



The Importance of Teaching and Learning Conditions

Influences on Teacher Retention and School Performance in North Carolina

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Abstract

This brief draws on a study of teacher working conditions and their relationship to teacher retention and school performance in North Carolina. It is part of a series of studies conducted by the Learning Policy Institute—in collaboration with WestEd and the Friday Institute for Educational Innovation at North Carolina State University—as part of an action plan developed to inform ongoing efforts to ensure compliance with the North Carolina Supreme Court’s decision in *Leandro v. the State of North Carolina*. That case affirmed the state’s constitutional responsibility to provide every student an equal opportunity for a sound basic education, including access to qualified teachers and administrators. Requested by the court in conjunction with both plaintiffs and defendants, the action plan aims to identify root causes of current inequalities and evidence-based solutions to meet the constitutional standard.

This brief is based on an LPI report published in 2019: *How Teaching and Learning Conditions Affect Teacher Retention and School Performance in North Carolina*, available at <http://bit.ly/2WpZhM9>. The Action Plan and 12 associated reports can be found at <https://www.wested.org/resources/leandro-north-carolina/>.

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Over the past 2 decades, a growing body of research has shown how the character of the workplace can influence the overall quality of teaching, teacher retention, and school improvement.¹ Studies have begun to pinpoint how:

- The organizational characteristics of schools influence teachers’ career paths, including decisions about whether to stay in or leave the profession.²
- High rates of teacher turnover have an adverse impact on student achievement.³
- Districts pay high costs to replace teachers who leave.⁴

The evidence on the importance of teacher working conditions continues to mount. For example, Helen Ladd found that working conditions are “highly predictive” of North Carolina teachers’ stated intentions to remain in or leave their schools, with school leadership emerging as the most important factor.⁵

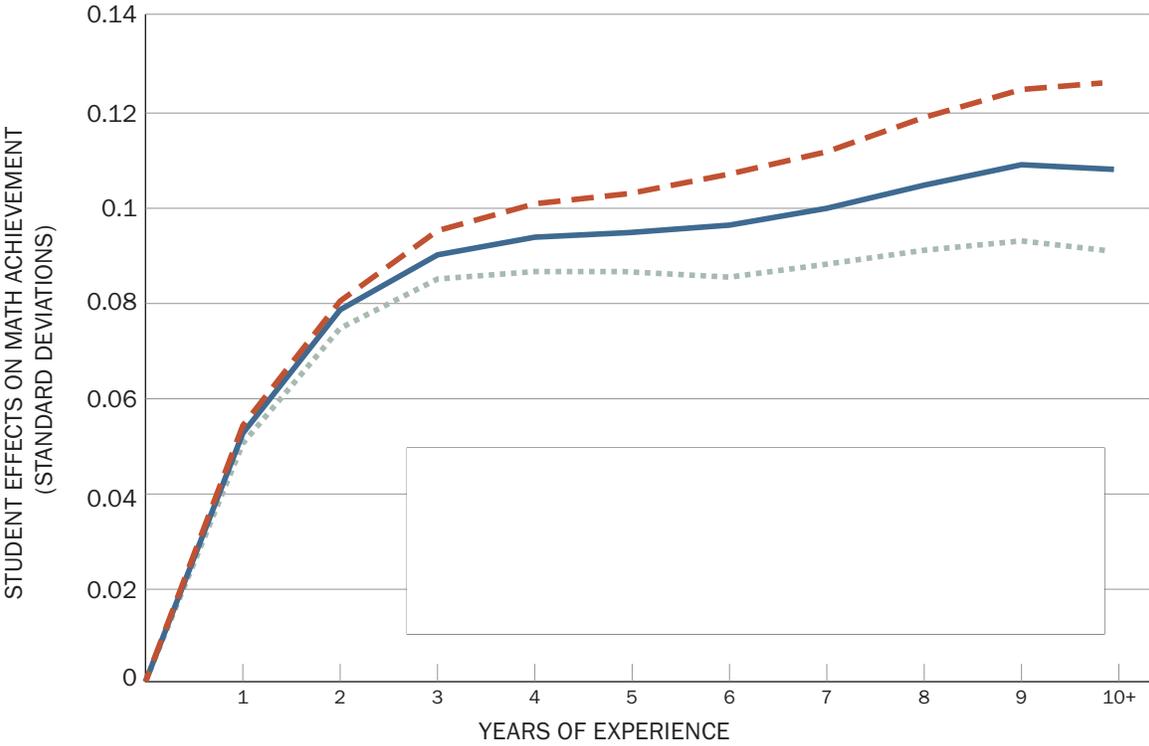
Another North Carolina study looking at 10 years of data found that teachers working in schools with strong professional environments improved their effectiveness over time by 38% more than did peers in schools with weak environments.⁶ The environments that supported teacher improvement provided supportive principal leadership, opportunities for peer collaboration, effective professional development, meaningful feedback, trust, and order. (See Figure 1.)

These studies are part of a growing research base finding links between the quality of school working environments and outcomes for students and teachers. And the qualities of these more positive and professional working environments have been shown to serve as critical building blocks for schools developing collective teacher efficacy, which some new research suggests is one of the most important factors influencing student achievement.⁷

The importance of collaboration was reinforced in a recent study, conducted in the midst of the pandemic-forced pivot to remote teaching. While the shift to online teaching resulted in a sudden, large drop in most teachers’ sense

of success, those who experienced “facilitated, meaningful collaboration with colleagues” were least likely to experience a drop in self-efficacy.⁸ Another investigation found that the disruption in teaching and learning fueled teachers’ interest in and need for greater collaboration among their peers.⁹

Figure 1
Predicted Returns to Teaching Experience Across Schools With Strong, Average, and Weak Professional Environments



Source: Adapted from Kraft, M., & Papay, J. (2014). Can professional environments in schools promote teacher development? Explaining heterogeneity in returns to teaching experience. *Educational Evaluation and Policy Analysis*, 36(4), 476–500.

Exploring Working Conditions and Their Effects

This brief reports on the results of analyses of the relationship between teaching and learning conditions and both student and teacher outcomes using survey, interview, and case study data. Our approach was threefold.

- First, our partners at the Education Policy Initiative at Carolina (EPIC) analyzed the 2016 North Carolina Teacher Working Conditions (TWC) survey results—a survey collected every 2 years since 2004—and a wide array of available school-level administrative data to assess whether working conditions and other school-level variables influence teacher retention and school performance. A factor analysis identified the core constructs for the analysis, and multivariate regression analyses were used to assess relationships between teachers’ perceptions and their attrition rates, as well as student achievement in both high- and low-poverty schools. (See “Key Factors That Emerged From the Teacher Working Conditions Survey Data Analysis.”)

- Second, we conducted focus group interviews during the summer of 2018 with a representative mix of 30 teachers from high- and low-poverty schools and from urban, rural, and suburban schools from across the state to better inform our understanding of how they experience teaching and learning conditions in their schools.
- Third, we drew upon the interviews produced in site visits in 2018 and 2019 to four North Carolina schools, representing high-poverty and low-poverty contexts in both urban and rural communities, which enabled us to offer more context and deeper analysis for the primary survey and focus group data for this study.

Key Factors That Emerged From the Teacher Working Conditions Survey Data Analysis

Teacher and school leadership: Teachers are recognized as experts and are supported to meet high standards, are involved in decision-making, and are tapped for school leadership positions.

Professional learning and collaboration: Professional development is readily available, useful, focused on practice, aligned with school improvement, and collaborative.

Community support and parent engagement: Families and the community are informed, engaged, consulted, and supportive of the school and teachers.

Teachers' collective practice and efficacy: Teachers develop collective practices for teaching and assessing student work and have a strong sense of their efficacy in supporting student success.

Instructional resources: Teachers have sufficient access to instructional resources, including digital tools, content, and communication technologies, as well as training.

Time for teaching: Teachers have reasonable time for collaboration and planning, class sizes to meet student needs, and few interruptions and other duties.

Student conduct: Students and faculty know, follow, and enforce expectations for conduct and are supported by administrators in doing so.

Conducive physical environment: The school is clean, well maintained, and offers appropriate space and classrooms for teaching and learning.

Student assessment data: State and local assessment data are available in time to impact instruction and are viewed as assessing learning standards.

Influences on Teacher Retention

Between 2015–16 and 2016–17—the most recent data available at the time this study was conducted—the average school-level teacher retention rate in North Carolina was 80%. In the lowest-poverty schools the retention rate was nearly 84%, whereas in the highest-poverty schools the retention rate was 73%.

Across all schools, six of nine working-condition factors were positively associated with teacher retention:

- teacher and school leadership,
- professional learning and collaboration,
- community support and parent engagement,
- teachers' collective practice and efficacy,
- time for teaching, and
- student conduct.

Almost all of these factors have even stronger associations with teacher retention in high-poverty schools. (See Table 1.)

Table 1
Relationship Between School Working Conditions and School-Level Teacher Retention

Factors	All Schools	High-Poverty Schools (Top 2 Deciles)	Low-Poverty Schools (Bottom 2 Deciles)
Teacher and school leadership	1.269** (0.144)	1.966** (0.305)	0.849** (0.275)
Professional learning and collaboration	0.469** (0.172)	0.920* (0.375)	-0.130 (0.264)
Community support and parent engagement	1.771** (0.225)	2.480** (0.464)	1.403* (0.685)
Teachers' collective practice and efficacy	0.519** (0.178)	1.105** (0.430)	0.413 (0.364)
Instructional resources	0.302 (0.164)	0.060 (0.405)	0.333 (0.321)
Time for teaching	0.672** (0.194)	0.504 (0.509)	0.701* (0.335)
Student conduct	0.569** (0.192)	1.293* (0.498)	-0.071 (0.427)
Conducive physical environment	-0.137 (0.148)	0.198 (0.315)	-0.773** (0.256)
Student assessment data	-0.810** (0.244)	-1.269* (0.576)	-0.411 (0.441)
Observation Count	2,399	481	480

Notes: *p < 0.05; **p < 0.01. This table displays regression coefficients and standard errors (in parentheses) from models examining the association between school-level teacher retention and school working-condition constructs. Models also control for school level (elementary, middle, or high school), percentage of economically disadvantaged students, percentage of minority students, school size, teacher-student ratio, percentage of novice teachers, percentage of National Board-certified teachers, total per-pupil expenditures, average teacher salary supplement, State Board of Education region, North Carolina Department of Commerce economic tier classification, and type of community (city, suburb, or rural).

Data source: Education Policy Initiative at Carolina (EPIC) analysis of 2016 North Carolina Teacher Working Conditions survey data and school-level administrative data. See: Berry, B., Bastian, K. C., Darling-Hammond, L., & Kini, T. (2019). *How teaching and learning conditions affect teacher retention and school performance in North Carolina*. Palo Alto, CA: Learning Policy Institute.

It is important to note that in the full model, the percentage of inexperienced teachers in a school has a significant negative association with teacher retention ($p < 0.001$), and the size of a district’s teacher supplement has a significant positive association with teacher retention ($p < 0.05$). As one would expect from the literature, better-paid teachers who have more positive working conditions are more likely to stay in the profession and in their schools.¹⁰

Teacher retention was negatively related to using student assessment data to impact instruction. It may be that schools with a strong focus on using test data were those in which there was significant pressure to raise scores—often the case in low-scoring schools that serve concentrations of students in poverty. This pressure may encourage or be coincidentally associated with higher teacher attrition. In the national Schools and Staffing Surveys, the most frequently cited reason for leaving the profession in 2012, during the No Child Left Behind era, was dissatisfaction with student testing and accountability, cited by 25% of teachers who left.¹¹

Influences on School Performance

The study’s analysis found that teaching and learning conditions also predict school performance, as defined by the North Carolina School Performance accountability system’s measures for “failing to meet,” “meeting,” or “exceeding” the school’s expected growth. Teaching and learning conditions proved particularly powerful in predicting the likelihood of a school exceeding its growth target relative to failure to meet the target. (See Table 2.)

Table 2
Associations Between School Working Conditions and School EVAAS Growth Status

Factors	All Schools	High-Poverty Schools (Top 2 Deciles)	Low-Poverty Schools (Bottom 2 Deciles)
Meets Growth (Relative to Does Not Meet)			
Teacher and school leadership	1.113 (0.095)	1.102 (0.525)	1.241 (0.194)
Professional learning and collaboration	1.040 (0.510)	1.079 (0.655)	1.019 (0.890)
Community support and parent engagement	1.142 (0.093)	1.046 (0.802)	1.462 (0.186)
Teachers’ collective practice and efficacy	1.232** (0.002)	1.221 (0.205)	1.212 (0.184)
Instructional resources	0.962 (0.474)	0.870 (0.313)	0.918 (0.574)
Time for teaching	1.001 (0.985)	0.749 (0.061)	0.919 (0.717)
Student conduct	1.508** (0.000)	1.281 (0.097)	1.657** (0.007)
Conducive physical environment	1.058 (0.345)	1.098 (0.501)	1.338* (0.019)
Student assessment data	1.072 (0.381)	1.187 (0.363)	0.982 (0.921)

Factors	All Schools	High-Poverty Schools (Top 2 Deciles)	Low-Poverty Schools (Bottom 2 Deciles)
Exceeds Growth (Relative to Does Not Meet)			
Teacher and school leadership	1.356** (0.000)	1.444* (0.047)	1.388 (0.071)
Professional learning and collaboration	1.038 (0.591)	0.994 (0.969)	1.077 (0.635)
Community support and parent engagement	1.451** (0.000)	1.693* (0.033)	1.993* (0.039)
Teachers' collective practice and efficacy	1.421** (0.000)	1.202 (0.328)	1.648** (0.004)
Instructional resources	1.025 (0.698)	0.959 (0.788)	0.815 (0.305)
Time for teaching	1.218* (0.018)	1.079 (0.752)	0.833 (0.499)
Student conduct	1.933** (0.000)	1.765** (0.002)	2.060** (0.000)
Conducive physical environment	1.070 (0.310)	1.018 (0.907)	1.362* (0.029)
Useful student assessment data	1.223* (0.047)	0.935 (0.806)	1.194 (0.458)
Observation Count	2,282	418	475

Note: *p < 0.05; **p < 0.01. This table displays relative risk ratios and p-values (in parentheses) from models examining the association between a school's Education Value Added Assessment System (EVAAS) growth status and school working-condition constructs. Risk ratios greater than 1 are positive; risk ratios less than 1 are negative. Models also control for school level (elementary, middle, or high school), percentage of economically disadvantaged students, percentage of minority students, school size, teacher-student ratio, percentage of novice teachers, percentage of National Board-certified teachers, total per-pupil expenditures, average teacher salary supplement, State Board of Education region, North Carolina Department of Commerce economic tier classification, and type of community (city, suburb, or rural).

Data source: Education Policy Initiative at Carolina (EPIC) analysis of 2016 North Carolina Teacher Working Conditions survey data and school-level administrative data. See: Berry, B., Bastian, K. C., Darling-Hammond, L., & Kini, T. (2019). *How teaching and learning conditions affect teacher retention and school performance in North Carolina*. Palo Alto, CA: Learning Policy Institute.

For example, across all schools, teachers' collective practices and efficacy, along with student conduct, were positively associated with whether a school met expected growth in test scores. These two factors, along with teacher and school leadership, community support and parent engagement, time for teaching, and student assessment data, also predicted the school's probability of exceeding its growth target.

Schools that exceeded their achievement growth targets were also more resource rich: They had more teachers, a greater proportion of National Board-certified teachers, and higher levels of total spending. These resources were more plentiful in schools serving more affluent students. For example, the proportion of National Board-certified teachers was three times higher in low-poverty than high-poverty schools, 15% and 5%, respectively. Since 2009, the share of such teachers has declined in high-poverty schools and increased in low-poverty schools, as growing inequality has appeared in North Carolina.

Leadership: The Importance of Principal Support for Teacher Leadership

Both principal and teacher leadership were strong predictors of teacher retention and school performance. Other studies using North Carolina TWC data have shown that teacher ratings of their teaching and learning conditions depend on which principal is leading the school, independent of other school and district contextual factors.¹² Principals often serve as gatekeepers to teacher involvement in decision-making, collaboration, and instructional support—all conditions that lead to teachers’ collective efficacy.

Our focus group interviews reinforced the fact that principal leadership matters most in the cultivation of teachers’ own leadership. And a key goal of teacher leadership is to ensure that those who work most closely with students and families can lead instructional improvement efforts and make sure that teaching expertise spreads. As a Wake teacher noted, and as research has well documented, “Good principals build trust and trust teachers to lead.” A teacher from Guilford noted, “[Principals] need to treat you as a professional. Firm is just fine, but not overbearing in a traditional boss sense.”

Another teacher, also from Guilford, noted how her principal led effectively as an instructional leader: “She is in and out of our classrooms all the time, but she does not micromanage us.” A number of teachers interviewed told us of how they moved to certain schools to work with principals who led in these ways because, according to one teacher, they “know how important it is for us to lead.”

When asked how they want to lead, teachers talked primarily about mentoring and coaching colleagues and novices. Some wanted the time and space to create new models of teaching and learning.

One teacher from Durham had learned about community schooling and wanted more time to lead efforts in this way in the district. He noted that community schooling enables the quintessential form of teacher leadership—the opportunity for those who teach to redesign their schools to be more responsive to students. He noted:

We are creating a community-based school model in Durham, and that could create all kinds of teacher leadership opportunities. Most want to be involved in mentoring, curriculum, and coaching.... Instead of bringing people in for professional development, we create space for teachers to help other folks out. I think in particular about developing teachers as leaders in order to create opportunities for more student engagement ... and for us to meet the kids’ academic needs as well as those of the community.

Professional Learning and Collaboration: The Importance of Time and Support

Professional learning, properly structured, positively influences teacher retention and the kind of collective efficacy necessary for long-term school improvement. Particularly in high-poverty schools, certain aspects of teachers’ professional learning identified in survey items were associated with greater teacher retention: these included professional learning that is aligned with school improvement plans, that encourages reflection on practice, and that offers opportunities for follow-up efforts that relate to specific training.

North Carolina teachers polled about their professional development needs identified a number of areas in which a majority feel they need more professional development, including differentiating instruction, serving students with disabilities in special education, teaching English learners, closing the achievement gap, and integrating technology into instruction.

However, only 20% strongly agreed that “sufficient resources are available for professional development” and that their schools “provide ongoing opportunities for teachers to work with colleagues to refine teaching practices”—both characteristics of high-quality learning environments.

A teacher from a low-poverty school with substantial collaboration time described high-quality professional development as follows:

We have each other. We teachers could not come close to differentiating the way our students need without the co-planning and co-teaching that the school’s leadership team helps us engage in. Our principal helps us help each other.

However, this kind of environment seemed to be the exception, not the norm. Teachers from four different districts noted:

So much of our professional development time is district driven. It can be real or somebody reading to you off a list of things to do.

Professional development [PD] is always defined by the district. Sometimes it is worthwhile, but often it is not. They could just as well have sent me the PowerPoint. My best PD is when I work with [my colleague who teaches in the room next door].

We rarely work together as a team the way we want to.

We have no time to collaborate and look at each other’s data. We mostly do this independent of each other. If we do [professional learning communities], it is after school, and it is once a month, and it is assigned. We rarely have choice.

Most teachers also reported that they have very few chances to see one another teach.

Developing Collective Efficacy: The Importance of Preparation and Mentoring

Teachers’ learning opportunities influence the degree to which teachers develop a sense of collective efficacy. Teachers from low-poverty schools were more likely to describe how collaborative learning occurred in their schools, often by a school’s expert teachers having time to work closely with novices, constructing joint lessons, assessing each other’s student work, and seeing each other teach. These teachers tended to have time to observe each other’s teaching. As one teacher who teaches in a low-poverty school noted: “Many of us are National Board certified, and we find time to help each other get better.”

In high-poverty schools, teachers' collective efficacy was often undermined by inadequate mentoring, which was due in part to the fact that such schools typically had a large number of novices—many of them entering through alternative routes without prior preparation—and very few expert veterans. An experienced teacher who teaches in a high-need, urban school talked about the challenges that underprepared recruits have in teaching in the district—and the mismatch in numbers between those who need support and those who can offer it:

In my district, we are losing 60-plus percent of teachers within the first 5 years. We do not have a lot of veterans around ... to mentor [them]. The first 5 years of teaching (in schools like mine) is like learning to tie your shoes. You have so much to learn about this community and its students.

In 2018, fewer than half (47%) of the state's new teachers reported that they had release time to observe other teachers, and 44% of the novices said they rarely or never developed lessons with their mentors. Most (76%) of them rarely or never observed their mentor's teaching, and 63% of them were rarely or never observed by their mentors.

Only 1,000 of the approximately 15,000 teachers in the state with less than 3 years of experience were supported by the state's formal mentoring program. One teacher, from a rural district, noted:

There used to be a mentoring program in the state where the mentors were trained. I was trained 15 years ago, and [the training] was a week long.... You had new teachers assigned to you and you were supposed to meet with them once a week.

Another teacher, who teaches in the same district, weighed in:

Now it is a "pretend-to" program with an online tutorial. I know young teachers at my school have "mentors," and they'll say that they haven't seen them. They don't meet with them.

These teachers see the consequences of inadequate mentoring as significant for both new recruits and the students they teach, undermining the development of the collective efficacy that pays off for retaining new recruits to teaching.

Teachers' efficacy is also undermined by lack of preparation. Well documented in both national studies and in our own supply and demand investigation in North Carolina,¹⁵ high-poverty schools experience a revolving door of underprepared teachers. More than half (53%) of the state's lateral-entry teachers—who enter teaching before they have had training—are found in high-poverty schools.

Underprepared teachers teaching in high-poverty schools rarely have the knowledge and skills to adequately support student learning and address the social-emotional learning needs of their students. And without significant training in teaching high-need students, teachers struggle to contribute to consistent and equitable school discipline policies and practices. We found that such practices are a key factor in teacher retention. The survey revealed that productive student behaviors and a safe environment, along with consistent enforcement of norms by teachers and principals, are major predictors of both teacher retention and student achievement gains.

The research team heard a great deal about how the lack of pedagogical skills on the part of underprepared teachers, combined with the lack of mentoring supports, exacerbated problems with student behavior, particularly through the use of inappropriate disciplinary measures in response to trauma-induced behaviors. One young recruit with an art history major in college, now teaching special education in a high-poverty school, described the challenges she faced with student behavior. She said, “I really do not know how to manage children with all of their issues and their parents who are not involved with them at home.” She was preparing to leave her high-need school before she had even completed her training. A teacher from a rural high-poverty school who entered through a lateral-entry program explained in animated fashion:

I was a lateral-entry teacher. Like others have said, I was thrown into the classroom, and I had never done a lesson plan before, and administrators were saying things to me like, “Oh, you’re going to do this part of the lesson,” and I’m like, “I don’t even know what to do.”

Community Support: The Importance of a Whole Child Support System

The study also pointed to the important role that community support and parent engagement play in teacher retention as well as school performance. Among the most important survey items predicting teacher retention are those associated with community support and with parent or guardian engagement with the school—being informed by the school and teachers, being involved, and being engaged in decision-making.

The need for community support was a prominent part of focus group conversations. Teachers pointed out that their effectiveness in the classroom was often undermined by the lack of community resources needed to serve their students. One teacher observed, “In one of our towns, there is no more recreation department. All of the after-school sports programs are dissolved, and even the grass on the fields has to be cut by volunteers.” Another teacher from the same district said, “We don’t have YMCAs or Boys and Girls Clubs here. Our kids need that safe after-school environment.”

While some teachers called for better instructional materials and resources, many focused on the physical, social, and mental health services students need in order for them to learn. A teacher from a rural community was explicit in describing the link between lack of resources needed to serve students and the willingness of teachers to remain in the classroom. She said:

Before I started teaching, I worked in mental health in the community.... And that drew me to become a teacher. We don’t have the resources that we need.... It is harder for me to do what I know how to do.... This is why we lose new teachers.

Many teachers who teach economically disadvantaged students spoke about the kind of professional learning they need to effectively teach school content to students. But in high-poverty schools, teachers would often first discuss what they needed to do to “parent, barber, and (even) clothe” their students. One teacher said she had spent more than \$1,000 of her own money this past year, plus donations from her parents and friends, so her students would have “basics like pencils, notebooks, food, and posters” for her classroom.

Another teacher, also from a rural community, pointed to food insecurity and the hunger that her students experience that undermines academic progress. She noted, “We fill up their backpacks for home; we provide food on the weekends and clothing as well.”

Conclusions and Recommendations

Given the strong evidence about conditions that enable teachers to do their work more effectively, several policy strategies seem warranted:

1. Invest in **principal preparation and professional learning** that enables principals to cultivate collaborative working environments, teacher-led learning, and teacher leaders

The strong effects of principals on student learning are accomplished substantially by principals’ ability to foster collegial learning and collective action among teachers.¹⁴ Principals who understand how to create conditions for distributed leadership in their schools and who value and know how to involve teachers in shared decision-making have a strong, positive impact on both teacher effectiveness and teacher retention. Like many other states, North Carolina has a declining supply of well-qualified school principals; a relatively inexperienced principal workforce, especially in high-poverty schools; and a principal workforce that does not feel well prepared to recruit and retain teachers or to lead school change efforts. Between 2009–10 and 2016–17, the number of new principals provided by the University of North Carolina system—the primary source of principals for North Carolina public schools—dropped by 56% (from 539 to 301).¹⁵ North Carolina currently allocates no state funds to professional development for principals.

Strong models exist in the state for preparing principals, including the North Carolina Principal Fellows program, which has a 25-year track record of success in preparing principals whom research has found to be effective and who are more likely to remain in their positions. The state can:

- Expand and leverage this program, now merged with the Transforming Principal Preparation Program (TP3)—which provides a full-year paid residency or internship working alongside an expert principal—and ensure that both the residency and aligned coursework provide support to principal candidates in learning how to cultivate collaborative working environments that support teacher learning and build teacher leadership, that create community and parent engagement, and that enable students to be well supported in their learning. Policy tools for leveraging these program improvements include licensing and accreditation standards as well as funding for specific program designs.
- Make investments in mentoring, induction, coaching, and other professional learning opportunities for principals, assistant principals, and teacher leaders through a statewide leadership academy (an approach used in more than 20 other states) that trains leaders on how to develop and lead environments that support student and teacher learning.
- Ensure that principal evaluation systems include criteria for building collegial workplaces and cultivating teachers as leaders for school improvement.

2. Build **teacher leadership** and a cadre of expert teachers, especially in high-need schools

Our research highlighted the strong relationship between teachers' collective efficacy and both teacher retention and student achievement. Our research also highlighted the importance of teacher leadership for developing collective efficacy, and we found that high concentrations of expert teachers in a school (e.g., National Board–certified teachers) are associated with strong student achievement growth. At the same time, teachers told us about the difficulty of building this kind of collective capacity when novice teachers have limited access to mentoring and coaching from expert colleagues.

North Carolina can help build greater capacity in its schools by developing a cadre of teacher leaders across the state who are able to facilitate teacher-led professional learning with their colleagues in person and virtually. This can be accomplished by:

- Providing **incentives for National Board–certified teachers** (NBCTs) to teach in high-poverty schools. North Carolina has long been a leader among states in providing financial incentives for teachers who obtain National Board Certification, a policy that has helped the state to distinguish itself in terms of the percentage of NBCTs statewide. However, to address the stark inequities in access to NBCTs between low-poverty and high-poverty schools—a 3-to-1 difference—the state should consider a multiyear additional stipend for NBCTs who teach in high-poverty schools, a policy that can also serve as a recruitment and retention strategy for these schools. Many other states and districts have adopted such policies, including Alabama, Arkansas, Colorado, Hawaii, Maryland, Mississippi, Montana, Utah, Washington, West Virginia, and Wisconsin.¹⁶ In California, research has suggested that statewide stipend payments of \$20,000 (spread over 4 years) to teachers who had earned National Board Certification and worked in low-performing schools expanded access to such teachers in schools serving concentrations of low-income and minority students.¹⁷ The state stipend was paid out over 4 years only to teachers who stayed in the high-need schools, and many teachers from these schools applied for and were supported in achieving National Board Certification by support groups designed to help them reach this goal.

State policy can also better leverage the financial incentives the state provides for NBCTs—including additional incentives for NBCTs in high-poverty schools—by linking these incentives to increased opportunities and training to serve as mentors and instructional leaders. Florida, for example, for a time offered NBCTs both a certification bonus and a mentoring bonus, equivalent to 10% of salary; the mentoring bonus required the NBCT to provide 12 days of mentoring or other support to colleagues.¹⁸

- Creating and **training statewide cadres of expert mentors and coaches** who can bring mentoring and coaching expertise into schools and districts where they work. North Carolina can grow its cadre of professional learning leaders across the state who are able to facilitate teacher-led professional learning with their colleagues and provide follow-up coaching, which the teachers we interviewed identified as particularly effective. Some states and nations have trained cadres of coaches to assist in implementation of new student standards (e.g., in literacy, mathematics, and science) as well as to address the needs of specific student groups (e.g., English learners, students with disabilities). North Carolina's large contingent of NBCTs, who have had a common professional development experience grounded in deep reflection and are experts in their

particular subject area or field as required by the National Board Certification process, are one resource for the state to tap in this regard. The state might also build upon current efforts, such as the Advanced Teaching Roles Pilot (see SL 2018-5 Section 7.9), to create new mentoring and coaching roles for teachers and compensation models to support them.

Successful models for this work include Arkansas' AR Math QuEST,¹⁹ a set of sustained professional development institutes with curriculum resources supported by state-trained math coaches and specialists, and California's Instructional Leadership Corps (ILC), a partnership between the National Board Resource Center and the California Teachers Association. This "teachers teaching teachers" model trains teacher leaders to lead ongoing professional learning around the state's new math, science, and English language arts standards within their own districts. In the 4 years since its inception, the more than 250 teachers and administrators who comprise the ILC have served more than 100,000 California educators in ways that transform practice through school-based learning, develop additional teacher leaders and instructional leadership among administrators, and strengthen the capacity of schools to implement the state standards.²⁰

- Rebooting a high-quality statewide **beginning-teacher mentoring program** for all beginning teachers, funded to match the needs of high-poverty schools, which have fewer accomplished teachers in them to support new recruits. Teachers who are better prepared and better mentored stay in teaching at much higher rates and are more successful, especially in high-need environments. Although North Carolina offers mentoring and induction for a limited subset of novice teachers, this type of support is not widely available, a factor repeatedly identified in our interviews and focus groups as negatively impacting collective teacher efficacy. A large cadre of NBCTs and other teacher leaders who can be tapped for mentoring and other leadership roles—particularly in high-poverty schools with large percentages of inexperienced and underprepared teachers—can bolster the state's ability to provide support to all novice teachers.

3. Expand and focus resources on **professional development** in high-need areas

The once-extensive infrastructure and funding for professional development in North Carolina has been greatly reduced, and many teachers report that what is being offered often fails to meet the standards of high-quality professional development: sustained over time; featuring active learning and collaboration for teachers; and content-focused and job-embedded, with opportunities for developing new practices supported by coaching and reflection.²¹

Meanwhile, the 2018 TWC survey results, as well as our interviews and focus groups, reveal a number of closely related areas in which a majority of North Carolina teachers say they need more professional development, including differentiating instruction, serving students with disabilities in special education, closing the achievement gap, and integrating technology into instruction. Our interviews and other research conducted for this project also suggest that teachers need and want additional professional development in social-emotional learning and restorative practices, as well as in trauma-informed practices and culturally responsive teaching. The latter is particularly important given the demographic mismatch between North Carolina's teaching workforce—80% White—and its student population, which is 52% students of color and has a rapidly growing immigrant student population.

In addition to developing a leadership cadre to support professional learning in the state's schools, North Carolina can further support these needs by:

- Leveraging P-20 (preschool through college) partnerships—as well as technology—to develop and support professional learning for educators within their subject and grade level to support their curriculum, instruction, and assessment learning. Blended communities of practice within content areas, such as the subject-matter projects run in several states, organized and supported by school–university partnerships on a regional basis and assisted by technology (especially for isolated rural communities), could meet this need. These partnerships could also reduce siloes between preservice and in-service teacher development.
- Expanding and focusing resources on professional development in high-need communities with high-quality models (e.g., strong institutes with expert coaching) where teachers report they need support for:
 - special education and differentiated instruction,
 - culturally responsive teaching,
 - trauma-informed practices,
 - social and emotional learning and restorative practices, and
 - development of community schools.
- Creating a personalized professional development plan for new teachers—and potentially all teachers—to guide induction and professional development. Teachers across North Carolina enter teaching through diverse pathways and need more customized learning opportunities, which can be spurred by the use of data from the state's assessment of student teachers, the edTPA (a well-developed teacher licensing exam), and early teaching evaluations.

4. Invest in **teaching and learning conditions** that influence retention and effectiveness

Our research findings point to the critical role that community support and parent engagement play in teacher retention and school performance. The overwhelming physical, social, and mental health needs of students, particularly in high-poverty schools—combined with a lack of in-school and out-of-school resources to meet those needs—leaves many teachers feeling overwhelmed and ineffective and drives them from the classroom. State investments are needed to make widely available the physical, mental, and social services for students and their families that will enable them to thrive in schools, including adequate numbers of counselors, nurses, and social workers. This can be accomplished by:

- Continuing the biennial **Teacher Working Conditions (TWC) survey** and strengthening systems to use the results of these surveys to inform school, district, and state improvement.
- Creating **community schools** that enable schools to provide resources, opportunities, and supports to address out-of-school barriers to learning.²² Some North Carolina communities have made a sizable investment in community-school and wraparound programs, which the state can

further build on by providing funds and technical assistance to school districts and community partners. It is important to note that the community-school model, whose key features include collaborative practices and leadership as well as family and community engagement, can help to address some additional drivers of teacher attrition identified in our research. The pandemic has further exposed the deep inequities in our education system—pointing to the inadequacies of one-size-fits-all school reforms and the dramatic need for more collaboration among education, health, and social agencies in order to effectively reach and teach children.

- Revising the **accountability system** to create a dashboard approach that better informs improvement because it measures growth and provides evidence about the opportunities and conditions associated with learning that may need to be improved—and does so with less stigma to schools and practitioners, which our research and other studies find increases attrition.

This study's findings mirror those of many others, showing how the character of the workplace influences whether teachers leave (or stay) and shapes school improvement, offering insights into how the state of North Carolina can offer a sound, basic education to every student. In order for high-quality teaching to be in place, well-prepared teachers need to work under teaching and learning conditions that enable them to teach effectively.

These findings are helping the state create a comprehensive road map for both excellence and equity for every public school student—and the teachers and administrators who serve them every day. In September 2020, the *Leandro* court issued a consent order—based on a joint action plan submitted by both the plaintiffs and defendants—that outlines actions the state will take to comply with its constitutional obligation to provide every North Carolina child with a sound, basic education.²³ Consistent with the findings of this study, the plan includes actions related to ensuring “each classroom is staffed with a high-quality teacher who is supported with early and ongoing professional learning and competitive pay” and “each school is led by a high-quality principal who is supported with early and ongoing professional learning and competitive pay.”

The parties' joint action plan includes, among other things, expanding access to mentoring and induction for novice teachers through the North Carolina New Teacher Support Program; implementing differentiated staffing roles to extend the reach of high-performing teachers; broadening access to high-quality principal preparation programs, including through the TP3 and Principal Fellows Program; planning for the development of principal professional learning opportunities through a School Leadership Academy; increasing investments in student instructional support personnel (e.g., school counselors, nurses, and social workers); and revising the school accountability model and annual report cards. The findings of this study can continue to guide policymakers and educators in North Carolina as they work to provide every North Carolina child with a sound, basic education.

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