

Teacher Professional Learning Through Teacher Network Programs

A Multiple Case Study Investigation

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Introduction

High-quality professional development opportunities for teachers are centrally important to improve instructional effectiveness and increase student learning (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; U.S. Department of Education, 2014; Vangrieken, Meredith, Packer, & Kyndt, 2017). In particular, professional development is needed to help teachers with the instructional shifts required in implementing the college and career-readiness standards (CCRS) (Brown & Kappes, 2012). The CCRS require substantially revised instructional materials and shifts in teachers' instructional practices, leading to challenges for teachers in implementing CCRS-aligned instruction (Kober & Rentner, 2012).

Despite large investments and efforts (Jacob & McGovern, 2015), schools and districts have long struggled to provide ongoing, effective, and sustained support for teachers' professional development. Schools face challenges related to time and budgetary constraints that may impede their ability to provide the sustained, high-quality professional development teachers need to shift their practice (U.S. Department of Education, 2014). Further, rigorous research at scale has shown disappointing results for translating high-quality professional development into improvements in student learning (Garet, Heppen, Walters, Smith, & Yang, 2016). Given the challenges, there is ongoing interest for innovative or improved ways to support teachers as they shift their practice to successfully implement CCRS.

Teacher practice networks have emerged as a potential mechanism to support teacher professional learning and supplement other types of professional development available to teachers. Network organizations can take many forms, but, in general, they support teachers and their instructional practice by (a) providing access to instructional materials, (b) providing training and support in the use of instructional resources and strategies, and (c) enabling teachers to connect with a network of other teachers to support instructional improvements. Numerous teacher practice networks aim to support teachers in CCRS-aligned instruction by providing resources and training to catalyze teacher-to-teacher learning (WestEd, Center for the Future of Teaching and Learning, 2017).

This study examined the experiences of teachers in six schools participating in one of three teacher network programs during the 2016–17 school year. We explored participant perspectives on the potential benefits of their engagement with the networks for themselves and their schools. The goal of this research was to provide an in-depth picture that would describe how teachers engage in networks, what they may gain from participation, and how their learning from network programs may spread throughout their schools. This type of evidence is needed to understand which approaches hold particular promise and identify barriers to success that can inform future implementation efforts for both schools and the network organizations.

Research Approach

This study was based on six school case studies; each school was served by one of three teacher practice network programs. We used a multiple case study approach to explore experiences and comparisons across a set of cases, rather than focusing on individual cases (Stake, 1995). This section presents the study framing, case study respondents, and methods for collecting and analyzing the case study data.

Teacher Practice Network Programs

The study focused on network programs with several common approaches to support teacher learning, including the use of “core teachers” to support networking (Exhibit 1). An overarching logic model (Exhibit 2) hypothesizes that by engaging with the network programs, core teachers will accelerate their adoption and application of effective and standards-aligned instructional practices. These core teachers will network with peers and share what they have learned, helping spread the professional learning opportunities and gaining instructional leadership experience.

*In this study, teachers that participated in professional development through the network programs are referred to as **core teachers** with the programs.*

Exhibit 1. Approaches to Support Teacher Learning

The study focused on network programs that incorporated several general approaches to teacher learning:

- ▶ Developing and disseminating instructional materials
- ▶ Building knowledge about instructional practices through direct training and online resources
- ▶ Providing opportunities for teachers to “network” and connect with other teachers and teacher leaders
- ▶ Enabling “core” teachers who participate in network program professional development to take on leadership through teacher-to-teacher learning about instruction

This logic model is informed by research indicating the importance of teacher-to-teacher learning to support instructional improvement. Generally, teachers benefit as active contributors to their own professional learning, rather than as passive recipients of training (Baker-Doyle & Yoon, 2010, Bill & Melinda Gates Foundation, 2014; Calvert, 2016). Teachers may develop more confidence and expertise in their practice through collaboration and knowledge sharing in collegial interactions with other teachers (Darling-Hammond et al., 2009; Killion, 2014). Successful teacher collaboration may encourage teachers to share, reflect, and take risks necessary to change their practice (Vescio, Ross, & Adams, 2008). Further, collaborative and collegial environments may help sustain teachers’ professional learning beyond one-off professional development sessions (Cohen, Moeller, & Cerrone, 2015; Knapp, 2003; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006).

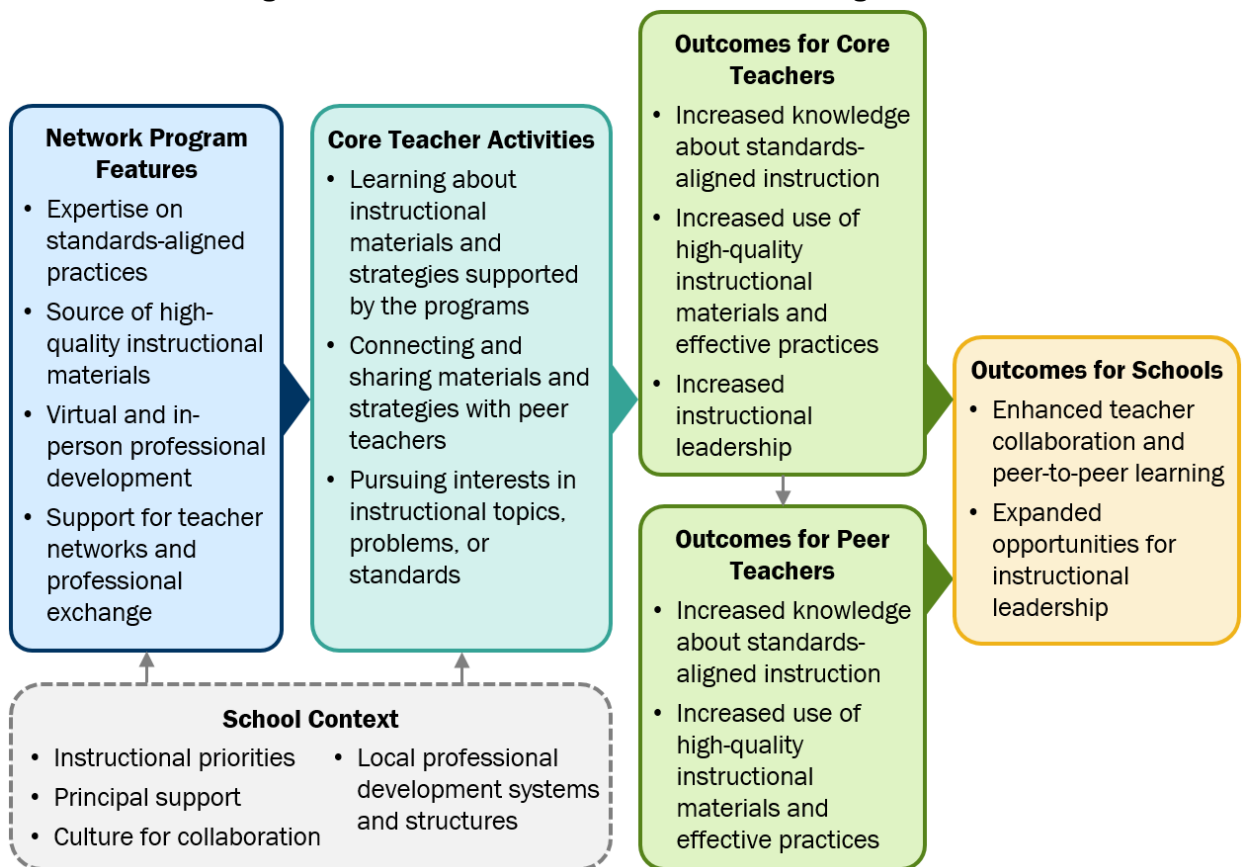
The teacher-to-teacher learning activities in the logic model leverage teacher leadership roles, which can serve as a mechanism to provide professional development for peer teachers and for teacher leaders themselves (U.S. Department of Education, 2014; Wilson, 2016). Previous

research has found that teachers can benefit from learning from each other through mentoring and peer coaching (Cohen et al., 2015; Wei et al., 2009).

The network program logic model recognizes the importance of context for teacher professional development efforts. The support of a school principal, competing instructional priorities, or more specialized student needs are examples of factors that can either support or undermine the success of professional development programs (Hill, Beisiegel, & Jacob, 2013; Hill, Corey, & Jacob, 2016). Flexible professional learning opportunities can help teachers to adapt instructional materials, practices, and content given their individual contexts (Gamrat, Zimmerman, Dudek, & Peck, 2014).

By integrating teacher collaboration, a teacher leadership role, and flexibility to allow teacher choice in the learning and adaptation to the local school context, network programs are hypothesized to hold direct benefits for core teachers that then extend through their schools.

Exhibit 2. General Logic Model for the Teacher Practice Network Programs



Teacher Practice Network Study Participants

Teacher practice networks in the field vary considerably in design and purpose. We invited three national network organizations with programs encompassing the common approaches in the logic model (also synthesized in Exhibit 1) to participate in the study. Beyond these common approaches, each network program had different features, activities, and roles to

support teacher instructional improvements. The programs also varied in terms of pathways for teacher participation, with differing emphases on teacher self-selected interest or involvement of school leaders in providing opportunities for teacher participation. The network programs are summarized in the descriptions that follow. Because each program allows for some local flexibility and adaptation, the summaries focus on what was implemented in the schools studied. For confidentiality purposes, we use pseudonyms for the network programs and the general term “core teacher” when referring to teachers that directly participated in the network programs.

Instructional Shifts Network Program. This program is led by an organization that supports networks of educators and develops materials for improving instruction and implementation of Common Core State Standards. The organization provides free, standards-aligned materials and information through its website, including instructional guides and instructional materials for standards-aligned teaching as well as coaching materials for working with peers. For teacher participation, the Instructional Shifts program emphasizes grassroots interest from teachers. At the onset of a new partnership, network program staff and local educators select a particular challenge for implementation of the standards on which to focus.

For this study, we worked with schools in a state that had partnered with the network program to focus on instructional shifts for engaging students in learning through complex texts. The Instructional Shifts program involved training core teachers to build expertise in the materials developed by the program and instructional approaches advocated by the program. Professional development for core teachers included training for using standards-aligned materials through an initial, in-person workshop followed by bimonthly webinars run by a state captain. The core teachers were expected to take what they learned from their trainings to share with their colleagues and serve as grass roots champions in their schools for the instructional approaches.

Digital Content Network Program. This program is led by an organization that provides a subscription-based service for standards-aligned digital textbooks and other instructional resources such as classroom activities, videos, texts, and planning tools. In complement to the instructional materials, the organization supports improved instruction through in-person and virtual opportunities for educators to connect and share instructional resources and strategies. In schools with a subscription, all teachers have access to the materials and community-building activities. Teachers in these schools can apply to participate in core teacher training, typically in consultation with district or school leaders.

For this study, we included schools with an existing district subscription to the service. The Digital Content program focused on training core teachers to use and implement the digital materials. In the schools studied, the program consisted of three in-person workshops of three hours each, held over three months. These workshops were supplemented by monthly assignments and weekly messages and optional opportunities to connect online with other teachers. Participating core teachers were encouraged to promote and share what they learned with other teachers in their school communities.

Curation Network Program. This program is led by an organization that builds partnerships with schools, districts, and states to support school improvement across a range of approaches,

including teacher practice networks. The networks involve formal participation by districts, with the network organization providing a variety of professional development supports to schools and teachers. Core teachers are selected from a pool of interested teachers, based on screening criteria.

For this study, we worked with schools in districts that were partners in a regional network. The Curation program emphasized training core teachers to build competency in curating instructional materials and supporting other teachers in use of the materials. The core teachers completed a series of online modules for networking, curation, and peer coaching. Following this training, the core teachers were expected to lead a curation process, consisting of researching educational materials and filtering that information for quality, both for use in their own instruction and for sharing with their peers. These core teachers also were expected to form small groups of peer teachers to share what they learned, including working with “high-touch” peer teachers in peer observation and coaching (virtually and in-person) and “light-touch” peer teachers for sharing information. As such, the Curation program placed a stronger emphasis on teacher leadership compared to the other two programs studied.

Methods

Guided by the logic model, the study included several research questions related to teacher learning opportunities through the network programs (Exhibit 3). To address these research questions, we examined the perceptions of case study respondents about participant experiences with network programs, what participants gained through engagement with the programs, and how participants shared their learning with other teachers in their schools. We also explored respondent perceptions on how the school context may have influenced the potential benefit and spread of network learning opportunities for teachers.

Exhibit 3. Research Questions

1. *How did the teachers engage in professional learning opportunities through the network programs?*
2. *How did the network programs enable the teachers to learn about instruction, connect and share instructional strategies and resources with other teachers, and gain instructional leadership experience?*
3. *Did teacher involvement in the network programs support or enable short-term changes in instructional practice?*
4. *How did school context facilitate network-derived teacher learning opportunities within schools?*

Study Sample

The study used an intentional sampling approach to identify schools and respondents to participate in the cases. For selection of school cases, the aim was to identify schools that had recently started participating in a network program for core teachers (i.e., a core teacher program, with direct training for participants and expectation for participants to share their learning with others) and had a sufficient number of teachers who had direct engagement with

network programs (beyond peripheral activities like accessing online resources) to provide informed respondents. Working with leaders of the network programs, we identified potential participating schools based on several criteria:

- ▶ Three to five teachers in Grades 4–8 who directly participated in training through the network programs, with a priority for teachers in English language arts (ELA) or social studies
- ▶ Initial school involvement with the core teacher program (though not necessarily the broader network organization) during the 2016–17 school year
- ▶ Schools that allowed the study to include some geographic range, with a priority for schools that served disadvantaged students

The resulting sample of six schools was located across five school districts within four states. Of the six schools, four were elementary schools, and two were middle schools; five of the schools were Title I schools. Four of the schools were located in rural areas and two in suburban areas, located across Central Mountain, Midwest, Northeast, and Southeast regions. More information on the schools is provided in the individual case studies in Appendix A. For confidentiality purposes, pseudonyms have been assigned to each school.

Within each school, we sought respondents that would allow us to explore the potential benefits for core teachers and whether core teachers were able to spread potential benefits at their schools. We therefore recruited participants at each school that fell into four categories: (a) core teachers, defined as classroom teachers who directly participated in network program training; (b) school administrators; (c) school- or district- level teachers or instructional leaders, some of whom also had relationships with the network program; and (d) peer teachers, defined as classroom teachers who did not participate directly in network program training. We sought two core teachers in each school, and at least one respondent from each of the other categories.

Core teachers were asked about their engagement with the network programs, potential changes to their instruction and leadership activities, and their perceptions of whether benefits of the programs spread more broadly at their schools. School administrators and teacher and instructional leaders provided perspective on how the network programs aligned with the local instructional priorities and their views on how instructional learning spread beyond core teachers. Peer teachers were interviewed to understand their perceptions on what they learned from the network programs and the core teachers. We sought recommendations from local network leaders to identify and recruit appropriate respondents for each respondent category.

The sample (Exhibit 4) consisted of 32 unique respondents across the six schools. Twelve respondents were core teachers. Additional respondents included six peer teachers in these schools, the six school principals, and six other school or district teacher leaders. Among the school or district leader respondents, several had experiences with the network program connected to their school or district. Three of these respondents participated in training for core teachers, and two respondents served in state-level network leadership roles to coordinate and support participating teachers in their state.

Exhibit 4. Overview of Interview Participants

	Core Teachers (Network Program Participants)	Peer Teachers	Other Staff
Curation Program	Roosevelt Elementary School Rural, Midwest Title I school, serving primarily Caucasian students in Grades PK–6		
	5th-/6th-grade ELA teacher	5th-/6th-grade science teacher coached by 5th-/6th-grade ELA core teacher	Principal
	Kindergarten teacher	5th-/6th-grade ELA and social studies teacher who began but did not complete the network program	
	Lockwood Elementary School Rural, Central Mountain Title I school, serving primarily minority students in Grades K–5		
	4th-grade teacher	High school social studies teacher coached by a core teacher	District-level instructional coach with network leadership role
	4th-grade teacher		Principal
Digital Content Program	Cedar Elementary School Rural, Southeast Title I school, serving racially diverse students in Grades PK–5		
	1st-grade teacher	4th-grade ELA and social studies teacher	School-level Digital Learning Coach (DLC) who participated in network training
	4th-grade mathematics and science teacher		Principal
	Arnold Middle School Rural, Southeast Title I school, serving racially diverse students in Grades 6–8		
	8th-grade science teacher	6th-grade social studies teacher	Principal
7th-grade social studies teacher	DLC		
Instructional Shifts Program	McClellan Middle School Suburban, Northeast school, serving predominantly Caucasian students in Grades 6–8		
	6th-grade ELA teacher	Middle school social studies teacher	District-level staff member in a network leadership role
	Middle school special education co-teacher	7th-grade ELA teacher	Principal
	Diaz Elementary School^a Suburban, Northeast Title I school, serving predominantly minority students in Grades PK–7		
	4th-grade ELA teacher	3rd-grade ELA teacher	Principal
5th-/6th-grade ELA teacher	District-level ELA supervisor who participated in network training		
			District-level ELA coach who participated in network training

^aIn this school, district staff participated in direct network training, and the core teachers participated in the district-based training provided by district instructional staff.

Protocols

Semistructured interview protocols were developed for each category of interview respondents described previously. Protocols for core teachers focused on their engagement with the network during the school year, how they felt their participation in the network influenced their instruction and leadership, and what challenges and successes they experienced engaging in and applying professional learning from the network. Protocols for teacher and instructional leaders focused on the district's relationship with the network programs, teacher engagement in the programs, perceived influences on teacher leadership and instructional practice, and challenges and successes related to instructional improvement. For principals, the protocols focused on the school's relationship with the network programs; perspectives on teacher participation and the related influence on instruction, collaboration, and teacher leadership; and challenges and successes related to instructional improvement. The protocols for peer teachers focused on their understanding of network activities, their interactions with the core teachers, and how network program participation influenced their own instruction. The interview protocols were designed to take approximately 45 minutes, and the networks reviewed the protocols in advance for relevance to their model.

Data Collection

Members of the case study team conducted a one-day visit to each selected school during March and April 2017. A small number of respondents were unavailable during the scheduled site visit, so the interview was conducted later by phone. All interviews were audio-recorded in addition to a team member taking detailed notes.

After the in-person visit at schools, the research team conducted follow-up interviews by phone in May with the two core teachers per school for further discussion about whether and how they had integrated network training and resources into their instruction. To ground the conversation in authentic work, we asked teachers to provide a lesson plan that they felt represented a strong example of their implementation of the CCRS literacy standards in their instruction and was relevant to the aims or focus of the network program. We used the lesson plans teachers shared to help inform the follow-up conversation, for example, asking why they selected the lesson plan they had shared and how the network training and resources may have informed their planning and instruction for the lesson.

Analysis of Case Study Data

Qualitative analytic procedures for this study were designed to synthesize information pertinent to the research questions. As a first step, we developed a coding protocol based on the research questions. As recordings of the interviews were transcribed, a senior analyst developed a coding structure based on the underlying interview constructs and research questions. The research team identified and analyzed a random sample of interviews to refine the coding structure and supplement it with patterns and themes emerging from the data sample. The codebook (Appendix B) also was modified based on input from a researcher external to the analysis team.

Data coding and analysis methods were designed to provide reliable findings while limiting bias, including setting standards of evidence and establishing interrater agreement in the coding of

interview data. Two analysts conducted the data coding and analysis, focusing on patterns among respondents for several topics:

- ▶ Nature and frequency of network activities
- ▶ Perceptions of how program participation supported learning about instruction
- ▶ Mechanisms and approaches for connecting and sharing with other teachers
- ▶ Opportunities for developing leadership roles
- ▶ Alignment of network programs with local school contexts

For the follow-up interviews with core teachers based on instructional artifacts, coding focused on emergent themes about the teacher selection of the instructional artifacts, the ways in which the artifacts represented implementation of the literacy standards, and perceptions of how teachers' engagement with the network had influenced their preparation and use of the instructional artifacts.

The analysts used NVivo qualitative data analysis software for coding and conducted reliability checks to increase the accuracy and trustworthiness of coding and analysis. The analysts coded several of the same transcripts and met regularly to compare coding, discuss interrater agreement, and revise codes, documenting all decision rules.

After all data were coded, analysts aggregated data from respondents at each school for each research question. To develop school case studies, the research team first analyzed responses across all teachers within a school and then expanded the focus to include analysis of responses from the teacher leader and administrator respondents. This process included documentation of areas in which respondents provided consistent information and description of where the responses varied, including where participants' role or relationship to the network coincided with this disagreement. The analysts then summarized these findings in written cases, organized around the research questions. Illustrative quotes were included to highlight key findings.

After developing the school cases, the research team summarized and compared findings across cases, using schools as the unit of analysis. This approach allowed for the identification of cross-cutting themes across the schools and networks and the prevalence of specific practices or experiences. Cross-case findings were written to present common experiences as well as highlight less common or outlier responses that were also informative. The presentation of cross-case findings includes illustrative quotes from respondents. For parsimony, the school pseudonyms were not incorporated into the cross-case findings; readers can refer to the case studies (Appendix A) for findings specific to each school.

With this qualitative study approach, the authors caution against overinterpretation of findings. The study focused on exploring hypotheses and uncovering mechanisms related to teacher participation in network programs, through the voices and perspectives of the study respondents. The results do not speak to causal impacts of network participation on teacher outcomes, and the small sample is not representative of a broader population.

Cross-Case Findings

Overall, findings from the case studies indicated that during their first year of participation in the network programs, core teachers perceived that the network programs provided quality materials and training that was useful. Core teachers reported benefits to their own instruction because of network training and gained instructional leadership opportunities through participation in network programs, especially when provided with explicit training in leadership roles. Respondents also perceived that the support from network programs was aligned to schools' priorities for teacher growth and instruction.

However, initial benefits to peer teachers and schools often were limited. The Curation program, which has a more structured approach to networking and coaching, demonstrated more progress in supporting peer teachers. The Instructional Shifts and Digital Content programs placed greater emphasis on core teachers building competency in instructional content, rather than building teacher capacity in sharing their instructional knowledge.

The key cross-case findings are discussed in the following sections and organized by several topic areas:

- ▶ Teacher learning opportunities through network programs
- ▶ Network-enabled connections and sharing among teachers
- ▶ Opportunities for teacher leadership
- ▶ Perceived influence on instruction
- ▶ Teacher network learning opportunities within the school context

▶ Teacher Learning Opportunities Through Network Programs

A small number of core teachers in each school participated in the network core teacher programs.

The network programs provided training to a core set of teachers to build knowledge on instructional strategies or materials developed by or aligned with network priorities. These core teachers, who had different role titles across the networks, were generally expected to function as informal teacher leaders by sharing and supporting the use of strategies and materials with other teachers in their schools. Five of the schools studied had two or more core teachers who had participated in training activities provided by the network programs; for one school (with the Instructional Shifts program), teachers participated in district-based workshops provided by local instructional leaders who had attended the network program training. Core teachers self-selected into this role, with screening in the case of the Curation program, or were nominated by school leaders.

“Getting to meet with teachers from other schools who taught different subjects than I did, and listen and see how they incorporated the strategies in their classrooms, it was like “Whoa, I never thought of that.”

—Core teacher on attending network training

The network programs emphasized participant learning about instructional materials or strategies, with different priorities across programs.

Core teachers from all three network programs described professional development priorities related to high-quality, standards-aligned instructional materials. Two of the network programs emphasized knowledge and use of instructional materials and approaches available through or advocated by the network organization. The Digital Content program focused primarily on “deeper” knowledge of instructional materials and curricula in various subject areas available through the program’s online portal and how to effectively implement these materials in the classroom. The Instructional Shifts program prioritized building knowledge of standards-aligned literacy instruction and “shifts,” including use of text sets identified through the program. The third program (Curation program) focused on building teacher knowledge and skills in a “curation process” for identifying and sharing high-quality instructional materials aligned with an instructional topic of interest to the participants.

Only one program provided explicit training on networking and teacher leadership, although all programs encouraged teachers to share their learning.

Respondents from the Curation program described explicit training, processes, and structures in networking and supporting other teachers. This program provided professional development for social networking with other teachers using social media and training on peer coaching and observation.

“My idea of coaching was so different, like, ‘Let me show you how to do it.’ I learned a lot about active listening and the paraphrasing . . . really questioning rather than telling.”

—Core teacher on peer coaching training

Respondents in all four schools for the other two network programs indicated that the training included an expectation that teachers would share and promote what they learned with other teachers or “spread the knowledge.” However, the respondents did not highlight specific training or support for networking with other teachers or engaging in teacher leadership activities. One principal highlighted the lack of emphasis on coaching and leadership in the Digital Content program as an impediment to supporting instructional change in the school.

Most core teachers found the programs useful.

Most of the core teachers interviewed expressed positive views regarding the usefulness of the professional development activities in which they participated. All core teachers in the Digital Content program conveyed that the activities were useful for learning about how the materials could be incorporated in the classroom, such as “ways that students could be more interactive” with the materials. Core teachers in both Curation program schools perceived the training as useful for identifying and sharing quality instructional materials, such as learning how to “really make sure” an instructional resource will be beneficial. Respondents in the Curation program schools also emphasized that the training related to peer coaching was helpful.

For the Instructional Shifts program, teacher views on the quality of training were more difficult to discern. Respondents in one school shared favorable views about the resources, although one teacher thought that the training concerning instructional strategies could be more in-depth. Respondents in the other Instructional Shifts school conveyed buy-in for the purpose of the

training—such as helping teachers “debunk” myths about instructional changes—but generally did not share opinions (positive or negative) about the usefulness of the training. In this particular school, the core teachers had been trained by district instructional coaches rather than through the network program directly, potentially making it more challenging for teachers to identify the network as the source of the training content.

▶ Network-Enabled Connections and Sharing Among Teachers

Core teachers typically shared instructional strategies and resources within their schools through established professional development structures and existing peer relationships.

Core teachers in four schools (at least one school per network program) emphasized tapping into professional learning community (PLC) meetings, department meetings, or common planning time to share network program materials and strategies with a subset of peer teachers in their schools with whom they had existing relationships. Existing meeting structures were described by core teachers as “a natural way and an authentic way” for core teachers to spread network learning or “bring back” what was learned through the program.

Instructional leaders working with two of the study schools reported incorporating some content from the network programs into their predefined school responsibilities. An instructional technology coach in one school used professional development sessions to help information “trickle-down” to teachers. Instructional coaches for the other school incorporated materials into monthly sessions that they hosted for all ELA teachers; according to a teacher, the instructional coach “keys that information” from the network program “and then we receive that training.”

From the interviews, it was unclear how frequently network program materials were shared through the existing professional development structures. The actions varied by core teacher, with respondents typically providing examples of their actions related to sharing information rather than describing ongoing or embedded activities. One core teacher recalled that once direct engagement with the network professional development concluded, the sharing of network materials was no longer “at the front of [their] thoughts.” There was some evidence that competing priorities at the school for professional development limited sharing. For example, a core teacher noted plans for sharing that were not realized: “We are going to have a PLC on this...Then you get pulled in so many other directions.”

“The biggest challenge was that other things get in the way so you leave and you are prepared to get everybody onboard with these great standards and shifts and just getting people to understand it...but everything else gets in the way.”

—Core teacher on sharing learning within the school.

Network programs provided core teachers with flexibility for selecting instructional content and sharing with peers.

Networks offered core teachers flexibility in dispersing the network information in their schools, which several core teachers found valuable. In the Digital Content and Instructional Shifts programs, core teachers determined how they would share the materials and strategies they learned from the network within their schools and engaged in the level of teacher leadership in sharing information that they felt comfortable with and able to provide. The Curation program

provided a more structured process for core teachers to share with and lead other teachers, with flexibility on which peer teachers to work with and the instructional content. For example, in one school, a core teacher described choosing a “problem of practice” or a broad instructional topic that teachers were “really passionate about or that we really [wanted] to work with.”

Core teachers had opportunities to connect with other teachers beyond their schools, though they did not report sustained interactions.

All three programs provided in-person or virtual opportunities for the core teacher respondents to connect with core teachers in their district or other districts that were participating in the training or had done so in the past. In the Instructional Shifts and Curation programs, all core teachers mentioned participating in online events hosted by the program. Examples included webinars focused on “what other states were doing and how we can use that” in one program and Twitter chats on technology use in the other program. These programs also provided occasional in-person activities such as a “Share Fair” for core teachers from across their state.

In the Digital Content program, the primary professional learning activities for core teachers were hosted in person at the district level, allowing core teachers across the district to “work together to come up with how [they] ... could take [the materials and strategies] back to [their] ... schools.” This program also provided access to a national online community, although the respondents had not become involved in this community at the time of the interviews.

Some core teachers reported that these intermittent connections beyond their schools were useful for their own learning. For example, one teacher learned “some really good ideas that I never would have considered using in my class,” and another stated that “it's nice to hear what's working for other people and what's not working.” However, the respondents did not report sustained connections or relationships beyond the hosted activities. In the words of one teacher, the connections “haven't really extended.”

Opportunities for Teacher Leadership

Network programs provided or enabled new opportunities for informal teacher leadership within schools.

To varying degrees, all three network programs provided or enabled new teacher leadership roles among the core teacher participants. In two programs, Instructional Shifts and Digital Content, these opportunities were more informal and individualized; core teachers were not directed in specific ways to work with peers. Teachers noted that the network role “opened up doors and opportunities . . . to share my experience, knowledge, and growth” and provided a “leadership aspect” in “being able to bring some of those ideas” back to the school. Two core teachers with the Digital Content program expressed discomfort with taking on formal teacher leadership roles, preferring the opportunities for informal sharing and discussions about instruction with peers enabled by their knowledge of the program materials.

“I think because I’m part of this program, maybe the expectation (is) for me to be more of a leader, like, ‘You’ve had this exposure, so you need to collaborate with your peers.’”

—Core teacher on teacher leadership role

For the Curation program, the core teacher role included explicit expectations and mechanisms for teacher leadership, requiring a more significant time commitment for program participation. The core teachers from both schools described identifying peer teachers to work with, providing peer coaching through cycles of observation and feedback, sharing materials through social media forums, and tracking and submitting their activities. This approach helped shift work with peer teachers from “nonchalant or not planned” to “purposeful” with a process and structure. As one core teacher described, “Now, that we have this cycle, first we do this, then we do this, and we keep going.”

Some study respondents reported that program participation was helpful for improving instructional leadership skills or confidence of core teachers, particularly those who had not served in similar roles in the past. A principal at one school noted that the participation started to cultivate leadership skills in newer teachers, and another principal noted that it helped teachers “become more reflective in their questions of others or support of others.” Similarly, an early career teacher felt more “confident” and “well-equipped” in sharing and discussing instructional materials.

▶ Perceived Influence on Instruction

Core teachers used instructional materials gained through network participation.

In five of the six schools, all core teachers discussed using instructional materials provided by or identified through the network programs in their instruction. Respondents with the Digital Content program reported regular use of the program-provided curriculum, citing the benefit of the training for helping them use the materials more fully. Core teachers at both schools participating in the Curation program reported using instructional materials they had identified through their curation work, and core teachers at one school with the Instructional Shifts program reported using text sets recommended by the program. These respondents did not specify how frequently they used the materials. The sixth school, with the Instructional Shifts program, was in the process of implementing a new curriculum, and the respondents did not directly report using program materials.

Core teachers perceived that network participation had supported their instructional rigor.

Either one or both of the core teachers at each school felt that they had increased their instructional rigor through the network training, particularly in terms of strong implementation of the standards. At four of the schools (at least one for each program), core teachers tied the increased rigor to the materials and texts either provided through the network or identified from network training. At two schools, core teachers and principals noted that the increases in instructional rigor were already in process prior to the network training, so the network support enhanced a pre-existing effort.

“I can definitely see a big change from the beginning of the year to now in just my structure of my classroom. It’s very much student engaged and interactive.”

—Core teacher on instructional influences of the program

Perceived benefits to instruction reflected each network program’s model.

Core teachers at both schools participating in the Digital Content program explained how the training to better use the network’s materials supported multiple aspects of their classroom practice. In particular, all four core teachers described stronger technology integration in their instruction, making their lessons more engaging for students. Teachers at both schools also mentioned using graphic organizers introduced through network training to help students in writing essays and requiring students to use a deeper level of evidence for their arguments. Two of the four core teachers cited that the materials and training helped them provide differentiated instruction to meet students’ needs. For example, one teacher described how Spanish-language versions of instructional media supported scaffolding for English learners.

All four core teachers in the Curation program explained that their participation helped them move toward more student-led instruction, with an emphasis on eliciting student engagement during lessons. One teacher described this dynamic occurring through using more demanding questions for students that required close reading of the rigorous texts being used, and another teacher explained that seeing too much “teacher talk” during peer observation prompted reflection concerning her own need to allow student-driven discourse.

Core teachers from the Instructional Shifts program reported benefits to their literacy instruction that reflected the close focus on literacy and implementation of the standards the network program provided. In particular, teachers described a focus on questioning strategies during their literacy instruction, with the intent of getting students to engage in higher-order thinking. The instructional teacher leaders and core teachers who attended network training described a related effort for teachers to use more student-driven discussions, with one instructional leader acknowledging the difficulty of getting teachers to make this shift.

There was limited indication of influence on instruction among peer teachers in most of the schools.

In most cases, the influence of the core teachers on peer teachers throughout a school was challenging to discern. For the schools participating in the Digital Content program, all teachers had access to the curricular materials, though respondents perceived that peer teachers used the materials less frequently and may not have had a sufficiently deep understanding of how to use the materials effectively. One peer teacher described using a student-centered approach based on the Digital Content program materials, but the teacher did not attribute this approach to support from the core teachers. For the schools participating in the Instructional Shifts program, peer teachers did not identify the program or core teachers as a potential source of influence for their literacy instruction. In one of the Instructional Shifts schools, this finding was likely affected by the concurrent implementation of a new curriculum and an effort to shift practices that predated involvement with the program.

As might be expected, there was more indication of network program influence spreading to peer teacher instruction for the schools implementing the Curation Program because they were engaging in a direct peer-coaching process. Peer teachers at these schools reported using materials identified by their core teacher coach and perceived that participation in the program

helped with student-centered instruction, such as better use of peer-sharing strategies and questioning strategies during class.

Teacher Network Learning Opportunities Within the School Context

School leaders supported the network programs' teacher-led approaches for professional learning but had limited direct involvement.

School leaders across all networks and schools perceived that the network programs had potential to spur teacher-led professional learning in their schools, aligned to school leaders' goals for building instructional and leadership capacity. Principals from three schools discussed network-supported opportunities for teacher leadership, such as "... build[ing] leadership capacity in teachers," giving "teachers ownership, leadership opportunities," and "grow[ing] their own." Two other principals pointed out the benefits of teachers being positioned to support peers compared to the principal "standing up and telling them" or "someone [teachers] don't know coming to present because there's a trust there." As one principal summarized, "Half your goals are met because the teachers are leading it and the teachers are teaching teachers."

Principals generally did not view themselves as drivers of or direct participants in the network programs, viewing teacher participation as "something that they're doing so that they can see benefit" or "you lead it and I'll support you in that." Principal involvement ranged from less active roles in three of the schools, such as setting expectations for participation or encouraging teachers to use program resources, to more active roles of sending teachers to observe colleagues who had been involved with the program or alleviating barriers for teachers to conduct classroom observations and coaching in the other three schools.

Network materials and approaches were generally aligned to local materials and curricula.

In five of the six schools, respondents described how features of the network programs were aligned to local practices. For one school in the Instructional Shifts program and both schools in the Digital Content program, alignment was discussed primarily from the perspective of instructional materials and curricula. For example, one core teacher explained that digital media from the Digital Content program were "hitting all the big [priorities] right now going on" in their school. Similarly, a core teacher with the Instructional Shifts program noted that the program materials and concepts "went along with our focus" and helped teachers "see the shifts actually taking place in our curriculum." Respondents from the two Curation program schools emphasized the alignment with priorities for teacher collaboration. A core teacher explained that peer coaching "is something that our district has been doing anyway, so it really aligned very nicely."

Respondents from the other school participating in the Instructional Shifts program perceived conflicts between the network program approaches and the curricula and professional development approaches used in the school, which constrained participation in the program. According to a teacher leader respondent, the local curricula "are not the most standards-aligned materials." In addition, core teachers described being unable to share program concepts during their PLC time because "eight out of ten times, we are pulled up for workshops," which created

challenges for “getting everybody onboard with these great standards and shifts” emphasized by the program.

Collaborative cultures in schools supported sharing of network materials and approaches.

Respondents at four schools indicated that school cultures of teacher collaboration may have helped facilitate network-related sharing in some instances. One principal described that it was not challenging for core teachers to share what they learned through the Digital Content program at her school because the teachers “love to engage in and lead professional development . . . they like to present and share with each other.” Respondents at Curation program schools described their schools as team-oriented and receptive to learning opportunities, which aided the curation and peer-coaching processes. For example, an instructional leader at one Curation program school noted that the school was “already very high, high on collaboration,” and a peer teacher explained, “I said ‘sure’ [to participating] because I’m open to learning something new.” Similarly, the principal at one school in the Instructional Shifts program explained that “we are very close-knit, and we’re open and receptive to learning” and cited routinized teacher-to-teacher observations and common planning time that were used to share network program materials.

“I know if one teacher on this floor can’t answer my question, there’s 28 others in this building . . . I know that they’re willing to help on a team level.”

—Core teacher on the collaborative culture within the school

Conclusions

What Did We Learn?

The teacher learning opportunities offered through the network programs studied had several promising ingredients. This included engaged core teachers, high-quality instructional materials, instructional approaches aligned to local objectives, and support from school leaders. We found that program participation provided some perceived benefits for core teachers with respect to instructional improvements and opportunities for informal instructional leadership. The core teacher experiences reflected key themes about effective teacher professional learning, including teachers being active contributors in the learning process and a focus on specific strategies and content consistent with local instructional priorities (Baker-Doyle & Yoon, 2010, Bill & Melinda Gates Foundation, 2014; Calvert, 2016; Darling-Hammond, Hyler, & Gardner 2017; Desimone, 2009). Considering the modest amount of time required, direct participation by the core teachers was an efficient way to engage in supplemental professional learning with an indication of at least short-term benefits.

A primary challenge was spreading benefits beyond the core teachers. In most of the case studies, there was limited evidence of early benefits for peer teachers, indicating that the initial efforts of core teachers were insufficient to overcome obstacles within their schools. The promising ingredients noted previously were not necessarily enough to catalyze collective teacher participation and collaboration, critical features of professional development for the larger school community (Darling-Hammond, Hyler, & Gardner, 2017). Thus, in the time period studied, the network programs in most of the schools were more akin to an external professional development offering for interested teachers, rather than a mechanism to catalyze peer-to-peer learning, a key distinguishing feature of the general program logic model (presented on page 3).

What Are the Implications for the Core Teacher Network Program Model?

The study findings highlight a need for professional learning in both instructional content and teacher leadership to accelerate the benefits of network program participation. Two of the programs studied (Instructional Shifts, Digital Content) emphasized core teachers building competency in instructional content; professional development for supporting peer learning was mostly beyond the intended scope of the programs. The schools affiliated with these two programs had less evidence of benefits to peer teachers and considerable variability or idiosyncrasies in how core teachers approached working with peers. The other network program studied (Curation) incorporated professional development and explicit mechanisms for connecting with peer teachers (e.g., specified teams of peer teachers, coaching activities, social media activities). Although these activities required a greater time commitment, they enabled more short-term progress in supporting peer teachers. These findings suggest that the logic model should articulate two domains for professional development and core teacher activities: one domain for preparation in instructional content and one domain for teacher leadership that includes readiness to support or network with peer teachers.

These findings also emphasize the importance of network program roles and activities responsive to school contexts and the limitations of professional development structures in schools. In the schools studied, local conditions were consequential, such as the cultures for teacher collaboration, existing professional learning structures, and the type of principal involvement. Most of the core teachers relied on opportunistic use of structures already in place in their schools to connect and share with peer teachers. This approach was useful but constrained by competing demands and limited time, common obstacles for teacher participation in professional learning (Postholm, 2012). Reflecting on the logic model for this study, a more nuanced understanding of the role of school contexts would consider the extent to which program features and professional learning activities recognize and respond to contexts that are likely to facilitate or impede progress.

What Are Opportunities for Improving the Teacher-to-Teacher Learning Promoted by Network Programs?

The findings in this study highlight several opportunities for program improvements to help teachers overcome obstacles to teacher-led learning in schools and be prepared to support the learning of peers. There was insufficient information from the respondents about out-of-school networking to meaningfully inform program design.

Place more emphasis on professional learning for teacher leadership.

To enable the peer collaboration and outcomes hypothesized in the logic model, core teachers need to be prepared to help other adult learners. The professional development provided by network programs could focus on facets of instructional leadership needed for successful core teachers in the program, such as skills in coaching and modeling lessons or building self-efficacy as instructional leaders. This seems particularly important when teachers do not have prior experience in teacher leadership roles, which was the case in most of the schools studied. It may also be beneficial for networks to prepare groups of participating teachers in a school to work as a team in supporting instruction, which was closely associated with student achievement in other research (New Teacher Center, 2017).

Help core teachers understand school readiness.

Core teachers working with network programs may need tools or supports to assess factors in their schools that facilitate or impede teacher-led learning opportunities. This could include approaches such as discussing how the evidence about school factors in professional development applies to particular schools, creating checklists of common readiness issues and competing demands, or developing individual plans for the first year that are responsive to localized factors and conditions. Network programs could also incorporate more explicit peer outreach and networking approaches for teachers to implement or choose from, depending on what is feasible in their schools, such as co-planning, embedding content in PLCs, or virtual collaboration.

Engage school leaders to support teachers during early adoption.

Core teachers may need more support and clearer expectations from school leaders to overcome challenges for incorporating network content in their schools. Network programs could provide

more initial training or guidelines for school leaders to have a deeper understanding of what supports core teachers need to make progress and how school leaders can leverage participation related to their goals for teacher leadership and instruction. It may be particularly important for school leaders to have a set of recommended concrete actions to take early on, such as encouraging use of the instructional content, formally recognizing participating teachers, or dedicating professional development time.

Where Is Further Research Warranted?

This study explored theories underpinning the professional learning opportunities offered through teacher network programs. Future research can build on this study in several ways, but it should recognize that network participation coincides with other initiatives and teacher activities, making it difficult to measure potential benefits in a rigorous manner.

Support for teacher leadership

One key theme of these findings is that teachers and administrators are looking to network organizations for opportunities to help develop teacher leadership. Teacher leaders engaging peers through the program content is a distinguishing feature of the network programs studied. Additional research is needed to further understand how network programs can support the development of local teacher leaders, including informal or emerging teacher leaders who could affect positive change in their schools. Research could also generate evidence on the particular teacher leadership skills or domains that network participation might improve, relative to other forms of professional development.

Longer-term outcomes for teachers and schools

This study examined short-term findings based on initial involvement of a set of schools and their teachers with network programs. Network programs such as those studied typically aim for schools and teachers to sustain engagement and participation beyond an initial school year. Subsequent investigation could focus on longer-term teacher engagement, teacher-led learning, and instruction to understand how participation and outcomes evolve over time. Future research could also explore how network program participation can affect school contexts or culture in these areas.

Benefits for student learning

Ultimately, schools and teachers engage with network programs to support instructional improvements so that students will benefit. Future research that is more systematic and measures student outcomes, including comparison groups, can provide critical evidence for districts and schools on the extent to which network program participation benefits students.

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Appendix A: Case Studies

Digital Content Program

Cedar Elementary School

School Background

Cedar Elementary School is in a small, rural town in the Southeast, serving students in Grades PK–5. Cedar is a Title I school, with a high percentage of low-income students, and its student body is racially diverse.

Cedar is in a district that has had a subscription with the Digital Content program for multiple years, which allows teachers across the district to access digital media, tools, online resources, and digital textbooks. For the first time in 2016–17, teachers across the district were invited to participate (as core teachers) in the Digital Content program.

The study team interviewed five staff members at this school: (a) two core teachers who participated in the program training, both of whom were in their first few years of teaching, one teaching first grade and one teaching fourth-grade mathematics and science; (b) the school's Digital Learning Coach (DLC), who also participated in the training for core teachers and has had a long-standing relationship with the Digital Content program; (c) one peer teacher who did not participate in the training provided by the program but used the materials in her classroom; and (d) the school's principal.

Teacher Engagement in Professional Development Through Network Programs

Core teachers at Cedar reported attending three training sessions held monthly in the district during the fall semester. The focus of these sessions was on how to search the Digital Content library of materials, how to select and organize materials, and how to incorporate materials and strategies into their instruction. As part of the Digital Content program model, core teachers were then expected to take what they had learned in these sessions to share with other teachers in their schools to encourage broader, more effective use of the instructional materials. The school's DLC had also attended a couple of regional network trainings in the past.

The Digital Content program provides a platform for teachers to connect virtually through its online community site, providing access to resources and opportunities for real-time and asynchronous interactions with the network of teachers across the country and internationally as part of the subscription service. However, teachers at Cedar did not mention connecting with other teachers from other schools in this way.

Teacher Learning Opportunities Through Network Programs

Although all teachers at Cedar had access to an online suite of resources from the Digital Content program, the trainings provided opportunities for participating teachers to explore the platform's functionality and materials in a more in-depth fashion. One core teacher explained, "We knew that the videos and the streaming, all that stuff was there, but we had never gone deeper into [the resources]." In particular, core teachers mentioned learning about a series of

instructional strategies and instructional units available on the website. Core teachers also mentioned learning how to manipulate the resources to fit various instructional contexts, such as different grade levels and subject areas, as well as how to incorporate the network resources in “ways that students could be more interactive with,” rather than simply showing a video, for example.

Core teachers mentioned that they had some opportunity to connect with district teachers from other schools through the district-hosted program trainings. One core teacher shared that it was useful to connect with teachers from different contexts who brought new insights to a common set of instructional resources. “It was cool to hear from somebody totally different, like lower grades. Maybe we hadn’t thought about that [what they shared] would be a way to integrate [network resources] into whatever we were doing.” However, no core teacher reported sustaining these connections beyond the in-person sessions. One core teacher explained that although core teachers shared strategies at the training, she hadn’t “gone further than the actual meetings to communicate or talk with anybody.”

Program Participation Influence on Teacher Connecting and Sharing

After these trainings, core teachers were expected to incorporate these materials into their own teaching and model for peers, as well as actively share materials and strategies with peer teachers. For core teachers, the most commonly reported vehicle for sharing and promoting network materials in the school was through their existing weekly PLCs. One core teacher explained, “If you have [a core teacher] in a PLC . . . that’s been helpful because they can automatically share what they’ve learned [from the network],” while the other stated, “My [PLC] teammate and I did it together. . . . She teaches fourth-grade math and science as well. So we’ve had the opportunity to kind of integrate and discuss during our PLC meetings.” Core teachers also described other unstructured channels for sharing materials, such as e-mail or informal conversation between teachers.

The school’s DLC who attended the Digital Content program trainings also shared network resources and strategies through incorporating information into the professional development she provides for school staff. She stated, “It’s my job to share with the teachers. [The Digital Content program] is one of those tools I throw out, and me being familiar with it, going through the [training], helped.” One core teacher described the way the DLC presents information on program resources to teachers as “a trickle down thing.” Responses from the interviewed peer teacher confirmed that she learned about the network’s capabilities through these professional development sessions led by the DLC, saying,

[The DLC] will lead [a professional development session] on [the program resources] and a lot of it is like, “Hey, did you know that you could do this with [the resources]?” That’s how I found out about all of the [program’s] unit plans that are laid out for lessons.

However, responses from school staff suggested there was some variation in the extent to which core teachers’ knowledge of Digital Content resources had permeated throughout the school as a result of sharing through informal or PLC structures. The interviewed peer teacher was aware that one member of her team, a core teacher, had received additional training from the network; the peer teacher expressed little familiarity with the program and did not note any changes to her

PLC in the current year in terms of using resources or explicit examples of working with the core teachers. One core teacher added that, after the trainings concluded, some teachers lost momentum and what they had learned from the trainings was no longer “at the front of [their] thoughts.”

Influence on Instruction in Classrooms and Schools

The main way core teachers described their practice changing after participation in the Digital Content program was through increased knowledge of how to best use the tools and resources available to them through their school’s subscription. “It gives me more tools in my toolbox,” one core teacher said. Another core teacher reported being more comfortable with her use of the tools and added that the training enhanced her thinking about how to adapt the resources for various contexts.

In addition to the digital tools, core teachers also described that some of the program’s strategies and activities influenced student-focused instruction. One core teacher noted that several activities contain challenging, broad questions that foster peer-to-peer dialogue and “[allow] the kids have that discussion amongst themselves.” Another core teacher described a lesson using a strategy she learned from the core teacher training, in which students presented the steps for solving a mathematics problem to other students. According to this core teacher,

This activity provided the opportunity to assess whether or not, or how deeply, [students] understood something because they were going to be the ones teaching. Obviously, I knew that [if] they couldn’t explain something, they didn’t have the material as deeply as maybe it seemed that they did.

Staff in all roles reported that using the Digital Content program materials was useful for creating student-centered lessons, with or without the use of technology. The online materials, including short video segments, e-texts, and digital tools, were helpful for creating technology-integrated lessons that were interactive rather than passive for students. Some participants described using the one tool with students, allowing students to search for materials and organize those materials into their own board. The peer teacher explained the school’s philosophy about using the technology and digital resources in instruction:

When we talk about how we can use [the program resources], it’s often in the frame of like, “And here’s what you can have your kids do to use this tool.” I think that’s been a lot of the focus with [the network]. It’s like, “Yes, we [as teachers] can do these things, but your students also have this ownership as well.”

All interview participants further mentioned that the standards-aligned digital textbook and other resources helped teachers ensure their instruction was hitting the rigor of the standards. According to the principal, “[The Digital Content resources] will just say, “This is the standard [teachers are] trying to cover” and [the program] professional development helps [teachers] to see how that resource or tool can be used to implement and teach that standard.” One core teacher also described selecting resources from the program to meet specific standards in her teaching, explaining “Here’s what I’m teaching and here’s how I can easily put this [resource] into to buff it up and make it more rigorous.”

Opportunities for Teacher Leadership

Some of the interviewed staff viewed core teachers sharing and serving as local experts on Digital Content materials as a form of leadership opportunity. According to the principal, this opportunity for leadership was especially crucial for the growth of the school's newer teachers who participated in the program, saying, "This year was really their first time doing anything outside of just, 'You're responsible for your classroom.' I think that was a huge opportunity for them, and then they're able to share that with their grade-level team." Speaking about the core teachers at her school more broadly, she added, "I feel like that program either enhanced leadership skills for people who already had experience in that capacity or started to cultivate those skills in newer teachers."

However, the Digital Content program did not include reported structures or opportunities for leadership beyond what the core teachers were comfortable sharing in their schools, and the core teachers themselves disagreed as to whether their participation constituted leadership. One core teacher said, "I think because there wasn't a bunch of teachers who were part of the [program], that gave me a leadership aspect, which is cool as a [newer] teacher to have that, taking that role and being able to bring some of those ideas back to the classroom." This core teacher provided an example of working with a newly hired teacher to demonstrate the capabilities of the Digital Content materials. Another core teacher said she had not viewed her participation in the program as a form of leadership for herself, saying, "That whole [leadership] thing is not really my cup of tea. I am not the type [to be] like, 'Here's the [professional development], and I'm going to lead it, and everyone listen to me.'"

Teacher Network Learning Opportunities Within the School Context

Because teachers throughout the school have access to the Digital Content program materials, respondents reported that many teachers have a base knowledge of the materials and use them to some extent in their instruction, which primed uptake of the network resources shared by the core teachers. "[The Digital Content program is] a resource that we already have access to. I feel like teachers have buy-in because they've used it in some capacity before, even if they don't use it all the time," shared the principal.

Several participants reported that the use of program resources supported existing district and school priorities on incorporating technology into the classroom in ways that engage students. Said the principal, "Last school year, technology was used to display information, but there wasn't an interactive component. This year, there's been more of a focus on 'How do you let kids interact with the technology and each other?'" She did not interpret this shift as originating with the Digital Content program but noted that it complemented the effort.

Respondents also noted that the program materials complement the school's philosophy as a global school by providing access to a series of cultural materials and experiences, including virtual field trips and video conferencing with students in other countries. This was considered especially important for exposing students to experiences they would not otherwise have. "Some teachers start their lesson with a short video clip [from the program's resources] because our kids don't get out much. A lot of these kids have never seen a beach," said one core teacher. The principal added, "Many of our students come from poverty" and "often need lots of background

and experiences to understand content concepts. . . .[The Digital Content program] helps them to be able to see and interact with things that they haven't actually experienced in their lives."

The school's principal voiced overall support for the Digital Content materials and training. Specifically, she regarded the program as aligned to her priorities for teacher collaboration and professional growth at her school, saying, "[The Digital Content program] provides leadership opportunity for teachers who want to learn from one another," adding,

One thing that we try to do here is [to] get teachers to collaborate in [PLCs] and find resources that are going to be relevant and engaging for kids, and then incorporate some rigor. I think that a lot of what [the network] has to offer does that for teachers.

The principal at Cedar described an existing school culture of collaboration and teacher-led professional learning that laid the groundwork for sharing strategies and resources, saying that teachers "love to engage in and lead professional development; . . . they like to present and share with each other." This model of select teachers receiving network professional development and then leading dissemination efforts at the school level was useful because "there's a trust there [between core and peer teachers]. [Peer teachers] feel like, "Well, she's using it in her classroom, [so] I can totally use it in my classroom."

The principal also reported that the program has been a source of support for teachers meeting several goals, including "understanding the content, making instruction relevant to students, [and] using technology in the classroom," which are becoming the factors on which teachers are assessed. Core teachers also perceived this support for the program and its materials from the school's leaders, which one core teacher understood as tied to the principal's priorities for technology use in instruction. "Our administration allows us to have an opportunity to explore and look more into [the network resources]. . . . They like to see it so they encourage the use of technology. They encourage for the kids to be able to be engaged and active by using the technology and by using the activities."

Arnold Middle School

School Background

Arnold Middle School is a middle school located in a small, rural town in the Southeast. The school is a Title I school, serving a high percentage of low-income students, and its student body is racially diverse.

Arnold is in the same district as Cedar, and therefore part of the same district that has had a subscription with the Digital Content program for multiple years, with teachers participating in the Digital Content Program for the first time in 2016–17.

The study team interviewed five staff members at this school: (a) two core teachers participating in the program training, including an eighth-grade science teacher and a seventh-grade social studies teacher; (b) one peer teacher who did not participate in the training but used network materials in her instruction, a sixth-grade social studies teacher; (c) the school's DLC, who did not participate in the training; and (d) the school's principal.

Teacher Engagement in Professional Development Through Network Programs

The interview respondents reported that three teachers at the school participated as core teachers in the Digital Content program. According to the core teachers, the trainings focused on program resources and strategies for “how to implement [network resources] seamlessly in our classrooms.” The respondents reported that their core teachers had varying attendance at the training; not all teachers were able to attend every training session.

Both of the interviewed core teachers were aware of the online platform to virtually connect with teachers outside their district for continued collaboration and learning, but neither teacher had actively participated in the network in that way during the first year. Both teachers expressed interest in future opportunities to connect with teachers outside their school, either virtually or in an in-person setting.

Teacher Learning Opportunities Through Network Programs

The interview respondents reported that the series of Digital Content program trainings provided participating teachers with an opportunity to dig deeper into the materials already available to them through their district’s subscription and learn creative and engaging ways to incorporate those resources into their instruction. According to one core teacher, the training “didn’t force [teachers]” to implement the materials in a certain way, “it just made it easier to implement them” into lessons they were already teaching. Another core teacher described the trainings as useful simply for “giving us time to unveil the major joys” of the program’s resources, which she would not otherwise have had.

The trainings brought together teachers from other subject areas and grade levels in schools within their district and provided core teachers the opportunity to learn from each other and practice using the resources. After demonstrations of the resources, “we would work together to come up with how then we could take it back to our schools and try that out,” as one core teacher described. Core teachers mentioned that the hands-on, collaborative format of the trainings was beneficial to their learning. One teacher, a social studies teacher, explained that connecting to other teachers within her district at the core teacher trainings enhanced her learning at these meetings:

Getting to meet with teachers from other schools who taught different subjects than I did, and listen and see how they incorporated the strategies in their classrooms, it was like “Whoa, I never thought of that.” Like really, why would I ever talk to a high school math teacher? But talking to a high school math teacher who [participates as a core teacher], he gave me some really good ideas that I never would have considered using in my class, but they totally work.

Although both core teachers reported that it was useful to have an opportunity to meet and share strategies with other teachers in their district, they did not sustain these connections in-between the meetings or after the series of meetings had ended.

Program Participation Influence on Teacher Connecting and Sharing

Both core teachers described taking what they had learned in their Digital Content program training back to share with their school communities, particularly various strategies and other

resources that teachers may not have realized were available. One core teacher mentioned that she shared the materials with her colleagues in her PLC and in the science department, requesting time on meeting agendas to present what she found valuable from the program trainings. The other core teacher mentioned sharing the materials with her PLC partner, but explained that more often, she took a more informal approach to sharing what she had learned, such as by sending e-mails to and connecting one-on-one with teachers with whom she has existing collaborative relationships. According to this core teacher, incorporating Digital Content information into existing conversations about instruction was “a natural way and an authentic way” for core teachers to spread network learning to peer teachers in their schools.

The core teachers generally stated that the Digital Content program provided another topic on which teachers could collaborate, but that it had not substantially changed how teachers were interacting with one another. The principal shared a similar opinion, saying that, although teachers were collaborating with program materials and strategies, teacher participation had not yet transformed the way that teachers collaborate: “[Teachers are] sharing, ‘Here’s where it is,’ but there isn’t a ‘Hey, let me come in and watch you do this tool and then let me give you feedback on it.’ I don’t think we’re at that level.”

Responses from interviewed school staff, including the interviewed peer teacher, indicated that many teachers throughout the school had a base understanding of the Digital Content materials independent of their interactions with the core teachers. The interviewed peer teacher mentioned she learned about materials through “trial and error, me trying it out and just seeing how it works.” This teacher was aware that one core teacher was known in the school for being highly knowledgeable about the resources but was not aware of the core teacher training and she did not report collaborating with the core teachers.

Influence on Instruction in Classrooms and Schools

Both core teachers believed their participation in the Digital Content program helped them find greater comfort and fluency with using the resources to create student-centered, engaging lessons and in incorporating technology and digital media into their instruction. Both teachers also mentioned that rigor is built-into some of the program activities and using them “lends nicely to going deeper and not being superficial,” as one described.

Differentiation was another area in which core teachers and the nonparticipating teacher agreed that their experiences with the program had a positive influence on their teaching practice. Specifically, they explained that the resources and tools available online were easily adaptable for use with different populations of students and students with varying levels of proficiency. One teacher provided an example of using the one tool to differentiate instruction, saying,

I’m able to create a board filter for my students that’s for scaffolding purpose, but also with my other students they’re able to create their own board builders and I’m able to see where they are with the standards and the content.

In addition, core teachers mentioned that the resources were a useful tool for scaffolding instruction for English learners and readers who are struggling because many of the videos and texts are available in multiple languages, with text read-alouds available for students.

Both core teachers also reported some influence of the program on incorporating literacy into their science and social studies content. They reported that the program’s activities had been useful for teaching writing, particularly learning how to use digital tools for students to collect and organize textual evidence. The principal agreed, saying, “I think the [digital textbook] does a great job of integrating literacy and content” and added that it was a school goal to develop integrated units across subject areas.

Opportunities for Teacher Leadership

Both core teachers discussed the ways that participating in the program had provided opportunities for informal or formal leadership within their schools. One teacher explained that participating in the Digital Content program helped her build positive connections for collaboration with her colleagues across grade levels and content areas that she had not had in her first year of teaching, which provided an opportunity to be an expert on a topic as a relatively inexperienced teacher:

Within my school, I think I’ve taken a lot on [of leadership]. I feel confident. I think especially as a [newer] teacher, utilizing it and participating [program] helped. So my confidence, not in content, but in instruction [and] in [sharing] instructional materials and activities to my PLC. Of course, the very first year of my PLC, even though it’s just me and the other teacher, I [am] very much just learning the ropes, “So what do you do? How do you do in your classroom?” This year, I guess felt so well equipped with, “Hey, let’s use this activity. Or let’s do this a little different.”

This core teacher mentioned having the opportunity to present about Digital Content resources at a district conference but stated that she did not yet feel ready to participate in that role.

The other core teacher mentioned that she did not feel personally comfortable in formal leadership roles, including presenting the information she had learned formally to teachers in her school. She explained that her participation in the network had allowed to her share her learning “in an informal way, with just conversation with other teachers and not presenting before the staff.”

Teacher Network Learning Opportunities Within the School Context

Respondents reported that attending the Digital Content program trainings was relevant to the instructional priorities of both the school and district; the trainings were directly connected to resources teachers were already encouraged to use in their classrooms. One teacher described, “It’s not this thick theory, ‘Oh, this sounds pretty, but how can I use this?’ I can take things back to the classroom and immediately implement them.” The principal agreed that the larger relationship with the Digital Content program is complementary to the school’s and the district’s priorities for instruction and professional learning, specifically for technology integration and integrating content across subject areas, such as incorporating literacy into science instruction. One core teacher also mentioned that the principal was emphasizing student-centered instruction in the school, for which she believed the online resources and tech-book were helpful tools.

All teachers described the principal as a proponent of teachers’ participation in the Digital Content program and said the principal also encouraged teachers schoolwide to use the network

materials in their instruction, specifically citing a staff meeting where the principal “encouraged us within our [PLCs] to select the [network materials] that would work best for our content.” The principal stated that he viewed the program as aligned with his priorities for developing local human capital because “it gives teachers ownership, leadership opportunities to share ideas [and] allows teachers the opportunity to feel confident in trying new things.”

However, the principal himself professed some skepticism about the Digital Content program as a model of professional learning geared at creating meaningful instructional change at the school level. He shared that he believed the program’s effectiveness at building teachers’ leadership skills and providing opportunities for leadership was limited, partly because the trainings focused on using the resources rather than on skills that are critical for leaders to possess. He stated, “I don’t know that there was knowledge in coaching and having crucial conversations in leadership, but in terms of the tool? Sure. Then they would share that knowledge, [but] it wasn’t that they then suddenly became these masterful coaches.” The principal added that his selection of the core teachers also could play a role in how the training was implemented, explaining that he promoted the program to teachers he believed to be among his most dynamic, high-achieving teachers or those he thought of as “front runners” in terms of technology use. He questioned whether this strategy for selecting teachers was the most effective or if it would be better to encourage teachers who are “on the edge of jumping in” to systematically develop instructional and leadership capacity in the school.

Although the teachers described their experiences with the Digital Content program as generally positive and aligned to their local goals, they also described some challenges with the network or ways their network participation could be improved. Both core teachers mentioned that while time and scheduling are always challenging for teachers, the trainings would be more effective if they had more frequent trainings or a longer series of trainings. In addition, because the Digital Content materials are subscription based, some teachers (particularly those using the trial social studies digital textbook) expressed some concern over losing access to the materials at some point. “Sometimes teachers are hesitant about [using network resources] because tools come and go,” one teacher explained.

Instructional Shifts Program

McClellan Middle School

School Background

McClellan is a middle school in the Northeast, serving students in Grades 6–8. McClellan serves a mainly Caucasian student body, and a small percentage of the students are from low-income families.

The participants at McClellan reported that their school is in the first year of a formal relationship with the Instructional Shifts program, although at least two staff members noted using materials in prior years from the program website.

The study team interviewed six staff members at this school: (a) two core teachers, both ELA teachers, who received direct training from the Instructional Shifts program; (b) two peer

teachers who were not working directly with the program; (c) one teacher leader, the district director of curriculum, instruction, and special projects who also is a statewide leader with the program; and (d) the school's principal, who had attended a weekend conference for the network.

Teacher Engagement in Professional Development through Network Programs

Respondents at McClellan reported that a small number of teachers and leaders at the school interacted directly with the Instructional Shifts program through in-person contacts with program staff in meetings early in the year. Both core teachers attended the statewide kickoff conference earlier in the year, which introduced program concepts and “sharing what they’re doing in their districts.” One core teacher reported planning to attend another, out-of-state, in-person training session scheduled shortly after the site visit. The principal also mentioned attending an out-of-state program conference for school leaders in the fall. The district director of curriculum, instruction, and special projects described a more intensive relationship through her leadership role in the Instructional Shifts program, including planning the state conference attended by core teachers, working with other members of the program’s state leadership team to determine the statewide focus, planning bimonthly webinars, and presenting at conferences.

The core teachers and the district-level director noted that virtual contacts in the form of bimonthly webinars took place five times during the school year and were hosted by program leaders. The core teachers reported that the webinars were designed to provide staff with an opportunity to learn how to incorporate instructional shifts and standards-based materials, plus provide an opportunity to connect with other core teachers in different districts to learn “what other states were doing and how we can use that to build our own bulletin board of what we are doing.” One core teacher stated, “It’s nice to hear what’s working for other people and what’s not working” through virtual connections.

Teacher Learning Opportunities Through Network Programs

Core teachers varied in their assessment of the sessions and their level of specificity on instruction. For example, one participant reported that sessions focused on specific instructional strategies, such as “conversation-starting type questions”; using standards-aligned, topical “text sets”; and other instructional resources being used by network participants in other districts and states. The district-level director reported that she and other teachers appreciated learning about how to make their classrooms more rigorous and meet the demands of the standards: “This is what I’ve been looking for, and these are the materials that I need that are going to help move my district.” However, this same participant also reported that the learning through webinars did not always “go in depth as much as they could” or were “on [the] surface.” Similarly, a core teacher noted that the webinars could have supported participants in learning to not only write “complex questions” but also “frame or scaffold [those] questions” to help students learn to answer robust, text-based questions required of the shifts, and engage in more complex summative tasks in response to new, more rigorous materials. The principal similarly noted that he hoped that future contact with the Instructional Shifts program would be more consistent and in-depth.

Program Participation Influence on Teacher Connecting and Sharing

Core teachers noted that the Instructional Shifts program expected that the teachers would attend webinars and then go back to their respective schools and districts to share text sets and other materials. The district’s director of curriculum, instruction, and special projects reported that sharing of material among nonparticipating teachers was more common in other schools and districts, but she reported that it was not yet happening widely at McClellan.

The two participating core teachers reported an interest in sharing with colleagues, particularly during PLC time, but other, competing commitments at the school made planned collaboration and sharing difficult:

When you were fresh out of that one [training] weekend, I felt like I came back more prepared to have the conversations, but the hard part is in our head when we leave that weekend, [we] were both like, “Oh, we are going to have a PLC on this. This is going to be great.” Then you get pulled in so many other directions. . . . I feel like that was probably . . . the biggest challenge was that other things get in the way so you leave and you are prepared to get everybody onboard with these great standards and shifts and just getting people to understand it...but everything else gets in the way.

Similarly, the other core teacher noted that PLC times, in particular, often were devoted to “different things that are important, too.”

One core teacher, who served as a coteacher at McClellan, reported creating a presentation based on program materials about incorporating high-level texts and instructional shifts to share with other special educators in the district. In addition, this teacher reported sharing one document-based writing assignment with coteaching colleagues. She stated that she has seen early influences in coteachers’ classroom instruction.

The interviewed peer teachers worked with the core teachers. Although the core teachers were consistently able to identify Instructional Shifts events and materials that came from the program, other teachers were not able to identify the program as the source of particular concepts or materials. Therefore, they were often unable to identify examples of learning and sharing with the core teachers that derived from the network program.

Influence on Instruction in Classrooms and Schools

The core teachers, district-level director, and the principal described some modest influences on instruction that they associated with the early stages of their involvement with the Instructional Shifts program. Respondents most frequently reported that materials and practices from the program supported teachers’ existing efforts to engage in standards-aligned teaching. One core teacher reported previously “let[ting] my students stay within their comfort zone, and now it’s rigorous to leave your comfort zone and scale to that . . . more challenging [set of] comprehension questions.” This teacher further described what she called a change in “mind-set,” where whole-class instruction focuses on a strong grade-level text, somewhat higher than in previous years, and then teachers also introduce students to texts of various levels of difficulty during independent reading time. The district-level director reported observing a core teacher who had been using the program materials, and that “those text sets . . . [have] helped her help

those students access those higher-level texts and push them further.” The materials, she said, have helped in “pushing her.” The principal similarly reported that he, too, had observed teachers continuing to try to teach the standards, as before, while working “more in their classrooms and [teachers] trying to adopt some of those [standards-aligned materials and approaches].”

One core teacher and the district-level director described new materials from the Instructional Shifts program complementing their existing, standards-aligned efforts. For example, the core teacher noted that although there had been “no dramatic changes” in her teaching in conjunction with working with the program, “maybe the text I am giving them is more rigorous” as a result of having new materials. Noting that standards and shifts had been part of the school’s work prior to its partnership with the Instructional Shifts program, the principal reported that “a lot of [teachers] have shifted some of their practices even prior to being part of this,” providing another example of the program providing additional support to an ongoing school effort.

Opportunities for Teacher Leadership

Core teachers did not describe their participation in the program as contributing to their leadership roles within their school. Explained one core teacher, “I don’t know if [participation in the program] was something that made the biggest difference,” with respect to leadership. Similarly, the other core teacher did not discuss the participation as a leadership opportunity. However, the school principal and instructional leader respondents saw the opportunity for the program to expand leadership opportunities. Diaz’s principal described the potential for developing teacher leadership and teacher-led learning through participation in the Instructional Shifts program. In addition, the district-level director noted that her the role within the program had “opened up doors and opportunities . . . to share my experience, knowledge, and growth,” within her district.

Teacher Network Learning Opportunities Within the School Context

The participants reported that many of the goals of the Instructional Shifts program were aligned with local goals for standards-aligned instruction. Core teachers noted that they had been interested in standards-aligned instruction and materials for several years and were enthusiastic to see that the program materials could support this goal to add rigor and complexity to lessons.

However, respondents also noted that the specific efforts of implementing the program materials and collaborating on the use of those materials often conflicted with other local efforts. The school’s existing instructional materials and instructional model were an obstacle for incorporating Instructional Shifts materials. According to the district-level director, the school’s materials “are not the most standards-aligned materials.” She reported that the philosophy and approach of the school’s existing workshop model of instruction lacked the rigor and depth required in the standards and promoted by the Instructional Shifts program:

The standards are about depth, not breadth, and I feel like [the workshop] materials sometimes are . . . they’re trying to be, like, “But we promote the love of reading.” Which like, yes, we want to promote the love of reading, but we also want to make sure that kids are college and career ready.

People feel like they have to use [the provided materials] word for word. It becomes, like, they feel like they can't deviate from it. Instead of using what they know and thinking about the standards, they're, like, "Well, it says that we're touching these standards right here, so since it says we're doing it, we must be doing it.

And in terms of the people working on literacy, as much as I have these conversations about "But what about the standards? What about the standards?" There are people who are very much workshop purists, and we have a lot of teachers who are very workshop purists. . . . I think there's that whole level of professionalism that sometimes gets lost because if we give people choice about the materials they're using, then they're just going to choose not to do it. And, so, this is the conversation and battle that I keep having.

We'll see where it goes. The assistant superintendent, when I have this conversation with her, she's like, "No, no, no. You're right; it should be a resource to support the curriculum." But then when you talk to the two people who I work with, they're, like, "No, no, no. They shouldn't be using any other resources; they should just be using the [workshop] bundles." . . . But we're obligated by law to teach the standards, and I think that's what gets lost.

One core teacher agreed about the tension between the curricula and the Instructional Shifts materials, saying that "I feel like the text [in the curriculum] is not as rich as it could be based on the standards we've gotten from [the program]." The other core teacher expressed some disagreement on this point, reporting that the resources were complementary as long as teachers understood that the workshop curricular materials were a resource, not "the end all be all."

Beyond conceptual conflicts, teachers shared that training and collaboration around other priorities limited time to collaborate on approaches and materials from the Instructional Shifts program. Core teachers reported that collaboration time they hoped to use to share materials and approaches was often prioritized instead for training on the school's workshop model, as one core teacher explained: "For language arts and PLC, eight out of 10 times we are pulled up for workshops, which are so important too for workshop teaching because we use the workshop model."

The principal at McClellan was knowledgeable of Instructional Shifts program activities, having attended one out-of-state meeting, and was supportive of teachers' participation as "an opportunity for us to build leadership capacity in teachers." The core teachers described their school leaders as supportive but not highly involved, explaining that they "haven't really discussed [work with the program] at all" but did perceive an expectation from school leaders that they share the materials.

Diaz Elementary School

School Background

Diaz Elementary School is in a suburban town in the Northeast that serves students in Grades PK–7. The school is Title I, with a high percentage of low-income and minority students.

The school and district were in their first year participating in the Instructional Shifts program. The district's ELA director, who had previous experience with the program, was new to the district and brought changes to the curricula and materials used to teach ELA, choosing to work with the Instructional Shifts program to support the implementation of these materials. As the program was implemented at this school, district-level instructional coaches participated in the training from the program and then provided network-influenced workshops to train classroom teachers in their district. For consistency with the other cases in this report, the study team refers to the classroom teachers who participated in the training as core teachers, although in this school these core teachers did not directly interact with the network. Also, the instructional coaches had connections with the network program similar to core teachers in other study schools.

The study team interviewed five staff members at this school: (a) two district instructional leaders, the ELA supervisor and the ELA coach, who both had received training from the network directly; two core teachers, who were fourth- and fifth-/sixth-grade ELA teachers participated in core teacher training held by their district; (b) one peer teacher, an ELA peer teacher who did not participate in the network; and (c) the school's principal.

Teacher Engagement in Professional Development Through Network Programs

The instructional leaders at Diaz attended an in-person, statewide Instructional Shifts training session for core teachers held on a weekend at the beginning of the school year. The school's principal also attended a meeting for principals held in another state that focused on implementing the instructional shifts. After attending the in-person training, the instructional leaders participated in virtual Instructional Shifts program events and meetings throughout the year, including bimonthly webinars with the network, Twitter chats, and blogging. These virtual events included "information saying how we can keep our teachers encouraged through this process and [reminding] us of the importance of making sure that the instruction is reflecting the shifts in literacy." The trainings also supported messaging on "helping teachers [who] don't really understand why we're making the changes in the instruction that we're making" and "to encourage [teachers] and to also debunk any of the myths that they believe, [such as] making that shift would cause either adding more work, or it's something that their content area shouldn't be involved in."

Because implementation with this school came through the instructional leaders, core classroom teachers from Diaz did not directly engage with the network program.

Teacher Learning Opportunities Through Network Programs

The instructional leaders worked with the principal to select two classroom teachers from the school to attend the training inspired by the Instructional Shifts program held at the district level by the ELA director. The instructional leaders and principal noted that they strategically selected these two ELA teachers from the school, believing that these teachers would help support the dissemination of Instructional Shifts concepts throughout the school. "We picked some teachers [who] could help move things," one instructional leader said. Describing these teachers, the principal said, "We identified two teachers, pretty strong teachers, but not just strong in their delivery of instruction but also their strength in being flexible and open . . . to working with the district . . . and receptive to new strategies and methods."

These core teachers attended one 4-hour professional development opportunity in the fall that introduced them to the Instructional Shifts program—“a smaller, condensed version” of the training that the instructional leaders had received directly from the network. According to the teachers who attended, “It talked about complex texts and quality of [texts]” and “where we were really introduced to [the network], and we talked about the shifts in Common Core, and we discussed questioning strategies and testing strategies.” The teachers also received Instructional Shifts program resources, including links to the website, a slide deck, and other handouts.

Program Participation Influence on Teacher Connecting and Sharing

The core teachers helped spread materials and strategies from the Instructional Shifts program with other ELA teachers at Diaz. One core teacher described sharing her highlights from the training with peer teachers, including “questions and strategies, peer collaboration, discussing how important that is and how it impacts us all, and especially the students the most.” The principal observed that common planning time was the main structure through which core teachers shared what they learned through the network: “Everyone has a common planning time. For instance, [the fourth-grade core teacher] works closely with [another teacher] who is a third-grade teacher and not in the network. So she shares her strategies.” The principal added that she had observed one of the core teachers sharing strategies and resources from the network, including a lesson planning tool.

Both core teachers reported that they were collaborating with other teachers in their school more and in different ways this year compared with last year. One teacher specifically shared that she was doing more classroom observations, and the principal added that she used core teachers as exemplars for teacher observations:

I send in my teachers to go in and observe [the core teachers], in practice, and then I also make arrangements for them to come out and observe my teachers in practice, the teachers that [did not participate in the training].

One core teacher added that her work with the program had influenced teachers’ attitudes about collaboration and had opened their practice, saying,

A lot of times as teachers we want to just close our doors, and it’s like every man for himself but now it allows us to open up our doors, and everybody’s classroom is a window to each other, which is more helpful.

The ELA supervisor and the coach also contributed to sharing within the school, and stated they were expected “to spread the knowledge of what we were learning [with the network] to our staff members when we come back into the buildings, having teachers come together and network, [helping] them through that process, and changing their frame of mind” with regard to implementing the instructional shifts. They described incorporating what they had learned from their training with the program into professional development provided monthly to ELA teachers at their school to support the implementation of a new, standards-aligned literacy curriculum. Said one instructional leader,

I found ways to take some of the information from the PowerPoint that [the network] provided to us, to enter into our [professional development]. So, that we were giving

them a little bit of what we got throughout the year . . . trying to get give them information, little by little.

This professional development provided by the instructional leaders was the main way by which most classroom teachers at Diaz experienced the network. As one core teacher explained, the network program would “key that information into the supervisors and then we receive that training.”

Influence on Instruction in Classrooms and Schools

The respondents generally reported that teachers’ work with the Instructional Shifts program had helped influence rigor and standards-alignment in teachers’ literacy instruction. However, it was often difficult for respondents to discern the role of the program support from the role of the curriculum itself because the two initiatives were so closely aligned. Also, the instructional leaders reported the need for continued effort to improve instruction.

The core teachers shared instances of increased rigor and standards-aligned practices in their literacy instruction over the year. One core teacher thought her experiences with the Instructional Shifts program influenced the level of rigor in her class, saying, “I think about [rigor] all the time as well. And I think that [network] assisted me with that, especially as far as questioning and expectations for my students.” One same core teacher mentioned that she was incorporating more student discussion in her classes as a result of her participation with the network, saying, “I know if [students] don’t get it the first time, then eventually, by continuing to collaborate, they’ll understand whatever that topic is better. They learn better from each other.”

The instructional leaders shared a more mixed perspective, seeing increased rigor as an area where teachers were making improvements but still experiencing struggles. For example, they thought that teachers had increased the creation of student-centered lessons, including student engagement in peer-to-peer discourse, which they identified as a component of their new curriculum. “There’s protocols that require students to turn and talk, or work in pairs or triads, and to hold discussions. So, some students are discussing more.” One instructional leader mentioned that the transition to more student-led instruction advocated by the Instructional Shifts program was nonetheless challenging for some teachers, saying, “They aren’t accustomed to releasing the control and allowing the students to take the forefront of the lesson.” In addition, the instructional leaders reported that teachers in the school were having students writing about texts differently than in the past, including more frequent use of evidence from texts. One provided an example of observing a third-grade class at Diaz: “[Students] don’t even have to be told to pull out their text and reference their text, and the way that they talk about characters in a text is completely different from what they were used to doing. It’s become natural to them.”

The leaders also expressed limitations to focusing on the instructional improvement because of the structure of the curriculum and the timing of their schedule. “We don’t have enough time in our instructional block for them to be able to get through everything that we’re asking them to get through,” one instructional leader said; as a result, teachers were “watering down” the more rigorous materials. Moreover, the instructional leaders described the buy-in and uptake of the literacy instructional shifts on which the network was focused among the school’s ELA teachers as inconsistent:

You have some people who are starting to see the reasoning behind this, and their mind-set is gradually changing, and then you have other people who were accustomed to the [previous curriculum]. They're at that standstill where they're just trying to see, "Are we going to continue this next year or is this just something for the moment?"

Opportunities for Leadership

There was some indication of the network program enhancing teacher leadership opportunities for the participants at this school. One core teacher did not make connections between the work with the program and leadership opportunities or skills. However, the other core teacher believed that her experiences with the program had helped her become viewed as a leader in her school, with heightened expertise due to the network training. She explained,

I think because I'm part of this program, maybe the expectation for me to be more of a leader, like, "You've had this exposure, so you need to collaborate with your peers. You need to share what you're doing in your classroom; you need to hear what they're doing in their classroom, and seeing how that can impact student achievement."

Teacher Network Learning Opportunities Within the School Context

Participants reported that many of the goals of the Instructional Shifts program were aligned with local goals for standards-aligned instruction, as the district ELA director chose to work with the program to support implementation of a new, standards-aligned curriculum. As one instructional leader explained, implementing the new curriculum coincided with "[changing] the mind-set of the teachers who we're working with because we were going from something that was completely a different frame to teaching literacy, than what we were moving toward." In the previous curriculum, teachers had been focused on having students read leveled texts and using leveled texts to provide instruction to students, rather than having students read more challenging and complex texts. One instructional leader described the shifts he or she was trying to make through work with the network:

We were trying to take [teachers] from that mind-set [of using leveled texts] to "How can we now challenge our students in the classroom?" because if we continued to allow students to just read leveled text, when are they going to be able to actually have the stamina to be able to get through an actual complex text? They wouldn't because they weren't being exposed to those types of things.

The roll out of the new literacy curriculum was designed to tie closely with the network support materials and resources, which made it challenging for teachers to differentiate between the network and their local initiative. The respondents described the district's and the program's priorities as "cohesive" or "intertwined." As one instructional leader explained, "What [the ELA director] is doing with all of the teachers is really a reflection of what the network is doing. It meshes well." Given this close alignment, teachers sometimes viewed their work as a district initiative, rather than of a separate network program. An instructional leader explained, "[Teachers] don't know that they're participating but they are . . . they think these ideas may just be implemented as a district, but they probably don't actually know where it's coming from."

There were also school factors that supported sharing and learning at Diaz related to the Instructional Shifts program. The two core teachers described the school's principal as supportive of their efforts with the program. "My principal has really supported [me] very well. I've explained to her numerous times I can't get everything done, and her trying to understand where I'm coming from and be supportive in that sense as well," one teacher explained. The other core teacher suggested that the principal viewed their participation as valuable, saying, "My principal is going to make sure that we do [continue the relationship with the network]." The responses of the principal herself indicated support for the Instructional Shifts program model of teachers teaching teachers, saying,

[Most teachers are] more receptive of each other than they are of me standing up and telling them. . . . When they're able to work and learn from each other, I think it is so much more impactful, and it allows them to be more of a risk taker with opening and being vulnerable to their colleagues coming in and supporting them.

Respondents from Diaz described that the sharing of network approaches and materials at the school level was facilitated by its teachers' shared values of collaboration. Describing the staff at her school, the principal explained, "We are very close knit, and we're open and receptive to learning," citing routinized teacher-to-teacher observations and common planning time.

Curation Program

Roosevelt Elementary School

School Background

Roosevelt Elementary School is in the Midwest in a small, rural town, serving students in Grades PK–6. Roosevelt is a Title I school with a student body that is predominantly low income and predominantly Caucasian.

Roosevelt has had a relationship with the organization that provides the Curation program for at least 10 years and had participated in several of their initiatives in the past. The school was in its second year participating in the Curation program, having been part of piloting the first two modules for the network in the previous year.

The study team interviewed five staff members at this school: (a) two core teachers who participated in the Curation program training, including a fifth/sixth-grade ELA teacher and a kindergarten teacher who also served as one of the state's lead teachers; (b) two peer teachers, including a fifth/sixth-grade science peer teacher who was working with a core teacher through peer coaching and a fifth/sixth-grade ELA and social studies teacher who participated in the pilot of two Curation program modules in the previous year but did not continue with the training; and (c) the school's principal.

Teacher Engagement in Professional Development Through Network Programs

Core teachers reported that the Curation program provided them with opportunities for learning through online training modules on social media use, the instructional resource curation process, and peer observation and coaching. Core teachers explained that participants from

their school had completed the first two modules (social media and the curation process) in the prior year and the final module on peer coaching in the current year.

In addition to their experience with the Curation program modules, core teachers also described program activities that provided opportunities for them to connect and share strategies with one another. This included an in-person Curation program conference in their state, where core teachers had the opportunity to present what they had done locally, as well as cross-state online Twitter chats for core teachers that focused on discussion topics related to network activities, such as on “how we use technology,” as one teacher described.

Teacher Learning Opportunities Through Network Programs

Through the Curation program modules, core teachers reported expanding their abilities regarding selecting and sharing instructional resources. The module on resource curation focused on how to select the most useful, high-quality educational materials. One teacher described learning how to analyze resources for their usefulness, saying “It’s okay to skim over [a resource] and really make sure it’s going to be beneficial to your toolbox before scooping it up.” The module on social media also was instructive. One core teacher reported, “For a long time, I thought, ‘I’m not sure that’s a platform that is really conducive,’ and yet now I’m finding all these different things . . . all these different opportunities that I didn’t know were out there.” Core teachers also mentioned that the modules provided learning on “what peer coaching is” and how to structure peer observation sessions.

Program Participation Influence on Teacher Connecting and Sharing

Core teachers reported that they applied what they learned about resource curation, social media use, and peer coaching with other peer teachers, known as their high-touch and light-touch teachers. One core teacher explained that the content for interactions between high- and light-touch teachers “depends on what is important to us and where we feel that we need to grow.” Several respondents discussed personalized learning as an instructional focus of the core teacher’s work with high- and light-touch teachers.

One core teacher described her role as “providing information to other teachers that we’ve vetted and making sure that they are good resources.” Often, this sharing of resources and strategies occurred through the school’s existing, biweekly teacher-based team (TBT) meetings. There, core teachers shared information and resources they gathered through the Curation program. High-touch relationships also consisted of ongoing instructional support through peer observation and instructional coaching. The core teachers and one peer teacher noted that these peer coaching connections occurred frequently. “I’ve had contact twice a week with my [high-touch] teachers,” one core teacher said, whereas the peer teacher she coached mentioned connecting informally nearly every day.

Light-touch contacts included one-time connections with teachers both within and outside their district. These connections were less frequent than high-touch connections and often occurred virtually, through Facebook groups, Twitter chats, and blogging. The school’s principal mentioned that the process of going online to connect and share resources led them to discover a school with similar challenges and goals hundreds of miles away, in another Midwest state. After discovering a teacher’s blog online, “that led to us starting to exchange e-mails, and we

eventually Skyped with them twice. We learned a lot from them and we trade stuff,” the principal explained, “They are like our sister school.” One core teacher reported that continuing to build external collaborative opportunities for local participants was crucial, saying, “If we only see within our walls...we’re never going to get any better; we’re just going to be stagnant. The whole [Program]—it was building a network beyond our walls.”

Several staff described influences on professional culture through the Curation program. Current core teachers and one peer teacher reported that collaboration beginning in TBTs and peer coaching sessions occasionally spilled over to include other colleagues and become larger discussions of instructional practice. According to the peer teacher who participated in some of the Curation program training in a prior year,

Normally, we run out of time before we run out of information that we’re talking about, so we find ourselves meeting out of that designated time, during the teacher-based teams, or collaboration teams, or grade-level team meetings. We find ourselves just talking in the hall or meeting after school or before school. It’s just a constant conversation that’s going on.

A core teacher added that peer observation through [the program] had generated interest in coaching from teachers not involved in the Curation program. “People are going through and doing more coaching and watching each other now,” one core teacher explained. Core teachers also mentioned their efforts around teacher collaboration had contributed generally to “opening “teachers’ practice and building a culture where teachers feel comfortable collaborating with one another. Said the peer teacher who participated in the network program in the prior year,

I can see how teachers can close themselves off and isolate themselves to whether it be through they don’t feel comfortable with their coworkers or just not wanting to collaborate. [The network] does not really allow for that to happen, and it’s not that they’re stepping in or anything. It’s just it makes it seem like an open air. I know if one teacher on this floor can’t answer my question, there’s 28 others in this building that not only through their collaboration with [the network], I know that they’re willing to help on a team level.

Influence on Instruction in Classrooms and Schools

All interviewed teachers discussed some ways in which their work with the Curation program influenced their level of rigor in accordance with the standards. One core teacher explained that her experience curating helped her find rigorous texts for use in her instruction, saying, “We look for the depth-of-knowledge now. . . . We use Newsela.com. We use Readtheory.org, which has an excellent choice of different articles that they can read, and text, and it’s very rigorous.” Another core teacher noted that network participation had influenced rigor in teaching writing, “We realized that we were not as rigorous as we needed to be in writing. Once that realization hit us . . . we did a lot with writing.”

Staff also noted that core teachers often were helpful in facilitating instructional changes in peer teachers through feedback after peer observations or sharing additional materials. For example, one core teacher explained that she and one of her high-touch teachers, a third-grade teacher,

learned that they needed to adjust the level of rigor in his instruction through the process of observation and reflection. The core teacher said,

We really started looking at third grade and what we expected of third grade, [and] we were like, “Wait a minute; that is not even close to what he should’ve been doing.” I know that definitely stepped up the rigor there.

In addition, the peer teacher who was coached by a core teacher confirmed that the core teachers had shared with her a few resources that helped her integrate “higher level thinking questions” into her science class and supported her in implementing practices to promote personalized learning:

They’ve come up with a lot of information for me, whether it’s work or group work or ways to work, like peer share. They’ve given me a lot of information . . . Usually any work that [the core teacher] gives or activities that she has do goes with what we’re doing. We share materials all the time.

Opportunities for Teacher Leadership

Staff and core teachers alike shared that the Curation program had provided internal and external leadership opportunities and helped cultivate leadership skills in core teachers. Through their roles as peer coaches, core teachers had leadership opportunities within their schools. One core teacher explained that this opportunity helped develop her skills in supporting other teachers in a leadership role within her school:

I hear people say that I’m a “fix-it” kind of person, so sometimes I don’t just listen . . . to how they’re feeling about what they’re talking about; sometimes I just look for a solution. [The Curation program has] helped me a little bit [to] back off of that and not quite be like that.

In addition, core teachers at Roosevelt mentioned attending a statewide conference where they presented about the networking done as a part of the Curation program. One core teacher stated that although she had been previously perceived as a leader within her own school, external leadership opportunities through the program were new. In addition to the Curation program conference, external leadership opportunities for this core teacher also included attending cross-district professional development and presenting information on the Curation program to the school board and the district leadership team.

Another Roosevelt core teacher took on an additional role as a Curation program leader for the state. In this role, she met with the other lead for the state to “talk about different ways we can help keep the network moving and keep [core teachers] engaged within it.” In addition, she mentioned engaging core teachers through organizing and hosting Twitter chats.

Teacher Network Learning Opportunities Within the School Context

Respondents noted that alignment between the activities associated with the Curation program and existing district priorities strengthened the work together, particularly as it related to using more technology and teaching with more rigor. Because of the length of time that Roosevelt has worked with the organization that provides the Curation program, staff noted strong cohesion

with existing priorities and structures in the school. According to the principal, “We know some of the [program staff] faces and their names . . . so our people and [the program staff], we work together on a lot.” In part because of its embeddedness in the school’s way of working, participants described the Curation program as a helpful, complementary resource that enhanced their capacity to pursue existing priorities, rather than a program with a distinct impact. For example, the school’s principal noted that “[the influence of the network is] indirect; it’s the whole overarching umbrella of what’s good practice in a classroom.” Similarly, several teachers noted that recent improvements in ELA instruction resulted from “a combination of . . . some of the stuff with [the network] and what we were [already] talking about with the writing stuff.”

The Curation program’s focus on facilitating connections between teachers through technology complements the rural school’s philosophy of finding creative, digital ways to connect with other schools. “We are a rural district that uses high amounts of technology,” said one core teacher. According to the principal, the school’s emphasis on virtual connections was viewed as an important way for teachers to identify new communities for professional support:

You will find you have more in common . . . more connections, sometimes, with people outside in this connected world than you do with your own people inside your own district. They’re isolated if they’re not in that digital connection.

Existing school structures for teacher-to-teacher collaboration also supported the Curation program activities by core teachers. In some cases, the peer coaching work of core teachers mapped onto an existing statewide requirement for pairing new teachers with experienced mentors. Core teachers who were mentors used their work with their mentees to complete the peer observation cycles for their work with the Curation program. One core teacher also mentioned, “[Peer coaching] is something that our district has been doing anyway, so [the work with the network] really aligned very nicely.” This structure, as well as scheduled biweekly meetings of the school-based TBTs, helped facilitate the resource sharing and peer coaching elements of the Curation program. According to some staff, the will to learn from each other and improve instructional practices was embedded in the school’s culture and aided the curation and peer coaching processes. According to the principal, the staff is “pretty good about, if they weren’t on the team . . . supporting the person that was and becoming part of that.” He added, “Very seldom do [teachers] shut the door and go ‘we’re not doing that.’”

The principal was familiar with and supportive of Curation program activities. He expressed support for the network partnership, noting that it “fits in perfectly” with other district plans, such as a previous leadership goal for teachers to collaborate more. Specifically, the principal shared his belief that the Curation program was aligned with his goals for cultivating teacher growth within his school because it is teacher led. “When the teachers are doing it, it’s not coming from the principal, then you know half your goals are met because the teachers are leading it and the teachers are teaching teachers.” The principal reported having previously attended some Curation program events personally and hoped to see the efforts grow.

Going forward, staff cited some potential challenges. For teachers, time was a concern, particularly for completing modules in the midst of other demands. The principal echoed that

there often are other district priorities for professional development, and these may take time away from module completion in the future.

Lockwood Elementary School

School Background

Lockwood Elementary School is an elementary school in a small, remote town in the Central Mountain region, serving students in Grades K–5. The school is Title I, with a high percentage of low-income students and minority students.

The school and district were in their first year participating in the Curation Network Program, and this was their first initiative with the network organization.

The study team interviewed five staff members at this school: (a) two core teachers, both of whom taught fourth grade and participated in the Curation program training, one of whom was a network lead for the state; (b) one peer teacher, a high school social studies teacher who did not participate in the training but who worked closely with one of the curators in peer coaching; (c) an instructional coach who also was the network’s state lead; and (d) the school’s principal.

Teacher Engagement in Professional Development Through Network Programs

Both Lockwood core teachers described completing the three online modules through the Curation program on social networking, the instructional resource curation process, and peer coaching. Core teachers explained that they completed the first two modules in short succession, during 3-day meetings held by the district. After completing the modules, the core teachers engaged in subsequent contacts with the network by submitting evidence of their work to the program’s online platform.

Core teachers also discussed opportunities to meet and connect with other core teachers in the network in their state, including through a conference, “where we really got a few more faces and people that were linked together.”

Teacher Learning Opportunities Through Network Programs

The Curation program modules provided learning opportunities around researching, assessing, and sharing information with other educators, and both core teachers perceived that these modules were useful for building their skills in this area. One core teacher explained that learning about curation taught him how to find and extract the most useful, research-based materials:

Last year, we were just pulling stuff, everything that we could find and using it, but now it’s really narrowed the focus down and we’re really searching for content that is what we need. . . . Going through the three different [modules] really helped guide my thinking of where I should be looking and what is good.

Core teachers also mentioned that the modules on social networking and peer coaching provided useful learning on those topics. “The social networking was nice because of being able to disperse information,” one core teacher said. Regarding the peer coaching module, one core teacher added,

My idea of coaching was so different, like, “Let me show you how to do it.” I learned a lot about active listening and the paraphrasing and tell them, “Okay, so I’m hearing you saying that. This is something that you’re struggling with, so what might we try? What have you tried?” [The goal is] really questioning rather than telling.

After the modules, core teachers selected a “problem of practice” or broad instructional topic on which to focus their social media sharing, curation, and peer coaching activities for the year. The two core teachers who were interviewed reported that they had chosen “standards-based instruction” and “depth and complexity,” respectively. Other core teachers in their district not interviewed for the study also chose depth and complexity or other topics, including technology-integrated instruction. One core teacher described that they were largely free to choose problems of practice that they were “really passionate about or that we really [wanted] to work with.” According to the school’s instructional coach,

[The Curation program] was about [teachers] recognizing their own strengths and their own interests so that they feel passionate to research this content, curate and get the best of the best [materials], and then share it out to people that they feel like will receive the content.

Program Participation Influence on Teacher Connecting and Sharing

To share the materials that core teachers acquired through their curation process, core teachers built personal networks by designating “high-touch” and “light-touch” teachers with whom they would collaborate. One core teacher explained they chose to work with high- and light-touch teachers who would be interested in or who would benefit from collaborating on the problem of practice that the core teacher had chosen as their focus. In addition, core teachers could choose from teachers with whom they had existing relationships, regardless of their school or school district. According to both core teachers, they chose a combination of three to four high-touch teachers each from within their school and district as well as teachers they knew personally from outside of their district.

With at least one of the high-touch teachers in their school, core teachers engaged in peer coaching cycles that included classroom observations, feedback, and regularly scheduled meetings between core teachers and the high-touch teacher. One core teacher detailed the variation in her interactions with her four high-touch teachers. The core teacher explained a most intensive high-touch relationship with a third-grade teacher in her school who she regularly observed and coached. She explained as follows:

We meet every Wednesday and Thursday morning. On Wednesdays, we make a plan . . . and then Thursday, we go over a lesson. I can go home Wednesday and prep what she wants to see for modeling or we’ll make a plan of what I’m going to watch. Then Thursday, I go in and look at what she’s going to do [in her classroom].

This core teacher also described working in a less intensive manner with two first-grade teachers in the school who were new to teaching. “I will help them with their lesson planning and coach them through questioning and things that we learned. Then they’ll do lessons and then we come back and we talk about it together. It’s not as structured,” she explained. Lastly, she mentioned working closely with one fourth high-touch teacher, a friend who teaches in a school several

hours away who was interested in standards-based instruction, the core teacher's chosen problem of practice. "Their school, they're somewhat standards-based and so they were struggling. . . . She would e-mail me her lessons. . . . Then I would look at it, and we would talk about whatever, a lot of e-mailing between her and I." The core teacher summarized her work with her high-touch contacts, "It's a little different with each [high-touch] person [but the] same kind of cycle."

The other core teacher also described interacting with his high-touch teachers in various ways, saying, "With my high-touch group, we've done a lot of face-to-face meetings, [professional development sessions], planning, different things like that, and then a lot of e-mailing." One of his high-touch teachers was a high school social studies teacher who also was interviewed for the study. This non-network teacher mentioned that the core teacher comes to observe her class, discuss feedback, and share instructional resources with her. She said, "Not only is he teaching or sharing, I think he listens to me; . . . I think he's a good trainer."

Core teachers also connected with teachers through their light-touch interactions, which were described as unidirectional or nonrepeating contacts. Often, core teachers' light-touch contacts consisted of virtual connections with teachers outside their school or district, often through social media outlets. Said one core teacher, "With my light touches, I've used a lot of Facebook, social media, to get out my problem of practice to my different people. I use Facebook a lot. I've used Twitter, the Tweet chats."

Light-touch interactions also could include virtual connections with teachers in the school or in-person meetings with teachers outside their schools. One core teacher maintains a Facebook group for connecting with teachers from throughout the region; she mentioned that teachers in her own school also could join the group. She said, "Even though we see each other [at school], we don't have a lot of time to share a lot during our days." Both core teachers also mentioned that visits to observe teachers in other local districts were organized by their instructional coach; they described these as other examples of light-touch interactions.

The peer coaching work with the Curation program created new kinds of connections by pairing teachers who had not ordinarily worked closely together. As the principal explained, "The participating teachers are working outside of their usual grade-level team . . . so they [have a] kind of different connection." In addition, three respondents discussed that the work with the program helped create new structures for collaboration between the elementary and secondary schools. According to one core teacher, the elementary and secondary schools had "been separate entities in the past." However, administrators saw their peer coaching work, which in some cases paired elementary and high school teachers, as "breaking down the barrier between the high school and the elementary school." In some instances, the creation of new structures connecting teachers allowed for diffusion of information to other teachers throughout their schools, as the principal observed:

[In the mathematics curriculum team], a pair of the teachers [who] are working together reference some of their [Curation program] work together, and so then that led to other conversation within that math curriculum team about the work that they're doing together. The same thing with the [core teacher] fourth-grade teacher and the high

school social studies [high-touch] teacher, that when they're talking about their work together and there are other teachers around, they become interested and the conversation continues. I don't know that necessarily they haven't started coaching anyone else or become a curator for anyone else but added them on the tweeting and the Facebooking and that sort of stuff.

Both core teachers believed that participating in the Curation program had changed the way they approached collaboration with teachers in their school, including making their work together more structured and purposeful. One core teacher described it as follows:

[In the past, my high-touch teacher] and I talked all the time about things in the mornings, just nonchalant or not planned. Now, it just gives so much purpose. We get a lot more done. She's like, "It's just crazy we did this [collaboration], but we didn't do it." Now, that we have this cycle, first we do this, then we do this and we keep going. It's really been productive."

The other core teacher echoed a similar sentiment, describing the ways program participation had "opened" his practice:

In the past, it kind of felt like I was on my own little island. I'd work in my room, and we have another fourth-grade teacher here who we weren't very close to, but [working with the Curation program] has kind of opened it up and communicating more with the high school staff on a regular basis, just making it more purposeful, the conversations that we're having, sharing ideas, getting into their classroom and observing what other teachers are doing.

Influence on Instruction in Classrooms and Schools

Both of the interviewed core teachers perceived that their participation in the Curation program had increased their level of rigor. One core teacher thought that the process of observing and modeling with one high-touch teacher in her school had been a valuable way to reflect on and increase rigor in her own class. She explained,

I'm coaching a third-grade teacher, and so being able to see her standards has really helped me to know whether mine are rigorous enough. So being fourth grade, when I look at her third-grade standards, I'm, like, "Oh, my gosh, we're still teaching it kind of like that. I need to beef it up."

The other core teacher stated that the skills he gained from the Curation program in terms of researching and evaluating educational resources helped him identify materials that were more rigorous for his instruction. He explained,

We found that our text was oftentimes below grade level, and it wasn't to the rigor that we needed, just by sorting and finding the appropriate grade level and the differentiated texts. I've used couple different websites that I found [through the curation process] to gather text material for the classroom.

Both core teachers also expressed benefits to their ability to create more student-centered classrooms. One core teacher attributed his perceived growth to resources he discovered through his curation process, saying,

I can definitely see a big change from the beginning of the year to now in just my structure of my classroom. It's very much student engaged and interactive. Using different Kagan games to get them to interact, and the depth and complexity cards allows them to just share constantly.

The other core teacher explained her shift to more student-centered instruction resulting from her experiences observing high-touch teachers in the peer coaching cycle. She explained as follows:

The [observation] form we fill out [asks], "What [do] you see" and "What [do] you hear." . . . [Filling out] that form has been crazy for me to use, because I'm, like, "I see her talking or I hear her talking and the students aren't. . . . You know, I probably do the same thing in [my classroom]." Like a lot of teacher talk, less student talk. I've been very much more aware of "What are my kids doing? What am I doing? What are [students] saying? How much talking are [students] doing? How much talking am I doing?"

The peer teacher described the materials the core teacher shared with her as useful, including a depth and complexity resource on questioning strategies called "Q3 cards" that helped her incorporate strategies for higher-level thinking in her classroom. She also mentioned the core teacher sharing a set of writing prompts that were helpful for "getting [students] to know the content, and then taking that information, their background knowledge, and [being] able to answer a higher-level question."

Opportunities for Teacher Leadership

Both core teachers, the principal, and instructional leader agreed that the opportunities afforded to core teachers through their work with the Curation program had helped teachers develop their leadership skills. The principal stated as follows:

Teachers [who] participate in this work, or this type of work, I've observed develop a skillset not necessarily telling someone else what to do or how to do it, and not that they were negatively doing that before. . . . They become more reflective in their questions of others or support of others and drawing that out in their high-touch [teacher].

The instructional leader agreed, saying that the opportunities for leadership resulting from the Curation program were valuable for developing teacher skills and self-efficacy, saying, "Just their belief in themselves [has grown], and that sometimes I feel like there's just not a lot of room to grow as a teacher. So these are just some little mini-levels, little teeny levels that feel good."

One core teacher also discussed more formalized leadership opportunities and roles through the network, mentioning that he is a lead curator for the state. He described this position as a resource for other core teachers in the state, saying it is "an opportunity to have a leadership role, to organize Tweet chats, and to e-mail, make sure everyone was in a comfortable place or if they needed help."

Teacher Network Learning Opportunities Within the School Context

According to the respondents, the model of the Curation program was complementary to local priorities for instructional and human capital development, which facilitated teachers' participation in the program. The principal, the instructional coach, and the core teachers all indicated that the core teachers' work in teacher collaboration and coaching was interwoven with several other collaboration-focused initiatives. Specifically, they mentioned a statewide priority on assessment literacy, which according to the principal, provided additional opportunities for "coaching conversations or reflecting conversations with the high-touch connection people." The principal also added that she saw the Curation program work as complementing the statewide educator effectiveness initiative, which includes components focusing on teacher-to-teacher collaboration and "teachers growing each other and supporting each other." The school's existing structures for collaboration also contributed to the implementation of the network model, as the instructional leader explained: "We were already very high, high on collaboration [before participating in the network]. [Teachers] team planned every day, and we do data walks; they walk the building with our principal every week." One staff member added that core teachers "had been through some peer coaching" before participating in training through the network program.

Although the principal stated that she "didn't take a large role" with regard to the Curation program activities, both core teachers believed that their administration was supportive of their work with the program. In particular, the principal helped core teachers cover class time to allow for peer coaching activities during the school day. In addition, both core teachers and the principal mentioned that their participation in the Curation program was supported by the instructional coach in their building, who was the state lead for the network and acted as a resource throughout the process. "She definitely keeps us motivated." One core teacher said,

She's always following up with us, making sure that if we had any questions that she was there for us to go to. She just made sure that we had everything that we really needed, and we understood what we were supposed to be doing and what everything was supposed to be.

The principal added that she viewed the work as beneficial for developing the human capital in her school, given their remote location: "I believe strongly in growing our own. In rural America, we don't have people fighting for jobs with us. Any opportunities we can have to develop the people that we do have are really key."

Both core teachers also mentioned that their district's schedule, in which students have one day per week off, facilitates teacher participation in professional learning opportunities, including their work with the Curation program. Having time to connect on the student-free days was important. The core teachers identified that scheduling peer coaching meetings during the school day could be a challenge. Said one core teacher, "When we are coaching, finding the time that we can meet with the people in our buildings and out of our buildings [has been a concern]."

Appendix B: Codebook

Code	Description
1. Program Objectives or Goals	
a. Network Program Purpose	Program's stated goal or theory of action, in participants' words
b. Program Features	Structural aspects of program's work in a given context, including use of local leaders, model for scaling up training, time in each locale, mode of contact, frequency of contact
c. Teacher Expectations	Description of goals/expectations teachers had for their participation in the network program
d. Expectations Met	Degree to which the teachers' goals/expectations were met by the program; expressions of satisfaction with the professional development
e. Program Activities	Meetings or contacts with programs and program staff, in-person and virtual; includes teachers' assessment of usefulness of activities; may differentiate high- versus low-touch, with program contacts
f. Local Activities	Frequency and nature of indirect contacts with program staff by teachers, such as through local staff who have been to program trainings, both in-person and virtual; may differentiate high- versus low-touch, with <i>local</i> contacts
2. Instructional Impacts	
a. Program Materials	Program materials provided, how they were used, assessment of their usefulness; includes whether they were shared
b. Impact on Instructional Practice – General	Program-inspired changes to instruction or references to instructional growth generally (not particular to ELA shifts), including lesson planning, assessment, implementation of materials, or how teachers think about instruction broadly; general references to “rigor”
c. Impact on Instructional Practice – in Literacy	References to ELA instructional shifts, noting how they are either being pursued deliberately or not, and whether program activity supports or not (e.g., reading, text, writing, technology, peer-to-peer discourse), coming from direct network participants or local TLs
d. Perceived Impact on Students	Perceived impacts on students
3. Collaborative Impacts	
a. Collaboration	Existing structures and opportunities that support collaboration between colleagues within the school; those provided by the school already (e.g., common planning time)
b. Collaboration Impact: Frequency	Impacts of participation on the frequency of existing collaborative structures like common planning time, peer observation, or other opportunities to work together
c. Collaboration Impact: Nature	Impact of participation on the nature of professional culture or collaboration (includes changes in focus of peer observation, trust, desire for further collaboration or growth, and other staff relationships impacted by network participation)
d. Leadership Opportunities	Opportunities participants have for leadership roles in their district/school

Code	Description
i. Leadership: Frequency	Changes in frequency of leadership opportunities for participants due to program participation
ii. Leadership: Nature	Changes in nature of leadership opportunities for participants due to program participation, including ways their existing leadership role may have changed as a result of participation
4. External Collaboration Impacts	
a. Program Opportunities	Types and frequency of opportunities to collaborate with staff outside the school or district
b. Impact on Practice	Resources, practices, and other supports teacher may have gotten through collaboration with network members outside of their school
5. Facilitating Factors	
a. Instructional Leaders	Role of instructional leaders in teacher learning, collaboration, or changes in practice, both as described by instructional leaders themselves and by core and peer teachers, including value and usefulness of the same
b. Perception of Instructional Leader Role	Role and responsibilities of instructional leaders as described by core or peer teachers, including usefulness of role, influence on practice, and value of local go-between connecting network and local teachers
c. Administrators	Role of nonparticipating school or district administrators; their role in supervising, facilitating, or hindering network activity; level of knowledge of program activities
d. Local Structures	Local policies or structures or other circumstances (e.g., schedule, materials, other initiatives) that may support or inhibit participation
e. Improvements	Ways that school and district leaders could more effectively support participation, including obstacles to more effective participation
6. Sustainability	
a. Prospects	Prospects for growth and sustainability in the school and district, including the possibility of participant continuing, or adding new participants in the future
b. Resources	Degree to which materials, resources, time, and money are sufficient to support sustainability
i. Alignment of Resources	Degree of alignment between program resources and existing district resources and policies
c. Complementary Efforts	Supportive actions or policies from district leaders or in the district (past or currently ongoing)
d. Competing Efforts	Other, concurrent projects or priorities that may inhibit efforts to spread or to sustain participation
e. Local Support	Interest and desire (or lack thereof) for supporting and continuing, including from staff and from leadership (looking forward)



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