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Planning and Developing Principal Pipelines

Approaches, Opportunities, and Challenges

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Executive Summary

In September 2019, 84 school districts came together to participate in a learning community to plan, develop, and learn from one another about principal pipelines. Participants in the Principal Pipeline Learning Community (PPLC) included central office district leaders involved in leadership development and human resources. The learning community was formed on the premise that teacher and student outcomes improve when districts develop principal pipelines, that is, a systematic approach to cultivating and maintaining a corps of effective school principals (Gates et al., 2019).

The purpose of this report is to document how a group of school districts involved in the PPLC built principal pipelines and, from these findings, to provide lessons and food for thought for other districts.

Principal pipelines address seven domains including leader standards, high-quality pre-service preparation, selective hiring and placement of principals, on-the-job support and evaluation, the role of principal supervisors, developing data management systems (referred to as leader tracking systems), and creating systems and capacity to ensure the sustainability of the pipeline. These domains were identified in research on earlier leadership efforts supported by The Wallace Foundation (see Gates et al., 2019).

THE NEED FOR PRINCIPAL PIPELINES

Principal pipelines are district-wide systems for identifying, training, hiring, and supporting school leaders (Turnbull et al., 2015). Principals are vital to school effectiveness; yet, principal turnover is high, particularly in under-resourced schools (Grissom et al., 2021; Bartanen et al., 2019). Principals of color are underrepresented relative to the student demographics in their schools, exacerbating inequities (Crawford & Fuller, 2017). These trends worsened during the COVID-19 pandemic as districts faced heightened staffing challenges (Kaufman et al., 2022). Consequently, many districts are now developing pipelines to create equity-centered, diverse pools of effective leaders and strengthen their current principal workforce (Gates et al., 2019; Reyes-Guerra et al., 2022).

Principal pipelines help to ensure that schools are staffed with highly effective principals who collaborate successfully with communities, teachers, staff, and students. Effective principals impact numerous outcomes, such as teacher satisfaction, turnover and quality, student learning, and school culture and climate (Blase & Blase, 2000; Boyd et al., 2011; Grissom & Loeb, 2011; Hallinger et al., 1996; Sebastian & Allensworth, 2012).

Pipelines also offer an opportunity for districts to support principals to adopt equitable leadership practices (Rigby et al., 2019). Assistant principals (APs) and principals are well positioned to drive equity in their buildings (Goldring et al., 2021; Ishimaru & Galloway,

2014; Khalifa et al., 2016). Through training and other forms of support, districts can guide leaders to understand inequities, support culturally responsive teaching, monitor student progress, and support improvement (Capper et al., 2006; Ishimaru & Galloway, 2014; Ladson-Billings, 1994).

IN THIS REPORT

This report describes the involvement of district central office leaders who participated in the PPLC, which ran from 2019 to 2022. Established and funded by The Wallace Foundation, the PPLC brought together 84 school districts from across the country to learn and receive guidance about effective principal pipelines and approaches to planning and implementing them. The learning community participants were from medium, large, and extra-large districts. Medium-size districts enroll 20,000 to 50,000 students, large districts enroll more than 50,000 students, and extra-large districts serve more than 100,000 students. The PPLC district leaders were offered numerous supports around their pipeline planning and development work.

Data are presented from two data sources of PPLC participants: A survey with responses from 376 central office leaders from 62 districts, and interviews with 86 central office leaders in 30 districts.

This report:

- Describes district central office leaders' goals for principal pipelines and the implementation of the pipeline domains.

- Discusses approaches to developing diversity and equity in pipelines.

- Examines district contexts and conditions that support or constrain the development and implementation of principal pipelines.

- Presents recommendations to support other school districts as they develop, implement, and refine principal pipelines.

It is important to note that much of the pipeline development and planning described in this report took place from 2019 to 2022, during the COVID-19 pandemic; unsurprisingly, the pandemic was a pervasive influence on this work. Despite this, much pipeline development continued, and in some districts, the importance of leadership development was put into clearer focus. We address this in the report.

Districts in the PPLC learning community engaged with numerous supports around their pipeline planning and development work:

- **Self-study guide**. *The Principal Pipeline Self-Study Guide for Districts* is a guide that central office leaders use to take stock of and improve their policies, processes, and structures around pipeline development. The guide, developed by Policy Studies Associates, steers districts through a holistic assessment of the current status of each of the domains of the principal pipeline, providing rubrics and guiding questions based on evidence-based indicators of implementation of each domain.

- **Early win**. Based on insights from the self-study assessment, districts weighed their needs and priorities, then selected and carried out a smaller, feasible task aligned with their overall change strategy. Districts wrote brief descriptions to document their work.

- **Workplan**. Each district was expected to complete a workplan based upon the self-study guide, in which they set one-, three-, and five-year goals for pipeline domains.

- **Consultant**. Each district worked with a consultant provided by The Wallace Foundation who provided guidance periodically. Consultants met with district leaders to support their self-study, workplan, and ongoing development and implementation of pipeline domains.

- **Convenings**. Central office leaders from across districts came together in-person or virtually for discussions, support, and resources around pipelines. Convenings typically included presentations, as well as smaller breakout sessions for participants.

- **Knowledge-based resources**. Leaders were provided research-based resources, such as *What It Takes to Operate and Maintain Principal Pipelines* or *Changing the Principal Supervisor Role to Better Support Principals: Evidence from the Principal Supervisor Initiative* at convenings or through their consultants.

- **Statewide networks**. Districts from the same state were organized together to meet with their consultants to determine a state-wide focus around principal pipeline development. These occurred in states with large numbers of participating districts.

KEY FINDINGS

Status of Principal Pipelines

Principal Pipelines Involve Multiple Activities to Identify, Hire, Develop, and Support Leaders

Many central office leaders identified pipelines as a system of aligned and interrelated components rather than a collection of isolated programs. District leaders implemented a range of pipeline activities tailored to their local contexts to meet the needs of leadership development.

District Leaders Worked to Develop or Strengthen Multiple Domains of Principal Pipelines

Districts expanded pre-service preparation and the pool of educators that can enter principal pipelines. Some districts created additional steps along the pathway to school leadership and invested in developing APs to prepare them to advance to the principalship. Many districts also reviewed and refined leadership standards and incorporated these standards into the pipelines.

Approaches to Diversity and Equity in Pipelines

Principal Pipelines Took Multiple Approaches to Increasing Leadership Diversity

Most district leaders framed diversity goals as expanding recruitment to leaders "who look like their students." They expressed that school leaders needed to better "mirror" or "reflect" the student population or the teacher pool. Some districts changed longstanding practices and policies that were identified as drivers of inequality. Districts achieved greater diversity in the leadership pool through new practices such as systems for developing, recruiting, and hiring future leaders. They emphasized the need to identify and remedy inequitable workforce experiences and outcomes, especially for non-White educators. Though almost all district leaders identified equity and diversity as priorities in their pipelines, most districts were just beginning to address these goals. More than 75% of district leaders surveyed said their districts were starting or preparing to implement key diversity and equity efforts.

Some District Leaders Specifically Addressed the Support and Retention of Leaders of Color and the Development of Equity-Centered Leadership Practices

District leaders that focused on support and retention within pipelines noted that recruitment alone was not enough because leaders of color in their districts left at higher rates than White leaders. Other district leaders saw pipelines as an opportunity to develop equity-centered leaders, but this was difficult because such goals were often abstract and aspirational, rather than aligned to specific actions. Addressing equity and diversity in pipeline work was also difficult, especially when district leaders lacked clarity about goals, and in districts facing politically charged climates.

District Contexts that Support Pipelines

Central Office Leaders Created Management Structures That Facilitate Pipeline Work Through a Core Team Specifically Charged with Running the Pipeline

Having a core team helped districts successfully plan, implement, and maintain focus on pipelines despite uncertainty and changes in the district. However, there were significant challenges to pursuing pipelines as well. A significant impediment was that some central office leaders lacked sufficient time to work on pipeline activities. Addressing equity and diversity in pipeline work was also difficult, especially when district leaders lacked clarity about goals, and in districts facing politically charged climates.

Pipelines Flourished in Districts Where Leaders Broke Down Silos Through Systems of Collaboration and Communication

In districts that intentionally created structures to support cross-departmental collaboration in service of the pipeline, central office leaders reported that they were able to loop in multiple departments and create a more systematic approach to the work, thus improving the coherence of the pipeline. Systems for collaboration and communication across central office departments increased pipeline coherence and systems alignment.

Superintendent Support and Stability Was Key to Pipeline Success

Superintendents were key to keeping districts focused on pipelines and allocating resources to support them. District leaders with stable superintendent leadership reported making more progress in their pipeline development, while those with superintendent turnover faced greater challenges and were less likely to say their pipeline domains were fully operational.

District Leaders Tapped Into Existing Relationships With Universities, Technical Assistant Providers (TAPs), and Unions to Support Their Pipeline Development

Pipeline development prompted some districts to take a fresh look at university partnerships, which focused on training and certifying leaders. Districts found ongoing relationships with their own TAPs crucial for integrating new training and support goals. Midsize districts with smaller central offices often spoke of them as being particularly helpful in bridging gaps in capacity. For example, one district spoke positively of ongoing work with a TAP in which leaders were receiving equity-oriented training to help them address identified disparities in outcomes for Black and Latino male students.

The COVID-19 Pandemic Influenced District Leaders' Approaches to Principal Pipelines

Despite the unsettling impact of COVID-19 on all districts, some leaders found that COVID-19 helped them reframe and even rejuvenate their principal pipelines. They described finding opportunity within the pandemic to articulate and define new kinds of training and skills principals need, such as leading autonomously and boldly.

RECOMMENDATIONS

Pipelines are strongest when district leaders:

▲ **Consider pipelines for multiple types of leadership roles**. Districts could approach pipelines as a whole-system model to expand the reach of pipelines beyond "just the principal." Strong student-centered districts require leadership that is distributed across multiple roles and levels.

▲ **Connect pipelines to ongoing district strategies, initiatives, and goals**. There is no "one size fits all" pipeline. Pipelines work best when they are comprehensive and aligned with the specific leadership needs and goals of the district, as well as meeting the needs of individual educators participating in the pipeline.

▲ **Develop, review, and revise leadership standards to reflect the expectations and needed capacities of leaders**. As the principal's role continues to evolve, standards should keep pace with current understandings of what principals need to know and do, such as explicitly including domains around equity-centered or culturally responsive leadership or providing meaningful feedback on instruction to teachers.

▲ **Focus on diversity and equity in pipelines**. Districts could consider pipelines as an approach for diversifying school leadership and developing principals' skills to support equity and inclusion. Pipelines can also be a useful tool for creating and communicating a systemwide vision of equity.

▲ **Develop a core central office team and dedicated leadership department to lead across pipeline domains**. Pipelines benefit from having a core team–often consisting of representatives from different central office departments–to develop systemwide take-up and awareness of the pipeline. Core teams also help coordinate to maintain the focus, momentum, and sustainability of the pipeline as it unfolds.

▲ **Create structures to support cross-departmental collaboration and communication**. Pipelines work best when other key departments, such as human resources, participate in their planning and support. Districts can find ways to break down department silos so that key central office departments and staff can communicate, support, and even "own" the pipeline together.

◢ **Choose a consistent "champion" to ensure pipelines are prioritized and aligned with district goals**. Buy-in from a high-level district leader is critical for garnering support for the pipeline and safeguarding its development, sustainability, and resource allocation. Districts can designate a champion to clearly communicate expectations and goals to central office leaders and ensure that pipeline programs have dedicated personnel to grow and thrive.

◢ **Leverage existing connections and relationships with university partnerships, technical assistance providers, and unions**. Pipelines often interact with other community organizations in service of recruiting and training new principals. Districts could partner with external groups and organizations to strengthen the components of the pipeline, thereby bolstering their own capacity to develop strong principals.

◢ **Consider leadership priorities post-COVID-19**. The pandemic had an enormous impact on districts and, in some cases, districts articulated new priorities for what leaders need to know and do, particularly in times of great uncertainty. Priorities included focusing on principal autonomy and decision making, problem solving and innovation, understanding strategies to address learning gaps, addressing social injustices, and having difficult conversations in politically charged climates. Districts can leverage pipelines as a strategy to help prepare and align school leadership with new imperatives, including new and revised skills, practices, and dispositions.

Introduction

THE NEED FOR PRINCIPAL PIPELINES

Principal pipelines are district-wide systems for identifying, training, hiring, and supporting school leaders (Turnbull et al., 2015). Principals are vital to school effectiveness; yet, principal turnover is high, particularly in under-resourced schools (Grissom et al., 2021; Bartanen et al., 2019). Principals of color are also underrepresented relative to the student demographics in their schools, exacerbating inequities (Crawford & Fuller, 2017). These trends worsened during the COVID-19 pandemic as districts faced heightened staffing challenges (Kaufman et al., 2022). Consequently, many districts are developing pipelines to create equity-centered, diverse pools of effective leaders and strengthen their current principal workforce (Gates et al., 2019; Reyes-Guerra et al., 2022).

Principal pipelines can help ensure that every school is staffed with highly effective school leaders who work successfully with communities, teachers, staff, and students. Effective principals impact numerous outcomes, such as teacher satisfaction, turnover and quality, student learning, and school culture and climate (Blase & Blase, 2000; Boyd et al., 2011; Grissom & Loeb, 2011; Hallinger et al., 1996; Sebastian & Allensworth, 2012). Importantly, a growing body of research also points to principals' direct role in improving student achievement (Grissom et al., 2021). However, principal turnover is linked to reduced student achievement and increased teacher turnover, yet these effects are greatly reduced when vacancies are filled by experienced, effective principals (Bartanen et al., 2019). A major research study on principal pipelines found that principals had a measurable impact on student achievement and principal retention at a relatively low cost (Gates et al., 2019).

The Principal Pipeline Learning Community (PPLC)

School districts participated in a learning community to plan, develop, and learn from one another about pipelines. Initiated in fall 2019 and continuing through 2022 (see footnote on p. 5 about PPLC duration), this learning community consisted of 84 districts ranging in size (i.e., medium, large, and extra-large school) and was supported by The Wallace Foundation. District participants included central office district leaders involved in various aspects of leadership development and human resources. The learning community was formed on the premise that student achievement benefits when school districts align principal preparation, recruitment, support, and evaluation through principal pipelines (Gates et al., 2019).

School leaders are disproportionately White and male in comparison to students and teachers (Goldring et al., 2021; Perrone, 2022). And, in some contexts, Black assistant principals are less likely to be promoted to the principalship, and those who do move into the principalship often take longer when compared to their White counterparts (Bailes & Guthery, 2020). Principal pipelines can address diversity and equity imperatives in school leadership.

Comprehensive, aligned principal pipelines are a promising approach to increasing the diversity of educators in leadership positions (Reyes-Guerra et al., 2022; Grissom et al., 2021; Goldring et al., 2021). Yet to fulfill the promise of pipelines, districts must address "leaky" points along pipeline to the principalship, such as entrance into preparation programs, certification, and licensure. Though these leaks exist for all educators, they are more pronounced among non-White educators (Clement & Young, 2022; Fuller & Young, 2022). Pipelines can help districts create transparent policies, targeted programs and initiatives, and outreach and recruitment efforts to address longstanding underrepresentation of racial and ethnic minorities.

Pipelines also offer an opportunity for districts to support principals to adopt equitable leadership practices (Rigby et al., 2019). Principals and APs are well positioned to drive equity in their buildings (Goldring et al., 2021; Ishimaru & Galloway, 2014; Khalifa et al., 2016). Through training and other forms of support, districts can guide leaders to engage in deeper understanding of inequities, to support culturally responsive teaching, and to continuously use data to monitor student progress and support improvement (Capper et al., 2006; Ishimaru & Galloway, 2014; Ladson-Billings, 1994). Principals can learn to adopt an inclusive leadership approach centering collaboration with students and communities to improve educational outcomes (Gardiner & Enomoto, 2006).

To be impactful, the planning, developing, and implementation of pipelines require district leadership and a district-wide strategy. Pipelines require a district approach to central office coordination and communication across and between multiple departments, such as human resources, principal supervision, and professional learning. In some districts, silos prevail, while in others, pipelines build from a history of interoffice cooperation and engagement.

Numerous studies demonstrate the critical role that central office systems play in the successful adoption and implementation of district-wide change initiatives (Cobb et al., 2020; Farrell et al., 2019; Honig & Hatch, 2004; Peurach et al., 2019). Yet, despite the growing presence of pipelines as a central office initiative, there has been limited exploration of the ways in which district context, capacity, and structures influence their implementation and success. Understanding whether and how district and central office structures influence pipelines is critical to the continual refinement of such efforts and the policies designed to support them (Blazar & Schueler, 2022).

Purpose of This Report

The purpose of this report is to document how school districts involved in a professional learning community worked to build principal pipelines and, from these findings, to provide lessons and food for thought for other districts interested in building pipelines. We describe the experiences and approaches to principal pipelines of a diverse group of school districts. Our data come from a sample of school districts that participated in The Wallace Foundation's Principal Pipeline Learning Community (PPLC), which brought together 84 school districts from across the country (see Figure 1) to learn about planning and implementing pipelines in their unique contexts.

This report:

- ◢ Describes district central office leaders' goals for principal pipelines and the implementation of pipeline domains.

- ◢ Discusses approaches to developing diversity and equity in pipelines.

- ◢ Examines district contexts and conditions that support or constrain the development and implementation of principal pipelines.

- ◢ Shares recommendations for other school districts as they develop, implement, and refine pipelines.

Figure 1. Eighty-Four Districts Throughout the U.S. Participated in the PPLC

■ States with participating PPLC districts
■ States with no participating PPLC districts

Note. See Appendix B for a complete list of participating districts.

Districts in the PPLC learning community engaged with numerous supports around their pipeline planning and development work:

- **Self-study guide**. *The Principal Pipeline Self-Study Guide for Districts* is a guide that central office leaders use to take stock of and improve their policies, processes, and structures around pipeline development. The guide, developed by Policy Studies Associates, steers districts through a holistic assessment of the current status of each of the domains of the principal pipeline, providing rubrics and guiding questions based on evidence-based indicators of implementation of each domain.

- **Early win**. Based on insights from the self-study assessment, districts weighed their needs and priorities, then selected and carried out a smaller, feasible task aligned with their overall change strategy. Districts wrote brief descriptions to document their work.

- **Workplan**. Each district was expected to complete a workplan based upon the self-study guide, in which they set one-, three-, and five-year goals for pipeline domains.

- **Consultant**. Each district worked with a consultant provided by The Wallace Foundation who provided guidance periodically. Consultants met with district leaders to support their self-study, workplan, and ongoing development and implementation of pipeline domains.

- **Convenings**. Central office leaders from across districts came together in-person or virtually for discussions, support, and resources around pipelines. Convenings typically included presentations, as well as smaller breakout sessions for participants.

- **Knowledge-based resources**. Leaders were provided research-based resources, such as *What It Takes to Operate and Maintain Principal Pipelines* or *Changing the Principal Supervisor Role to Better Support Principals: Evidence from the Principal Supervisor Initiative* at convenings or through their consultants.

- **Statewide networks**. Districts from the same state were organized together to meet with their consultants to determine a state-wide focus around principal pipeline development. These occurred in states with large numbers of participating districts.

The Principal Pipeline Learning Community (PPLC) provided participating districts with consultations, tools, knowledge resources, and peer networks to guide them in developing and building principal pipelines. The PPLC built upon the successes and learnings from more intensive change initiatives related to pipelines, such as *The Principal Pipeline Initiative, The Principal Supervisor Initiative,* and *The University Principal Preparation Initiative,* but was relatively 'light-touch' in its approach.

It is important to note that much of the principal pipeline development and planning described in this report took place from 2019 to 2022, during the COVID-19 pandemic; unsurprisingly, the pandemic was a pervasive influence on this work.[1] Despite this, much pipeline development continued, and in some districts, the importance of leadership development was even put into clearer focus. We address this later in the report.

Methodology

This report describes the involvement of district central office leaders who participated in The Wallace Foundation's PPLC, an initiative that ran from 2019 to 2022. The PPLC brought together 84 school districts from across the country to learn about principal pipelines and approaches to planning and implementing them. The participants were from medium, large, and extra-large districts. Medium-size districts enroll 20,000 to 50,000 students, large districts enroll more than 50,000 students, and extra-large districts serve more than 100,000 students.[2]

We present findings from two data sources: First, 376 central office leaders from 62 districts responded to a survey; and second, we interviewed 86 central office leaders in 30 districts.

SURVEY

The study team sent requests to field a survey to all 84 districts participating in the PPLC. Thirteen districts declined to participate, while 9 districts did not respond to requests or other direct outreach. The final sample was comprised of 62 out of the 84 PPLC districts. We invited a total of 521 central office district leaders in the 62 districts to participate in an online survey from October 2021 to May 2022. The overall response rate was

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[1] Because of the pandemic, there were notable shifts in the learning community (PPLC). Convenings and consultant support moved to all virtual formats in March 2020; when the American Rescue Plan (ARP) funding was authorized, the focus of pipeline building and the PPLC expanded to also include support for districts to guide their ARP spending both for pipelines and other district priorities, such as learning loss, starting in August 2021 through November 2022.

[2] The definitions of district size follow the designations in the initial Principal Pipeline Initiative (Policy Studies Associates, 2020).

72%, a total of 376 central office leaders (from the 62 districts). The number of central office leaders participating in the PPLC varied widely from district to district. Districts independently decided who would participate in the PPLC. We sent surveys to as few as 1 central office leader in a district to as many as 20 in a district, based on rosters of participation in the PPLC. The responses per district ranged from 1 to 18 respondents.[3]

The survey included questions about district leaders' experiences with pipelines, the conceptualization and status of pipelines, the district context, and central office organization of pipeline implementation. Because district leader participation varied widely across the 62 districts and correspondingly, in the survey itself, we applied post-stratification weights so each district is equally represented in the analysis (see Appendix A for more details).

INTERVIEWS

We interviewed central office leaders from 30 Principal Pipeline Learning Community districts engaged in principal pipeline development and planning during the 2021 school year. We developed a sampling frame after initial outreach to the districts to ascertain names of central office personnel active in the district's pipeline development work or who were participating in the PPLC. Of the 30 districts with central office staff who participated in interviews, 12 districts were also interviewed during the first year of the initiative, and 18 were new to the sample in the second round of interviews.

We caution that the data presented here most likely represent the learning community's most engaged districts and viewpoints, that is, districts that agreed to share their insights and experiences through surveys and interviews. We do not have data from districts that stepped away from the PPLC and pipeline work, or from districts that declined to participate in the study. The results reported are from individual central office leaders, and do not necessarily represent one, overall district perspective (see Appendix A for more details).

The Status of Principal Pipelines

In this section, we first present central office leaders' overall approach to developing pipelines. We then summarize the status of principal pipelines in the study districts. We describe district leaders' approaches to planning and developing comprehensive pipelines in each of the domains.

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[3] While larger districts did have more central office staff on their core teams, larger districts did not necessarily have more survey respondents; see appendix for weighting methodology.

PRINCIPAL PIPELINES INVOLVE MULTIPLE ACTIVITIES TO IDENTIFY, HIRE, DEVELOP, AND SUPPORT LEADERS

Central office leaders noted that they focused on many of the pipeline domains. However, they also demonstrated how they adapted pipelines to match their unique contexts, often emphasizing particular domains to meet specific district needs.

Many central office leaders identified pipelines as a comprehensive system of aligned and interrelated components, rather than a collection of isolated programs or activities. Principal pipelines served as an umbrella for talent development that included creating opportunities, supports, and transparency around career advancement for all educators, and in a few cases, district support staff. District leaders implemented a range of pipeline activities tailored to their local contexts and goals, across multiple domains of leadership development. Pipelines typically included a combination of pre- and in-service training,

The seven domains of principal pipelines:

- **Leader standards**. Articulate what principals should know.

- **High-quality pre-service principal preparation**. Develop programming internally or with university partners to ensure training and certification programs are aligned with district priorities and leader standards.

- **Selective hiring and principal placement**. Revise hiring and placement processes to be systematic and tied to leader standards.

- **On-the-job evaluation and support**. Align evaluation with leader standards and provide actionable feedback for improvement. Develop coaching and mentoring to promote growth.

- **Principal supervisors**. Improve support for principals.

- **Leader tracking systems**. Develop data management systems to streamline and leverage employee information to identify and support future leaders.

- **Systems and capacity to support and sustain principal pipeline**. Create a position or office specifically dedicated to leadership development and pipeline support.

reevaluation of standards, expanded recruitment and hiring practices, and newly developed tools for identifying leaders.

> [A pipeline is] something where pretty much everyone within the organization sees the through line [to leadership]; they can see if they're a substitute starting out, a teacher entering the workforce, or even a principal being hired, they see our tiered structure. [Pipelines define] what I would need to do as an individual to be able to make that leap" to the next leadership position. (Director of Secondary Education in a medium-size, western district)

Given the pandemic and increased turnover in leadership positions, pipelines were meeting an urgent need for many districts. While most of the pipelines were funded through a mix of general and Title funds, district leaders were not concerned about the sustainability of funding; instead, sustainability concerns centered around the education profession.

District leaders reported multiple goals and priorities for principal pipelines:

- **Building a bench**. Addressing the shortage of qualified leaders and building a pool of applicants.

- **Developing quality**. Improving the effectiveness of leaders, especially in terms of instructional leadership and working in high-need schools.

- **Increasing retention**. Retaining qualified staff at all levels in the district to create career progression.

- **Growing-your-own**. Recruiting leaders from within the district to capitalize on local context and knowledge.

- **Creating equitable processes**. Creating consistent and transparent processes for becoming a principal and making principal appointments.

- **Improving diversity**. Increasing the diversity of school leaders to reflect the student body.

- **Establishing alignment**. Connecting disparate programs and initiatives to create a complete system for leadership recruitment, development, and support.

- **Expanding opportunities**. Increasing and adding new staff groups into the pipeline, such as teachers, teacher leaders, central office staff, and APs.

Some district leaders worried about a lack of future educators for the principalship as they saw mounting teacher shortages. Many districts were already reporting educator and leader shortages prior to the COVID-19 pandemic which exacerbated recruitment and retention challenges (Schwartz & Diliberti, 2022). Forty-four percent of districts surveyed by the National Center for Education Statistics reported teaching vacancies and 61% of these schools identified the pandemic as a cause of increased staffing challenges (National Center for Education Statistics, 2022). Furthermore, from 2020 to 2022, the Job Openings and Labor Turnover Survey (JOLTS) has reported an average monthly teacher vacancy rate of 2.7%, a significant increase from the average of 1.7% reported from 2015–2019 (Schmitt & deCourcy, 2022). These teacher shortages and projected shortfalls extend into leadership, with more than a third (38%) of principals planning to leave the principalship in the next three years (NASSP, 2021).

> …we're talking about a more global issue of talent development, because the number of teachers going into the profession is weakening, and the number of people even coming into the principalship is less (Principal Supervisor in a large, southern district).

DISTRICT LEADERS WORKED TO DEVELOP OR STRENGTHEN THE DOMAINS OF PRINCIPAL PIPELINES
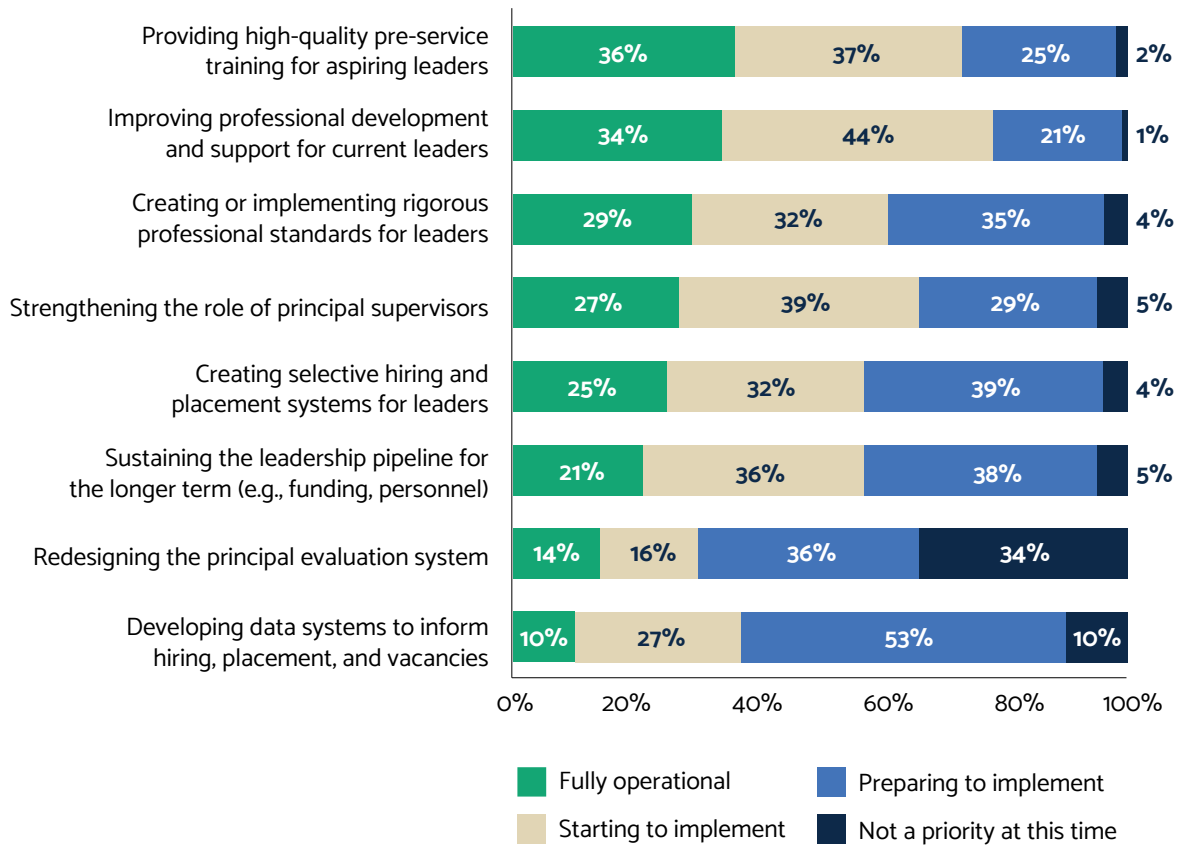
Central office staff engaged in addressing many of the domains of pipelines. Some, such as pre-service preparation and ongoing support, received the most focus, while others, such as redesigning the principal evaluation system or creating data systems for talent management, received less attention (see Figure 2).

Refreshing Leadership Standards

Many district leaders explained that they reviewed and redefined leadership standards, and then incorporated these standards into their pipelines. The work on standards entailed four areas. First, district leaders aligned standards across leadership positions. This review entailed setting out expectations for teacher leaders, APs, and principals. In some cases, district leaders recognized that their standards were not consistent across positions within the district and took steps to address this misalignment.

> …If we were going to continue to have solid leaders, we don't want it to be by chance. We want to be very intentional. And so that intentionality is what has driven us to create not only our core competencies–so we know what a leader looks like and what goals they need to be accountable to–but then to think about how we're going to provide the professional growth so that they actually meet those same standards. (Executive Director of Elementary Schools in a large, midwestern district)

Figure 2. Districts Have Started to Implement Multiple Principal Pipeline Domains

Domain	Fully operational	Starting to implement	Preparing to implement	Not a priority at this time
Providing high-quality pre-service training for aspiring leaders	36%	37%	25%	2%
Improving professional development and support for current leaders	34%	44%	21%	1%
Creating or implementing rigorous professional standards for leaders	29%	32%	35%	4%
Strengthening the role of principal supervisors	27%	39%	29%	5%
Creating selective hiring and placement systems for leaders	25%	32%	39%	4%
Sustaining the leadership pipeline for the longer term (e.g., funding, personnel)	21%	36%	38%	5%
Redesigning the principal evaluation system	14%	16%	36%	34%
Developing data systems to inform hiring, placement, and vacancies	10%	27%	53%	10%

Legend:
- Fully operational
- Starting to implement
- Preparing to implement
- Not a priority at this time

Note. Figure reads, "36% of respondents indicated that 'providing high quality pre-service training for aspiring leaders' is a fully operational pipeline domain." Survey question reads, "Which option best describes the status of your district's leadership pipeline in the following domains this school year (2021-22)?" Respondents were asked to rank each domain on a 5-point scale as follows: Not a priority at this time; Under discussion; In planning; Started to implement; Fully operational; Don't know. Under discussion and in planning are combined into "preparing to implement." Weights applied. Responses indicating "don't know" have been excluded; N=294.

Second, district leaders reviewed their standards to align or realign them with their district's broader leadership vision. This was important because in some districts the standards had not been reviewed for some time. Third, other district leaders worked with their preparation program partners to align curriculum to their leadership standards. Lastly, standards were also included in assessment centers, which use job-embedded evaluation task, that is tasks a principal might have to do on the job, for screening and hiring prospective leaders. These standards also drove formal evaluation systems for hiring and promotion decisions.

EXPANDING PRE-SERVICE PREPARATION AND THE POOL OF LEADERS

Central office noted the provision of high-quality pre-service training for aspiring leaders was one of the most fully operational domains of their pipelines (see Figure 2). Specifically, 36% of central office respondents indicated that 'providing high-quality pre-service training for aspiring leaders' is a fully operational pipeline domain.

Adding Roles to Expand the Pipeline. Some districts implemented innovative approaches through their pipelines to expand interest in leadership opportunities. Many districts expanded their principal pipelines to include a wider range of roles, including APs and teacher leaders. Seventy-nine percent of central office leaders surveyed reported that APs were a target group in their district's principal pipelines, and 50% indicated that teacher leaders were also included (not shown). A few district leaders reported that they even saw value in developing a pipeline for non-instructional positions, such as technology or transportation employees. Principal supervisors, who generally support principals through initiatives like leading learning communities, were often beginning to be included as a targeted step in the pipelines.

To further enhance their pipelines, some districts created additional steps along the pathway to school leadership and developed new leadership positions. One leader described that the district introduced a new role open to teachers, called Dean of Students, which allowed teachers who were not yet certified for leadership positions to experience school leadership while the district held onto their teaching positions. This allowed teachers to gain leadership experience before deciding to pursue licensure and enter a principal intern or AP position.

Districts created intern roles or the opportunity to provide aspiring leaders with job-embedded, developmental experiences. In some districts, internships were district-run opportunities, whereas in other districts, they were offered in partnership with the local university, as part of pre-service preparation programs. Interns typically served in a school for a year before moving into the AP position. Thus, internships represented a step along the pathway to the principalship. Only one district in our sample required interns to hold administrator licenses.

Developing Assistant Principals. Most districts invested in developing APs while preparing them to advance to the principalship. For example, one district developed a three-year Leadership Academy for all new APs, which focused on both development in their current role and preparation for the principalship. Another district created a program for "high flying APs" to prepare them for the principalship. Another organized their Assistant Principal Academy by years of experience, with APs receiving more instructional leadership training and responsibility once they reached two or three years

of experience. Many districts implemented dedicated leadership academies for new and experienced APs to focus on instructional, rather than operational tasks, compliance management, or student affairs.

Another district leader noted that the district implemented a program focused on pre-service preparation, where aspiring principals could earn a master's certificate and licensure through a partnership with a local university.

A Principal Pipeline to Address Mindsets, Not Just Milestones

For some districts, the pipeline was an opportunity to move beyond viewing the path to the principalship as a series of credentials toward a deeper understanding of what it meant to be "prepared" for leadership. As they strengthened their pipeline and created a new AP program, leaders in one large, western district realized that they needed to help aspiring and current school principals shift their *mindsets* away from tasks and lists to making sure that their work was fully aligned with an overarching district vision for student success:

> We're changing mindsets with all our administrators in our district now. Because the mindset was always 'Let's try this, if it doesn't work, let's try this.' Well, we always got the same results, and nothing ever changed. … I think the biggest mindset is looking at how we do things differently to make sure we're meeting the unique needs of each of our kids. These [mindsets] don't just come naturally, we can't just identify it. So, the work that has to be done is it has to start with our leaders who then bring it down to the teacher and on to the kids. (Principal Coach)

To facilitate mindset change, the district developed training goals for aspiring principals around its Portrait of a Graduate, which listed essential attitudes and skills students should demonstrate before graduation. They also worked with their external consultant on a new instructional framework that delineated clear roles for principals, coaches, and teachers.

As a result of this focus, the district also hired additional supports, such as a principal coach and instructional coaches, to support principals' and APs' newly aligned work.

Creating Hiring and Screening Practices

To improve upon hiring and selection, districts developed new types of assessments using job-embedded tasks–tasks that principals do on the job–to evaluate candidates on relevant leadership skills. The data collected included responses to a series of writing prompts, a data task, and scenarios, all scored on a standards-based rubric. Other districts used the data from the assessments to determine ongoing training and support needs. One district used the revised assessments to determine readiness for the principalship, and another used it to determine readiness for a range of other leadership roles in the district. One district used the assessments for a district-led internship program to determine a candidate's next placement along the pipeline, into an aspiring AP program, AP position, and sometimes, but rarely, a principalship.

Enhancing On-The-Job Evaluation and Support

A few districts adopted a tiered approach to supporting principals. For example, one district differentiated principal support based on years of experience, with a new principal academy supporting new principals, second-year principals participating in workshops and mentoring, and third-year principals having mentors in addition to ongoing support from principal supervisors. Others provided ongoing professional development and support for even their most experienced principals. Some districts even created clearly articulated tracks within their pipelines, one track for future leaders and another for current leaders.

For example, one district offered professional development targeted to individuals who already had a master's degree and principal certification but might have been overlooked in a leadership placement or received their training a while ago. The program focused on instructional leadership and prepared participants for the principal selection process.

Strengthening Principal Supervision

Few districts explicitly included preparing a cohort of future principal supervisors in their pipelines. Given the immediate needs and challenges facing schools during the pandemic, and the demands facing principal supervisors to support principals and schools, this may not be surprising. One district did create internship opportunities for high-performing principals to move into central office leadership. Instead, most district leaders worked with supervisors to support APs and principals in the pipeline. For instance, one district–where supervisors often had to spend a significant amount of time on collective bargaining–created an office with dedicated administrators who worked on contract issues, freeing up supervisors' time for the pipeline. Another expanded the role of principal supervisors to include coaching of principals alongside their role as formal principal evaluators. In some districts, principal supervisors became involved in identifying leaders, recognizing that this cannot be the sole responsibility of the human resources department.

Developing Data Systems for Talent Management

District leaders found that developing and using data systems, or Leader Tracking Systems, was difficult and complex. Many encountered barriers such as finding financial resources, identifying vendors, and gathering data from across departments to implement data systems. Even when systems were built, some systems were challenging to use and posed difficulties in maintaining and updating data. Additionally, district leaders struggled to integrate the data systems into their practices in such a way that staff would use it for decision-making.

However, there were some successful implementations of data systems. For example, one district used multiple measures, including formal evaluations, 360 evaluations, areas of professional growth, and assessments of readiness for leadership to identify and follow the career development of educators. These data were used formally and informally to identify, support, develop, and place leaders. Another district created a dashboard to track aspiring leaders and brought the technology department into the core team to lead these efforts.

Building Systems and Sustainability

The PPLC was an opportunity for learning, exploring, planning, and developing principal pipelines. Consequently, district leaders were less focused on long-term planning and sustainability. Early on, district leaders collaborated to articulate a vision for their district's pipeline, including its long-term development, and alignment to district goals. A key aspect of understanding pipeline sustainability involved securing ongoing funding for pipelines. Most district leaders indicated that pipelines were funded through internal operating funds and the work of pipeline programming and involvement was often added on to current staff roles and responsibilities. Concerns about financial sustainability were rare, although at times, district leaders noted concern that district priorities could shift away from pipelines, bearing in mind superintendent turnover. We detail other elements related to systems and sustainability later in this report (see *"District Contexts: Opportunities and Barriers of Principal Pipeline Development"* on page 20).
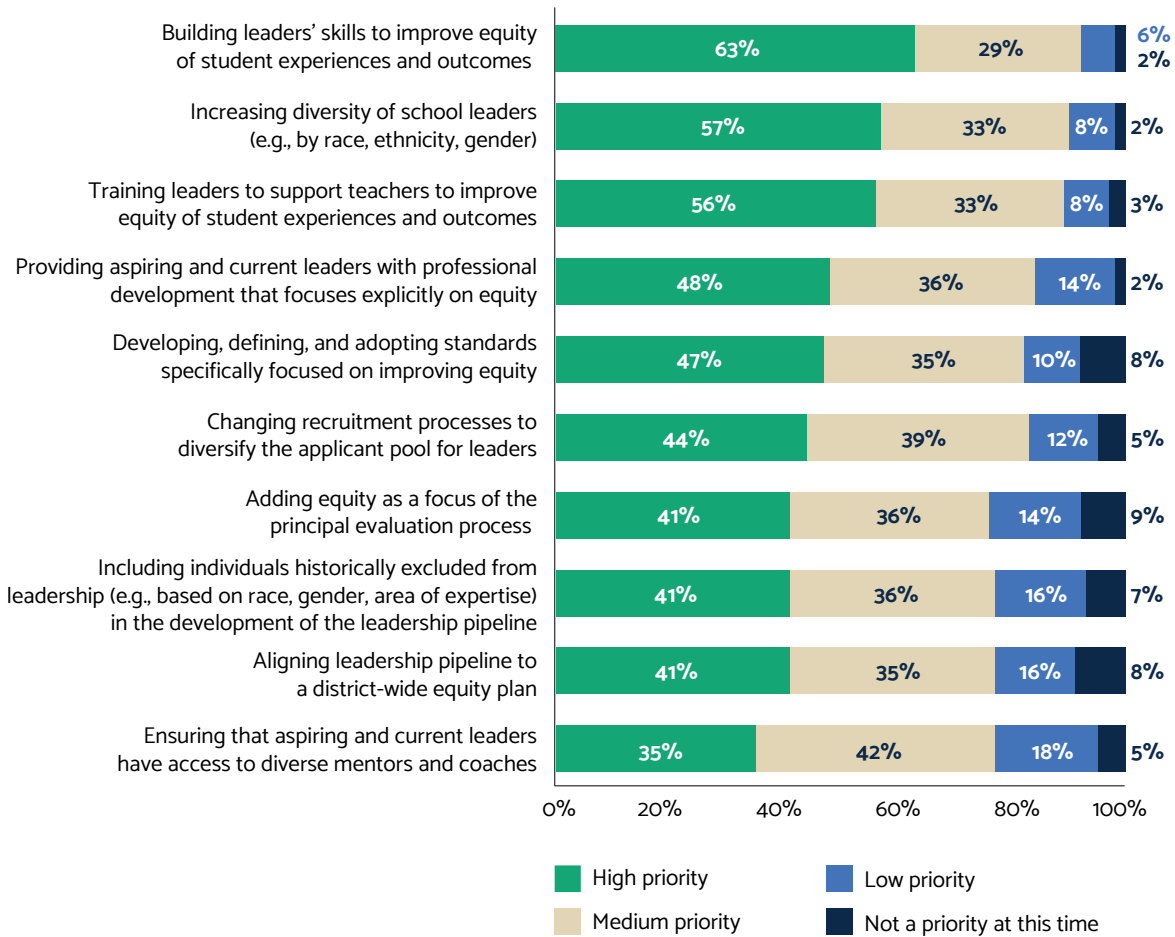
PRINCIPAL PIPELINES ADDRESS EQUITY AND DIVERSITY

District leaders noted three diversity and equity goals of principal pipelines: a) to address the lack of diversity amongst educators considering school leadership positions, b) to support and retain leaders of color, and c) to develop equity-centered mindsets and practices. In this section, we summarize the approaches districts considered to address leadership equity and diversity.

Approximately 90% of surveyed leaders ranked "building leaders' skills to improve equity of student experiences and outcomes" and "increasing diversity of school leaders" as a medium or high priority of their pipelines (see Figure 3). Alongside these efforts, some

district leaders noted the complexity of addressing and even talking about diversity and equity, in the current political context of their state; many wrestled with how to achieve these important goals. Few district leaders mentioned the involvement of Diversity, Equity, and Inclusion (DEI) personnel in principal pipelines.

Figure 3. Districts Prioritized Equity and Diversity in Their Pipelines

Activity	High priority	Medium priority	Low priority	Not a priority at this time
Building leaders' skills to improve equity of student experiences and outcomes	63%	29%	6%	2%
Increasing diversity of school leaders (e.g., by race, ethnicity, gender)	57%	33%	8%	2%
Training leaders to support teachers to improve equity of student experiences and outcomes	56%	33%	8%	3%
Providing aspiring and current leaders with professional development that focuses explicitly on equity	48%	36%	14%	2%
Developing, defining, and adopting standards specifically focused on improving equity	47%	35%	10%	8%
Changing recruitment processes to diversify the applicant pool for leaders	44%	39%	12%	5%
Adding equity as a focus of the principal evaluation process	41%	36%	14%	9%
Including individuals historically excluded from leadership (e.g., based on race, gender, area of expertise) in the development of the leadership pipeline	41%	36%	16%	7%
Aligning leadership pipeline to a district-wide equity plan	41%	35%	16%	8%
Ensuring that aspiring and current leaders have access to diverse mentors and coaches	35%	42%	18%	5%

Legend: ■ High priority ■ Low priority ■ Medium priority ■ Not a priority at this time

Note. Figure reads, "63% of respondents indicated that 'building leaders' skills to improve equity of student experiences and outcome's is a high priority for leadership pipelines." Survey question reads, "How much of a priority are the following leadership pipeline activities and goals in your district this school year (2021-22)?" Respondents were asked to rank each area on a 4-point scale as follows: High priority; Medium priority; Low priority; Not a priority at this time; Don't know. Weights applied. Responses indicating "don't know" have been excluded; N=308.

District leaders in communities with shifting student demographics and community priorities noted this influenced pipeline development. For example, districts shifted the focus of their pipelines in response to increasingly diverse student populations in formerly majority-White districts. These often appeared as either a formal equity focus, or equity strands in the pipeline work, or increased conversations around the role of equity in the pipeline. District leaders noted these conversations could be tense as

multiple individuals weighed in on the definition and role of equity in leadership, and sometimes revealed deep rifts within the central office:

> I think COVID-19 has highlighted some very specific challenges faced by certain populations in the district…there's definitely been an advance of the conversation around 'equity matters' as a result of COVID-19…But I will say that the conversations around equity are still governed by and divided along racial lines. (Manager for Leader Excellence, Advancement, and Development in a large, southern district)

Leaders in other districts also responded to social movements as an opportunity to create sorely needed programs, such as a pipeline program specifically for men of color:

> I can't pinpoint exactly what it was from the superintendent's perspective, it could have been pressure from the community, it could have been pressure from the board, it could just be looking around at a principals meeting and seeing, "Hey, there's no Black guys here. There are no Latino guys here." Go walk into a fifth-grade math teachers' meeting, and there are no men in the room … A Black boy needs to see a Black man as a teacher, as a leader. But the White kids or Latino kids need to see it too. One benefits when diversity is on the table and when we're working towards creating more equitable outcomes for everybody. (Director of Staff Development in a medium-size, northeastern district)

However, district leaders reported on surveys that equity priorities were just beginning to be addressed and were not fully operational. More than 75% of district leaders said their districts were starting or preparing to implement key diversity and equity foci in their pipeline goals (see Figure 4).

Figure 4. Districts Started to Implement Diversity and Equity Goals in Principal Pipelines
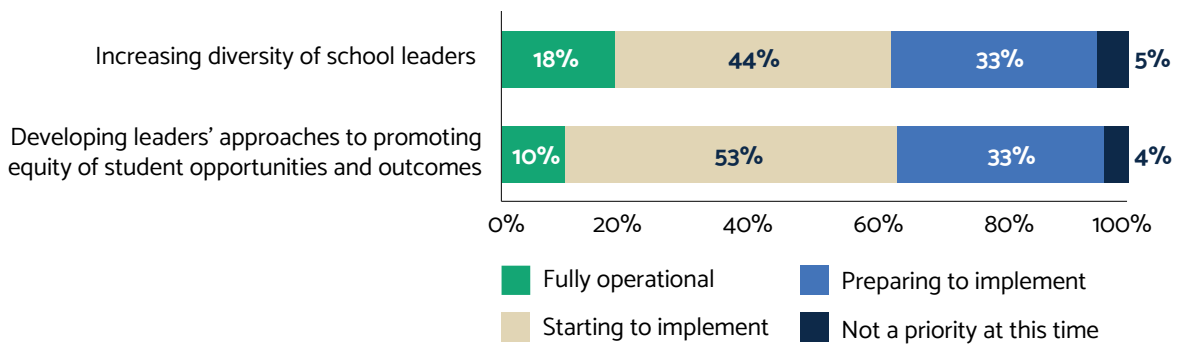
Note. Figure reads, "18% of respondents indicated that 'increasing diversity of school leaders' is a fully operational pipeline domain." Survey question reads, "Which option best describes the status of your district's leadership pipeline in the following areas this school year (2021-22)?" Respondents were asked to rank each area on a 4-point scale as follows: Fully operational; Starting to implement; Preparing to implement; Not a priority at this time; Don't know. Weights applied. Responses indicating "don't know" have been excluded; N=286.

Increasing Diversity

District leaders noted multiple approaches to increasing leadership diversity through pipelines. Some focused efforts on race, whereas others had more holistic conceptualizations of diversity, such as race, ethnicity, economic background, gender, and language. Most district leaders framed demographic diversity goals as expanding recruitment to leaders "who look like their students." They expressed that school leaders needed to better "mirror" or "reflect" the student population or the teacher pool.

Districts created unique pipeline programs to attract leaders of color, who were underrepresented in their leadership cohorts, and to provide a support community to encourage candidates of color to pursue leadership roles.

> ...we're not just looking for any leaders, we're looking for equity-minded leaders, people who are committed to ensuring equity for all and not afraid to disrupt normalcy. It takes a special pipeline to be able to grow your own that have the mindset that you need to lead schools.... And I think that true pipeline really helps to bring about that diversity. We look at the diverse needs of the students we serve, and even the demographics of the students we serve. And we would like for our pipeline to mirror that...to be able to effectively add value and bring different skill sets and background experiences. (Director of Leadership Development and Support in a large, southern district)

Some districts changed longstanding practices and policies they identified as drivers of inequality to achieve greater diversity in the leadership pool. These district leaders stressed the importance of building equitable systems for developing, recruiting, and hiring future leaders and specifically highlighted the importance of equity of processes and systems to move people through the pipeline. This included "tapping" or encouraging individuals to aspire to leadership positions, ensuring equitable access to developmental opportunities, and creating skills-based interview protocols for selecting leaders. In doing so they emphasized the need to identify and remedy inequitable workforce experiences and outcomes, especially for non-White educators. One district added support groups for future "Black and Brown leaders." Another implemented a special pipeline program to attract men of color through dedicated affinity groups. Still another focused on attracting Black men when designing a new university partnership program to allow candidates to earn the necessary certification while also entering the AP pool. Another district focused on recruiting specific underrepresented groups, after internal analysis of district data showed they were disproportionately filtered into discipline roles.

> ...our focus [is] on Black and Brown men, and marginalized groups, in particular, Asian American folks, as well as Latinx folks, too, to really target them in this work. And so, when we did the pathway to leadership program, we made sure to target

those roles that are heavy in Black and Brown folks, such as the climate manager and the climate role, deans and all those different roles. To me, that was the district earmarking that money and sending a district message, that this is a priority for them. (Director of Leadership Development in a large, northeastern district)

Principal pipelines also helped districts create more transparency, consistency, and equity in the pathway to the principalship. Several district leaders recounted that one important benefit of fully operational pipelines is creating a systematic, data-driven approach to moving into the principalship. Pipelines helped some district leaders communicate to educators how to take steps along the pipeline and the supports available along the way. The systematic approach was intended to make the journey along the pathway explicit and concrete, and helped address actual and perceived "secrecy, favoritism, and bias in principal appointments," and consequently, increase diversity.

Supporting and Retaining Leaders of Color

Fewer district leaders specifically addressed the support and retention of leaders of color. These districts noted that recruitment was not enough, because leaders of color in their districts also left at a higher rate than White leaders. One district dedicated considerable effort to this after they identified disparate turnover rates among leaders by race. A central office leader from the district explained that they made "listening to and learning from the experiences of our Black leaders as a priority." She framed these conversations as helping the district "take a critical look at ourselves, at how are we treating Black leaders? … unpacking, having honest conversations, and then saying, 'what can we learn from that?' What are some of the practices that we want to do differently?" (Assistant Superintendent in a large, western district)

District leaders recounted multiple strategies to bolster support and retention of leaders of color:

- Creating affinity spaces for leaders of color to reduce racial isolation and foster professional networks.

- Monitoring data to track leadership placement to ensure leaders of color were not consistently assigned to the most challenging schools.

- Ensuring leaders of color receive similar supports as their White counterparts by formalizing mentoring.

- Working with principals and principal supervisors to ensure they are providing equal levels of support to all future and current leaders.

Developing Equity-Centered Leadership Practices

Pipeline development efforts focused much more on diversifying the principal pipeline and less on developing culturally responsive and equity-centered leadership practices. Central office leaders did see pipelines as an opportunity to develop equity-centered leaders, but this was a difficult goal; often, discussion of such goals was abstract and aspirational, rather than aligned to specific actions. However, leaders in districts with ongoing equity work, such as districtwide equity plans, were often better able to describe how they were developing "mindsets, knowledge, and skill sets…foundational for making changes" (Director of Leadership Development in a large, western district).

Central office leaders in one district explained that they introduced equity-based competencies outlined in the district leadership vision, noting the importance of holding everyone accountable for enacting this systemwide priority. In another district, all new administrators participated in a two-year program where they engaged in practices "[including] examining case studies - things happening in schools …historically and currently that reproduce racialized outcomes for students…" (Director of Leadership Development in a large, western district). One district integrated equity into all professional development programming for leaders.

> What we have really pushed…is supporting principals and seeing that equity is a through line in their building… And it's not a silo that is compartmentalized on a shelf somewhere. …seeing how it comes up in instruction with grading practices, seeing how it comes up in culture, with suspension and attendance numbers, seeing how that comes up with enrollment with gentrification happening. …really getting principals to have that lens on at all times. (Director of Leadership Development in a large, northeastern district)

In a few instances, districts engaged with university partners to revise principal preparation to ensure candidates developed equity-oriented competencies. For example, one district revisited an existing partnership with the local university to revise the leadership preparation program to focus on urban school leaders; equity and diversity were central components. Another central office leader shared that after examining the leadership preparation curriculum with their partner university, they noticed a lack of attention to equity-centered leadership. When they engaged with their university partners, they found that their university partners did not share their understanding of equity work, which caused them to end the partnership.

District Contexts: Opportunities and Barriers of Principal Pipeline Development

Research suggests that districts are better able to adopt and implement new policies and practices when they work with, rather than against, their existing context and features (Farrell et al., 2019; Chrispeels et al., 2008). In this section, we highlight district conditions and features that were critical to districts' successful development of pipelines.

CENTRAL OFFICE CULTURE, NORMS, AND STRUCTURE

District leaders reported that there are central office structures in place to support principal pipeline work, although those capacities vary widely from district to district (see Figure 5). Central office leaders overwhelmingly agreed on the survey that their superintendents were supportive, and that pipeline team members had relevant experience. However, only 54% agreed that the pipeline staff had enough time to work on leadership pipelines. A quarter of district leaders also indicated that financial resources to support the pipeline could be a concern, while 75% of respondents agree they have the resources to build pipelines, suggesting that pipelines are indeed affordable in their current contexts. Although the survey sample included districts of varying sizes, district size did not play a factor in respondents' perceptions of the district capacity for pipeline work (statistical analyses not shown).

As districts set out to design their pipelines, many leveraged or created central office management structures to facilitate the work through the presence of a *core team* of central office staff and a *dedicated leadership department* who were specifically charged with developing and overseeing the pipeline.

Core Central Office Team

Though pipeline planning could involve many individuals from across the district, core teams were often small groups of mid-level administrators who regularly met to develop, plan, and implement the specific domains of the pipelines. Teams varied in size, and in some cases grew as the pipeline developed. Although typically led by one or more individuals who directly oversaw leadership in the district, core teams were also frequently made up of individuals from more than one department, such as professional learning and a human resources department, which allowed team members to coordinate different pieces of the pipeline (recruitment and hiring processes) more efficiently. Core teams often worked with a high amount of autonomy and authority

to lead pipelines. District leaders spoke of the importance of involving multiple departments to give the pipeline work a "larger voice."

> We continue to grow the team...we've got technology people on the team because we have a dashboard. Now we have retired principals on our team because they serve in that mentor capacity. HR is on our team. I'm on our team. So, we've grown the team and continue to have a focus, we use technology, we're transitioning now to teams to try to house and institutionalize some of the work. (Chief Academic Officer in a large, southern district)

Figure 5. Districts had Differential Capacity to Engage in Principal Pipelines
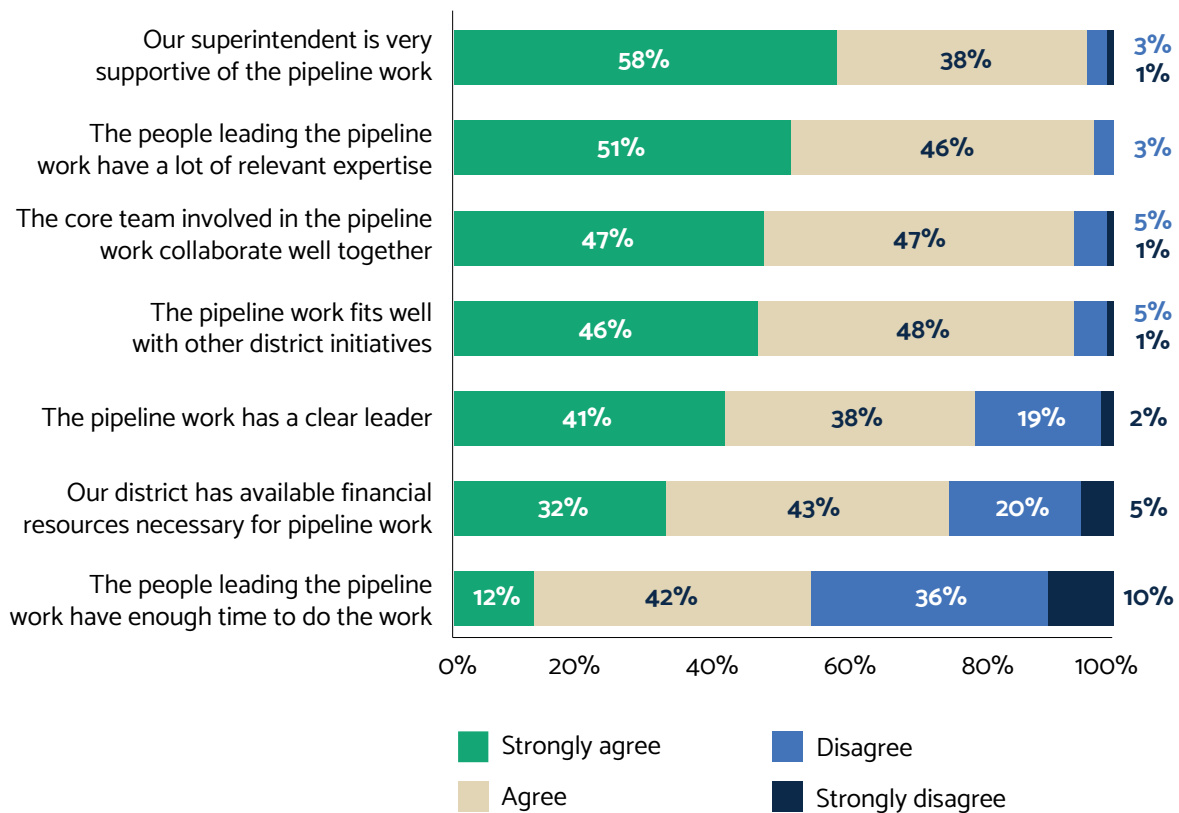
Note. Figure reads, "58% of respondents strongly agreed with the statement 'our superintendent is very supportive of the pipeline work.'" Survey question reads, "To what extent do you agree or disagree with the following statements about your district's leadership pipeline work this school year (2021-22)?" Respondents were asked to rank each area on a 4-point scale as follows: Strongly disagree; Disagree; Agree; Strongly agree; Don't know. Weights applied. Responses indicating "don't know" have been excluded; N=295.

Uncovering and Addressing Patterns of Inequity

Some districts saw principal pipelines as an opportunity to assess training for current and future leaders to develop the instructional leadership skills and dispositions to ensure all children, regardless of race, ethnicity, or socioeconomic status, receive a high-quality education.

One large, northeastern district began with a needs assessment of the current school leadership landscape. An analysis of regularly collected data provided revelations about dynamics and training offered to leadership candidates and current leaders:

> What we've seen is that White candidates get through our process quickly. They are supported by internal, informal, and formal networks. Once they're in the job, they are rated higher. (Deputy Chief of Leadership Development)

As a result, they formalized information dissemination processes to ensure communication about advancement opportunities depended less on social networks and more on official district messaging. Members of the leadership development office also engaged in an information tour, working with the teachers' union to broaden access to information and resources. They also used these findings to justify changes around recruitment, selection, training, and support. They began actively recruiting promising future leaders from underrepresented groups.

They also prioritized revising training for future and current leaders. Annually, every principal and AP participates in "equity pathways," personalized professional development opportunities where participants reflect on identity, privilege, and the ways the education system contributes to inequality.

> We redirected our work around training with principals in racial equity development, and other work to help set up principals for this moment of both pandemic and racial uprising. (Senior Project Manager for Leadership Development)

Districts with core teams that guided the pipeline work made more progress in planning and implementing pipelines. Compared to districts without a core team, district leaders with core teams rated their district capacity for pipelines and the status of their pipeline domains more positively than districts that did not have a core team (see Figure 6; differences are statistically significant at the 5% level).

Having a core planning team also helped districts maintain focus on pipelines despite uncertainty and changes in the district. For example, one district with a strong core team carried on the pipeline work through the toughest parts of the COVID-19 pandemic. Another district with a strong core team continued with pipeline planning and implementation, even when their team lead left, because, despite the loss of expertise, the work had been shared by at least two other central office leaders.

Dedicated Leadership Department

Districts with dedicated leadership departments also found it easier to lead and sustain the pipeline work, compared to districts without such a department. In several districts, a dedicated leadership department with a clear lead oversaw the bulk of leadership development and support work. In other districts, pipelines were spread across multiple departments with no clear lead, or no 'home' department.

Fifty-eight percent (N=207) of surveyed central office leaders reported that staff in the district's school leadership department were involved in core principal pipeline work. These central office leaders with a dedicated leadership department were more likely to report that pipeline domains were fully implemented and operational (not shown; survey results statistically significant at the 5% level). District leaders in these departments often noted that pipeline development was a formal part of their job descriptions, which greatly facilitated their ability to work together regularly to focus solely on the pipeline and to marshal resources.

Absent a dedicated leadership department, district leaders involved in pipeline programs were often pulled in many directions as they attempted to establish a home for the pipeline, coordinate across departments, and invest others in the work. In a handful of districts, a single individual led the pipeline work alone—in cases where these individuals left the district, the pipeline work effectively ended. In many districts, pipeline responsibilities were added on to existing responsibilities. This led to fragmentation, and lack of understanding of the coordination and alignment across programs, especially when there were limited dedicated personnel for pipeline work.

Figure 6. Districts With Stable Superintendents and Core Teams for Pipeline Work Had Stronger Capacity for Principal Pipelines and More Domains Were Operational
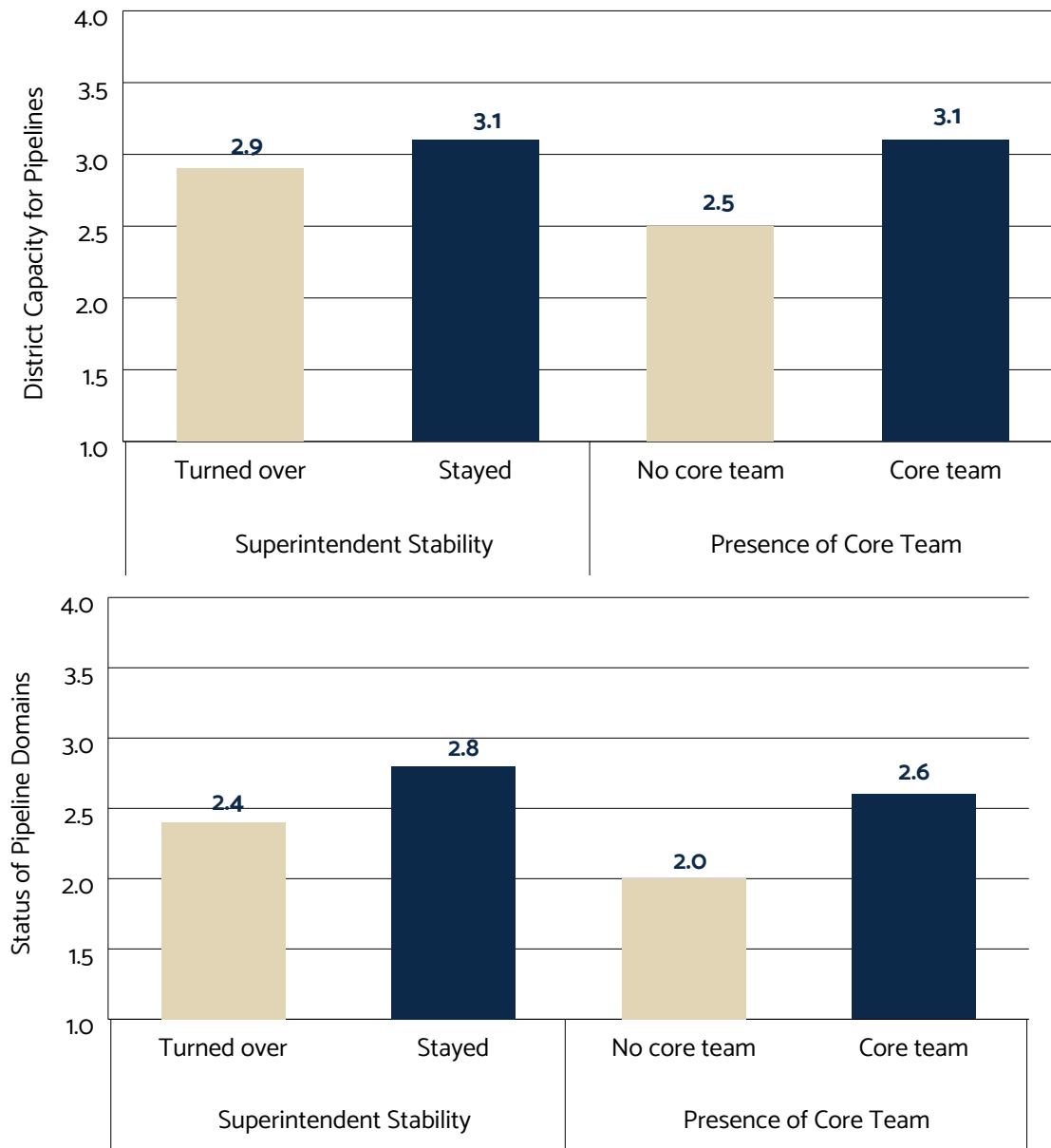
Note. Figure reads, "Survey respondents rated the status of pipeline domains 2.9 out of 4 in districts where superintendents turned over during the PPLC.'" Survey question about pipeline domains reads, "Which option best describes the status of your district's leadership pipeline in the following areas this school year (2021-22)?" Respondents were asked to rank each domain on a 5-point scale as follows: Not a priority at this time; Under discussion; In planning; Started to implement; Fully operational; Don't know. Survey question about district capacity reads, "To what extent do you agree or disagree with the following statements about your district's leadership pipeline work this school year (2021-22)?" Respondents were asked to rank each area on a 4-point scale as follows: Strongly disagree; Disagree; Agree; Strongly agree; Don't know. Weights applied. Responses indicating "don't know" have been excluded; N=293.

Collaboration and Communication

Pipelines flourished in districts where leaders worked to break down silos through systems of collaboration and communication. In districts that intentionally created structures to support cross-departmental collaboration in service of the pipeline, central office leaders reported that they were able to loop in multiple departments and create a more systematic approach to the work, thus improving the coherence of the pipeline. Systems for collaboration and communication across central office departments increased pipeline coherence and systems alignment. A handful of districts embraced a cross-departmental model that allowed the core pipeline team to collaborate with administrators in other departments. One district created a cross-departmental team in which the Director of Leadership Development, who led the pipeline efforts, met monthly with the directors of Human Resources and Curriculum and Instruction to discuss staffing and equity of hiring processes.

In districts that did not proactively work to shore up communication, longstanding central office silos made cross-department collaboration a challenge. Many districts struggled to embed the pipeline work across departments. In some districts there was either no intentional coordination across departments, or no clear pipeline leader, and consequently, multiple departments handled different aspects of the pipeline (such as teacher leadership, aspiring principals training, and principal supervision). Due to the lack of communication, absence of a leadership department, or lack of a clear pipeline leader

**The principal pipeline team fostered cross-departmental collaboration**
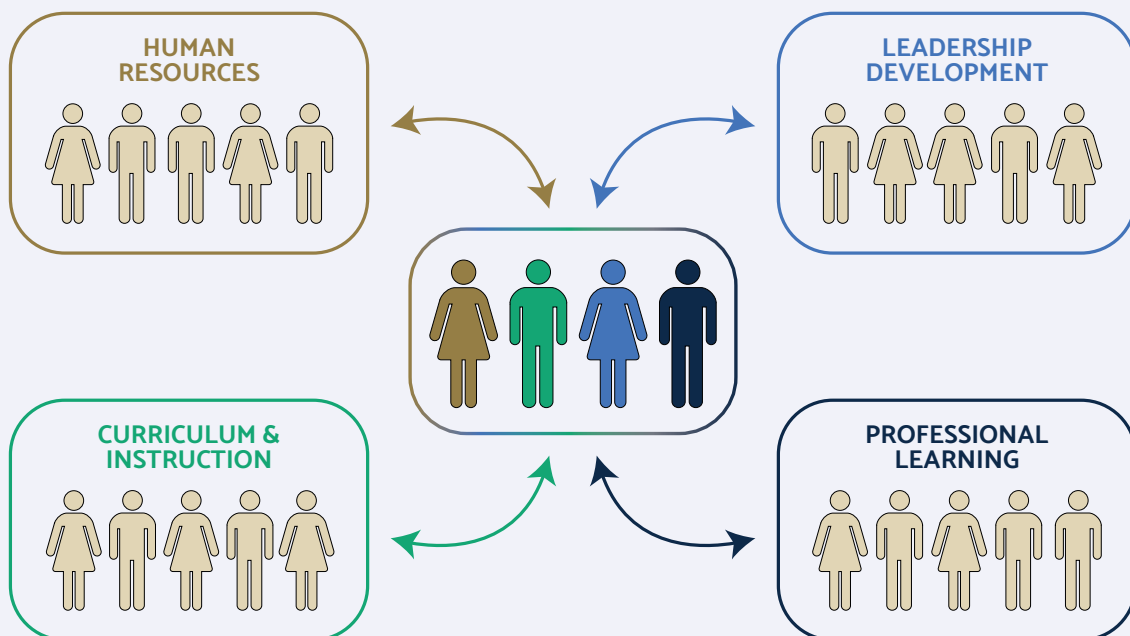
or team, staff who worked across multiple departments often did not share similar understandings of their pipelines, and sometimes even engaged in power struggles over differing visions. This resulted in disjointed programs, not well aligned.

Districts that lacked a cohesive culture and silos were often those that also had high central office turnover. Indeed, Figure 7 shows that 71% of district leaders "strongly agreed" or "agreed" that there was central office turnover amongst those involved in developing pipelines. Turnover in the central office significantly disrupted pipeline planning; in one district, turnover among those involved in leadership development at multiple levels effectively brought the pipeline work to a standstill.

Superintendent Support

A few superintendents took a more hands-on role in pipelines, such as attending planning meetings, providing directives for the specific focus of pipelines, and charging other central office departments and personnel with specific tasks to move the work forward. For example, in one district, the superintendent met regularly with the planning team and attended learning community sessions. A district administrator noted that the superintendent attended and spoke at leadership trainings and meetings, "Her commitment level is infectious, which makes our [pipeline] participants want to work hard, want to be engaged." (Director of School Leadership in a medium-sized, midwestern district)

Figure 7. Central Office Turnover, Silos, and Culture Impacted Principal Pipelines
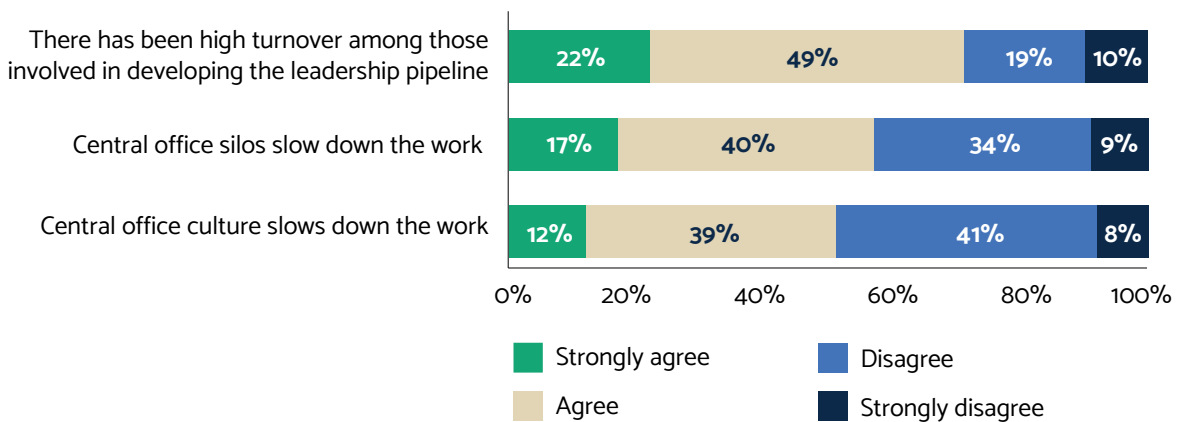
Note. Figure reads, "22% of respondents strongly agreed with the statement 'There has been high turnover among those involved in developing the leadership pipeline.'" Survey question reads, "To what extent do you agree or disagree with the following statements about your district's leadership pipeline work this school year (2021-22)?" Respondents were asked to rank each area on a 4-point scale as follows: Strongly disagree; Disagree; Agree; Strongly agree; Don't know. Weights applied. Responses indicating "don't know" have been excluded; N=293.

District Contexts: Opportunities and Barriers of Principal Pipeline Development

Superintendent support was also key to resource allocation for pipelines to ensure they were strong and sustainable. In one district, the superintendent allocated over $3 million dollars of internal funding to a new preparation partnership. In another district, multiple district administrators praised the superintendent for their intentionality in building central office capacity to administer the pipelines:

> Our superintendent has really been very intentional…He led the addition of two individuals in human resources. He added a third principal supervisor. He restored positions in the teaching and learning area, just to ensure we were able to lead… across the system…Through his leadership and his decisions, we are very much in a stronger position to lead now at a district level and then support leadership at the school level. (Chief of Schools in a medium-sized, midwestern district)

Fifty-three percent of surveyed respondents experienced turnover of their superintendent at least once in the three years from the 2019–2020 to 2021–2022 school years (see White, 2023, not shown). This amount of turnover is consistent with other national data that found that 49% of the largest 500 districts experienced superintendent turnover between March 2020 and September 2022 (ILO Group, 2022).

Central office leaders in districts with turnover often described uncertainty and anxiety over the direction of the pipeline as they waited to learn about the new superintendent's vision and priorities. Some also mentioned the importance of having a dedicated leadership department and an "institutional memory" to sustain the pipeline work in times of leadership instability, although they were aware that the new superintendent ultimately had final say:

> If there's not stability in leadership, you're constantly going…what's the new vision? While we have a district strategic plan, that may not be the next person's thing. And so, it is unfortunate. But the good thing is that we do have a leadership development department…So, the work is still there, the need is still there. But I think the reason why you have challenges with sustainability has more to do with stability and leadership. (Interim Chief Human Resources Officer in a large, southern district)

District leaders with stable superintendent leadership reported making more progress in their pipeline development, while those with superintendent turnover faced greater challenges. Using survey data, we analyzed whether superintendent tenure in the district had a statistically significant relationship with measures of district capacity to support pipelines (see Figure 5 for items of district capacity) and status of pipeline domains as fully operational (see Figure 2 for status of pipeline domain items). District leaders that experienced turnover of their superintendent reported on the survey lower levels of district capacity and were less likely to say their pipeline domains were fully operational, as shown in Figure 6 (differences are statistically significant at the 5% level).

EXPERIENCE WITH LEADERSHIP DEVELOPMENT

Some districts already had experience with leadership development; central office leaders in these districts noted that this history meant that they already had formal commitments to leadership, such as a leadership development focus in their strategic plans or an existing program for identifying and training new principals. This history made it easier for these districts to "sell" the pipeline to others in the district, because it "fit right in" with other important district priorities. Having "previous experience" did not necessarily entail decades of investment; several district leaders noted that they had only recently come to leadership work, shortly before beginning the PPLC.

Districts with existing leadership investments also tended to make greater progress in developing their pipelines. For example, districts that implemented and used data systems, Leader Tracking Systems, were much more likely to have prior experience with leadership development, whereas districts that were new to leadership development were more likely to report that their pipelines were "nascent." Importantly, though their districts began the work in markedly different places, central office leaders in these "new to leadership" districts were just as committed and enthusiastic about the pipeline as those in the more "veteran" districts. They also spoke of doing extra work to convince others in the district of the value of prioritizing principal leadership. As one central office leader put it, "We have a knowing-doing gap in our district, where we know the effect that a strong principal has on a school … But we just don't act on [it] because we put other priorities ahead of it" (Principal in a medium-size, southern district). However, district leaders also spoke of the positive benefits of spending time introducing others in the district to the power of pipelines:

> I feel like we got a lot of support. I feel like we were visible. We spent this year actually teaching people the components of pipeline and what a pipeline has to offer. So, we spent many sessions presenting to our principals, presenting to our board members, presenting at the state level. What's the pipeline look like? Sound like? Feel like? (Director of School Leadership in a medium-size, midwestern district)

Leaders in districts with strong community, state, and school board support for leadership development reported that they felt empowered to prioritize pipeline work, even in the face of the pandemic. By contrast, districts with limited community or board support for leadership–sometimes out of a concern for resources to be placed in schools rather than central office–or that experienced shifts in support due to competing initiatives or demands, often struggled to prioritize pipelines.

External District Connections and Involvement

Districts tapped into existing relationships to support their pipeline development. These included university partnerships, ongoing work with technical assistance providers (TAPs), and unions. Pipeline development prompted some districts to take a fresh look at university partnerships, which focused on training and certifying leaders. For example,

one district worked with its university partner to reframe their joint leadership training program around a new vision for leadership that emerged from the pipeline planning process. Another district began working with a nearby university on analyzing evaluation data which showed gaps in its recruitment and hiring processes; the district was using this evidence to plan further changes to strengthen hiring. The district was partnering with a university to help them analyze and evaluate their data. University partnerships go beyond providing pre-service preparation in some districts.

Districts found ongoing relationships with TAPs crucial for integrating new training and support goals; TAPS provided expertise lacking internally. Districts of all sizes relied on TAPs in this manner, but midsize districts with smaller central offices often spoke of them as being particularly helpful in bridging gaps in capacity, at least for the present. For example, one district spoke positively of ongoing work with a TAP in which leaders were receiving equity-oriented training to help them address identified disparities in outcomes for Black and Latino male students.

Finally, districts with strong unions worked proactively with them to bring union representatives and leaders on board with the pipelines. One district worked with the local teachers' union to set up Master Practitioner certification for teachers, which tied into its expanding teacher leader section of the pipeline and conferred legitimacy onto these activities.

COVID-19 PANDEMIC, THE POLITICAL CONTEXT, AND PIPELINE WORK

The COVID-19 pandemic was a pervasive influence on pipelines. Almost all leaders spoke about the disruption of the pandemic, but the specific influence of COVID-19 on pipeline work varied. Some districts withdrew from the pipeline initiative altogether during COVID-19, and it was unclear when or how they would resume the work. Others slowed or paused the pipeline work as the pandemic shifted their priorities. For example, some leaders moved into a reactive mode, noting that they had to prioritize contact tracing, the shift to online teaching, mental and physical well-being, staff shortages, and other new, pressing issues that emerged during COVID-19.

Despite the unsettling impact of COVID-19 on all districts, some leaders found that COVID-19 was an impetus to reframe and even rejuvenate their principal pipelines. They described finding opportunity within the pandemic, viewing COVID-19 as offering new insight into the kinds of training and skills leaders in the district needed. Others found the pandemic emphasized for them why a pipeline was such a necessary investment.

> There's been a lot of silver linings with COVID-19. It actually brought to the forefront the need for the pipeline to be stronger…It can't just be on the shoulders of a couple of

people and professional development. The pipeline has to be a district priority where everybody's working and involved in it. And it has to be some of the most important work we do. (Director of Leading and Learning in a large, southern district)

Still other district leaders described COVID-19 as refocusing the qualities that they valued in their principals. These leaders described a shift in the need for principals to be problem-solvers, to be more flexible, and to lead as innovators, not just managers, during the pandemic crisis. They began to value autonomy rather than compliance in their school leaders, articulating the importance of principals who develop solutions to the various challenges that COVID-19 presented.

I think our values have shifted. Our values may have been before, "Yes, we value you doing what we tell you to do." Now the value has shifted to, "We value that you are bringing solutions and bringing ideas to the table." (Principal in a large, southern district)

Other district leaders described new practices during COVID-19 that shifted leadership work at the central office level. For example, some noted that they spent a considerable amount of time supporting leaders as the crisis unfolded, emphasizing that this became a major priority. District leaders noted that they used pipeline convenings to rely on one another for support around COVID-19 and to learn from other districts about how to handle the pandemic. They saw the importance of allowing space and time to process the challenges of the pandemic that were unrelated to pipeline work.

Still other leaders noted that the pandemic forced them to make technological shifts– such as running meetings and trainings virtually–that better facilitated the work and freed up time for district and school administrators alike. Virtual meetings also enabled some leaders to increase participation in professional learning opportunities, and virtual interviews helped to increase diversity in hiring by reaching a broader range of applicants in the early stages of recruitment.

District leaders also spoke about the national and local political climate during this time period as being an importance contextual factor that interrupted their work. Districts that faced community distrust–often stemming from local and state partisan politics erupting during the COVID-19 pandemic–encountered several barriers. Political pressures regarding discussions of race and equity led some leaders to question whether they could explicitly address equity, diversity, and inclusion in their pipelines. While some district leaders attempted to work around this by emphasizing alignment with previously approved district strategic plans or reworking language and goals to be more politically palatable, others explicitly removed references to terms like "equity" or "social emotional learning." Still other district leaders found that their efforts to build buy-in for pipelines were thwarted by school board disagreements around masking and vaccination policies that became pressing district priorities.

Recommendations for Developing Principal Pipelines

We examined the experiences of district leaders who took part in a professional learning community around principal pipelines during 2019–2022. First, we found that many leaders viewed pipelines as critical for school effectiveness, providing districts with multiple avenues to identify, hire, develop, and support future leaders. Pipelines not only included pathways for future principals, but APs, teacher leaders, and others. Second, we found that many district leaders noted the importance of using pipelines as a strategy to address equity and diversity, through the recruitment and retention of leaders of color. Third, we found that various factors inhibited or supported the development and sustainability of pipelines, such as superintendent support and stability, core teams, central office culture and structures, communication and collaboration across departments, and the larger context of a district. Unsurprisingly, COVID-19 was a disruption for districts involved in the pipeline learning community, although some leaders found that the pandemic reshaped the types of principals they looked for and valued during the crisis.

We share recommendations around developing principal pipelines. These recommendations stem from lessons we learned from the district leaders in their design and implementation of pipelines.

Pipelines are strongest when district leaders:

- **Consider pipelines for multiple types of leadership roles**. Districts could approach pipelines as a whole-system model to expand the reach of pipelines beyond "just the principal." Strong student-centered districts require leadership that is distributed across multiple roles and levels. Districts can cultivate career pathways, complete with tools and resources, that focus on other leadership roles such as APs, teacher leaders, deans of students, instructional coaches, and principal supervisors. These efforts might consider other career ladder initiatives in the district to create alignment, as appropriate given the unique demands and skill requirements of each role. For example, a teacher leader pipeline may embrace a grow-your-own model for high school graduates or paraprofessionals that extends all the way to a teacher leadership position, such as a department head. Over time this teacher career ladder could then feed into principal pipelines. Having multiple pathways can help legitimize the value of leadership in different roles and expand other pathways to the principalship.

▲ **Connect pipelines to ongoing district strategies, initiatives, and goals**. There is no "one size fits all" pipeline. Pipelines work best when they are aligned with the specific leadership needs and goals of the district, as well as meeting the needs of individual educators participating in the pipeline. Districts can take stock of their existing initiatives and strategic plans to determine how pipelines fit. For example, one district might provide specific professional development to APs to prepare some of them to step into the principalship, or while another district could focus on training and supports for principals around districts goals in early literacy, access and equity for underrepresented students, or data use for targeting and aligning instructional supports for students.

▲ **Develop, review, and revise leadership standards to reflect the expectations and required capacities of leaders**. As leadership roles continue to evolve, leadership standards should keep pace with current understandings of what school leaders need to know and do, such as explicitly including domains around equity-centered or culturally responsive leadership or providing meaningful feedback on instruction to teachers. These standards can serve as a north star for changes and developments throughout the various initiatives and domains of the pipeline.

▲ **Focus on diversity and equity in pipelines**. Districts could consider pipelines as an approach for diversifying school leadership and developing principals' skills to support equity and inclusion. Pipelines can also be a useful tool for creating and communicating a systemwide vision of equity. Central offices can center diversity and equity in the ways they use the pipelines to recruit, select, and support principals. Equity can also inform how aspiring leaders are trained. Specific pipeline programming for principals might focus on helping leaders unlearn biases, address disparities in achievement or discipline, and create fairer school staffing and evaluation processes.

▲ **Develop a core central office team and dedicated leadership department to lead across pipeline domains**. Pipelines benefit from having a core team– often consisting of representatives from different central office departments–to develop systemwide take-up and awareness of the pipeline. Core teams also help coordinate to maintain the focus, momentum, and sustainability of the pipeline as it unfolds. The specific structure of the team will vary by district and will depend on where the responsibility for leadership development lies in the district, how departments are organized, and district size. Districts can support teams' work by ensuring that the people involved have enough time and resources to devote to building successful pipelines. Having a dedicated leadership department, where administrators focus solely on leadership support, can help in this respect.

◢ **Create structures to support cross-departmental collaboration and communication**. Pipelines work best when other key departments, such as human resources, are involved in their planning and support. Districts can find ways to break down department silos so that key central office departments and staff can communicate, support, and even "own" the pipeline together. Common structures to support cross-departmental collaboration including having representatives from multiple departments attend meetings led by a clear pipeline leader or designating leaders from two different departments as co-leaders of the pipeline work. Pipeline work benefits when the central office prioritizes regular meetings among department chiefs to share updates on the pipeline and discuss its fit with other ongoing district initiatives.

◢ **Choose a consistent "champion" to ensure pipelines are prioritized and align with district goals**. Buy-in from a high-level district leader is critical for garnering support for the pipeline and safeguarding its development, sustainability, and resource allocation. Districts can designate a champion to clearly communicate expectations and goals to central office leaders and ensure that pipeline programs have dedicated personnel to grow and thrive. A champion could also be prepared to protect the pipeline from threats to its sustainability, such as political attacks or infighting. Given the high rates of superintendent turnover in the districts in our study, districts facing leadership transition might tap an alternative high-level district leader as a champion for the work. Having both a high-level champion, that is a designated person accountable for the pipeline, and a dedicated leadership department helps offset the challenges that arise with superintendent turnover, as a champion can maintain coordination and help keep pipeline initiatives moving forward during transitions.

◢ **Leverage existing connections and relationships with university partnerships, technical assistance providers, and unions**. Pipelines often interact with other community organizations in service of recruiting and training new principals. Districts could partner with external groups and organizations to strengthen the components of the pipeline, thereby bolstering their own capacity to develop strong principals. For instance, local university partners can help provide training and credentials, technical assistance providers can perform specific technical needs such as facilitated equity audits or development of Leader Tracking Systems, and unions can legitimize the pipeline by ensuring that principals and educators have a voice in the planning process. Community organizations and non-profits can help bridge understanding between school leaders and their communities.

▲ **Consider leadership priorities post-COVID-19**. The pandemic had an enormous impact on districts and in some cases, districts articulated new priorities for what leaders need to know and do, particularly in times of great uncertainty. Priorities included focusing on principal autonomy and decision making, problem solving and innovation, understanding strategies to address learning loss and gaps, addressing social injustices, and having difficult conversations in politically charged climates. Districts can leverage pipelines as a strategy to help prepare and align school leadership with new imperatives, including new and revised skills, practices, and dispositions.

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Appendix A: Methodology

SURVEY ADMINISTRATION

Sample

The study team sent requests to field a survey in all 84 districts participating in the PPLC. Participant lists were obtained from The Wallace Foundation. Thirteen districts declined to participate, while 9 districts did not respond to requests or other direct outreach. The final sample included 62 districts.

Table A1. Districts' Responses to Survey Research Requests

Agreed to participate	62 districts
Declined to participate	13 districts
No response	9 districts

After obtaining district permission to field the survey, we reached out to individual participants from each district through rosters of PPLC participants provided by The Wallace Foundation. We also sent these names to each district's PPLC team leader and asked them to verify the names, titles, and emails of individuals involved in leadership pipeline planning or development and/or individuals who participated in the Wallace PPLC or American Rescue Plan Professional Learning Community PLC.

We invited a total of 521 people in 62 districts to participate in the online survey from October 2021 to May 2022. The overall response rate was 72%, a total of 376 respondents. We sent invites to as few as one person in a district to as many as 20 people in a district; the responses per district ranged from 1 to 18 respondents.

Survey Contents and Analysis

The survey included questions about respondents' experiences with leadership pipelines. Survey topics included the conceptualization and status of leadership pipelines, the district context, and central office organization of leadership pipeline implementation. We also asked respondents about their roles, backgrounds, and demographics. Questions asked participants to reflect on leadership pipelines in the 2021–22 school year. We used data provided by The Superintendent Project[4] to identify superintendent tenure in our analysis.

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[4] We are grateful to Rachel White at The Superintendent Project at University of Tennessee Knoxville for generously sharing data on superintendent tenure. See, White, R. S. (2023). Ceilings made of glass and leaving en masse? Examining superintendent gender gaps and turnover over time across the United States. *Educational Researcher,* 0013189X231163139.

Survey Weights

Because staff participation varied widely across the 62 districts in the PPLC and correspondingly, in the survey itself (from 1 to 18) respondents in a district), we applied post-stratification weights so each district is equally represented in the analysis. We determined these weights by calculating the inverse of the number of respondents in each district out of the total respondents of the survey (N=376) divided by the total of districts (N=62). For example, in a district with 18 respondents, individuals in this district had survey weights of 0.34 (i.e., 376/18/62). Individuals in districts with 5 respondents had survey weights of 1.21 (i.e., 376/5/62). Survey weights ensured that districts with more respondents were not being overcounted in our analysis and that districts with fewer respondents were not being under counted. This approach is consistent with the approach taken in reports on the Principal Pipeline Initiative (Gates et al., 2019)..

Constructing Composite Measures

We constructed two scales, or composite measures, combining multiple items to measure the overall status of leadership pipelines across domains and the district capacity for leadership development work. To create these scales, we first reverse-coded any negatively worded items. We then conducted an exploratory factor analysis using promax rotation to reduce the items into a single, composite measure. We imputed missing values on individual items using the respondent mean on all non-missing items before running the factor analysis to calculate the composite variable.

Table A2 shows the survey items included in these measures.

Table A2. Survey Items in Composite Measures

Status of Leadership Pipeline Domains (Cronbach's alpha = 0.84)

Which option best describes the status of your district's leadership pipeline in the following domains this school year (2021–22)? [Not a priority at this time; Under discussion; In planning; Started to implement; Fully operational; Don't know]

- Creating or implementing rigorous professional standards for leaders
- Providing high-quality pre-service training for aspiring leaders
- Creating selective hiring and placement systems for leaders
- Improving professional development and support for current leaders
- Strengthening the role of Principal Supervisors
- Redesigning the principal evaluation system
- Developing a Leader Tracking System (data systems to inform hiring, placement, and vacancies)
- Sustaining the leadership pipeline for the longer term (e.g., funding, personnel)

District Capacity (Cronbach's alpha = 0.81)

To what extent do you agree or disagree with the following statements about your district's leadership pipeline work this school year (2021–22)? [Strongly disagree; Disagree; Agree; Strongly agree; Don't know]

- Our superintendent is very supportive of the pipeline work
- The pipeline work has a clear leader
- The people leading the pipeline work have a lot of relevant expertise
- The people leading the pipeline work have enough time to do the work
- The core team involved in the pipeline work collaborate well together
- Our district has available financial resources necessary for pipeline work
- The pipeline work fits well with other district initiatives
- Central office silos slow down the work*
- Central office culture slows down the work*
- There has been high turnover among those involved in developing the leadership pipeline*

Note. * indicates item was reverse coded

INTERVIEWS

District Sample

We purposively sampled 30 districts where there was a high likelihood that they remained engaged in leadership pipeline development and planning. We developed a sampling frame based on preliminary outreach to the districts to determine PPLC participants. We then supplemented this initial list with researcher nominations based on Year 1 interview data, indicating the district was working on leadership pipelines. We also included districts in the PPLC that were part of three statewide networks (California, Florida, or Texas). In total, 62 districts in the sample completed the survey out of the 84 PPLC districts, and 22 did not. Of the 30 districts that participated in interviews, 12 were interviewed in Year 1 as well, and 18 were new to the sample.

District Central Office Interviews

We interviewed up to four members from each district's core leadership development team, including the team leader (excluding superintendents). In some cases, the team leader was the point person for the PPLC, while in other cases due to turnover, these participants were not team leaders during the PPLC. All of them, however, were part of the PPLC team prior to taking on this position and were well-versed in the initiative and the work. We used a snowball sampling approach to select the other team members to interview after the district team leader. We asked team leaders for recommendations based on their roles in leadership pipelines in their districts. We also reviewed rosters of PPLC participants, which were provided by The Wallace Foundation to supplement team leaders' nominations. We conducted interviews with an additional 56 district staff across the 30 district teams. In total, we interviewed 86 district personnel.

Analyses

We conducted semi-structured, hour-long interviews with participants remotely via Zoom. The study team developed interview guides and questions to address three main areas: a) the status of leadership pipelines; b) the district contexts, supports, and barriers of leadership development; and c) the components of the accelerated take-up model in the PPLC. We also asked about equity and diversity within the context of pipelines.

Interviews were transcribed and analyzed by research team members using an iterative process based on both *a priori* codes aligned with the study goals and themes, and emergent codes to capture themes and patterns that unfolded during data collection. To ensure interrater reliability, research team members independently coded transcripts and compared codes, discussing discrepancies. After coding the data, we compiled case memos for each district. We used these memos to identify cross-district themes and variation.

Table A3. Interview Sample

2021–2022	Interview Sample
District Size	
Medium	11 districts (37% of districts in sample)
Large	11 districts (37% of districts in sample)
Extra Large	8 districts (27% of districts in sample)
Region	
Northeast	2 districts (7% of districts in sample)
Midwest	6 districts (20% of districts in sample)
South	16 districts (53% of districts in sample)
West	6 districts (20% of districts in sample)
Statewide Networks	
In state with statewide network (i.e., CA, FL, TX)	13 districts (43% if districts in sample)
Not a member of a statewide network	17 districts (57% of districts in sample)
Interview Round	
Interviewed in 2021 and 2022	12 districts (40% of districts in sample)
Interviewed only in 2022	18 districts (60% of districts in sample)

Appendix B: Participating Districts

Table B1. PPLC Participating Districts

State	District Name	State	District Name
AZ	Mesa Public Schools	FL	Miami-Dade County Public Schools
CA	ABC Unified School District	FL	Orange County Public Schools
CA	Fairfield-Suisun Unified School District	FL	Pasco County School District
CA	Fresno Unified School District	FL	Pinellas County Schools
CA	Long Beach Unified School District	FL	School District of Osceloa County
CA	Los Angeles Unified School District	FL	School District of Palm Beach County
CA	San Francisco Unified School District	FL	Seminole County Public Schools
CA	Santa Ana Unified School District	GA	Dekalb County School District
CA	Sweetwater Union High School District	GA	Henry County Schools
CO	Aurora Public Schools (Adams & Arapahoe Joint School District)	GA	Savannah-Chatham County Public School System
CO	Colorado Springs School District 11	HI	Hawaii Public Schools
		IA	Des Moines Independent Community School District
CO	Jeffco Public Schools (Jefferson County R-1 School District)	IN	Fort Wayne Community Schools
CT	New Haven Public Schools	IN	Indianapolis Public Schools
DC	District of Columbia Public Schools	IN	South Bend Community School Corporation
FL	Brevard Public Schools	KS	Kansas City Public Schools
		KS	Wichita Public Schools
FL	Broward County Public Schools	KY	Fayette County Public Schools

State	District Name	State	District Name
KY	Jefferson County Public Schools	OR	Portland Public Schools
MA	Boston Public Schools	OR	Salem-Keizer Public Schools
MD	Anne Arundel County Public Schools	PA	Pittsburgh School District
MD	Baltimore County Public Schools	PA	School District of Philadelphia
MD	Baltimore County Public Schools	PR	Puerto Rico Department of Education
MI	Utica Community Schools	SC	Aiken County Public School District
MN	Minneapolis Public Schools	SC	Charleston County School District
MO	Saint Louis Public Schools	SC	Greenville County Schools
MO	Springfield Public Schools	TX	Arlington Independent School District
NC	Cumberland County Schools	TX	Austin Independent School District
NC	Guilford County Schools	TX	Cypress-Fairbanks Independent School District
NC	Wake County Public School System	TX	Dallas Independent School District
NC	Winston-Salem/Forsyth County Schools	TX	El Paso Independent School District
NE	Omaha Public Schools	TX	Fort Bend Independent School District
NJ	Newark City Schools	TX	Garland Independent School District
NJ	Paterson Public Schools	TX	Houston Independent School District
NM	Albuquerque Public Schools	TX	Katy Independent School District
NV	Clark County School District	TX	North East Independent School District
NY	Buffalo Public Schools		
NY	Yonkers Public Schools		
OH	Cincinnati Public Schools		
OH	Cleveland Municipal School District		
OH	Columbus City Schools		

State	District Name
TX	Pasadena Independent School District
TX	Plano Independent School District
TX	San Antonio Independent School District
UT	Alpine School District
UT	Salt Lake City School District
VA	Fairfax County Public Schools
VA	Virginia Beach City Public Schools
WA	Seattle Public Schools
WI	Green Bay Area Public School District
VA	Virginia Beach
WA	Seattle Public Schools
WI	Green Bay Area Public