Teachers and School Leaders

Why Is This Issue Important?

Research suggests that the quality of a child's teacher, followed by their school principal, are the in-school factors with the greatest impact on students' learning.[i] But despite this understanding, recruiting, training, and retaining effective teachers and school leaders[1] has not traditionally been well-supported by policy. Over the last five to ten years, issues like teacher and leader evaluation and teacher salaries have been particularly contentious as states asserted greater authority in this area, in part due to federal incentives. To ensure that future policies more effectively support teachers and school leaders and improve student learning, state policymakers can take a more holistic approach and work alongside stakeholders to determine what policies will help to build and maintain a teacher and leader workforce that meets the state's needs.

Guiding Questions for State Leaders

To help inform strategy, state leaders can consider:

Policy Leadership

- What do we know about our state's existing teacher and school leader workforce, including gaps or shortages (e.g., by subject area/grade level, race/ethnicity, geography, etc.)? How might we address potential shortages while not compromising quality?
- Who trains teachers and leaders in our state? Is our state a net producer or importer of teachers? How can we partner with teacher preparation programs (like colleges) to ensure they are responding to districts' needs?
- How does our state gauge teacher and school leader effectiveness?

- What is our state's teacher and leader attrition rate? Do we have data on the factors that lead teachers and leaders to leave and what helps them stay? Are retention rates differentiated by year of entry or by levels of effectiveness? By race/ethnicity?
- What do our constituents (students, families, teachers, leaders, superintendents, etc.) see as the best policies to support teachers and leaders? What are the barriers to seizing on these opportunities?
- How are teacher and school leader salaries set? Does our state have a uniform pay scale? How does teacher pay in our state compare to neighboring states? Within the state, how do salaries for teachers and school leaders in high-poverty and low-poverty schools compare? Or in rural, suburban, and urban settings? What are the policy barriers to differentiating roles and salaries?
- Does our state have goals for the recruitment, support, and retention of high-quality teachers and school leaders generally, and teachers and school leaders of color specifically?
- Does the state have a plan for teacher leadership pathways that offer a variety of opportunities for growth? How do we know?
- Do districts have the flexibility to test new practices to prepare, recruit, support, and retain highly effective educators? What do district leaders say they need?

Engagement

- How do we communicate with teachers and leaders? How can we improve communication?
- How will we proactively communicate about teachers and leaders with the public?

---

1   School leaders is a term that includes both principals and other administrators like assistant principals.

Resources and Oversight

- How will the state help guarantee equitable access to strong teachers and leaders in all communities?
- If applicable, does the state have a plan to ensure that teacher leadership pathways are financially sustainable and compensate educators for added responsibilities? If this is a local issue, are there resources or supports that would be helpful for district leaders, including connecting local leaders with philanthropic dollars?
- How do we leverage ESSA and Title II funds to support goals related to teachers and leaders?
- Do compensation packages, including retirement benefits, reflect the state's interest in attracting and retaining high-quality teachers and school leaders? How can the state ensure that pension plans remain both competitive and financially solvent?
- What laws governing collective bargaining apply to educators in our state?

State leaders planning to take action on teacher and leader issues should begin by engaging stakeholders – including students, families, educators, industry and workforce leaders, district superintendents, community groups, and others.

To support these conversations with stakeholders, it is helpful to understand background and research on teacher and leader issues, promising practices from states, and contested issues that may emerge during discussions.

Background

Over the past decade, federal and state policymakers have tried a number of approaches to improve the quality of teaching (i.e., teacher evaluation, pay raises, teacher leadership pathways) and have focused on different populations (e.g., teacher candidates, novice teachers, effective teachers, school leaders).[ii] These approaches have produced varied results[iii] and some have become politically contentious.[iv]

Increasingly, the national conversation has focused on teacher salaries, as walkouts across multiple states and resulting coverage of teachers' financial struggles have activated educators and galvanized the public.[v] Recent opinion polling suggests that a growing number of Americans (62%) believe that teachers are paid too little[vi], and that they see raising teacher pay as one of the top three ways public education can be improved.[vii]'

In June 2018, the Supreme Court ruled on *Janus v. AFSCME*, striking down laws in 22 states that allowed public sector unions to collect agency fees from employees to bargain on their behalf even if those employees were not members of the union.[viii]

Research

Given the tremendous impact that effective teachers have on student achievement, it is especially important for policymakers to consider:

- Students from low-income families and students of color are disproportionately more likely to be in classrooms headed by the least effective educators compared to their white and affluent peers.[ix]
  - » For students of color (particularly African-American students), having a teacher of the same race can significantly improve outcomes.[x]
- Principals and school leaders play a critical role establishing a positive school culture for students and adults, which in turn creates better conditions for student learning.[xi]
- While there is great variation by community, teacher and principal turnover rates have been on the rise nationally.[xii]
  - » Turnover rates are typically higher in schools that serve predominately students of color and students living in poverty.[xiii] Strong principal leadership can reduce rates of teacher turnover,[xiv] and effective principals are more likely to retain effective teachers and less likely to retain low-performing teachers.[xv]
- Research on teacher shortages shows substantial variation by region, subject area, and school type, with rural schools, schools serving high concentrations of students from low-income families and/or high populations of students of color reporting higher rates of vacancies.[xvi]
  - » Subject areas like STEM and special education are

typically harder to staff than elementary grades or English or social studies classes.[xvii] Teacher accountability reforms may have reduced the supply of new teachers,[xviii] and colleges of education also have reported declines in enrollment.[xix]

- Though teacher compensation does vary across states and districts, wages have not kept pace with inflation.[xx] In contrast, wages for comparable professions have continued to grow.[xxi]
  - » A greater share of teachers' overall compensation is in retirement benefits, which can make these figures difficult to compare, and benefits are concentrated among teachers with more years in the system.[xxii]
  - » Though research on the impact of teacher salary is not conclusive, evidence does suggest that increasing compensation can improve retention and attract qualified professionals to the field.[xxiii]
- Nationally, $18 billion is spent on professional development every year.[xxiv]
- Recent investments in new teacher evaluation models have not systemically improved student performance, increased access to effective educators, or retained effective teachers, though there is some evidence that less-effective teachers left the field.[xxv]
  - » Tennessee's Evaluation Partnership Program, however, which identifies less-effective teachers and the areas where they need the most support and pairs them with teachers who excelled in those same areas for peer learning and coaching *has* produced promising results.[xxvi]

Promising Practices

Although every state leader must weigh their local context when making policy decisions, some promising practices from other states may help to inform their approach.

Teacher leadership and career progression:

Classroom teachers generally have the same responsibilities whether they are in the first or twenty-first year of teaching; this is not how other professions develop or reward talent. Opportunities for high-performing teachers to take on leadership roles (i.e., coaches, department chairs, peer evaluators, and mentors) may have a positive impact on student achievement, teacher retention, and recruitment.[xxvii] Indeed, highly-effective educators are more likely than their lower-performing peers to report that lack of leadership and advancement opportunities impacted their decision to leave teaching.[xxviii] There are opportunities to increase teacher leadership pathways, which allow teachers to develop new skills and expand their impact to more students while increasing their likelihood of remaining in the classroom.[xxix] **Iowa's** Teacher Leadership and Compensation System incentivized local innovation and has shown promising results[xxx] and **North Carolina** created the Advanced Teaching Roles Pilot to help interested districts implement alternative compensation models and teacher leadership pathways, and early results show improved classroom practice and increased attractiveness of the teaching profession.[xxxi]

Improve pathways into the profession:

Prospective teachers have a number of routes into the classroom, including traditional teacher and principal preparation programs, alternative certification programs, and residencies. States can play a role in improving the quality of these pathways by evaluating the effectiveness of different programs[xxxii] and expanding access to effective programs like residencies.[xxxiii] For example, **California's** legislature recently funded teacher residency grants to support partnerships between local districts and institutions of higher education to prepare teachers in critical shortage areas and **Pennsylvania** is using ESSA funds to establish a competitive grant program focused on developing teacher and leader residencies.[xxxiv]

Strengthen principal preparation and support:

States can play an important role in supporting the development of a leadership pipeline and ensuring these candidates have the competencies needed to lead their schools. For example, **Kentucky** and **Illinois** worked together to redesign their principal preparation programs to prioritize collaboration with school districts, hands-on learning experiences, and the identification of mentor principals to support new principals' development.[xxxv]

Kentucky also established regional leadership networks to support principals once they are in their new roles, and the state board of education approved new requirements to align professional development to key principal competencies.[xxxvi] **Arkansas'** Quest program seeks to build the capacity of principals through a multi-tiered system of support, including professional learning communities and support coaches.[xxxvii]

Increase teacher diversity:

Teachers of color improve academic outcomes, college aspirations, and perceived student behavior among students of color,[xxxviii] yet only 20 percent of public school teachers are people of color.[xxxix] States like **Illinois**, **Texas**, and **Washington** are launching "Grow Your Own" teaching programs to recruit teacher candidates from the communities their schools serve (including from paraprofessionals), which diversifies the teacher corps while addressing potential shortage areas (like bilingual teachers) and increasing the likelihood they will retain these teachers since they are from the community.[xl] **Connecticut** established a pilot program to recruit students of color to the teaching profession, and **Wisconsin's** Minority Teacher Loan Program increased the amount of student loans available to teacher candidates of color and provides some loan forgiveness.[xli]

Support data-informed decision making:

States can support districts to make more informed human capital decisions by analyzing data and producing helpful tools. For example, the **Tennessee** Department of Education produces Human Capital Data Reports focused on evaluation, growth and development, hiring, and retention. The Department also produces a self-assessment tool to help district leaders make sense of their reports, identify areas in need of growth, and connect them with successful strategies to improve.[xlii]

Improve professional learning:

For students to learn more, teachers and leaders must engage in powerful learning themselves. Teacher and leader evaluation and support systems can provide helpful information about their effectiveness and areas for growth. At a system level, the data garnered from evaluation can help inform a clear professional learning agenda. To meet this promise, both the evaluation and the professional learning must be aligned to clear state and district expectations for the profession, and include adequate funding, time, and data. State leaders can also incentivize more robust and aligned professional learning; the **Louisiana** Department of Education removed barriers to local professional learning efforts by identifying providers with a proven track record, making it easier and more affordable for districts to select these options.[xliii]

Remaining Issues

In order to lead in this area, state leaders will need to understand where there are differences of opinion to bring people together.

Evaluation:

Recent state efforts to improve teacher quality through evaluation generated mixed results. In some cases, the primary purpose of evaluation was focused on identifying and removing ineffective teachers and leaders, rather than supporting the development and growth of educators via a fair and transparent process. The inclusion of student test scores and the technical and sometimes prescriptive system combined with the rapid pace of change contributed to a sense of "reform fatigue" for policymakers and practitioners alike.[xliv] As a result, many states have de-emphasized evaluation and the weight of test scores in assessing teacher performance. However, these policies did create shared language and a performance management infrastructure that are resources for improvement. For example, recent research on Tennessee's evaluation system shows that teachers are making progress on a number of measures (including student performance data and classroom evaluation ratings) and improving over the course of their careers when they receive robust and differentiated feedback.[xlv] Policymakers have an opportunity to ensure that their evaluation systems support the professional growth of educators and meet local and state needs.

Top down vs. bottom up reforms:

With previous efforts to improve teacher quality largely viewed as 'top-down' reforms from the federal government, states, and the philanthropic community,[xlvi] new approaches to attracting, preparing, developing, and retaining high-quality teachers and leaders have prioritized more 'bottom-up,' locally-led efforts that are more responsive to local needs but may lose out on the benefits of scale or partnership with other districts. State policymakers can network different groups to determine the right approach for local communities and help support and scale local efforts where appropriate.

Salary increases:

As a result of recent teacher walkouts, more policymakers are considering whether current compensation levels need to be raised. Some advocates argue that teacher salaries need to be more generous, while others argue that overall compensation — including pensions, health care, and other benefits — is already adequate. Policymakers may also generally agree on raising salaries but disagree on how to fund these increases.

Resources

- **The Aspen Institute Education & Society Program and Council of Chief State School Officers**
  - » Leading for Equity: Opportunities for State Education Chiefs (see Commitment #8 – "Value People: Focus on Teachers and Leaders"); Education & Society Program
  - » Teacher Evaluation and Support Systems: A Roadmap for Improvement

- **Center for American Progress**
  - » Starting Strong: How to Improve Teachers' Entry into the Profession
  - » These States Are Leveraging Title II of ESSA to Modernize and Elevate the Teaching Profession
  - » Educator Pipeline at Risk

- **Education Commission of the States**
  - » Targeted Teacher Recruitment
  - » Teacher Evaluations
  - » Teacher Development and Advancement
  - » School Leadership: A Primer for State Policymakers

- **The George W. Bush Institute**,
  - » Operating in the Dark
  - » Great Principals at Scale (with New Leaders for New Schools)

- **Leading Educators**, State Leadership Toolkit: Created By States, For States

- **Teach Plus**, Taking Stock: A Teacher Perspective on Informing and Improving Teacher Preparation Programs

Endnotes

i   Steven G. Rivkin, Eric A. Hanushek, and John F. Kain, "Teachers, Schools, and Academic Achievement," Econometrica 73, no. 2 (March 2005): 417-458; Karen Seashore Louis, et al., *Investigating the Links to Improved Student Learning: Final Report of Research Findings*, The Wallace Foundation, July 2010, available from https://www.wallacefoundation.org/knowledge-center/Documents/Investigating-the-Links-to-Improved-Student-Learning.pdf.

ii   For more information on recent state actions on teacher and leader issues, see Education Commission of the States' 50 state comparisons, state profiles, state information requests, and policy primers, available here: https://www.ecs.org/issue/teaching-quality/.

iii   *Promoting Educator Effectiveness: The Effects of Two Key Strategies,* National Center for Educational Evaluation and Regional Assistance, March 2018, available from https://ies.ed.gov/ncee/pubs/20184009/pdf/20184009.pdf.

iv   Liana Loewus, "Are States Changing Course on Teacher Evaluation?" *Education Week*, November 14, 2017, available from https://www.edweek.org/ew/articles/2017/11/15/are-states-changing-course-on-teacher-evaluation.html.

v   Kate Reilly, "'I Work 3 Jobs and Donate Blood Plasma to Pay the Bills.' This Is What It's Like to Be a Teacher in America," *Time*, September 13, 2018, available from http://time.com/longform/teaching-in-america/.

vi   "Americans Believe Teachers Are Underpaid," Rasmussen Reports, April 10, 2018, available from http://www.rasmussenreports.com/public_content/lifestyle/education/americans_believe_teachers_are_underpaid.

vii   This statistic is based off of a survey of Americans ages 18 to 34 as of June 2017 in Cathy J. Cohen, et al., *Education in America: The Views of Millenials*, GenForward University of Chicago, June 2017, available from https://genforwardsurvey.com/assets/uploads/2017/09/GenForward-Education-Report_Final.pdf.

viii   Matt Barnum, "Supreme Court Decision in Janus Deals Blow to Nation's Teachers Unions," *Chalkbeat*, June 27, 2018, available from https://chalkbeat.org/posts/us/2018/06/27/janus-decision/.

ix   Dan Goldhaber, Lesley Lavery, and Roddy Theobald, "Uneven Playing Field? Assessing the Teacher Quality Gap Between Advantaged and Disadvantaged Students," *Education Researcher* 44, no. 5 (June 2015): 293-307. http://journals.sagepub.com/doi/abs/10.3102/0013189X15592622.

x   Seth Gershenson, et al., "The Long-Run Impacts of Same-Race Teachers," IZA Institute of Labor Economics DP No. 10640, March 2017, available from http://ftp.iza.org/dp10630.pdf; Anna J. Egalite and Brian Ksida, "The Effects of Teacher Match on Students' Academic Perceptions and Attitudes," *Educational Evaluation and Policy Analysis* 40, no. 1 (June 2017): 59-81.

xi   "How Do Principals Influence Student Achievement?" University of Chicago Consortium on School Research, March 2018, available from https://consortium.uchicago.edu/sites/default/files/publications/Leadership%20Snapshot-Mar2018-Consortium.pdf; James H. Stronge, Holly B. Richard, and Nancy Catano, *Qualities of Effective Principals* (Alexandria, VA: ASCD, November 2008), available from http://www.ascd.org/publications/books/108003/chapters/Instructional-Leadership@-Supporting-Best-Practice.aspx.

xii   Desiree Carver-Thomas and Linda Darling-Hammond, *Teacher Turnover: Why It Matters and What We Can Do About It*, Learning Policy Institute, August 2017, p. 3, available from https://learningpolicyinstitute.org/product/teacher-turnover-report.

xiii   Ibid., p. 14-15; Victoria Van Cleef, "The Real Impact of Teacher Turnover," *TNTP Blog*, February 26, 2015, available from https://tntp.org/blog/post/the-real-impact-of-principal-turnover.

xiv   *The Role of Principals in Addressing Teacher Shortages*, Learning Policy Institute, February 2017, p. 2, available from https://learningpolicyinstitute.org/sites/default/files/product-files/Role_Principals_Addressing_Teacher_Shortage_BRIEF.pdf.

xv   Jason A. Grissom and Brendan Bartanen, "Strategic Retention: Principal Effectiveness and Teacher Turnover in Multiple-Measure Teacher Evaluation Systems," *American Educational Research Journal* (2018): 19-20, available from http://journals.sagepub.com/doi/pdf/10.3102/0002831218797931.

xvi   Thomas S. Dee and Dan Goldhaber, "Understanding and Addressing Teacher Shortages in the United States," The Hamilton Project, April 2017, p. 8, available from https://www.brookings.edu/wp-content/uploads/2017/04/es_20170426_understanding_and_addressing_teacher_shortages_in_us_pp_dee_goldhaber.pdf.

xvii   Ibid., 9.

xviii   Matthew A. Kraft, Eric J. Brunner, Shaun M. Dougherty, and David Schwegman, "Teacher Accountability Reforms and the Supply of New Teachers," January 2018, available from https://scholar.harvard.edu/files/mkraft/files/kraft_et_al._2018_teacher_accountability_reforms.pdf.

xix   Jacqueline E. King, "Colleges of Education: A National Portrait," American Association of Colleges of Teacher Education, 2018, available from https://secure.aacte.org/apps/rl/res_get.php?fid=4178&ref=rl.

xx   Sylvia Allegretto and Lawrence Mishel, *The Teacher Pay Penalty Has Hit a New High*, Economic Policy Institute, September 5, 2018, available from https://www.epi.org/publication/teacher-pay-gap-2018/.

xxi   Ibid.

xxii   Ben Backes, et al., "Benefit or Burden? On the Intergenerational Inequity of Teacher Pension Plans," Center for Analysis of Longitudinal Data in Education Research Working Paper 148, November 2015, available from https://caldercenter.org/sites/default/files/WP%20148.pdf.

xxiii   Charles Clotfelter, Elizabeth Glennie, Helen Ladd, and Jacob Vigdor, "Would High Salaries Keep Teachers in High-Poverty Schools? Evidence from a Policy Intervention in North Carolina," NBER Working Paper No. 12285, June 2006, available from https://www.nber.org/papers/w12285.

xxiv   "EdStat: $18 Billion a Year is Spent on Professional Development for U.S. Teachers," Education Next, June 12, 2018, available from https://www.educationnext.org/edstat-18-billion-year-spent-professional-development-u-s-teachers/.

xxv   Brian M. Stecher, et al., *Improving Teaching Effectiveness: Final Report*, RAND Corporation and American Institutes for Research, 2018, available from https://www.rand.org/content/dam/rand/pubs/research_reports/RR2200/RR2242/RAND_RR2242.pdf.

xxvi   John P. Papay, et al., "Learning Job Skills from Colleagues at Work: Evidence from a Field Experiment Using Teacher Performance Data," National Bureau of Economic Research, Working Paper 21986, February 2016, p. 3, available from http://www.nber.org/papers/w21986.pdf.

xxvii   Mary Nistler, Dean Gerdeman, and Ryan Williams, *Strategies for Implementing the Teacher Leadership and Compensation Program in Iowa School Districts*, American Institutes for Research, September 2018, available from https://www.air.org/system/files/downloads/report/Strategies-for-Implementing-Teacher-Leadership-Compensation-Iowa-case-studies-2018.pdf; Kevin Booker and Steven Glazerman, *Effects of the Missouri Career Ladder Program on Teacher Mobility*, Mathematica Policy Research, Inc, May 2009, available from https://eric.ed.gov/?id=ED507470; TNTP, "The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools," (2012); Susan Moore Johnson, Jill Harrison Berg, and Morgan L. Donaldson, "Who Stays in Teaching and Why: A Review of the Literature," The Project on the Next Generation of Teachers and Harvard Graduate School of Education (February 2005): 86, 93-97.

xxviii   *The Irreplaceables: Understanding the Real Retention Crisis in America's Urban Schools*, 2012, available from https://tntp.org/assets/documents/TNTP_Irreplaceables_2012.pdf.

xxix   *Developing a Professional Learning System for Adults in Service of Student Learning*, The Aspen Institute Education & Society Program, February 2018, available from https://www.aspeninstitute.org/publications/developing-professional-learning-system/.

xxx   "Teacher and Leadership Compensation (TLC) System," Iowa Department of Education, https://educateiowa.gov/teacher-leadership-and-compensation-system.

xxxi   Robert Maser and Trip Stallings, *Teacher Compensation Models and Advance Teaching Roles Pilot Programs: Year 1* (2017-18) Interim Report, The William and Ida Friday Institute for Educational Innovation at North Carolina State University, October 2018, p. 3, available from https://www.ncleg.net/documentsites/committees/JLEOC/Reports%20Received/2018%20Reports%20Received/Advanced%20Teaching%20Roles%20Pilots%20-%20Year%201%20Interim%20Report.pdf.

xxxii   *Using Data to Ensure That Teachers Are Learner Ready on Day One*, Data Quality Campaign, August 2017, available from https://2pi-do73em67o3eytaq1cp8au-wpengine.netdna-ssl.com/wp-content/uploads/2017/08/DQC-EPP-primer-08032017-1.pdf; Getting to Better Prep: A State Guide for Teacher Preparation Data Systems, TNTP, April 2017. Available from https://tntp.org/assets/documents/Getting_to_Better_Prep.pdf.

xxxiii   Roneeta Guha, Maria E. Hyler, and Linda Darling-Hammond, "The Teacher Residency: An Innovative Model for Preparing Teachers," Learning Policy Institute, September 2016, p. 13-15, available from https://learningpolicyinstitute.org/sites/default/files/product-files/Teacher_Residency_Innovative_Model_Preparing_Teachers_REPORT.pdf.

xxxiv   Daniel Espinoza, et al., *Taking the Long View: State Efforts to Solve Teacher Shortages by Strengthening the Profession, Learning Policy Institute*, August 2018, p. 11, available from https://learningpolicyinstitute.org/sites/default/files/product-files/Long_View_REPORT.pdf.

xxxv   Paul Manna, *Developing Excellent School Principals to Advance Teaching and Learning: Considerations for State Policy*, The Wallace Foundation, p. 32-33, available from https://www.wallacefoundation.org/knowledge-center/Documents/Developing-Excellent-School-Principals.pdf.

xxxvi   Cortney Rowland, *Principal Professional Development: New Opportunities for a Renewed State Focus*, Education Policy Center at American Institutes for Research, February 2017, p. 18, available from https://www.air.org/sites/default/files/downloads/report/Principal-Professional-Development-New-Opportunities-State-Focus-February-2017.pdf.

xxxvii   Arkansas Leadership Quest, http://www.arkansased.gov/public/userfiles/Public_School_Accountability/School_Improvement/School_Improvement_Conference_2016/Arkansas_Quest_General_Information.pdf.

xxxviii Desiree Carver-Thomas, *Diversifying the Teaching Profession: How to Recruit and Retain Teachers of Color*, Learning Policy Institute, April 2018, available from https://learningpolicyinstitute.org/press-release/teachers-color-high-demand-and-short-supply; Anna J. Egalit and Brian Kisida, "The Many Ways Teacher Diversity May Benefit Students," *Brown Center Chalkboard*, August 19, 2016, available from https://www.brookings.edu/blog/brown-center-chalkboard/2016/08/19/the-many-ways-teacher-diversity-may-benefit-students/; Littisha A. Bates and Jennifer E. Glick, "Does It Matter If Teachers and Schools Match the Student? Racial and Ethnic Disparities in Problem Behaviors," Social Science Research 42, no. 5 (September 2013): 1180-1190.

xxxix   Soheyla Taie, Rebecca Goldring, and Maura Spiegelman, *Characteristics of Public Elementary and Secondary School Teachers in the United States: Results from the 2015-15 National Teacher and Principal Survey*, National Center for Education Statistics, June 2018, available from https://nces.ed.gov/pubs2017/2017072rev.pdf.

xl   Jenny Muñiz, "Diversifying the Teacher Workforce with 'Grow Your Own' Programs," New America, February 28, 2018, available from https://www.newamerica.org/education-policy/edcentral/diversifying-teacher-workforce-grow-your-own-pathways/.

xli   "Recruiting and Retaining Minority Teachers," Education Commission of the States, November 10, 2017. Available from https://www.ecs.org/wp-content/uploads/State-Information-Request_Minority-Teacher-Recruitment-and-Retention-1.pdf.

xlii   "Human Capital Data Reports," Tennessee Department of Education. Available from https://team-tn.org/data/human-capital-data-reports/.

xliii   Ross Wiener and Sue Pimentel, *Practice What You Teach: Connecting Curriculum & Professional Learning in Schools*, The Aspen Institute Education & Society Program, April 2017, p. 5-7. Available from https://assets.aspeninstitute.org/content/uploads/2017/04/Practice-What-You-Teach.pdf.

xliv   Stephen Sawchuk, "Teacher Evaluation: An Issue Overview," *Education Week*, September 3, 2015, available from https://www.edweek.org/ew/section/multimedia/teacher-performance-evaluation-issue-overview.html.

xlv   John P. Papay and Mary E. Laski, "Exploring Teacher Improvement in Tennessee: A Brief on Reimagining State Support for Professional Learning," Tennessee Education Research Alliance, April 2018, https://peabody.vanderbilt.edu/TERA/files/Exploring_Teacher_Improvement.pdf. For more on Tennessee's teacher evaluation system, see Lynn Olson, *Scaling Reform: Inside Tennessee's Statewide Teacher Transformation*, FutureEd, October 2018, available from https://www.future-ed.org/wp-content/uploads/2018/10/FutureEdTennReport.pdf.

xlvi   Sawchuk, "Teacher Evaluation: An Issue Overview."