SCALING REFORM

INSIDE TENNESSEE'S STATEWIDE TEACHER TRANSFORMATION

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FutureEd is an independent, solution-oriented think tank at Georgetown University's McCourt School of Public Policy, committed to bringing fresh energy to the causes of excellence, equity, and efficiency in K-12 and higher education. Follow us on Twitter at @FutureEdGU

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Last spring, the Tennessee press published a flurry of stories on the problems plaguing administration of the state's new, online student testing system. Lost in the media squall was a less sensational but arguably far more important education story: a study by Brown University researchers that found substantial, career-long improvement among the state's teachers.[1] The finding flies in the face of the conventional wisdom that public education teachers improve only during their first few years on the job and then plateau, if they improve at all.

The startling research results followed a decade's worth of ambitious reform in the Volunteer State designed to improve the quality of teachers and teaching from Memphis to Chattanooga. While a wave of teacher protests in other Red states have rightly focused on stagnant pay and under-resourced classrooms, Tennessee's story demonstrates that salary increases alone are not enough to strengthen the profession. In the process, the state has shown that it is possible to make ambitious improvements to the profession and do so at scale. Tennessee has led one of the most comprehensive education reform efforts in the country over the past 10 years, overhauling teacher evaluation and professional development and strengthening teacher and school leadership statewide, while simultaneously toughening student standards and assessments.

During that period, Tennessee saw steady improvement in student achievement. Tennessee, which once ranked near the bottom among states on the National Assessment of Educational Progress (NAEP), now sits in the middle of the pack.[2] A recent study by researcher Sean Reardon of Stanford University, based on standardized test scores from roughly 45 million students in more than 11,000 school districts, found Tennessee to be one of the most rapidly improving states in the nation.[3] And an analysis by professors Paul Peterson and Daniel Hamlin at the Harvard Kennedy School of Government gave the state an "A" for its 2017 proficiency standards, based on the close alignment between the percentage of students deemed proficient on the state tests and those deemed proficient on NAEP.[4] "It's a dramatic improvement," said Peterson of the work to align state standards with national expectations.[5]

The Volunteer State has established high standards for all students. It has created a common language throughout the state about what good teaching looks like. It has opened up more engaging professional opportunities for teachers, including peer-to-peer learning, that help retain the state's best educators. It has successfully identified the principals who work most effectively with teachers. And it has made clear the importance of strong, sustained state-level leadership that is committed to high-quality execution, while remaining respectful of local conditions and open to course corrections based on evidence and experience.

At a time when the federal Every Student Succeeds Act has placed authority for improvement squarely in states' hands, Tennessee provides powerful lessons

for achieving meaningful change in teaching and the teaching profession, statewide.

A Failing Grade

The state's journey began in 2007, when Tennessee received an "F" from the U.S. Chamber of Commerce for "truth in advertising" regarding its students' performance.[6] While Tennessee reported that nearly 90 percent of students in grades three to eight were proficient in math and reading on its state tests, fewer than 30 percent of fourth and eighth graders were proficient on NAEP, which tests a nationally representative sample of students and is known as the Nation's Report Card.[7]

In response, state leaders set out to raise standards for both students and teachers. In 2008, then-Gov. Phil Bredesen (a Democrat) announced the Tennessee Diploma Project to raise the rigor of the state's academic content standards and tests. When the National Governors Association and the Council of Chief State School Officers launched work on a new set of voluntary, national standards in literacy and mathematics in 2009, state leaders viewed the Common Core State Standards as the natural next step to Tennessee's standards work.

The state adopted the standards in 2010. That same year, education, business, and community leaders launched "Expect More, Achieve More"—an alliance dedicated to building support for the new standards and assessments. When the Obama Administration launched the Race to the Top initiative, which offered states money for plans that included adopting college- and career-ready standards and a new system of teacher evaluation, based in part on student achievement, Tennessee leaders jumped at the opportunity.

The state would become one of only two to win an initial Race to the Top grant, unleashing $501 million in federal funding. The application, signed by then-Gov. Bredesen, was supported by all 136 school districts in the state, as well as the Tennessee Education Association (TEA).

The state plan's ambition was breathtaking: promising to roll out a new set of state standards and assessments and a new system of educator evaluation almost simultaneously, all in a state with an underperforming education department and hundreds of small, poorly resourced rural districts.

Sara Heyburn Morrison, a former classroom teacher and now the executive director of the Tennessee State Board of Education, joined the governor's team as his K-12 policy advisor in the spring of 2010, just as the state was notified of its federal grant. "It was fast and furious," she recalled. "The realization was that standards for instruction had to be raised for students, and standards and expectations for educators also had to be raised. And this work needed to happen as quickly as possible on both fronts."

In January 2010, the legislature passed the First to the Top Act to enact key aspects of the plan into law. When Bill Haslam (a Republican) was elected governor later that fall, he shared his predecessor's commitment to implementing the plan. (As part of the Race to the Top application, Gov. Bredesen had included a letter of support signed by all seven gubernatorial candidates running to replace him to ensure continuity beyond his tenure.) This commitment to reform that bridged Democratic and Republican administrations would prove vital.

Building State Capacity

While the new Diploma Project student standards work was already underway, Tennessee's education agency lacked the capacity to lead a comprehensive school improvement effort, as did many state departments of education at the time. Strengthening the TDOE had to be an early priority.

Haslam made the unusual decision to bring in an outsider as the state's new commissioner of education. Kevin S. Huffman, a senior manager at Teach for America, did not know much about Tennessee when he

became state commissioner in April 2011, "but I knew what they had promised," he recalled.

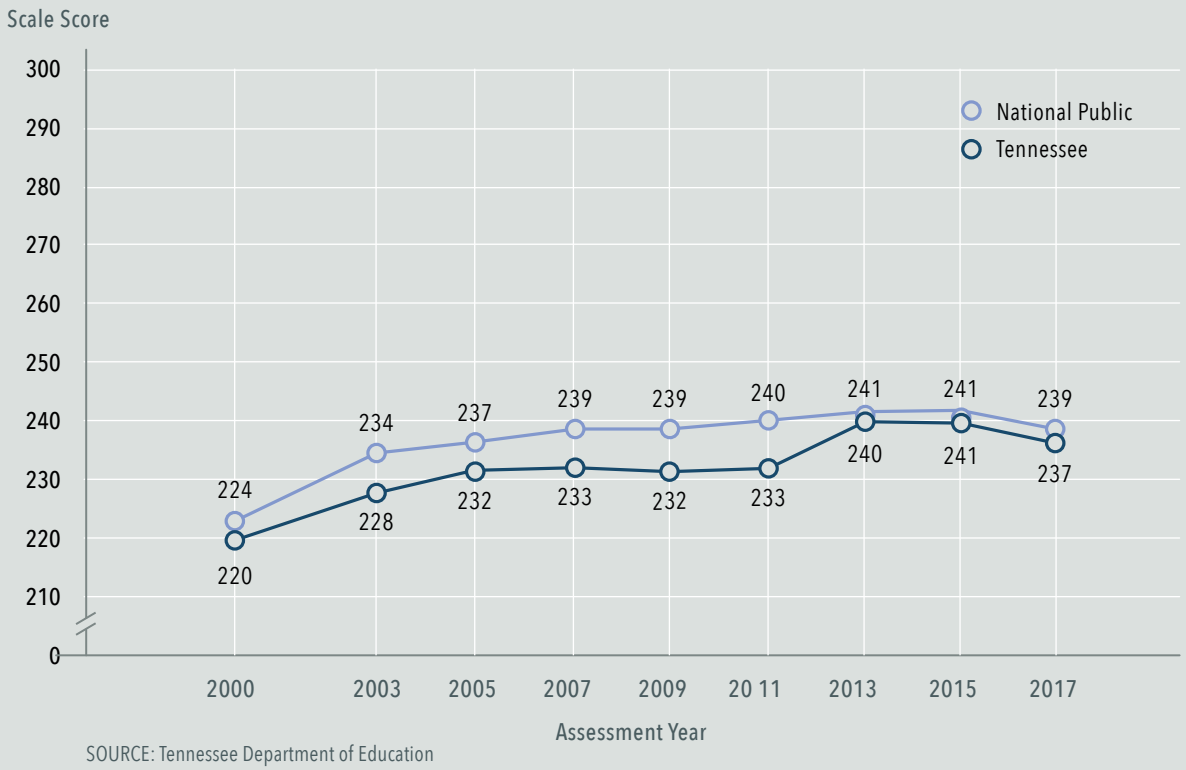
Huffman was attracted by the broad coalition behind the proposals, the legislative authority to act, and an educational asset unique to the state—the Tennessee Value Added Assessment System, or TVAAS—which had been producing information about the academic growth of teachers' students for years, even though not much had been done with the data.

Based on methodologies pioneered by William Sanders, an agricultural statistician at the University of Tennessee, in the late 1980s and early 1990s, TVAAS predicts how well a teacher's students will perform based on their standardized test scores in prior years. If a teacher's students outperform expectations, the teacher receives an above-average value-added rating, while students who underperform lower teachers' scores.[8]

Huffman brought two people with him to the department—Emily Barton (now Freitag), who had been Teach for America's executive director in Washington, D.C., to help lead the department's strategic planning and Hanseul Kang, managing director of programs for TFA's DC office, to be his chief of staff. Huffman then found creative ways to quickly build the agency's capacity, which is frequently a stumbling block for new state leaders intent on change.

He created a fellowship program to bring in additional outside talent who could help drive the strategic plan forward. The department also used some Race to the Top dollars to hire outside contractors who eventually became full-time employees. This included an initial effort to reorient the state's eight regional service centers from a focus on compliance to capacity building and to rename them Centers of Regional Excellence (CORE). The department recruited CORE directors who had prior

Tennessee Grade 4 Math Scores on National Assessment of Educational Progress



SOURCE: Tennessee Department of Education

experience leading schools or districts with improving academic achievement; streamlined monitoring positions to free up spots for data and math analysts to work with districts; and instituted 360-degree evaluations for all department employees.

Major civil service reforms passed by the legislature as Huffman was coming on board provided him with hiring flexibility. Over time, the department's staff came to consist of about one-third department veterans, one-third people from outside the state, and one-third Tennessee educators drawn from the field. Morrison, for example, moved from the governor's office to the department to become Assistant Commissioner of Teachers and Leaders and to lead implementation of the new teacher evaluation system.

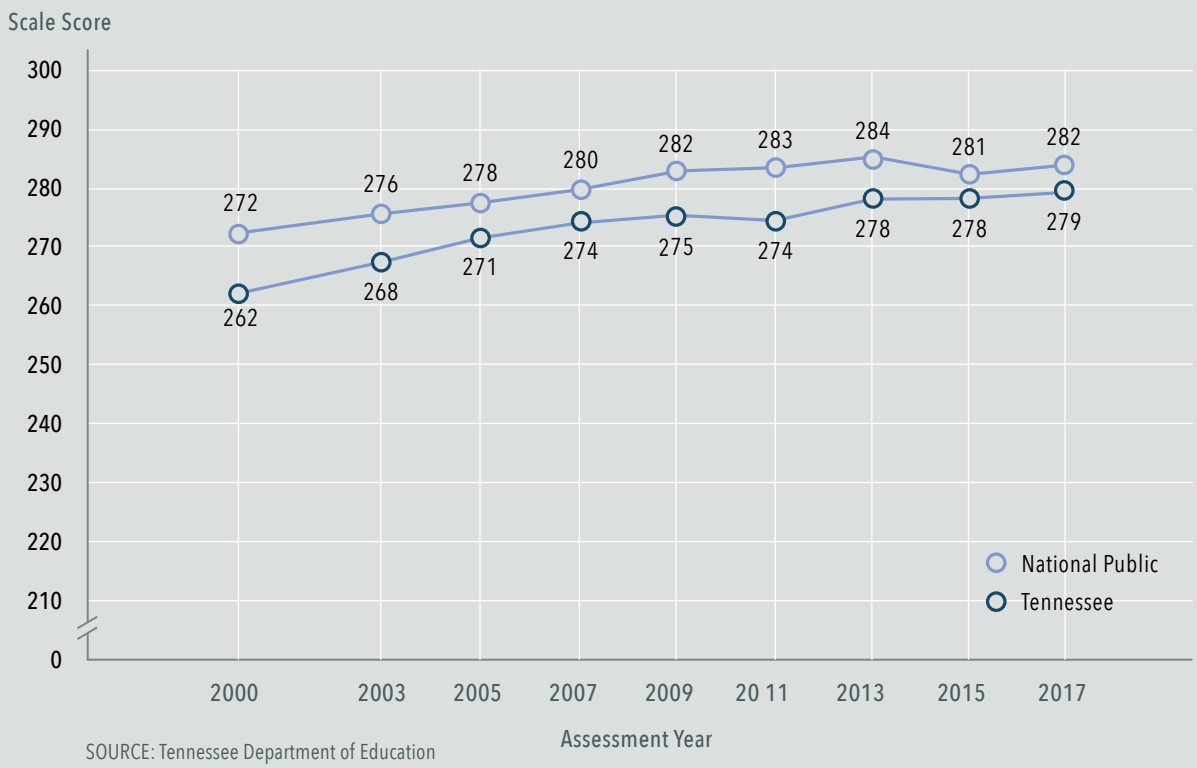
The new Tennessee Educator Acceleration Model (TEAM) evaluation system was Huffman's first major project after building out the TDOE.

The new state law required that half of a teacher's evaluation be based on student achievement (35 percent based on their students' growth, as represented by TVAAS or a comparable measure, and 15 percent based on other student achievement measures adopted by the state board and mutually agreed on by the teacher and the evaluator). The other half of a teacher's evaluation would be determined through qualitative measures—in particular, teacher observations.

Hard Lessons in Year One

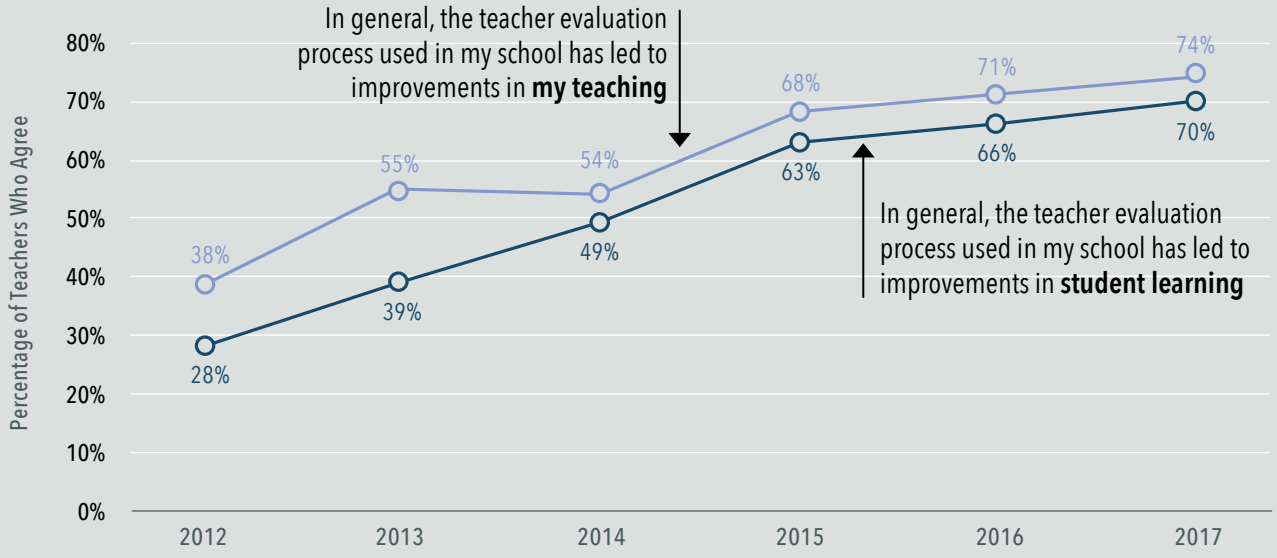
Before Huffman arrived, then-Gov. Bredesen had appointed a Teacher Evaluation Advisory Committee, required by law, of principals, teachers, superintendents, legislators, business leaders, and other community members, to work out details of the new evaluation system. About 125 schools across the state had field tested four different observation rubrics during the 2010-

Tennessee Grade 8 Math Scores on National Assessment of Educational Progress



SOURCE: Tennessee Department of Education

Evolution of Teacher Opinions on Educator Evaluation



SOURCE: Tennessee Department of Education

11 school year. The committee recommended that the state board adopt TEAM, based on a rubric developed by the National Institute for Excellence in Teaching.

In addition to unanimously adopting the TEAM model, the state board endorsed three alternative models: 1) Project Coach in Hamilton County; 2) TEM (Teacher Effectiveness Measure) in Memphis City, which was being piloted as part of a large teacher effectiveness grant from the Bill & Melinda Gates Foundation; and 3) TIGER (Teacher Instructional Growth for Effectiveness and Results) in 12, mostly municipal, school systems statewide. The gubernatorially appointed board also approved a menu of student achievement measures.[9]

The logistical and cultural changes required by the new evaluation system when it rolled out statewide in 2011-12 were massive. At the time, educators were reeling from new state tests, first administered in 2009 before Huffman's arrival, that dropped student proficiency rates in grades 3 to 8 from about 90 percent to about 35 percent in math and 45 percent in reading. Those scores would now be included as part of teachers' evaluations, leading many teachers to panic.[10]

Principals, who had previously been required to evaluate teachers only once every five years, would now have to conduct multiple observations annually—typically six times a year for new teachers, and four times a year for those with more than three years' experience—using an agreed-upon standard for instructional practice. The legislature also had redesigned teacher tenure, making it possible for teachers to lose tenure if their evaluation score was "below expectations" or "significantly below expectations" for two consecutive years, further increasing educators' anxiety about their jobs.[11] Teachers could no longer earn tenure unless they achieved a score of 4 or 5 on their evaluation, or above expectations.

The department tried to let districts know that they did not have to use the evaluation results for any consequential decisions in the first year (2011-12), but the blowback from teachers and districts was intense. "I spent three months just getting yelled at about how

badly this was all going," recalled Freitag, who was working on implementing the teacher evaluation system at the time. "We needed to get out there and listen."

"Can you say chaos?" recalled Versie Hamlett, superintendent of the Humboldt City Public Schools. "Any time you have change, it's difficult for teachers because we're asking them to make a shift in their mindset. To incorporate a new evaluation system, and standards, and high expectations was very challenging. There was a lot of pushback."

Some teachers, who had previously thought of themselves as successful, suddenly learned they were a 3 on a scale of 1-5, which many interpreted as average. Evaluators were required to pass an inter-rater reliability exam, in which they viewed videos of teachers delivering lessons and rated them to ensure they could differentiate between levels of performance. But teachers complained about the quality of observations in the field, with many principals and teachers treating the rubric as a checklist.[12]

Teachers often didn't know where to turn with questions, and school leaders struggled to find the support and guidance needed to navigate the new system.

Administrators voiced frustration with the large amount of time needed to complete the evaluation process, especially given the requirement for far more classroom observation.[13] Approximately two-thirds of teachers did not have individual value-added data because there were no state tests in their grades and subjects. For these teachers, 35 percent of their evaluation was based on schoolwide data rather than individual performance, which they viewed as grossly unfair.[14] Communications challenges were also frequent: The department had left it up to districts to communicate with teachers, rather than communicating with them directly. But the effectiveness of these communications varied greatly by district.

Teachers often didn't know where to turn with questions, and school leaders struggled to find the support and guidance needed to navigate the new system.[15] The TEA, which had supported the TEAM evaluation model, quickly reversed course. The biggest pushback came from districts whose superintendents opposed the new evaluations as state over-reach and who made that clear to teachers and principals. It was in these districts that implementation was weakest.

Huffman said it never occurred to him that the state didn't have to roll out the evaluation system statewide in one fell swoop. "It was only in hindsight, a year or two later, as I watched virtually every other state that won Race to the Top money renege on their promises around evaluation, typically by delaying or doing another pilot, that I realized, my gosh, this was an option," he said. "But we plowed forward because we had the pieces in place and we said we were going to do that." Perhaps a more phased-in approach would have gone more smoothly and generated less opposition. Then again, such an approach might have meant, as it did in many states, that the plan would never have been fully implemented.

In retrospect, said Huffman, the state clearly should have done a much better job communicating directly with teachers, a lesson that many states have learned the hard way. "We should have trained the teachers, not the principals, or we should have trained both," he said. "And we should have done it all in-house, and with Tennessee people leading the way."

In response to the uproar, the department set up an electronic hotline and a rapid response team to answer questions within 12 hours: In the first year, it fielded 20,000 questions. It also made midyear process improvements, such as making it easier for evaluators to upload their observations electronically. But even before the first year was completed, legislators began threatening to roll back the system.

That's when Gov. Haslam, supported by legislative leadership, stepped in. He tasked the State Collaborative on Reforming Education (SCORE), a nonprofit nonpartisan advocacy organization, with conducting an independent review of the system through a statewide listening tour and then providing policy recommendations to the state board and the department. The governor also announced his support for a joint resolution adopted by the General Assembly that directed the department to seek feedback, conduct an internal review of the evaluation system, and provide a report with its own recommendations to the House and Senate Education Committees by July 15, 2012.[16]

Committing to Continuous Improvement

What happened next both saved the system and became a hallmark of how the state department would approach implementation going forward: The state listened to educators, looked at its data, and made changes. This feedback loop of continuous improvement has persisted ever since.

Over the 2011-12 school year, the department held in-person meetings and presentations with more than 7,500 teachers across the state; met with all the state's district superintendents in large and small group discussions; held 120 stakeholder meetings through focus groups and study councils; and received more than 7,500 e-mails through its teacher evaluation electronic help desk. Huffman personally visited more than 100 school districts.

Two surveys of teachers—one from SCORE and one from the Tennessee Consortium on Research, Evaluation & Development (TNCRED) based at Vanderbilt University—generated about 34,000 responses in total. SCORE released an in-depth analysis with seven key recommendations, based on nine public roundtables throughout the state, its online survey, and numerous interviews.[17] The department also analyzed the TVAAS scores of teachers and schools, the observation scores of teachers, and the results of the state's annual student assessments.[18]

As a result of this investigation, the state made several key changes going into the 2012-13 school year.[19] Teachers who earned an overall score of 5 on their observations or on individual growth could have fewer observations. This reduced principals' workload and freed their time to spend with struggling teachers. These teachers were now required to be formally observed a minimum of four times a year, receiving the same amount of feedback as new teachers.

Evaluators were expected to conduct a coaching conversation with these teachers prior to their first observation to discuss strategies and supports to improve student results. The state also provided additional flexibility for districts by approving more than 40 plans (for nearly one-third of Tennessee districts) to further customize the state evaluation model. These slight adjustments primarily let districts tailor the specific scope and sequence of observations or other processes to local needs and priorities.

In addition, the state introduced new growth score options—such as peer-reviewed portfolios of student work—in non-tested grades and subjects, which together increased the population of teachers with individual growth data from just over 30 percent to just over 50 percent.[20] While the initial portfolios were in fine arts, over the years the state would add other portfolio options in world languages, physical education, pre-kindergarten and, most recently, grades K-1. The state also introduced an optional assessment, the SAT-10, which could be used to generate a growth score for teachers in the early grades. And the state developed some more tailored schoolwide measures. For example, career-technical education teachers could calculate a growth score that included only students who took three or more CTE courses.

In a change that required approval by the General Assembly, the state adjusted the weight placed on schoolwide growth data for teachers in non-tested

grades and subjects from 35 percent to 25 percent. And teachers who earned a 4 or 5 on individual growth could use this score for 100 percent of their overall evaluation, if it would result in a higher rating and if their district approved.

What probably helped the plan most, though, was that student test scores improved, in aggregate, at a faster rate in the 2011-12 school year than in any previously measured school year. Math and science scores, in particular, increased significantly.[21] While the state attributed this to a number of factors, including the higher academic standards introduced in 2009 through the Tennessee Diploma Project, many pointed to the new evaluation system as shining a spotlight on the quality of instruction. The following year, student achievement on state tests continued to improve in every grade and subject. Based on the 2013 National Assessment of Educational Progress, Tennessee students advanced more than any other state in the nation on all four areas measured by NAEP.[22]

Results from the survey also showed that teachers' perceptions of the evaluation system had grown more positive over the past year, though there was still room for improvement.

"It was the only reform that we had firmly embedded before we had our first historic NAEP gains," said Courtney Bell, director of educator engagement at Tennessee SCORE. "Having a common language to talk about what good instruction looked like was transformative."

As part of the Race to the Top grant, the state department of education also administered the TELL survey (Teaching, Empowering, Leading, and Learning) in 2011 and 2013 to teachers across the state. More than 60,000 teachers took the survey in 2013, answering questions about a variety of working conditions. The results showed a significant improvement over the two-year period, with teachers' perceptions of their workplace more positive than those of their peers in other measured states.[23]

Results from the TNCRED survey also showed that teachers' perceptions of the evaluation system had grown more positive over the past year, though there was still room for improvement. More than two-thirds of teachers now felt the process of teacher evaluation treated them fairly. Nearly half believed that the feedback they received was more focused on helping them improve their practice than on making a judgment about their performance, up from around one-third of teachers in the first year of implementation.[24] By 2018, 72 percent of teachers reported the teacher evaluation process used in their school had led to improvements in their teaching, and 69 percent reported it had led to improvements in student learning.[25]

"I think our teachers have a clear understanding of what the expectations are, and that's what TEAM provides us," said Hamlett of Humboldt City Public Schools. "Before, we were kind of scrambling, doing our own thing. Now, we're all on the same playing field."

Since 2012-13, the state has continued to double down on quality execution, another hallmark of Tennessee's reforms. That year, it began identifying evaluators whose observation scores were most misaligned with the student growth data, and it used a combination of federal grant and state funds to hire eight TEAM coaches, based out of each regional service center, to build these evaluators' capacity to rate teacher practice accurately and to provide effective feedback in post-observation conferences.

Activities include monthly co-observations of classrooms to discuss evidence, role-playing coaching conversations, and analyzing school- and teacher-level evaluation trends to drive professional learning.[26] The department also worked to ease data-management for administrators. It used Race to the Top funds for a five-year contract with RANDA, an online performance management system, to support districts in the

implementation of TEAM, at a cost of about $1 million per year. It currently spends about $225,000 annually to maintain the platform.

An initial critique of the new system was that it would lead to massive teacher retirements, particularly among the state's good teachers. But department data refuted those claims. A 2013 analysis found that while retirement rates had been rising since 2009, correlating with the loss of an additional 1 percent of the workforce per year, the rise had been steady both prior and after Race to the Top. What had changed was who was leaving and who was staying.

Teachers who chose to retire consistently rated lower in effectiveness, based on TVAAS, than those eligible for retirement who chose to remain in the classroom.[27] There is similar evidence of strategic teacher retention: Teachers whose average observation scores range from 1 to 2.75 are twice as likely to turn over as teachers receiving a score above 4.5.[28]

The state's principal evaluation system, rolled out simultaneously, also successfully identifies principals who are making a noticeable difference on school success. Half of a principal's evaluation derives from measures of school achievement and growth; the other half is based on how well the principal implements the teacher evaluation process and on observations and measures of their practice by supervisors and/or peers.

Based on an analysis of data from 2011-12 through 2014-15, by Jason A. Grissom and colleagues at the Tennessee Education Research Alliance, schools with more highly rated principals experience more student growth. Teachers also tend to perceive both leadership and school climate as higher in schools led by highly rated principals, the study found. And these more effective principals are better at holding onto effective teachers and encouraging those with low observation scores to leave.[29] Given research showing that effective principals are associated with better instructional practices, more positive learning environments, and higher teacher morale, these are incredibly encouraging findings.

Despite these positive trends, the Tennessee Education Association has fought the evaluation system in court, calling the proportion of the teacher evaluation system based on test scores arbitrary, flawed, and in violation of teachers' constitutional rights.[30] The latest lawsuit, filed in federal court in 2014, charged that more than half of

Teachers also tend to perceive both leadership and school climate as higher in schools led by highly rated principals, the study found. And these more effective principals are better at holding onto effective teachers.

Tennessee public school teachers are evaluated based substantially on schoolwide scores in subjects they do not teach.[31] The union lost the suit and there are currently no suits challenging Tennessee's teacher evaluation system. In every instance, the department has either prevailed or the plaintiffs have voluntarily dismissed their suit.

Focusing on District and Teacher Capacity

In 2011-12, the same year that Tennessee rolled out teacher evaluation statewide, it began implementing the Common Core State Standards, which were adopted by the board of education in 2010. The rollout began in grades K-2, with the goal of implementing the standards over time through grade 12.

As with teacher evaluation, the state relied on its primary theory of action—supporting districts as the unit of change. "Four hundred state department of education employees from Nashville cannot work in 1,800 schools," explained Hanseul Kang, Huffman's former chief of staff and now state superintendent of education for the District of Columbia. "But we can do something meaningful to support some 140 school districts, so we focused on building support at the [local] level."

During summer 2011, the department conducted six awareness sessions about the standards across the state, aimed at school administrators. A vast majority—over 4,000—participated. That summer, the state department also held eight training sessions with more than 1,200 K-2 teachers, who were asked to share what they were learning with colleagues.

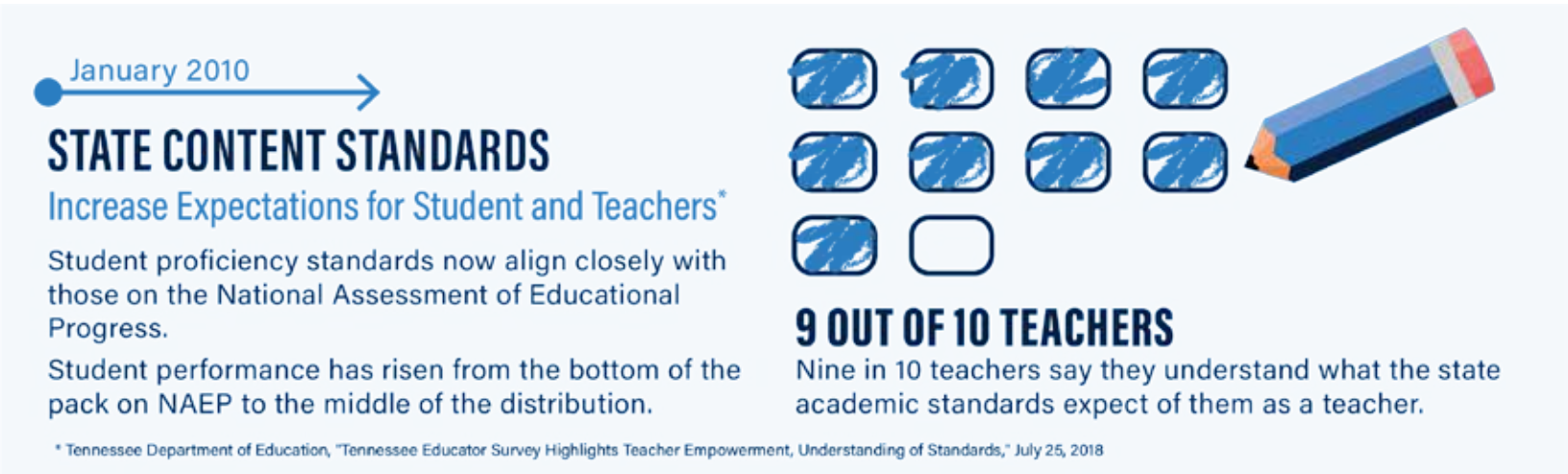
Helping some 65,000 teachers and more than 5,000 administrators dramatically shift their instruction and their expectations of students was a massive challenge. It takes eight hours to drive from one end of Tennessee to the other. Approximately one-third of the state's students are concentrated in four big urban districts—Chattanooga, Knoxville, Memphis, and Nashville—whose central offices are often bigger than that of the state education department. One-third attend schools in largely suburban districts just outside these urban areas. The remaining one-third are spread across 100-plus small rural districts statewide. The department decided to focus its support on these rural districts with less internal capacity.

Emily Freitag became Assistant Commissioner for Curriculum and Instruction in December 2011, charged with leading Tennessee standards implementation. She thought she had learned something from the first year of rolling out the new teacher evaluation system. "I saw first-hand how top-down policy implementation would inherently fail. We had to form a team."

Her first step in 2012 was to enlist a group of 13 highly respected school and district leaders from across the state to form a leadership council. The council members, each paid about $10,000 annually above their regular salaries, would meet every two months and advise the department on the design of professional learning, formal and informal assessments aligned with the standards, and the resources and materials teachers needed for implementation. "They were invaluable," said Freitag. "We co-created everything." TDOE also partnered with the Institute for Learning (IFL) at the University of Pittsburgh, which had recently worked with the New York City Department of Education on standards implementation, as a partner.

Unlike the teacher evaluation training, Freitag and her team decided to target Tennessee teachers as the key focus of their work. To do this, they used a detailed scoring rubric to identify great teachers from across the state, then worked with them to deliver the training. "I had an immediate sense that great teachers were going to do this far better than any other option," said Freitag. "It was so practical: Our choices were the department, a vendor, or teachers. Teachers were the clear winner."

"It was just plain and simple efficacy," said Huffman. "We knew that we had to start doing something, and we could not figure out how to do it efficiently with the dollars that we had in any way other than using the people who were already there. The other thing we



knew from teacher evaluation was that using Tennessee teacher-to-teacher communication seemed really important."

It had already become apparent, from the teacher evaluation rollout, that Tennessee educators trusted their peers far more than outsiders. Moreover, given the scale of the task, there were not enough external consultants or TDOE staff to do the job, and the latter did not have a strong track record of providing professional development.

In the spring of 2012, TDOE launched a competitive application to find the teacher-leaders who would serve as the state's primary trainers. These "Core Coaches" would attend eight days of intensive training on weekends and after school and then share what they'd learned with teachers in their districts. They had to have at least three years of teaching experience, be current classroom teachers or recent classroom instructional supervisors, and demonstrate evidence of their students' learning. With the help of the leadership council and the scoring rubric, TDOE initially selected 200 Core Coaches from 56 districts. Training would focus on the new math standards in grades 3-8, which the state was scheduled to implement in the fall of 2012 and where student performance was weak. The Core Coaches were given $5,000 stipends plus travel expenses.

> **"The Core Coach model really catalyzed teacher leadership in our state. The people who went through that saw the power of teacher voice and teachers as leaders in the classroom, and I think districts saw the power of that, as well."**
>
> – Courtney Bell, Tennessee SCORE

The training, designed with IFL support, asked Core Coaches to focus on the instructional shifts demanded by the standards, complete the same standards-aligned tasks that their students would experience, and identify differences from existing practice. Coaches had a chance to practice what they'd learned in their own classrooms before teaching others.

During the summer of 2012, the 200 Core Coaches trained 11,000 educators, all of whom opted to participate, from 135 of the state's 136 districts. Training sessions were held in 41 different school sites across Tennessee's eight regions because districts wanted help close to home. "We saw a 50 percent increase in attendance between the first offering and the second," said Freitag, based on positive word of mouth. "It was peer-led. It was deeply content focused. It was grade-specific, so it was relevant. And it was hard. We intentionally challenged people. And then there's that magic electricity that happens when you're with other teachers working on your content."

Rethinking Professional Learning

TDOE invested $5.2 million in this first cycle of large-scale professional development, with $3.2 million paid for with Race to the Top funding. In December 2012, the department recruited another 700 math and English Language Arts coaches, some of whom returned from the previous year. That summer, those Core Coaches trained more than 29,000 Tennessee teachers, nearly half of all teachers in the state and the largest statewide teacher training in the state's history.[32] In the spring of 2014, the department selected another 500 Core Coaches. Freitag estimates that the total number of educators participating in the state training was over 60,000, at a total cost of about $20 million.

"The Core Coach model really catalyzed teacher leadership in our state," said Courtney Bell of Tennessee SCORE. "The people who went through that saw the power of teacher voice and teachers as leaders in the classroom, and I think districts saw the power of that as well. For many teachers, their first foray into teacher leadership was being a Core Coach and that lit a fire for them to want to do more than being in their classroom every day."

As with teacher evaluation, the department intentionally created feedback loops to adjust the program. Every council meeting began with one thing that was going well and one thing that wasn't. The department created a website where educators could pose questions and provide comments. "For four years, I read every question and response," said Freitag, "and we had a weekly tally of what we were getting questions about, so we could be nimble."

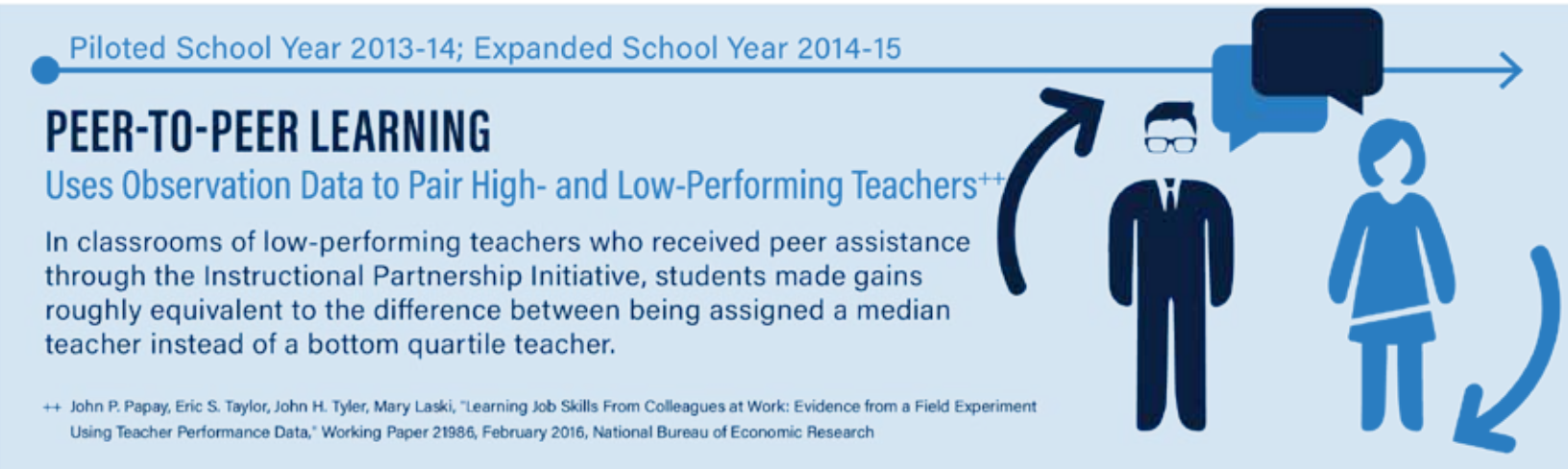
The department also surveyed participants at the end of each training session. As one example, the department originally required teachers to score by hand state-provided assessment items in math aligned with the standards to provide low-stakes feedback on how students were doing. But after pushback from teachers about the time demands, the department changed the requirements to score most tasks for only a subset of students.

TDOE also analyzed the characteristics of coaches and found that the greatest predictor that a coach would be successful was prior evidence of their students' academic growth. As a result, this was emphasized more in subsequent application processes.

Huffman had been dubious, given prior research, about whether professional development could improve teacher practice and student outcomes. "PD has such a terrible research track record in this country, and we didn't have a ton of confidence about whether we could pull this off," he recalled. To investigate the link, the state used data from TVAAS and its teacher evaluation system, looking both at changes in teacher observation scores and in their students' academic growth. Based on results from the first round of Core Coaching:[33]

- Teachers who received the training saw their observation scores increase by about half the gains made by an average teacher between the first and second year of teaching.
- Teachers with Core Coaches in their schools made significantly greater increases in their questioning practices during classroom discussions compared with those without coaches.
- Teachers who received training from the Core Coaches saw about one week of extra learning for their students a year.
- Core Coaches gained 0.3 points on the 5-point observation rubric, reflecting improvements in their own classroom instructional practices.

While the Core Coaching model enabled teachers to lead without leaving the classroom, it also helped build capacity at the department. Over time, one-third of Freitag's team at the department came directly from the ranks of Core and Leadership Coaches and from the leadership council.



Encouraging Peer-to-Peer Learning

The department recognized, however, that despite its investments, many teachers were still not getting the support they needed to improve their practice. Meanwhile, John P. Papay, an assistant professor of education and economics at Brown University, and his colleagues Eric S. Taylor and John Tyler were becoming concerned that states were more focused on rating teachers accurately than on improving their instruction. They had written up a one-page prospectus for a study to see if the data embedded in evaluation systems could be used to improve practice by pairing teachers who had done well on specific domains within an evaluation rubric with peers who had struggled for peer-to-peer learning. Although Papay said he had no prior relationships with Tennessee, state officials told him "this is exactly the type of thing we were thinking about."

In the 2013-14 school year, schools were randomly assigned to Papay's treatment model or to a business-as-usual control group. Then an algorithm was used to match high-performing teachers with low-performing teachers based on 19 specific indicators scored as part of the TEAM rubric, such as questioning, managing student behavior, and lesson structure and pacing. Teachers were encouraged to work together on improving teaching skills identified by the observation data. More generally, pairs were encouraged to examine each other's evaluation results, observe each other teaching, discuss strategies for improvement, and follow-up with each other throughout the school year.

At the end of the year, the average student in a treatment school scored higher on math and reading tests than students in the control schools, whether or not their teacher participated in a partnership, the study found. In the classrooms of low-performing teachers targeted for the program, students made gains roughly equivalent to the difference between being assigned to a median teacher instead of a bottom quartile teacher. Moreover, these improvements persisted, and even grew, in the school year following treatment, with larger treatment effects when the high-performing partner's skill strengths matched more of the target teacher's weak areas.[34]

Based on the study, the state officially launched the Instructional Partnership Initiative in 93 schools in the 2014-15 school year. It also launched a similar program for principals, known as the Principal Peer Partnerships. By the 2017-18 school year, 700 teachers in 48 districts participated in the initiative. "There are unimagined benefits of having that data and that orientation toward research," Papay said in interview.

Politics Intervenes

Yet even as the department was successfully implementing its teacher quality and instructional improvement initiatives, Tennessee was being swept up in the national backlash against the Common Core State Standards and related tests. Tennessee had been an early member of PARCC, one of two state consortia to receive federal money to help develop Common Core-aligned assessments, and it had already begun piloting assessment items. But toward the end of the 2014 legislative session, Republican state legislators proposed delaying the implementation of the state standards for three to four years. Separate legislation proposed delaying PARCC, citing concerns of federal overreach.[35] Meanwhile, some Democratic legislators and the TEA criticized the rush to implement standards and assessments without giving students and teachers enough time or resources to adjust.[36]

In part because of advocacy by SCORE and others, lawmakers reached a compromise that kept the standards but approved a one-year delay in implementing the tests. The legislation opened up the state's standardized testing to a competitive bidding process, effectively moving the state away from PARCC. Gov. Haslam, who saw this as a way to preserve the standards, signed the bill into law in spring 2014.[37] Separate legislation prohibited the use of any standardized test scores in teacher licensure decisions.[38]

By January 2015, Huffman had left the department and Candice McQueen, the former dean of education at Lipscomb University and a specialist in literacy, had succeeded him as commissioner. "When I came in, we were at the height of frenzy," said McQueen. "We'd just gotten rid of PARCC and there was a lot of angst about how to switch to a new test and do that well." That year, Gov. Haslam announced a public review of the state standards for English Language Arts and math, which lawmakers codified in a special legislative session in January 2016. "Within that context, we started quickly on how to regroup to create a narrative around a Tennessee-specific plan—Tennessee Succeeds—that was all about Tennessee and what Tennessee was going to do," McQueen said.

The plan had five priority areas: early literacy; improving the high school-to-postsecondary transition; addressing continued achievement gaps by focusing on the needs of all students; empowering districts through additional flexibility and ownership; and educator support, with a focus on teacher supports and teacher leader networks.[39]

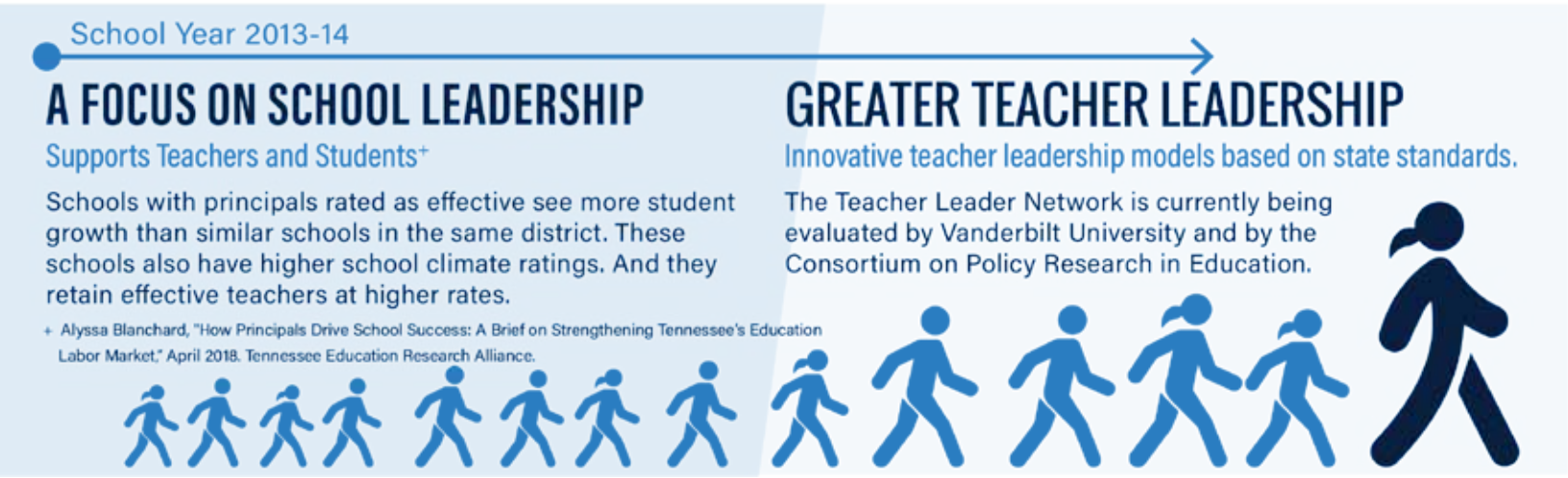
Advancing Teacher Professionalism

Tennessee had passed a law in 2007 requiring districts to develop differentiated pay plans for teachers, although it had never been implemented aggressively. It also had adopted Teacher Leader Model Standards In 2011-12, at the same time teacher evaluation and content standards were being implemented. In 2013-14, with data on which teachers were most effective, the department decided to act.

"By that point," said Huffman, "we had a healthy appreciation that the needs in Nashville are different than in the immediate suburbs or rural communities. How they wanted to reward and compensate their teachers needed to be different as well."

That led to the idea of a voluntary, district-based, Teacher Leadership Network, through which the state supports districts to develop their own models for how and why they should pay teacher leaders more. The district models were required to align with the teacher leader standards and to reach every school in the district. To make the initiative work, the department partnered with the state board to pare back requirements in the statewide salary schedule.

"The thought was, if you can figure out who your best teachers are, you can compensate them more, give them more work, and study why they're a star," said Erin O'Hara, who had worked in Gov. Bredesen's office of planning and policy and then moved over to the education department to lead Race to the Top implementation. O'Hara is now the executive director of the Tennessee Education Research Alliance at Vanderbilt University.



The Teacher Leader Network launched with six districts in 2013-14, under the leadership of Paul Fleming, then the executive director of leader effectiveness at the department. The network continued to expand when McQueen became commissioner and Fleming became Assistant Commissioner of Teachers and Leaders.

During their first year in the program, districts select a four-person vertical team (usually the assistant superintendent, an instructional coach, a principal, and a teacher leader) that works with the department to design a model to address district priorities and specific teacher leader roles, based on an analysis of district data. The district then implements the model the following year. Districts that want to continue refining their model enter stage 2, during which they continue to work with a cohort of other districts to share best practices and engage in joint problem solving. They are supported by regional coaches, who currently work in schools and districts in each CORE region.[40]

While the state focuses recruitment on districts that are struggling with strategic compensation, participation is purely voluntary. Initially supported with state dollars, the program is now funded through federal Title II-A funding, with a budget of $160,000 annually. This covers travel expenses to monthly meetings in Nashville for each four-person district team and $8,000 stipends for the district team members and for the coaches. Districts must figure out how to pay for and sustain the stipends for teacher leaders themselves, which are typically about $1,500 per teacher annually.[41]

The goals of the program are to increase student achievement and growth through the development of a shared leadership structure at each school site; broader dissemination and use of effective teaching strategies through increased teacher collaboration; and a stronger and more positive school and district culture through the development and retention of highly effective teachers.

The distributed leadership model was reinforced in 2013 through the adoption of Tennessee Instructional Leadership Standards for principals. Those standards were revised again in the 2015-16 school year so that principals are now assessed on how well they use the teacher evaluation system to inform professional learning goals, engage teachers in differentiated professional learning, and deploy teacher leaders to coach their peers.[42]

"The network really helps for peer learning," said Fleming. "What we're asking districts to do is relatively new. There's a lot of learning when you get folks together who are focused on a common goal."

By the 2016-17 school year, 59 districts were in the network and working to design or refine their teacher leadership models. The TLN is currently being evaluated by the Tennessee Education Research Alliance and by a grant from the Nellie Mae Foundation to the Consortium for Policy Research in Education at University of Pennsylvania to study promising teacher leader models nationally.

Rather than being "a shiny new innovation," the program was designed to help districts address their existing challenges—including standards implementation, Response to Instruction and Intervention, and the need for multiple observers under the evaluation system, Fleming said. In the most successful districts in the network, teacher leaders are almost exclusively leading professional learning in their buildings, managing professional learning communities, providing nonevaluative peer feedback, and mentoring new teachers.

The Resources Teachers Need

At the same time that the state was building its Teacher Leadership Network, Commissioner McQueen was trying to reconfigure its standards-based professional learning for teachers and school leaders to keep up with revisions in the standards, knowing that its Race to the Top funds were ending.

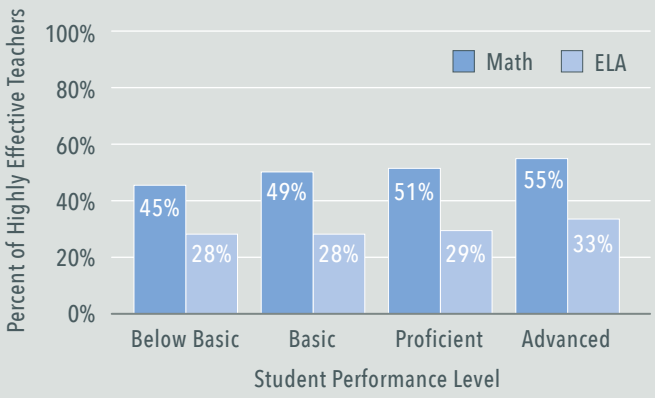
The department settled on a model where district teams—typically the superintendent, district leaders

in curriculum and instruction, a principal, and teacher leaders—attend training in the spring and are given facilitation guides and online materials to help re-deliver the training to others in their district over the summer.

"This ultimately helped support the Teacher Leader Networks because it was a lot of the same people who were now part of these standards trainings," said McQueen. Based on a department analysis, about half of the teacher leaders in the Teacher Leader Network began as Core Coaches, although the two were never intentionally linked.

In 2016, the education department began piloting a micro-credentialing program that pairs highly effective teachers (with four to nine years of experience) with novices (one to three years of experience) to earn up to three micro-credentials based on the most common areas for growth within the TEAM rubric: questioning, thinking, and problem solving. In 2016, 29 veteran teachers met face-to-face with 29 novice teachers, and an additional 17 teachers agreed to participate virtually by earning micro-credentials independently and providing feedback on the experience.[43] The goal is to explore avenues for providing more personalized learning for educators across the state.

Tennessee Students' Access to Highly Effective Teaching



SOURCE: Tennessee Department of Education, 2016

The program was expanded in 2017 to help districts build their capacity to provide personalized, competency-based learning for teachers, including a structured pathway for teachers to earn micro-credentials in teacher leadership, which would help strengthen the teacher leadership networks by more clearly identifying the core skills of effective teacher leaders.

The department has used a similar opt-in approach for its Read to Be Ready initiative, launched by Commissioner McQueen in February 2016. The program is focused on boosting students' early literacy skills, from about one-third of 3rd graders reading at grade level to at least three-quarters by 2025. About two-thirds of the state's districts have opted into the initiative, which provides them with funding stipends for Read to Be Ready coaches for three years. Coaches are trained by the state around early literacy strategies and, increasingly, around the adoption and use of standards-aligned curriculum materials in the early grades. More than 200 teacher-coaches, who meet as a network, work directly with more than 3,000 teachers to improve reading programs and practices across the state.[44]

At Lipscomb, McQueen had been an expert in literacy and had taught reading courses about the more rigorous standards. "What we came to very fast, maybe in the first six months of our coaching work, was that folks had awful curriculum, if any, in their classrooms," she said. The state worked with The New Teacher Project (TNTP), a national nonprofit, to create units specific to grades K-3 based on high-quality, standards-aligned texts as a bridge to helping districts make better instructional material choices over the next few years.

With grant funding, Tennessee SCORE and TNTP also teamed up with Leading Innovation for Tennessee Education (LIFT), a group of 13 district superintendents committed to sharing innovative approaches and best practices, on how to adopt standards-aligned curriculum for early literacy. LIFT leaders originally had come together as proponents for higher standards for Tennessee students.

One District's Story

Putnam County Public Schools, a member of the LIFT network, provides some sense of how the state's teaching and instructional initiatives have played out on the ground. The mid-size district, with approximately 11,000 students in grades preK-12, sits halfway between Nashville and Knoxville.

On a mid-May morning, kindergarten teacher Martha Ramsey at Sycamore Elementary School is talking with her young students about former President Barack Obama, part of a unit about American presidents based in the Core Knowledge Language Arts (CKLA) curriculum. On an easel beside her is a map of Hawaii and another map of Africa. She explains that Obama was born in Hawaii, which is an "island state" because it is surrounded by water. Then she asks the children to recall the name of the continent on the other map. "Africa," they chorus.

She proceeds to describe how Obama went to Africa to learn more about his ancestors. One student asks, "What does that mean?" Ramsey explains that she is an ancestor to her grandchildren and that her grandfather and grandmother were ancestors of hers. "Now, talk to a neighbor about what an ancestor is," she says. As the lesson continues, Ramsey prods the children to remember the characteristics they had identified that would make a good president from an earlier lesson: responsible, fair, honest, polite, follows the rules.

One girl remembers that presidents are elected every four years. Then the group moves on to do a group writing exercise, in which individual children volunteer to write facts that they can remember about Obama on a large white paper that the group reviews together for grammar. As the kindergartners move into center time, they can choose to write sentences about one of the five presidents they've studied so far.

Ramsey has taught in the Putnam schools since 1995. "When I look back at how I taught when I was first teaching, I apologize," she said. "When I first started teaching, you just threw out some activities. They might have a central focus, but they didn't build deep knowledge."

Both the new curriculum and teacher evaluation system have made her a "much stronger teacher," she explained. "I've had to reflect on what I'm doing. It's caused me to look at myself and how I can get better. Teaching is a profession where if you are not continually doing that, you need to get out of the profession. And the new evaluation made me do that. I know a lot of people don't like it, but it was good for me."

At Jere Whitson Elementary School across town, where the students are overwhelmingly Hispanic and from low-income families, Emily Rose, a pre-kindergarten teacher in her second year of teaching, said she first experienced

> **"We're being more intentional and more purposeful about the materials we put in front of children. In our district, we're trying to think about worthy topics."**
>
> – Allison Painter, Read to Be Ready Coach

TEAM during her student teaching. "I became familiar with the expectations and with getting feedback through those observations," she said. "I don't feel that it's intimidating or that they're expecting me to be perfect."

She too likes the CKLA curriculum, though she added, "It's just been challenging in a class of 20—and with the time constraints of the day—to teach with fidelity every element of the curriculum appropriately to meet the needs of my specific students."

Both elementary schools are supported by Allison Painter, a Read to Be Ready Coach, who began as a pre-k teacher, participated in the state's early training around state standards, and eventually became a Core Coach for the Upper Cumberland region. "That was a good transition," she said. "It built your knowledge of the kinds of things we were trying to implement. Then you

would go back and share the things you were learning with people in your building, so you would make more teacher leaders."

Painter participated in that training in both math and literacy standards for about three or four years. Now, she said, she works to help teachers understand that "even though we have a good curriculum, don't check your teaching practices at the door. You've still got to develop best teaching practices."

In addition to observing classrooms and modeling instruction, Painter works with grade-level teams on planning lessons and reviewing student work. "We're being more intentional and more purposeful about the materials we put in front of children," Painter said. "In our district, we're trying to think about worthy topics."

Tina Francis, the assistant principal at Jere Whitson, has been in the district for 30 years. "As I look back over my career, the rigor has gone up significantly," she said. "Honestly, I think Race to the Top put a lot of pressure on us."

That pressure, she said, has been both good and bad. For example, while the evaluation rubric is an effective tool for having conversations with teachers about their practice, she's repeatedly found that if a teacher receives a score below a 3, "the conversation stops and the walls goes up. I would love to have the evaluation system without the number assignment with it."

Putnam, one of the first pilots for the TEAM rubric, now uses the more content-specific Instructional Practice Guides (IPG), developed by Student Achievement Partners, for its literacy walkthroughs of buildings, in addition to the regular TEAM evaluation process. This provides more of the non-evaluative, content-specific feedback many teachers crave. The district is trying to show teachers that if they do well on the IPG, they will do well on the TEAM evaluation. The district's monthly Professional Learning Communities for principals now also focus on the instructional shifts required by the standards and on the curriculum, explained Jill Ramsey, the curriculum supervisor for the district, "because if the principals weren't understanding this, it wasn't going to happen."

Ramsey had been the principal at Algood Elementary School, the largest in the district, when TEAM rolled out. "At that time, I'll be honest with you, I felt like I was an instructional leader because I was in the classroom the majority of my time," she said. "But in reality, I was a building manager. I didn't dive deeply into understanding the standards with teachers. I just assumed that they knew them."

Jerry Boyd, the superintendent of the district, admits the amount and speed of change has not been easy—and that Putnam has sometimes preferred to develop its own programs rather than to rely on training provided by the state or the regional CORE offices. "Yes, it was frustrating and exhausting for teachers, for principals, for district staff trying to support all the changes," he said.

But he added: "I don't know if we could have made the kinds of change we made unless it was that ambitious. That's the double-edged sword. The urgency might not have been there, and the desire to act on that urgency."

"Our teachers are working really hard," he said. "We've asked a lot of our teachers. In the beginning, we didn't do a great job of explaining everything to them. We just said, 'Trust us, it's best for kids.' But that only lasts so long. They've tolerated the fact that we've had to regroup and adjust and, maybe at some points, change directions."

Assessment: The Achilles Heel

Now Boyd and others are concerned that the recent stumbles over state test administration in an online delivery system—and the upcoming election of a new governor—could put Tennessee's longstanding commitment to improving teacher quality and instruction at risk.

Following the legislative session in spring 2014, and Tennessee's withdrawal from PARCC, the state selected a new testing company, Measurement Incorporated. But after numerous troubles with both online and

paper-and-pencil test administration in 2015-16, the state pulled the plug on that contract and selected a new vendor, Questar, which had come in second in the original procurement process required by the legislature when the state pulled out of PARCC. Because of the implementation challenges, student achievement and growth data were not available for grades 3-8 that school year, leading the governor and legislature to give teachers flexibility about using the results in their evaluations: If the available data helped a teacher receive a higher evaluation score, it would be used; if the results did not positively affect a teacher's score, the data would not be used. The next year, the state returned to paper-and-pencil tests but still had scoring and score delivery issues.

Then, on the first day of online testing in spring 2018, login problems in high schools and some middle schools that had opted to use online testing only prevented some students from accessing the exams. The following day, what was first believed to be a potential cyberattack on the testing vendor prevented thousands more students from submitting their tests. Then, about 1,400 students ended up taking the wrong versions of the exam. And a runaway dump trucked severed one of the state's main fiber-optic cables, causing connectivity problems at schools during the testing period.[45] Although the combination of unfortunate events interfered with only four of 18 days of testing, the damage was done.

Lawmakers responded quickly by passing a new state law that prevents scores on this year's TN Ready exam from being used for high-stakes consequences for schools, teachers, or students.[46] Haslam planned a statewide listening tour aimed at addressing problems with online administration of the state test.[47]

"Unfortunately, there is now, and there's going to be for some time, a mistrust in our state testing process at all levels," said Boyd. "We're going to have to overcome that. But it will take some time to rebuild that trust."

"Ultimately," he added, "we have put a lot of emphasis on the test. We said this is going to demonstrate [that] all of this hard work we've been doing is going to pay off. But if we don't have a way to demonstrate that, we're in limbo."

Clint Satterfield, superintendent of the Trousdale County Public Schools, a small rural district between Nashville and Knoxville, said that in hindsight the state perhaps should have rolled out standards and assessments first, with teacher evaluation coming in after that. Now, with both standards and assessments having changed several times in the last several years, "the principal can't sit down with the teacher and explain the quantitative piece of the teacher evaluation because we've failed to do the assessment right."

"Was it too much too fast?" he asked. "I don't particularly agree with that. For a state as far behind as we were, we needed to move fast to catch up with the field." His concern now is that the pendulum could swing too far in the other direction, back to where the state was before Race to the Top.

Over the past decade, the state truly has learned to expect more of its students—and to provide teachers with more of the support they need to help students achieve more. Overall, nine in 10 teachers now report that they understand what the state academic standards expect of them as a teacher. Three of four teachers report that they feel more empowered, versus constrained, to teach in ways that they feel are best for their students.[48] That doesn't mean the work is done: teachers continue to report needing more time for lesson planning and collaboration and more access to materials they feel are well-suited to teaching the standards.

But, says Satterfield, "We're engaging more students than we ever have. In the past, we taught the best and forgot the rest."

LESSONS FOR THE FIELD

What has Tennessee done right and where has it stumbled? Other states have much to learn from the Volunteer State's experiences.

The Importance of State-Level Capacity

To a remarkable extent, the state has built a clear and consistent vision with a diverse coalition around higher expectations for students and teachers. That coalition has, by and large, held together across Democratic and Republican governors, two education commissioners, and an increasingly Republican-dominated legislature. The presence of a strong, statewide advocacy group, Tennessee SCORE, which has served as a proponent of the changes and a critical friend to the department, has been central to keeping that coalition together and has provided remarkable consistency. "Relative to a lot of states I've worked with, Tennessee still has the same rubric and framework for teaching," said Andrew Baxter, who until recently was vice president of educator effectiveness for the Southern Regional Education Board. "I'm working with some states that are still in the process of defining what effective teaching is and choosing a rubric."

Focusing on High-Quality Execution

Although Huffman was controversial as an outsider trying to push an enormous change agenda, "Kevin was exactly who we needed," said O'Hara of the Tennessee Education Research Alliance. "He is a person who is significantly focused on a set of big goals" and willing to put achieving those goals first when making decisions. Huffman and his team quickly realized that if they were going to achieve those goals, they would have to move beyond the department's historically modest plans for supporting teachers and principals and build an entirely new suite of services, drawing on the existing state talent pool and a re-envisioned set of regional service centers. They also would have to decide what to keep tight—such as the ability of principals to accurately observe teachers and the Teacher Leader Model Standards—and what to keep loose—such as the specific teacher leader roles in each district or the observation rubric that districts chose—enabling districts to craft plans that address their unique circumstances. "For me, the macro-lesson learned from Tennessee was that implementation matters a lot," said Kang, now state superintendent of the District of Columbia, "and that the state education agency can make a major difference in student achievement outcomes by changing the way it does business." In large part, that change entailed moving from a top-down model focused on compliance to paying detailed attention to how and when to provide support. McQueen has demonstrated this continued focus by supporting the evolution of the CORE offices to provide more targeted and diagnostic help to districts. This includes using literacy and math "learning walks" or short observations to support district alignment with the state's strategic priorities.

Making Adjustments Based on Data and Experience

Tennessee especially stands out for its commitment to learn and adjust based on data and experience. While TVAAS gave the state an initial database that many states lack, the commitment of state leaders—both in and outside the department—to use research and evidence has been equally important. "At least in my experience, it's pretty unusual," said Papay of Brown University about the department's openness to research and data. "I do think Tennessee, compared to other places I've looked at and worked with, has more of a commitment, and they tend to do research both internally and externally. They also have a larger group of folks who work with them, and the [Tennessee Education Research Alliance] has now become the hub for that."

Putting Teachers and Teacher Leaders at the Center

From the beginning, and with increasing clarity over time, Tennessee has put the capacity of teachers and teacher leaders at the center of its work around improving instruction and student outcomes. In particular, Commissioner McQueen has opened the lines of communication with teachers and increased the level of information going to and from teachers. Most recently, the TDOE and Tennessee SCORE have put together a Tennessee Teacher Leader Collaborative to support the development and sustainability of teacher leader networks by curating and sharing information and practices.[49]

In addition to supporting collaboration across TLN districts, the collaborative includes other teacher leadership efforts in the state led by nonprofit organizations, such as Hope Street Group, the Chattanooga Public Education Foundation Policy Fellows, and the SCORE-led Tennessee Educator Fellowship program, which offers teacher leaders the chance to serve one-year terms, during which they learn about the policies, practices, and systems that affect student achievement and educator effectiveness. TDOE and SCORE host a Teacher Leader Summit for teacher leaders from across Tennessee, who come together to share experiences and learn from each other.

Relying on Networks

Tennessee has made good use of networks of like-minded teachers and districts to learn and innovate together, which over time is building capacity across the state. Research shows that capacity remains uneven, which is the focus of future study by the Tennessee Education Research Alliance.[50] But, as Morrison argued, "I do think the networks have been a big part of how we've developed and tried to sustain capacity. The state has to be uber-cognizant of the things we can do well and not do well. Ultimately, education is delivered locally, so that means building up capacity at the district and classroom level."

Assistant Commissioner Fleming said the networks also have been extremely valuable in creating a consistent feedback loop between the department, educators, and districts that has informed mid-course corrections and revisions to many of the state's initiatives, including the TEAM evaluation model, the TN Teacher Leader Network, the development and implementation of the administrator evaluation rubric, strategic compensation guidance, the Instructional Partnership Initiative, and the approval process for teacher preparation programs.

Struggling with Assessment

At the same time, Tennessee, like many states, continues to struggle with how best to incorporate student achievement into its teacher evaluation system—with the recent testing snafus throwing those tensions into sharp relief. O'Hara suggested that the legislature's decision to withdraw from PARCC was the first step in a number of steps that have led to turmoil in the state testing system. Even without that decision many question the best way to use value-added measures when it comes to assessing teacher quality. Studies have found that while value-added methods can reliably identify teachers at the top and bottom of the performance distribution, they are less useful for distinguishing among the vast majority of teachers in the middle.[51]

Given that, should student achievement count for 50 percent in the evaluation system, with 35 percent overall based on TVASS data? In retrospect, said O'Hara, maybe the percentages weren't perfect, "but the thinking was, if you're teaching, and your students are taking assessments, isn't part of whether you're doing a good job part of whether your students can show gains in learning?"

LESSONS FOR THE FIELD *continued*

Papay said there has to be a role for student achievement, but in Tennessee, the District of Columbia, and other places, "it takes a disproportionate amount of psychic attention and energy compared to its actual weight in the system." One option, some experts have suggested, is to use value-added scores to flag particularly high- or low-flying teachers for additional observations or opportunities for advancement. Tennessee already flags systems for intervention situations where teachers are routinely getting 5s on their observations but their students aren't improving.[52]

Tennessee's work on teachers presenting portfolios of student work in non-tested grades and subjects, most recently for kindergarten and 1st grade teachers, may prove one way to incorporate more meaningful measures for classroom instruction—although the recent introduction of portfolios in the early grades has led to some pushback from teachers. A statewide survey and two dozen focus groups and interviews conducted by SCORE in 2016 found that although educators receive information about TVAAS, most do not find that information easy to understand.[53] Yet the least scalable and reliable measures within TEAM continue to be the 15 percent that teachers select based on individual student learning objectives for their classrooms.

The Next Decade

Pinpointing which of Tennessee's myriad policy and practice changes are most responsible for the progress of its teachers and students is difficult, particularly in a state that began far below the national average. "If I had to guess, it would be some constellation of things that require students and teachers to engage in content more deeply," said Papay, whose study on teachers' career trajectories was released this past spring. "Unless they're replacing a large chunk of the teacher workforce [which data suggest they are not], we're seeing those improvements because of those policies." The big question is whether the improvements will be sustained over the coming decade.

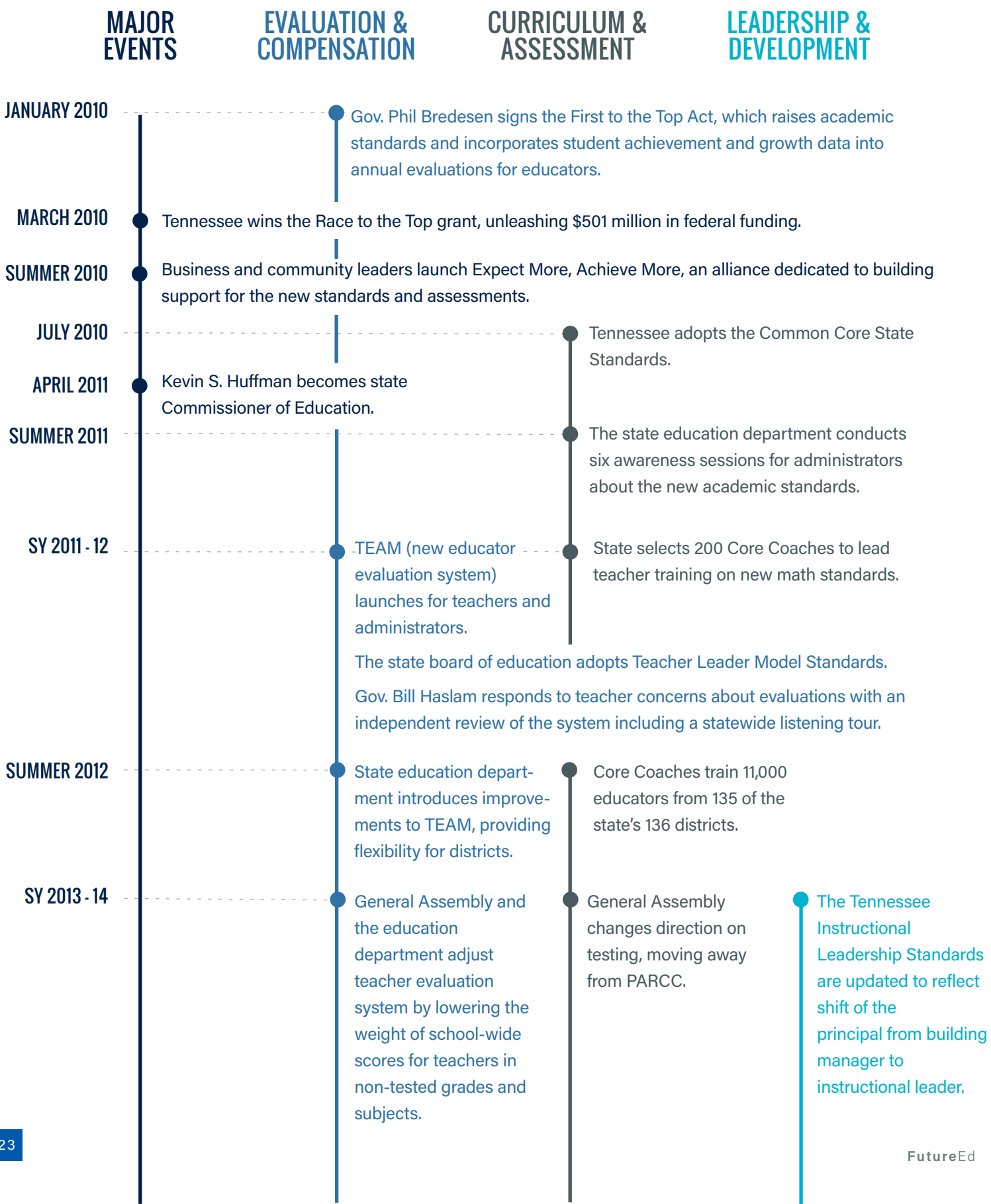
"Our hardest work is still ahead of us," said Morrison. "A lot of what we've done was the low-hanging fruit, particularly at the state level. It gets harder and harder for policy and state initiatives to force the nuanced changes that need to happen to continue incremental improvements." That includes providing better feedback to teachers, particularly at the secondary level, where that feedback needs to be content-specific; improving the quality of the state's teacher and educator preparation pipelines, which the state has begun to tackle in the last few years using value-added data; closing achievement gaps, which remain wide, and increasing the equitable distribution of effective teachers; and improving the salaries of Tennessee teachers, who have gone through so much in the past decade.

Under the watch of Gov. Haslam and Commissioner McQueen, the state has invested more than $500 million in raising educator salaries over the last three years, and over $1.5 billion in K-12 education total.[54] But Tennessee teachers still remain poorly paid compared with teachers nationally.[55] The state has no income tax and the legislature is increasingly dominated by Republicans. Furthermore, the coalition behind increasing teacher pay is not as robust as the original coalition that supported higher expectations for students. Teachers may grow tired of waiting for the promised rewards and recognition they were supposed to receive for all their hard work.

O'Hara indicated that despite its efforts to identify the most effective teachers and to raise their pay, Tennessee still has room to grow on compensation. "We should pay all teachers more, and we should pay our best teachers more than that," she said.

The question now is whether a set of interrelated initiatives that have been sustained over time and led to great progress over the last decade can transition into the next decade. "I don't want to discount the work as a state collectively that we've done," said Jerry Boyd of Putnam County Public Schools. "But it has been successful because our districts and schools have bought in and believed in the idea that we need to improve."

TIMELINE


MAJOR EVENTS
EVALUATION & COMPENSATION
CURRICULUM & ASSESSMENT
LEADERSHIP & DEVELOPMENT
JANUARY 2010
Gov. Phil Bredesen signs the First to the Top Act, which raises academic standards and incorporates student achievement and growth data into annual evaluations for educators.
MARCH 2010
Tennessee wins the Race to the Top grant, unleashing $501 million in federal funding.
SUMMER 2010
Business and community leaders launch Expect More, Achieve More, an alliance dedicated to building support for the new standards and assessments.
JULY 2010
Tennessee adopts the Common Core State Standards.
APRIL 2011
Kevin S. Huffman becomes state Commissioner of Education.
SUMMER 2011
The state education department conducts six awareness sessions for administrators about the new academic standards.
SY 2011 - 12
TEAM (new educator evaluation system) launches for teachers and administrators.
State selects 200 Core Coaches to lead teacher training on new math standards.
The state board of education adopts Teacher Leader Model Standards.
Gov. Bill Haslam responds to teacher concerns about evaluations with an independent review of the system including a statewide listening tour.
SUMMER 2012
State education department introduces improvements to TEAM, providing flexibility for districts.
Core Coaches train 11,000 educators from 135 of the state's 136 districts.
SY 2013 - 14
General Assembly and the education department adjust teacher evaluation system by lowering the weight of school-wide scores for teachers in non-tested grades and subjects.
General Assembly changes direction on testing, moving away from PARCC.
The Tennessee Instructional Leadership Standards are updated to reflect shift of the principal from building manager to instructional leader.

MAJOR EVENTS	EVALUATION & COMPENSATION	CURRICULUM & ASSESSMENT	LEADERSHIP & DEVELOPMENT
SY 2013 - 14	State pilots peer-to-peer coaching for teachers based on teacher observation results.		Tennessee Teacher Leader Network launches.
FEBRUARY 2014	Gov. Haslam introduces Tennessee Promise to provide tuition-free community college.		
SY 2014 - 15	State expands peer-to-peer coaching, now called the Instructional Partnership Initiative, to 93 schools statewide.		Principal Peer Partnerships launch to support coaching for school leaders. A revised principal evaluation system reflects a greater emphasis on instructional leadership.
JANUARY 2015	Kevin Huffman leaves the education commissioner's post. He is replaced by Candice McQueen.		
SUMMER 2015	First Tennessee Teacher Leader Summit held.		
SY 2015 - 16		Gov. Haslam and lawmakers agree to a review of state academic standards. Tennessee Succeeds launches to provide support for educators, early literacy, postsecondary transition, achievement gaps and local flexibility. Implementation problems lead to pulling the plug on the new student testing system.	
OCTOBER 2016		Tennessee becomes the first state to cover the cost of retaking the ACT for high school seniors.	
2016 - 17	Tennessee Teacher Leadership Collaborative launches to coordinate and support the development of state and nonprofit teacher leadership networks.	Read to Be Ready initiative launches, including coaches focused on early literacy. LIFT network (a consortium of 12 districts) works with The New Teacher Project on an early literacy initiative focused on high-quality, aligned curricula.	
			State board of education raises cut scores for teachers on some state licensing exams and requires all candidates to pass a portfolio-based performance assessment beginning in 2019.
SUMMER 2017	Second Tennessee Teacher Leader Summit held.		

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