruction varied, the principal's school improvement effort after two academic years appeared to have increased teachers' confidence in their instructional capacity and fostered a collaborative and cohesive culture at the newly established school. Moreover, the number of students requiring reading intervention declined, signaling that students' needs were better met in classrooms.

### ***Putting Professional Learning to Work***

This case study report accompanies the report *Putting Professional Learning to Work: What Principals Do with Their Executive Development Program Learning* (available at [www.rand.org/t/RR3082](http://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](http://www.rand.org/t/RR3082).

## Overview

This case study features Peter Reid,<sup>1</sup> a fifth-year principal at the start of the EDP. He drew on his 12 months of EDP experience and 1.5 years of NISL coaching to build teachers' capacity to use data to inform their instruction in ways that better addressed students' individual needs. He built this capacity by (1) emphasizing the use of formative assessments that were included in a new reading program, (2) putting structures in place to enhance collaboration on data use among teachers, and (3) actively monitoring the progress of his school improvement effort. Simultaneously, he was preparing to open a new elementary school that merged the two schools he was leading.

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.<sup>2</sup> We selected the nine principals from among 26 best-practice candidates nominated by NISL. To learn 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](http://www.rand.org/t/RR3082).

To describe the changes that occurred in the two schools, Nester and Starling Elementary, we first set the stage by describing the school contexts and

Principal Reid's history with the schools prior to participating in the EDP. 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 implemented, highlighting the connections between his actions and core EDP principles and concepts (shown in the text boxes).<sup>3</sup> After summarizing Principal Reid's accomplishments and plans for continuing the school improvement work, we conclude with a discussion of key factors that facilitated or hindered change.

The timeline shows the key activities described in this case study. The activities above the horizontal blue arrow are Principal Reid's individual actions, and those below are school improvement activities in which the staff at Nester and Starling Elementary Schools engaged.

## Context for Principal Reid's School Improvement Effort

As shown in the timeline, Principal Reid began his tenure at a suburban school district for the 2016–2017 school year as principal of two elementary schools. Principal Reid accepted the positions knowing that, at the start of the following school year (2017–2018), the faculty and students would merge into a newly built, larger elementary school. Prior to 2016–2017, Principal Reid had been a principal for four years and an assistant principal (AP) for two years at an elementary school in a nearby district. Before that, he was a kindergarten and first-grade teacher.

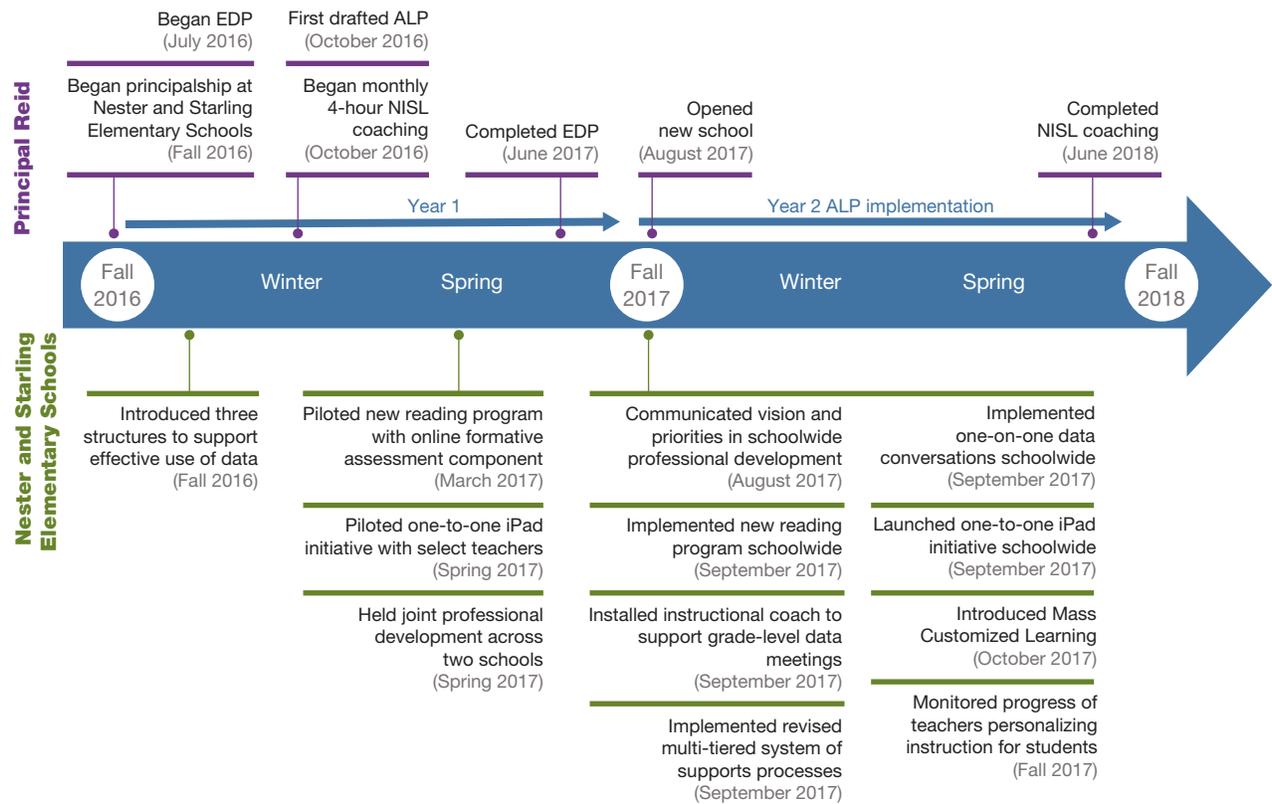
At the time of this study, Nester Elementary School, where Principal Reid spent most of his time, served about 400 students and was predominantly white; a little less than 20 percent of the students were racial minorities. Starling Elementary (located one block away) served about 250 students, about 10 percent of whom were nonwhite. At each school, about 35 percent of students were eligible for free or reduced-price lunch. Academic performance at the

<sup>1</sup> Names of individuals and schools are aliases to protect confidentiality.

<sup>2</sup> To gather perceptions of how Principal Reid worked to improve his school, we conducted a series of interviews and focus groups over two school years. We visited Nester Elementary for day-long visits in May 2017 and May 2018 to (1) individually interview Principal Reid and key supporters and implementers of his school improvement effort, including his assistant principal, school counselors, an instructional coach, and a curriculum consultant; and (2) conduct a total of two focus groups with selected staff. In addition, we conducted hour-long phone interviews with Principal Reid in September and November 2017. At these four points, we also interviewed Principal Reid's NISL coach. Finally, in spring 2017, we interviewed Principal Reid's direct supervisor, the director of curriculum and instruction. The information we present within this case is drawn from our coding of transcribed interviews and focus groups and from 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.

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

## Timeline of Key Activities Related to Principal Sawyer’s School Improvement Effort



two schools was similar. At the end of the 2015–2016 school year about 25 percent of third- and fourth-grade students at both schools achieved “advanced” scores on the state English language arts assessment, about 50 percent were “proficient,” and the remaining 25 percent were at or below “basic.” In mathematics, about one-third of those students scored advanced, one-third scored proficient, and one-third scored basic or below.

By multiple accounts, the schools’ staffs were hard-working and dedicated to doing their best to serve all students. They had, however, experienced turnover multiple times in recent years in the schools and among district administrators. As a result, it was difficult for staff to achieve a coherent, consistent vision. According to teachers we interviewed, new initiatives were often introduced without follow-through or without being given sufficient time to take root. It was against this backdrop that Principal Reid led an ambitious school improvement effort, even while preparing the staff of two schools to merge into one.

## Designing the Action Learning Project

When Principal Reid assumed principalship at Nester and Starling Elementary Schools, he also began the EDP; he finished it one year later, in June 2017. Three months into the EDP, principals began the iterative process of designing and starting to implement an ALP.

Principal Reid started working with a first-year NISL coach in October 2016. She was a practicing principal with over ten years of experience in that role; prior to that, she had been a classroom teacher, AP, and dean of students for more than ten years combined. The coach and Principal Reid began meeting face-to-face about once every month for four hours each time, in addition to meetings by phone every other week. The coaching lasted a little over 1.5 years, ending in June 2018. During the coach’s in-person visits to Principal Reid’s schools, she reinforced core concepts from the NISL EDP, served as a sounding board for his ideas for developing teachers’

data use capacity, encouraged him to think more strategically about the cause and effect of the actions he planned to undertake, assisted him in developing protocols to implement his strategies, and conducted classroom walkthroughs to help monitor progress.

## Using District Priorities and Early Experiences to Inform Focus of School Improvement Effort

First, Principal Reid took cues from district priorities and early experiences at his schools to determine the focus for his ALP. With the arrival of a new superintendent, the district adopted technology-enabled personalized learning and one-to-one iPads in the schools. Another major district-wide initiative was rolling out a new reading approach designed to increase the number of minutes in class dedicated for students' reading.

Second, Principal Reid learned that there had been few to no expectations for teachers in either school to use student data to inform their instruction, although the district and schools were "data rich." Although data meetings were supposed to take place three times per year in the years prior to Reid's arrival, these meetings did not happen; they were frequently canceled or sometimes not scheduled at all. When data were used, efforts primarily entailed using summative assessment data to create lists of the neediest students, who qualified for intensive pull-out intervention with the reading specialist. The specialist would bear primary responsibility for administering assessments. As a result, a vast majority of classroom teachers were unclear about their role in measuring and monitoring student learning outcomes and the relationship between data and their instruction. In fact, Principal Reid determined that a large group of teachers did not have a strong grasp

### EDP Core Concept

Have an understanding of your school's context that is grounded in data and analysis before setting forth a vision.

on how to read data reports or did not buy in to the value of data for improving instruction.

## Designing the Action Learning Project to Strengthen Use of Data to Improve Instruction

Principal Reid's overall **vision** guiding his ALP was to foster a culture of data use among staff at his schools.<sup>4</sup> He envisioned that teachers would regularly analyze and use a variety of diagnostic and formative student assessment data to gain a deeper understanding of students as learners. Such data would be used to track student progress, set rigorous goals for students, and improve lesson planning, instruction, and supports, especially for students with the greatest needs. Principal Reid said,

I really want to make it where it's not an event to look at that data, but . . . it's something that's embedded in everything [teachers] do, so that the data become something relevant toward their next lesson, or next meeting with a child.

In the EDP, principals learned that they need to identify a **strategic intent** for their school's improvement. Principal Reid's strategic intent was as follows:

- If teachers develop a strong understanding of student assessment data, they can better prevent students from falling through the cracks and instead help them reach their potential.
- If teachers are more informed about each student's specific needs, as presented in his or her assessment data, they can better meet those needs in their planning and instruction.
- If teachers collaborate with colleagues, they can develop expertise in data use and a comprehensive set of effective instructional tools to meet students' varied learning needs.
- If teachers use data effectively to set learning goals and guide instruction, students will be better able to articulate their learning goals and work toward the achievement of these goals.

<sup>4</sup> Terms in bold indicate key components of the ALP that principals were to develop and articulate.

Principal Reid identified multiple **key strategies** for achieving his intent. First, he implemented the new, district-mandated reading program by the American Reading Company (ARC), placing an emphasis on its formative assessments. Second, he put structures in place to enhance collaboration on data use among teachers. He expected that, through regular conversations with colleagues, teachers would expand each other's capacity for data use, enlarge each other's instructional repertoire and differentiation strategies for supporting students, and help monitor each other's instructional goals. When Principal Reid started at the school, he noted that there was no space or time for teachers to engage in these collaborative activities. Third, he worked to achieve a cohesive faculty who shared the mind-set that all students can learn. Lastly, he actively monitored the progress of his improvement effort.

After identifying his primary strategies, Principal Reid laid out the concrete **action steps** to put them into action. He identified, for example, how he would communicate his initiatives and expectations to teachers. Another component of the iterative ALP design process was to identify necessary **resources and supports** for successful implementation. Principal Reid identified his AP and instructional coach as particularly critical to the school improvement effort. Moreover, district support in the form of autonomy in establishing structures and procedures in the new school was important. Finally, his NISL coach deepened his thinking about how to achieve his vision.

## The First Year of Implementing the Action Learning Project

Principal Reid spent most of the first year of his ALP implementation (2016–2017) setting the scene and piloting initiatives that he planned to officially launch the following year, when staff from the two schools would merge into one and when he would have a clean slate in a new building to establish procedures, structures, and expectations for the data-driven instructional system he envisioned. Principal Reid introduced three structures to support teachers' use of data and piloted two initiatives that used data

to inform and enrich instruction. During this time, he promoted a sense of community among the faculty of the two schools.

### Strategy 1: Introducing Three Structures for Supporting Effective Use of Data

Guided by the EDP's emphasis on systems, Principal Reid worked to establish three structures to facilitate three ways of data use, with the intent of scaling them in Year 2, when the schools merged.

First, he sought alignment and collaboration among teachers of the same grade level at each of the schools. He required formal grade-level team data meetings to review benchmark data, collected three times per year. During these half-day meetings, teachers worked together to analyze assessments, with the goal of looking for root causes that may explain trends in the data. Such analysis helped to inform future instruction and identify grade-level supports that might be necessary.

Second, Principal Reid believed different teachers working with the same students—for example, the classroom teacher and the interventionist offering pull-out support as part of the school's multi-tiered system of supports (MTSS)—needed to collaborate more and jointly accept responsibility for the students' progress. To this end, he encouraged data discussions among colleagues who shared the same students. He recommended that teachers work one-on-one with each other to establish and monitor goals for students throughout the year.

Finally, Principal Reid piloted one-on-one data conversations—between himself and a teacher—designed to move the schools toward a data-driven culture and hold teachers accountable for using data to inform instruction. In Year 1, he conducted one such conversation with each teacher, using the opportunity primarily to get to know each staff member

#### EDP Core Concept

High-performing organizations find time for teacher teams to meet and work to improve their craft.

and check on teachers' progress toward student learning objectives. The following year, when the schools merged, he expected to fully implement three cycles of data conversations, meaning he would speak with each teacher once in the fall, once in the winter, and again in the spring.

## Strategy 2: Piloting Programs and Initiatives That Use Data to Drive Instruction

In March 2017, the district adopted a new reading approach after analyzing data that suggested that students were engaging enough in independent reading and developing proficient reading skills. The reading program the district selected, by ARC, included web-based formative assessments keyed to specific reading skills and a dashboard system for managing data. Teachers were to use the assessment data to conference one-on-one with students and help them set learning goals, as well as to plan and adjust instruction to better meet students' needs. Principal Reid selected four teachers at one school and eight at the other to pilot the ARC program, with the intention of scaling it up to all staff at the new school in the following year. These 12 teachers attended district-wide training on the program. A consultant affiliated with ARC provided additional support, including modeling how to conduct a student conference. Although most pilot teachers embraced the program, four of the 12 felt overwhelmed and underprepared, unsure of how they should adjust instruction given the data they were generating and examining.

Anticipating the district's planned rollout of one-to-one computing and the learning it would require for staff, Principal Reid provided selected teachers (not involved in the ARC pilot) with an iPad and access to the district-subscribed application, eSpark, which provided student-centered language

### EDP Core Concept

Teachers must constantly monitor their students' progress toward building knowledge and addressing conceptual misunderstandings.

arts and mathematics activities with built-in reporting and data features. He encouraged teachers to familiarize themselves with the device and app at least enough to know how to log students on and what the app offered students. Teachers received support from the district as needed. For example, the district provided a day of professional learning with ARC and offered to take some teachers to visit a school where the program was working well; six of Principal Reid's teachers attended. In the summer, teachers could take an iPad course paid for by the district and offered by a local college.

## Strategy 3: Building Community Among Faculty in Two Buildings

Throughout the year, Principal Reid worked to build community among the faculty of Nester and Starling Elementary Schools. He coordinated three professional development (PD) days throughout the 2016–2017 school year for the combined staff so that they received the same messaging and training about the importance of data use. Principal Reid and his AP designed these PD sessions so that teachers could get to know one another, exchange ideas, and hopefully arrive at a common understanding and shared language concerning using data to design instruction that helps students develop reading skills. At the final PD session of the 2016–2017 school year, Principal Reid arranged for teachers who participated in each of his three core initiatives—data conversations, the ARC program, and iPads and apps to support personalized learning—to share their learning experiences and preview what other teachers would experience in the new year and new building.

### EDP Core Concept

High-quality instructional systems incorporate formative assessment processes that enable teachers to understand whether or not students are grasping the material being taught.

## The Second Year of Implementing the Action Learning Project

During summer 2017, Principal Reid and his new AP prepared for and executed the move to the new school building. Among other tasks, they worked out the master schedule and strategically placed teachers teaching the same grade in classrooms near one another to facilitate collaboration. Through his preparation for opening a new school, Principal Reid made decisions that reflected the EDP's priority for establishing a positive school culture, striving for a high-quality aligned instructional system, and building teacher capacity.

Principal Reid began the 2017–2018 school year with about 60 staff members. He and his administrative team prioritized getting the staff comfortable in the new space prior to the students' arrival and continuing to team-build. For example, in the first staff PD session, the administrators organized a scavenger hunt for teachers to get to know the building, requiring them to partner with teachers whom they did not already know. More substantively, Principal Reid used the August 2017 PD session to communicate his vision and priority initiatives related to fostering a culture of effective data use to strengthen instruction. When students arrived and the school year officially launched, Principal Reid realized that he and the teachers were not yet ready to immediately focus on instructional improvement. For the first three weeks, despite his careful planning, he needed to adjust basic routines and procedures related to school functioning, such as school safety. Once those operational issues were addressed, he returned to promoting data-driven instruction.

### Strategy 1: Communicating Clear Expectations at Inaugural Schoolwide Professional Development Day

In August 2017, Principal Reid used his first opportunity to speak with the full staff of the new school to communicate his vision of data-informed instruction, introduce the initiatives they would undertake, and convey his expectations for teachers. He referenced the end-of-year PD, in which teachers

#### EDP Core Concept

With the input of stakeholders, effective leaders set and communicate a shared vision. They seek a commitment from all involved to work toward the vision, and they work to integrate that vision into the daily work and culture of the organization. These efforts help support the sustainability of the transformation.

learned about the pilot implementation of his priority initiatives. At this meeting, he set up three stations, each focused on one of the three key initiatives (data conversations, ARC program with formative assessment components, and personalized learning), and had groups of teachers rotate through each station to learn about what it entailed and how he expected teachers to play a role in its implementation.

In an interview, Principal Reid summarized his overarching message to teachers, saying,

All of the work that we're doing right now, it's continuous improvement to make our kids improve. We're not just doing this so the community can . . . ooh and aah at the new pretty school. We're very specific in our intentions here, and it's about student growth, maximizing their abilities.

He credited NISL for helping him achieve a clear focus by pointing out that the EDP situated student learning at the core of a high-quality education system. Principal Reid also learned from the EDP that "if you're going to lead, people need to know where you're leading them to." More generally, Principal Reid acknowledged the EDP for teaching him the value of taking context into consideration in decisionmaking, so that when introducing every initiative, he was aware that he was leading a group of people who had experienced a lot of change recently—they were in a new building, new to working together, and trying to establish a new culture—and so he was sensitive to the amount of pressure they might feel. One staff member recognized his sensitivity, saying, "It was so apparent that he is not pushy. He definitely takes the stance of, 'Let's think about the teacher.'"

## Strategy 2: Implementing New Reading Program with Strong Formative Assessment Component Widely

During the 2017–2018 school year, teachers in the district implemented the new reading program and used the associated formative assessments and student learning and achievement dashboard to monitor students’ reading skills development and inform instruction. The district expected teachers to administer certain formative assessments at regular intervals, to input assessment data into ARC’s SchoolPace student achievement dashboard system, and to conduct individual conferences with each student every two weeks about their reading progress, using available data.

Principal Reid devoted some PD time to support teachers as they implemented the district program. In one PD session in August, he and a consultant from ARC introduced teachers to different reports that could be generated from the formative assessment system, dissected various pieces of data in the report, and helped teachers understand the benefits of each report. For example, teachers learned to use reports to help students set and monitor learning targets during one-on-one conferences and to group students working on the same skill for small-group instruction.

Most teachers in the school conducted a few one-on-one reading conferences each day with students (as the program called on teachers to do) and accessed and inputted data daily, as a result. At these conferences, the teacher would click on the student’s name in SchoolPace and see the goals the student was working toward. The student would complete the suggested related reading activity, and, as the student read, the teacher could enter relevant data, such as which words or sounds the student had difficulty with or had mastered. The teacher would use data to guide the conversation with students and set the next set of goals.

One teacher remarked on the value of the real-time data system: “I can just open SchoolPace to Student X and see his [learning goals] . . . and you can just change your teaching. It is very easy to do.” In contrast, teachers in years past had to wait for the district to provide formal interim or

summative assessment data to make instructional adjustments. Other teachers, however, struggled with using technology fluidly. Principal Reid noted that some teachers spent “an exorbitant amount of time” recording data on paper first, then entering it into the system later. In meetings with teachers, he tried to model simple and efficient ways of using the technology to capture data and encouraged teachers to share SchoolPace tips with each other in team meetings.

## Strategy 3: Maximizing the Role of the Instructional Coach, Particularly to Support Grade-Level Data Meetings

Principal Reid decided that teachers needed knowledgeable and readily available support to implement data-driven instruction. He reshaped the role of the instructional coach—a cross-subject support for all teachers—and named a new person for the role. Previously, by his telling, “the position was not utilized in an effective manner. [It] became someone who was the data housekeeper . . . who just collected [data] and [distributed] resources . . . but never really went into the realm of instruction.” In Year 2, he selected a well-liked and highly capable teacher with a wealth of instructional knowledge and credibility for the position. She was able to motivate teachers to take some risks and try something new, getting them to recognize that “if you are going to fail, you’re going to fail forward.”

The instructional coach primarily worked with grade-level teams of teachers and focused her PD efforts on analyzing student writing. She worked with Principal Reid and other administrators to develop PD sessions, during which she would lead grade-level teams of teachers to examine the writing assessments that they all administered three times per year. With the writing rubric and student work in hand, teachers calibrated their grading with colleagues, diagnosed students’ needs, and discussed how they would adjust

### EDP Core Concept

Effective school leaders distribute leadership responsibilities to teachers and other stakeholders in the school.

### **EDP Core Concept**

In high-performing organizations, teachers have access to embedded and non-embedded PD. This means that, in addition to participating in formal PD sessions, teachers experience opportunities for professional learning as part of their regular work. PD is driven by teachers' and students' needs.

their instruction in the next writing cycle in light of the student work data they had analyzed. As necessary, Principal Reid encouraged individual teachers, who may need help understanding, generating, managing, or using data effectively, to ask the instructional coach for help.

The instructional coach also helped monitor teacher progress on behalf of Principal Reid. By working with different teacher teams, she was able to learn what they were struggling with or doing well. Principal Reid met monthly with the instructional coach to review goals they had set for teacher and student progress. They also discussed whether they were being responsive to teacher needs. These conversations were grounded in data. For instance, the instructional coach would bring in first-grade students' interim assessment data, and they would look for trends to gain a better understanding of how to support teachers. By situating the instructional coach as a frontline support and liaison, Principal Reid was able to keep his teachers moving toward best practices in data-driven instruction.

### **Strategy 4: Revising Multi-Tiered System of Supports Processes to Encourage Teacher Collaboration and Co-Ownership of Student Progress**

Principal Reid envisioned that effective data use would especially benefit struggling students. In Year 1, he began thinking about how to encourage data use among teachers sharing students. In Year 2, he revamped several aspects of the MTSS to support his vision of a data-driven culture. Teachers were required to bring data to referral meetings, where they discussed students' struggles with a group

of other teachers and stakeholders, and to use the data to identify students' strengths and weaknesses. Previously, teachers typically described students' behavior in vague ways ("he's always frustrated" or "he puts his head down") that did not provide a clear picture of students' academic needs. Principal Reid reported that, over time, more and more teachers were able to draw on data to characterize students and help determine the appropriate supports.

The reading intervention program into which students were sometimes placed as a part of the MTSS also became more data-driven and connected to classroom instruction. Previously, reading interventionists would work with students in near isolation. Now, the reading aide had access to and used the data the classroom teacher generated in SchoolPace, such as students' current learning goals and assessment scores, which enabled the aide to provide specific support on students' goals and areas of need. Moreover, the interventionist was now required to send correspondence back to the classroom teacher once a week to report on each student's progress. As the instructional coach noted, "It really becomes collaboration between the classroom teacher and what's happening in [intervention]."

### **Strategy 5: Implementing One-on-One, Principal-Teacher Data Conversations**

In September 2017, Principal Reid officially implemented the one-on-one data conversations that he piloted the prior year. (They ended up being two-on-one, since the AP also participated). Principal Reid retained a substitute to release teachers for 30 minutes at a time so that the data conversations could occur during the school day. In all, he and his AP met with almost 60 teachers per cycle, for three cycles (September, February, and May).

To prepare for the data conversations, teachers were asked to identify a high-achieving student and a struggling student, develop a reading-related learning goal for each, and be prepared to describe what they knew about each child as a learner. Principal Reid designed it this way because he wanted to know "How well do you know the learners that are sitting in front of you?" With the support of his NISL coach,

### EDP Core Concept

School leaders can use a model relating to effective coaching and the components of an effective coaching relationship to improve teaching, learning, and student achievement.

Principal Reid developed a protocol to guide the data conversation. Questions included “How much growth are you asking the student to make? How did you arrive at those growth numbers? How does your instruction match the goal you set? What does the learning look like? What would I see that would let me know your students are on track to meeting the goal?” During the meeting, Principal Reid accessed the student’s data, including from SchoolPace, on his computer.

Principal Reid realized through the one-on-one data conversations that “everyone is at a different place.” This was partly due to staff turnover that he had not expected and teachers transferring to the new school from a third elementary school in the district. As a result, he needed to get certain teachers “up to speed on some of the work [they] had done.” As much as the data conversations were a way for Principal Reid to ensure that teachers were keeping up with data entry and to monitor their facility with data use, they were also an opportunity for him to coach and model how to examine data. During these meetings, Principal Reid worked with teachers to analyze the student data in front of them. Moreover, the data conversations allowed Principal Reid to gather from teachers what additional supports they might need and to consider how he could meet teachers’ needs. Sometimes he suggested that a teacher work with another colleague, sometimes he tapped the instructional coach for support, and sometimes he simply asked the teacher, “What is it that you don’t feel comfortable with, and how can we grow in this together? How can we support each other in a collaborative frame of mind?” Teachers we interviewed in the focus group said they felt comfortable talking with administrators about student data. One said, “I feel safe and not like it’s going to be a ‘gotcha’ moment. . . . [The administrators] are encouraging

and . . . on your side and supportive of you as a teacher.”

### Strategy 6: Launching One-to-One Laptop Initiative and Using Data and Technology to Transform Learning

Once the pilot teachers were comfortable with the use of iPads and the district-endorsed application for personalizing student learning (eSpark), Principal Reid formally launched the one-to-one initiative in the 2017–2018 school year, providing all students with a laptop. Per district guidance, students were required to use eSpark for a certain amount of time per week, depending on grade level, and teachers had to provide students with opportunities to use the technology in meaningful ways. Most commonly, teachers used eSpark to administer pretests to students. eSpark then directed students toward apps or activities that targeted students’ specific, diagnosed needs. Students spent about 15 minutes using the prescribed app to practice the skill or standard; within a few days, teachers administered a posttest.

Principal Reid also saw an opportunity to use existing assessment data to drive the app-based personalized learning activities. Previously, data from DIBELS, an early reading predictor assessment, and the STAR reading and mathematics assessments were used exclusively to identify students for special intervention. Now, those data were fed into eSpark, which recommended activities for students. One teacher noted, “There is no data we are asked to generate that we are not using.”

Principal Reid continued to provide support to teachers to use the technology effectively. In December 2017, for example, teachers came together for a session during which a few teachers who were already experts in the use of the iPad and app for instructional purposes demonstrated some components of the tool that might be underused by teachers. In May 2018, teachers received additional training on the iPad from an external provider. Principal Reid believed that it was important to provide “really good training for teachers and keep coming back to it. [Training] needs to be an ever-evolving thing

that is occurring. You can't just have a one-and-done training." Moreover, there was an on-site tech person to help teachers out "with glitchy things." Principal Reid attributed the relatively smooth implementation and high buy-in for the iPad initiative to his rollout approach, with which he set expectations for usage and had supports in place to help teachers be successful:

I think it is something that if you let teachers know . . . that this is an ongoing process, they are not expected to be experts at it in the moment, that we are going to be learning through this together. . . . It's about the best thing for the students.

### Strategy 7: Introducing Mass Customized Learning by Focusing on Shifting Mind-Sets

Over the past few years, the district office had made it a priority to bring Mass Customized Learning (MCL) to schools. MCL is a technology-based approach in which instruction and learning experiences are differentiated, or personalized, according to individual students' needs and interests. Principal Reid saw MCL's merit for furthering his vision of data-driven personalized instruction in his school and planned to introduce it to his staff. In preparation, he attended a statewide convention on MCL during the 2016–2017 school year and took a district-offered course on it. During the 2017–2018 school year, Principal Reid selected a few teachers to attend a workshop, pilot the approach, and discuss a book about it with him.

Knowing that he would introduce MCL school-wide in Year 2 and that he needed to structure the PD wisely, Principal Reid requested and received district approval to run four half-day PD sessions; typically, schools were limited to one hour per month of PD time with teachers, per the teachers' contract. In October 2017, he launched the first PD session. He took a slow and deliberate approach, believing that teachers needed to first understand and embrace the philosophy underlying MCL, rather than think of it as a technology-based program to learn. For much of the four half-day sessions, he focused on "developing

a mind-set and coming to a shared understanding of how to meet our kids' needs." Discussions included teachers' past learning experiences ("What are the best learning experiences I have had throughout my life?") and what they need to provide for their students ("What are the characteristics of those experiences that I can bring to my students?"). Through these discussions, teachers revealed what constitutes the ideal learning environment for students and how they could make the school reflect that environment. They also discussed why a personalized approach was essential, how data could be used to inform what and how to teach students, and what was or was not working. Having established the purpose of MCL, Principal Reid used subsequent PD time to introduce teachers to the tools (e.g., apps and programs) that would help teachers customize instruction and learning.

This deliberate rollout was informed by the EDP. Readings and discussions on the concept of mind-set and its importance in advancing the idea that all students can learn helped Principal Reid realize that having the same and right mind-set must come first:

Once that mind-set is [established], [all else] will become tools. And the tools, at some point, will be interchangeable. [They] are going to change; the mind-set is what is going to stick with us.

Principal Reid and his NISL coach regularly took time to think about the risks involved with implementing a new strategy, and they planned ways to mitigate potential challenges. This work led to the realization that, for MCL to have an effect on student learning, they needed to spend time early on garnering teacher buy-in. As Principal Reid said,

If we're ever going to reach every one of our kids in a customized way so that they can achieve their best, [teachers] have to buy in to that. They have to believe that.

As part of the plan to garner buy-in, Principal Reid had teachers lead part of the PD sessions; select teachers researched key concepts, such as the features of an ideal learning environment, and presented findings to colleagues. According to Principal Reid, teachers were more receptive to hearing from

their colleagues than from him. One staff member observed that, although some teachers felt initially overwhelmed by the idea of customizing instruction because they thought it would entail more work for them, everyone ultimately got on board because they realized “it really just comes down to best practices,” meaning doing what it takes to meet students’ needs. Overall, Principal Reid was able to message MCL as an approach that reinforced his focus on creating a data-driven, student-centered culture and was invested in helping teachers recognize its potential.

## Strategy 8: Monitoring Progress

Principal Reid maintained a palpable presence throughout the school as he monitored the progress of his ALP implementation. He said he devoted an hour per day to visiting classrooms, even if meant seeing each class for only five to ten minutes. His goal was to see whether the instruction was addressing student needs. He argued that there ought to be a “very noticeable difference” that he could observe in a short amount of time. He looked, for example, for whether students were strategically grouped and working on different skills. Sometimes he talked to students about their learning goals to get a sense of whether students were aware of their own data and progress. Principal Reid and his AP also attended PD sessions that the instructional coach led for grade-level teams. Beyond just dropping by to generally ask whether everything was okay, they participated in looking at student work and analyzing data with teachers.

According to the NISL coach, having a school leader visit classrooms and attend data meetings sent a clear message to the teachers that there was a level

of accountability. In his case, Principal Reid conveyed that he was not having data meetings for the sake of having data meetings: He genuinely wanted to know how teachers were progressing with data-informed instruction, and the best way for him to know that was to collect data by visiting classrooms and PD sessions and then analyzing what he observed. Moreover, such actions also conveyed to teachers that Principal Reid valued their time and the work they were doing and that they were working together. The NISL coach attributed Principal Reid’s transformation from a building manager to an instructional leader to his EDP learning.

## Evidence of Progress

Over two years, the effort to create a culture of data use showed progress in several ways. First, both Principal Reid and his NISL coach marveled at how expectations and opportunities for data use helped create a more collaborative environment. According to them, teachers in grade-level teams came together to analyze student writing and share ideas for next steps in ways they had not before. Intervention aides and classroom teachers, too, were sharing student data with each other. Overall, conversations seemed more oriented toward understanding and helping students where they were, instead of simply identifying struggling students for grouping purposes.

Second, teachers grew in confidence and ownership of their instructional capabilities. Principal Reid reported that, by the end of the first quarter (i.e., the end of 2017), all teachers were using iPads and eSpark in the intended way:

When I think about how and which technology was used in the past, and it was kind of hit and miss whether it was towards the kids’ needs or not. . . . [It] makes me feel really good to say that we are being a lot more intentional and focused in getting kids what they need.

Moreover, based on a scale he and his NISL coach developed, Principal Reid determined that, during the first cycle of data conversations in September, teachers were weak at explaining expected student growth and describing the teaching that would lead to growth. As he and his NISL coach

### EDP Core Concept

Effective school leaders are visible and present in the school improvement process, particularly in a coaching role. For example, they attend professional learning meetings and make frequent, informal classroom observations for the purposes of (1) identifying opportunities to mentor teams or individuals and (2) improving their own leadership practice.

recalled, teachers appeared more comfortable during the second cycle in February, articulating the growth that their students were making and describing the instructional strategies they planned to use to move students to the next level. The NISL coach said,

It was really the teacher showcasing their knowledge and understanding of the student's progress under their leadership. I think that was wonderful compared to a year ago, where teachers couldn't read the data or didn't know their next instructional strategy.

The NISL coach credited Principal Reid's efforts—such as holding one-on-one meetings with each teacher, conducting walkthroughs, and providing coaching and PD—with helping teachers truly understand the impact they can have on student outcomes.

Although some respondents were not yet confident and proficient with data use and customized instruction, Principal Reid and his NISL coach noted several impacts. Many teachers were generating and using individual learning plans for students and, in doing so, engaging in more purposeful instruction. Moreover, students appeared to have a clearer understanding of what they were expected to do and learn because of these individual learning plans. Principal Reid and his NISL coach observed higher levels of students engagement than in the past. The coach characterized the changed classroom:

Everyone was doing something . . . according to what they needed at that moment, compared to . . . a lot of whole-group lessons [or] . . . giving everyone the same task. . . . Students knew exactly what they were supposed to do and why, while teachers were sitting in the back doing a targeted lesson based on what that particular group needed. . . . No more “stand and deliver.”

Principal Reid believed that the focus on personalized learning contributed to student-level academic achievement. At the outset of the 2017–2018 school year, for example, about 124 students required intensive intervention in reading. By midyear, 54 students (about 44 percent) were judged ready to exit the intervention program. Principal Reid attributed the progress not only to the intervention program

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(because “that’s only a small part of their day”), but also to his belief that

there are better things going on in the classrooms for these students. . . . Everyone who works with that child, whether they are interventionist or . . . the classroom teacher, they know what they are to be working on with the child. It's a lot more targeted now because, now, through a series of multiple meetings that you've had with this child, you're seeing patterns emerge, you're seeing those needs rise to the surface.

## Plan for Upcoming Years

Principal Reid planned to continue making data easier for teachers to access and use. In the next school year, he planned to adopt a system that would gather data from various assessments and platforms into one program so that teachers would be able to see a snapshot of students' history and progress. Training would begin with administrators and instructional facilitators, but all teachers would eventually have access to the system.

### EDP Core Concept

In a high-quality instructional system, key components, including standards, curriculum and materials, instruction, assessments, and PD focus, are aligned.

Given his EDP experience, Principal Reid was aware that he had to maintain a systems perspective toward sustaining the change effort. He said,

NISL always has us look at that systems piece. . . . The nice thing . . . is that all of the systems have been recently created because it's a new school, so that's a big advantage. . . . The [parts of the system] were created so purposefully, . . . all of it speaks to each other. . . . As people turn over or natural change occurs, how do we maintain that piece from a systems point of view? It will be interesting to see how we keep our pulse on that.

## Factors That Facilitated and Hindered Change

### Facilitators of Change

Our analysis indicates that the following factors helped facilitate Principal Reid's implementation of his school improvement effort:

- **Positive staff.** The staff at the schools led by Principal Reid in the 2016–2017 school year and the combined staff at the new school in the 2017–2018 school year reportedly had a positive attitude and were motivated to make a positive impact on students. They were invested in their students and the school and, as a result, were inclined to subscribe to initiatives—such as data-informed instruction—that they believed were in the best interest of students.
- **Staff respect for Principal Reid.** By and large, staff spoke highly of Principal Reid. He earned their respect through his focus on students, his genuine interest in developing his teachers' capacity, and the careful deliberation behind his actions. As a result, an already

energized staff readily worked to support his school improvement effort. One staff member characterized Principal Reid as approachable, engaged, and trustworthy, saying “[he] comes from a place of not being critical at all, of seeking to understand. . . . I feel I can trust him.” That trust was built on the sense that Principal Reid “absolutely puts students first.” Another staff member praised him for asking “Why are we doing what we’re doing?” and “What’s the purpose for it?” and for pursuing something different if something they were doing was not benefiting students, saying “If it’s something that he’s really working toward, he’s communicated the value in it and why we’re doing it.” Moreover, Principal Reid always offered supports when setting expectations to help teachers be successful. Finally, teachers felt that Principal Reid was a risk-taker, having taken on the responsibility of opening a new school building, and was open to his staff taking risks and making mistakes in the process. These characteristics helped them to buy in to and support Principal Reid’s school improvement effort.

- **A supportive, progressive school district.** Principal Reid had district support for implementing his ALP because his initiatives aligned with district priorities and initiatives (i.e., ARC, MCL, and one-to-one iPads). Furthermore, teachers reported that the superintendent was forward-thinking and that he said he wanted the district to “disrupt public education and think outside the box.” Principals and teachers were therefore encouraged to take risks and do things differently, so Principal Reid’s strategies and approaches were welcomed. Finally, the director of curriculum and instruction at the district, one of Principal Reid’s direct supervisors, had previously worked with him at a different district. She was the person who encouraged him to attend the EDP.
- **Guidance of NISL coach.** Principal Reid’s NISL coach actively helped shape Principal Reid’s implementation plan through conversations in which she pressed him to

think through his strategic intent. Early on, for example, she had him consider what he wanted teachers to be able to do if he held a data meeting and what he wanted students to be able to do as a result of increased teacher capacity. Such questioning, at times, derailed his initial plans a bit. Principal Reid recalled thinking, “If I can’t answer those questions, why am I doing it?” Because of his NISL coach’s guidance, he believed he better planned the implementation and felt more confident about the execution.

## Challenges Hindering Change

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

- **Variation in teacher capacity.** According to Principal Reid, by the time the two schools had merged in Year 2, there was a “great contingency of teachers” moving forward with some great data use practices; however, about 30–40 percent of teachers struggled. He determined that the problem was not refusal on the part of the teachers but that they needed additional support to be successful. Although he understood that, like students, different teachers may need different supports, he struggled with identifying the right additional supports for these teachers.
- **Staff turnover.** As new staff arrived at the school, it was critical that they accept the initiatives that Principal Reid was trying to implement and that the school subscribed to so that students’ needs could be met. New teachers needed to be trained and become accustomed to the tools available to them; however, they did not have the benefit of carefully designed PD that communicated the underlying purpose for the data-driven approach, and so it was difficult in some cases

to achieve buy-in at first. Principal Reid had to be more mindful about how he acclimated the new teachers so they did not feel overburdened or overwhelmed by his expectations.

## Conclusion

Principal Reid was in an unusual position of initiating school improvement at two sites while preparing to open a new school the following year with combined staff and students. In this respect, his context was unlike that of the other case study principals. Yet his trajectory for fostering a culture of effective data use to support student’s personalized learning was similar in many ways to the other cases. Specifically, he began by establishing and introducing structures—grade-level team data meetings, communication facilitating the MTSS, and data conversations—to encourage collaboration among teachers and promote the desired practice of data use. He also piloted a curriculum (ARC) and a technological initiative (using iPads) designed to change teachers’ instruction to be more data-informed. Furthermore, he worked to build community among staff, as other case study principals did, except he did so both within and across the two schools. Like other case study principals who took the opportunity at the first all-staff meeting of the year to communicate a vision, Principal Reid welcomed his staff to the new school with a clear message about his priorities. He spent Year 2 expanding and enforcing the structures and programs he had piloted the year before. In doing so, he built leadership capacity in his instructional coach, made data more transparent and shared among teachers, and modeled data analysis himself. Although teachers’ capacity for data use varied, Principal Reid laid a strong foundation over two years for a culture that encouraged teachers to generate, discuss, and use data. He had begun to shift both the practices and the mind-sets of teachers toward using data to better meet the needs of all learners.



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