What Matters Now:
A New Compact for Teaching and Learning

THE EVIDENCE BASE

NCTAF

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The National Commission on Teaching & America's Future (NCTAF) was founded in 1994
as a bipartisan effort to engage education policymakers and practitioners to address the entrenched national challenge
of recruiting, developing, and retaining great teachers in order to ensure that all students have access
to quality teaching in schools organized for success.

What Matters Now:
A New Compact for Teaching and Learning
The Evidence Base

INTRODUCTION

In 1996, NCTAF's first groundbreaking report made five bold recommendations that changed teaching and learning across the country. *What Matters Most* challenged the nation to provide every American child with his or her educational birthright: access to competent, caring, qualified teaching in schools organized for success. In the twenty years since its publication, its message that strengthening the teaching profession was the key to addressing America's education crisis has been felt from the classroom to the legislative chamber. *What Matters Most* called for higher standards for teachers and students, a reformation in teacher education, and for schools to be organized for success.

Progress has been made on many fronts—but this progress has been uneven and insufficient. This is especially true in the most academically challenged, impoverished, and disenfranchised areas of our country. While we know that a strong system of teacher recruitment, preparation, and retention is critical to the academic and personal success of students, we let individuals become teachers with little training and the least experienced teachers continue to be concentrated in our nation's most challenging classrooms. And we, as a nation, have not focused on ensuring equity of resources, standards, and support across all schools. As a result, we are shutting down the pathways, aspirations, and the potential of millions of children and driving great teachers from the schools that need them the most, or from the profession altogether.

Despite this, we believe that there is greater potential for progress today than ever before. We know more now than we ever have about how people learn—and that knowledge is multiplying on an almost daily basis. We now have research-based evidence for what many teachers have always understood—that we must address students' social and emotional learning in order to truly engage them in academic content. In addition, educators are becoming increasingly adept at leveraging technology to maximize everyone's learning potential—both for themselves and their students. The reauthorization of the Elementary and Secondary Education Act, now called the Every Student Succeeds Act (ESSA), provides states and communities an opportunity to think differently about how schools are organized, how accountability is structured, and how teachers are supported and evaluated. We must act now or lose yet another opportunity to see every student succeed.

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to rigorous, relevant, and powerful learning experiences led by caring, competent, and qualified teachers every year they are in school. Our belief in the strengths, assets, and potential of teachers is strong; therefore we are calling for an investment in teaching as a profession in order to maximize today's opportunities.

The challenges are complex but not intractable — research on promising practices, lessons from other countries, and examples from our own country's schools demonstrate on a daily basis that positive change can occur.

Positive change, in many cases, means supporting, sustaining, and scaling existing effective programs while in other cases it means protecting innovations as they develop. It also means that we must have the resolve to abandon practices and policies that are ineffective or even harmful. There are many examples of innovative education in our country; the challenge is that often these innovative programs and practices are operating on parallel tracks alongside the traditional system, and thus are not reaching all students and are often not sufficiently resourced.

NCTAF offers recommendations, examples, and resources throughout this report from a wide array of partners — including national organizations, state and local policymakers, school networks, and community groups. Drawing on multiple sources and partnerships is a deliberate strategy designed to build consensus and ultimately lead to a shared action agenda.

We must shift the national conversation about teachers to one that is bipartisan, supportive of educators, and practically focused on how to provide the resources and tools that support great teaching. And while there's not complete agreement about the best ways to do that, we have worked hard to find common ground among those who disagree, with a focus on the importance of a strong research base and effective implementation.

Please join with us. Let our consensus as a Commission serve as an example of a genuine investment in collaboration. Come talk with us so we can better understand the challenges and explore what it would take to move forward on this critical agenda. The need could not be more urgent.

HOW TO USE THIS REPORT

This report is designed for state and local policymakers who are interested in how to comprehensively transform teaching and learning for the students they serve, leveraging the opportunities presented by the recent federal legislation that provide more autonomy to states and districts, advances in the science of how people learn, transformational technologies, and student populations with increasingly diverse backgrounds and global connections.

Throughout this report we have offered examples of states, districts, schools, and teachers who are working to modernize and personalize learning for all students. Reform — even revolution — can emerge from any layer of the system, depending on the resource and policy conditions. By highlighting a range of innovations, catalysts, and essential conditions, this report offers many different ways to bring about long lasting and effective education reform.

I. A National Imperative

At the **Envision Academy of Arts & Technology** in the heart of Oakland, California, a nervous but brave young Black woman presents a literary analysis of The Kite Runner — her senior capstone project — to family, school and community members, and invited guests. Proud to display what she has learned over months of work, Lisa deftly explains the metaphors in the novel using evidence from the text, while weaving in reflections on her own personal experiences. At just 17 years old, these already include transitions between several schools, the murder of her father, and an arrest for drug possession. After a half an hour, Lisa concludes to the cheers of her fellow students, teachers, family, and strangers in the room, and falls into the arms of her principal, filled with pride that she has completed this latest transition and is officially the first in her family to finish high school and go on to college.

Across the country at a high school in Delaware, proud, tall Ivan slumps in front of a principal who does not know him other than by his transcript, which indicates that he has not met the requirements to graduate in few weeks. Ivan, a Puerto Rican student living in a poor community, has struggled so much already to get to this point. He has been left largely on his own because he was not on the academic track or considered "college material" and has not caught the eye of any particular teacher or administrator. This meeting with the principal is the first Ivan has heard that his graduation is in peril; he wishes he had a teacher or advocate he could turn to for help. With no one to advise him about how to navigate summer school or secure the credits he needs, all he can see is that he will not walk at commencement, he will not be able to report for duty in the U.S. Navy this summer, and he may have to let go of his dreams to see the world.

These are just two examples of what our students experience every day across the country, but they represent the troubling variation that exists. The schools at which students are consistently engaged in meaningful, long-term, and relevant learning experiences like the ones that helped Lisa meet her potential are too few and far between, and negative experiences like Ivan's are too frequent and consistently concentrated in communities of poverty and

> ❝ Only 57% of Black high school students and 65% of Hispanic high school students have access to the full range of courses necessary to succeed in college and careers. ❞

schools with high minority populations. Some schools and systems are able to tap into the potential of new learning sciences and evolving technologies, while others sort students or pass them along using strategies and tools developed a hundred years ago. We know how to build schools that personalize learning for students and encourage teachers to develop into accomplished practitioners and leaders, but we are not, as a country, embracing these strategies for all students. As a result we have an expensive, uneven, and inequitable patchwork of learning that many refer to as a "non-system" of education. What's more, unlike so many other countries around the world, we're not systematically investing in the teachers who educate our children every day or learning from the promising international strategies — even though many of the promising strategies originated in the U.S. As the writer William Gibson observed, the future is already here — it's just not evenly distributed.

The systemic inequities that prevent all students from having access to the kinds of opportunities that Lisa experienced, amount to a national tragedy. Supporting all of today's students as they strive to be successful, productive, and informed citizens is one of the most important issues facing our country today. Yet according to statistics reported by the U.S. Department of Education, only 57% of Black high school students and 65% of Hispanic high school students have access to the full range of courses necessary to succeed in college and careers, compared to 71% of White students.[1] And we know that the challenges start early: only 41% of children in low-income communities are enrolled in preschool, compared with 61% of children in wealthier communities.[2]

Today nearly one in four American students live in conditions of poverty—a rate higher than that of any other advanced industrial nation in Europe, North America and Asia. This percentage is even higher for students of color.[3] More than half of all students now qualify for free or reduced-price school lunches.[4]

The current education system simply does not work for millions of low-income students. Over the past 25 years, the achievement gap between high- and low-income students has increased by 30-40%.[5] These gaps begin before children start kindergarten and widen throughout their school years. Low-income students are less likely to have attended preschool, less likely to receive adequate and preventative physical and mental health care services, and less likely to experience structured or unstructured out-of-school learning experiences.[6] Students living in low-income circumstances are also more likely to experience food insecurity, homelessness, childhood trauma, and violence.[7]

If we fail to act now, the gaps will continue to widen, leaving more and more students behind, or worse—we will graduate students with the promise that they are prepared for college and work when in fact they are not. The chasms are growing between the poor and the wealthy students, poverty is more entrenched in communities than it has been in decades, and opportunities are increasingly limited for more and more students of color and students living in poverty. **We need to act now** on what we know in order to reorient the educational system and invest our resources in ways that address students' inequitable access to great teaching and deeper learning opportunities. Leaving students behind decreases the future opportunity for all citizens and for this country as a whole.

Consider the recent decline in civic and cultural literacy in the country, leaving us with an electorate of which only 36% can name the three branches of U.S. government.[8] Not only do we have an ethical and civic responsibility to keep the doors to opportunity open for all students, but it is in our economic best interest to support students on a path to college and careers. According to calculations by the Alliance for Excellent Education, high school dropouts are three times more likely

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to be unemployed than college graduates, and when they are employed, earn about $8,000 a year less than high school graduates and approximately $26,500 a year less than college graduates.[9] In addition, recent reports by McKinsey & Company argue that gaps in academic achievement cost the U.S. economy trillions of dollars a year.[10] So no matter which scenario hits home—an individual student's diminished lifetime earnings, a community with chronic high dropout and unemployment rates, or our nation's decline compared to other countries' growth—the economic impact of growing inequities is everyone's challenge.

Right now, there is a real opportunity to reorient the education system so that students across the country have access to meaningful and powerful learning opportunities. The new federal Every Student Succeeds Act (ESSA) offers states and local education organizations the opportunity to do things differently—to develop school systems that are coherently and effectively focused on delivering personalized learning for all students as well as on the individualized professional learning that will enable teachers to drive this transformation. We can achieve greater equity by ensuring that every student has access to the kind of great teaching that occurs when teachers work together to grow and achieve individually and collectively—strengthening and deepening their content and pedagogical knowledge, social-emotional competencies, and their collaborative work to improve their professional learning and development. In fact, the opportunities to leverage are many: new research on learning sciences and deeper learning, a deeper understanding of the 21st century competencies students will need for work and citizenship, and meaningfully integrated and supportive technology.

This is a call for a national investment that requires making tough choices—for instance, making investments in teaching and systems and strategies that strengthen the

American education system rather than continuing to "invest" in the expanding prison population.[11] We shouldn't assume that making positive change is too expensive, too complicated, and can't be done. We can learn a great deal from how other countries have invested in a systemic way to improve teaching and learning. We can turn the tide by making targeted and strategic investments in developing the expertise and professional experience of the teachers and leaders in our schools, providing capacity building and support, and capitalizing on shifts in federal policy as opportunities for looking at resources and systems differently.

In some states, this may mean focusing on recruiting teachers who understand the needs of students living in poverty, or the 25% of the nation's students who attend rural schools. In some communities, this means focusing resources on teacher induction in order to stanch chronic new teacher attrition. And in far too many cases, this means we must train and equip teachers to create supportive learning communities for young people living with violence and trauma.

Turning the tide depends on investing in a new design of teaching and learning that empowers teachers and strengthens the profession, and acknowledging that there are teachers and state and district leaders across the country whose skills and expertise provide the best answers for how to improve. Improvements can be grassroots or top-down. In this report you'll encounter both types — for example, statewide changes that resulted from new policies about teacher competency progressions, or school- or district-wide adoption of teacher-led professional development that was spurred by one local teacher reaching out to create more meaningful professional learning opportunities. Throughout this report, we also point to strong examples of forward-thinking, effective strategies that work — from collaborative teaching environments to aligned and supportive professional learning systems — in order to help map out promising strategies and resources. Our goal is to "connect the dots" between these pockets of progress so that we have a map for achieving a nationwide network of schools and systems organized for success.

> 66 Scholars Michael Fullan and Andrew Hargreaves have called for a national investment in the 'professional capital' of the teacher workforce, a long-term investment that they argue will yield a well-educated citizenry capable of powering our economy and democracy. In their words, 'teachers become nation builders.' 99

The Way Forward

The Commission is recommending several key strategies, each of which is described more fully in this report:

1. Policymakers should establish and broadly communicate a new compact with teachers
2. Every state should establish a Commission on Teaching, Learning, and the State's Future
3. States and districts should codify and track whether all schools are "organized for success"
4. Teacher preparation should be more relevant and clinically-based
5. States should support all new teachers with multi-year induction and high-quality mentoring
6. Education leaders should evaluate ALL professional learning for responsiveness and effectiveness

Taken alone, no single one of these strategies is capable of transforming teaching. But strategic, long-term investments in coherent, dynamic, and well-designed systems that work together to address different aspects of the problem will yield long-term returns for teachers, their students, and for our nation.

II. A New Kind of Learning: Today's Students, Today's Opportunities

As a nation we must focus on what successful students need to know and be able to do, so that we can ensure that our schools are set up to produce those students — a process that begins with early childhood and is consistently reinforced through high school and beyond. Many are already zeroing in on developing profiles of graduates as drivers of instruction and systemic change. National organizations including Jobs for the Future, Council of Chief State School Officers, and the Partnership for 21st Century Skills are leaders in this work. Several states including South Carolina (sidebar) are using commonly supported and collaboratively developed profiles of a successful graduate as the foundation for discussions at all levels of the system about how to develop curricula, assessments, and professional development.

Students who graduate from high school must be well prepared with the knowledge, skills, and habits to succeed in college, career, and life. Whether they want to become scientists, welders, soldiers, writers or gymnasts, our graduates must be creative and astute problem solvers who can access and apply information, think critically and weigh evidence, and communicate their ideas. Graduates also need to collaborate well and appreciate diversity in order to engage successfully in the global marketplace. We want this generation to be curious, self-directed, lifelong learners who have cultivated a variety of interests and been nurtured by a wide range of educational experiences.

At the end of the day, we need students to learn differently so that they can function effectively in today's global economy. We are in the midst of a transition to work that involves fewer routine and manual tasks and requires more analytic, interpersonal, and creative abilities. Organizations are seeking and hiring individuals who can work across and within flexible networks of people, with greater efficiency and at an accelerated pace.[12] In addition, students will be required to effectively leverage technology in almost every aspect of their careers, no matter the industry.

The students we are preparing for 21st century work and citizenship are more diverse than ever before. Over the past three decades, the number of students who speak a language other than English at home more than doubled, from 4.7 million to 11.2 million, and those students speak more than 450 different languages.[13] More than six million students have identified disabilities or special needs; many more are as yet undiagnosed.[14] All this, while the income gap in America widens and the percentage of children living in poverty continues to grow.

The diversity of learners makes the need to design new paradigms of learning and teaching even more urgent. Developing learning progressions designed around an understanding of each student's strengths and challenges, and focused on teaming, communication, and problem solving is the way to ensure all are achieving high standards. The education system and teaching in

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Profile of the South Carolina Graduate

World Class Knowledge
- Rigorous standards in language arts and math for career and college readiness
- Multiple languages, science, technology, engineering, mathematics (STEM), arts and social sciences

World Class Skills
- Creativity and innovation
- Critical thinking and problem solving
- Collaboration and teamwork
- Communication, information, media and technology
- Knowing how to learn

Life and Career Characteristics
- Integrity
- Self-direction
- Global perspective
- Perseverance
- Work ethic
- Interpersonal skills

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particular must become more responsive to local needs and contexts. Although providing more 'equal' environments and resources to all students and teachers will go a long way towards achieving equity in K-12 education, this alone will not ensure that we are addressing each student's unique needs and helping each student realize their full potential. Making sure each student gets what he needs to meet high standards and achieve success in college, career, and life is the real equity we must aim for.

There are various ways to describe this vision for learning and many strategies that are employed to achieve similar ends, each with its own terminology, networks, and methods. For instance, personalized learning focuses on identifying and addressing the individual needs of students, and differs from Deeper Learning in some methodology. Throughout this report we use the term "great teaching for deeper learning" which honors the Deeper Learning

> **"** Often seen as a challenge, the country's changing demographics could also be our greatest opportunity. Students who bring diverse learning styles, backgrounds, and cultural experiences to schools are making the clearest call in decades for improving access to great teaching and learning. **"**

PERSONALIZED LEARNING PAYS OFF

A student in Casco Bay High School in Portland, Maine, who described himself as a "passive and disengaged" learner in his first year admits he didn't really feel invested in his own learning until after he led a teacher-parent conference as a sophomore. During the conference, his advisor praised his academic performance but questioned why he wasn't involved in other school or community activities. After the student and advisor discussed this issue and explored some of his interests, the student joined the Model United Nations program. That experience led to a new curiosity about Asian culture and languages. His teachers and principal recognized and encouraged his new interests and arranged for him to take a Japanese language class at the nearby university, followed by a summer program focused on China; he then spent his full senior year in Japan. The student was accepted early admission to Bowdoin College majoring in Asian Studies and government. The trajectory of this student's academic career, and possibly his future academic and professional successes, were changed by attention and personalization by the educators in his school.

work we support while aligning more broadly with what we view as similar and complementary frameworks and competencies. We encourage others who share a "similar enough" vision to see past differences in implementation details in order to strategize about how to ensure these types of outcomes for a greater number of students.

Opportunities to Leverage

We know that today's education needs to be more than rote learning, memorization of facts, and sitting in a classroom seat. Students need to be challenged to think and learn differently, and in ways that engage their personal strengths and abilities. Teachers must be supported to help facilitate this kind of personalized, deeper learning. But where are the opportunities, and what does leveraging those opportunities look like in schools and classrooms?

The Science of Learning

First, we know more than ever about why and how students learn. A growing body of research on the science of learning provides us with a more nuanced understanding of children's development at different ages and stages; the neuroscientific underpinnings of their academic, social, and emotional skills; and the teaching strategies that may be most effective for students of different ages and abilities. For example, a recent report from Jobs for the Future makes the case for a number of student-centered approaches based upon current neuroscience, including self-direction, customization, and active, real-world engagement.[15] We must build educators' capacity to use knowledge like this to accelerate the learning of each individual student.

LearnLab is an NSF-funded Science of Learning Center formally known as the Pittsburgh Science of Learning Center. The Center conducts research to understand and identify the optimal instructional conditions that lead to student learning, and it acts in partnership with a local school so that strong connections can be made between the research and teachers' practice and feedback. LearnLab uses advanced technologies to allow for both rigor and practice to be measured. One of the Center's foci is on metacognition and motivation. In these studies, researchers work to understand the links between metacognition and motivation and identify the conditions in learning environments that strengthen these factors in order to improve student learning.

High Standards and Deeper Learning Competencies

We also have a clear and forward-looking roadmap of *what* students should learn, thanks to high standards like the Common Core State Standards and the Next Generation Science Standards (NGSS), as well as a better understanding of the competencies students need to succeed. New standards and their related assessments signal essential and important shifts to: depth over breadth, performance-based mastery of skills, and making connections across disciplines, while a focus on deeper learning competencies help us see all students as critical thinkers, collaborators, and problem solvers. That said, we must make sure we are supporting teachers' ability to address these standards and competencies, and ensure a fair distribution of implementation resources in order to achieve equity.

The Hewlett Foundation's work to promote strategies that support Deeper Learning competencies for students is one way to understand and achieve the outcomes we desire. The deeper learning competencies are: *mastery of core academic content, the ability to think critically and solve complex problems, the ability to work collaboratively and communicate effectively, and the development of an academic mindset (the ability to learn how to learn)*. These competencies span three domains: cognitive, interpersonal and intrapersonal. In the *cognitive domain*, students develop a strong academic foundation in core subjects, and in particular an understanding of larger disciplinary principles and concepts that they can apply in novel situations. Students learn to think critically by synthesizing and analyzing information; framing questions; and recognizing patterns, trends, and relationships for the purposes of identifying and solving problems and assessing proposed solutions. In the *interpersonal domain*, students learn how to work with others to

complete tasks, produce shared work, understand and solve complex problems, and communicate complex concepts to others. For students to do this, they must learn how to clearly organize their data, findings, and thoughts. In the intrapersonal domain, students learn how to monitor and direct their own learning, identify the obstacles or barriers to their success, and then deploy strategies to address these challenges. Students with an academic mindset develop the belief that they are capable of success, can trust in their own competence, feel a strong sense of efficacy, and learn to persevere when they face difficulties.

Recently, a rigorous quantitative study conducted by the American Institutes for Research (AIR) found that students attending Deeper Learning schools outperformed their peers in other types of schools on PISA-based tests for core content knowledge and problem-solving skills; graduation rates; enrollment rates to selective colleges and universities; and measures of collaborative skills, academic engagement, and motivation. This was true for all types of students in Deeper Learning schools, regardless of their background, prior level of achievement, or whether they lived in an urban or suburban district.

Zeiser, K., Taylor, J., Rickles, J., Garet, M., & Segeritz, M. (2014). Evidence of deeper learning outcomes: Findings from the study of deeper learning. Washington, D.C.: American Institutes for Research.

compels us to shift education from the traditional knowledge-transfer model to learning that's self-directed, collaborative, and dynamic. The teacher-learner relationship is changing dramatically as classrooms become more "open" via voice, video, and text-based collaboration. Students and teachers can access real-world data, a world library of primary sources, blended learning environments, new ways to demonstrate and share knowledge, and more.

As teachers develop their proficiency with technology integration, the value of technology extends well beyond automating traditional classroom tasks. This can't be about drill-and-practice games that substitute for flashcards and quizzes, reading a chapter of a digital textbook, or submitting a worksheet digitally instead of in hard copy. Ultimately, technology should power transformative learning experiences that engage students in ways not previously possible and enable the other elements of deeper learning described in this chapter. This might mean using technology to construct inquiry around topics of personal interest, seek out and vet multiple sources and modes of information, facilitate collaboration, contribute to citizen science projects as part of a global community of researchers, and create and share products that respond to community needs. Chris Dede suggests that collaboration tools, online and hybrid educational environments, tools that support learners as makers and creators, immersive media that create virtual worlds or augment reality, and games and simulations can be especially effective technologies.[16] Our challenge is to equitably distribute these resources and provide the capacity building needed to help teachers use them in an integrated and supportive way.

Schools like the Minnesota New Country School in Henderson, Minnesota, systematize this approach by working with each student to develop a personal learning plan. Advisors solicit input from parents and other staff members, but ultimately it is the students who identify the projects they'd like to pursue and their aspirations beyond school. The process involves developing detailed project proposals that identify goals, relevant state standards, deadlines and deliverables; independent work that requires students to document their time and learning each day; regular check-ins with advisors; and a presentation of each project in which students must defend their learning to a team of faculty members who evaluate how well the student met the goals he established for himself.

New Technologies

As they work to realize the vision inherent in the standards, teachers and students can employ unprecedented new technologies that have positively disrupted the way we teach and learn. In the era of big data, wearable technology and the Internet of Everything, technology

For example, in Josh Block's 10th grade world history classes at the Science Leadership Academy in Philadelphia, students created digital stories that explored the criteria for something to be considered "revolutionary" by analyzing evidence from at least three different revolutions. Students used Internet sources to research historical and modern revolutionary movements, including several of the countries involved in the Arab Spring. Social media sites like Twitter and Facebook and other digital sources allowed students to access text, video, and images posted by individuals involved in the Arab Spring and other modern-day revolutionary struggles. They used graphic design and video editing tools to create their digital stories, and then blogs to share their digital stories with a wider audience and describe their own learning.[17]

Video and collaboration technologies are now so sophisticated that they enable us to more effectively connect students with peers, educators, and subject matter experts, and scale great teachers to the furthest corners of the globe. In Minnesota, seven rural school districts created the Itasca Area Schools Collaborative (IASC) to meet shared challenges including declining enrollments, budget cuts, and delivering services over their 3,500 square-mile area. By pooling resources, the IASC districts created virtual classrooms featuring multiple cameras, high-definition screens, and collaboration tools. This allowed the districts to offer electives that would otherwise have been cut, and partner with local universities to offer college-credit courses. Thanks to this "fast-tracking" of college credits, some IASC students actually graduate ahead of their peers in more urban, affluent districts. Matt Grose, superintendent of an IASC member district in Deer River says, "Our kids deserve to have these opportunities, independent of zip code."[18]

Rethinking Data and Evaluation

In addition, new ideas about data and evaluation are causing us to rethink how we measure and improve education, from individual classrooms up through federal agencies. Our ability to collect and analyze data about teaching and learning has increased significantly in recent decades, as has the focus on utilizing improvement science. In contrast to the randomized control trials and experimental designs that have dominated educa-

tion research for many years and are rigorous but often time-consuming and of limited practical use — improvement research aims to provide timely, useful feedback. Drawn from successful research and development activities in other industries, it pairs researchers with networks of practitioners to develop practical tools that help teachers understand how well an instructional strategy or assessment works, for whom, and under what conditions. In education and in other sectors, the result has been that "large networks have organized around complex problems and brought about remarkable change."[19]

Engaging Community Partners

Supporting all of this is the critical engagement of community partners. Recognizing that a child's success in school depends on a constellation of factors in and out of school, schools must attend to the "whole child," which includes physical health and safety, emotional well-being, and disposition towards learning. This involves scaffolding learning experiences for students in ways that are compatible with their personal experiences to date as well as their family, community, and cultural patterns. To do so, educators must know, engage, and work collaboratively with their students, families, and communities. The most effective way to do this is to engage the community as a learning and development partner in the education process, rather than look for an endorsement of an already-developed initiative.

Schools in the New York City Small Schools of Choice network have partnerships with community-based youth and family organizations, universities, museums, and arts and STEM organizations as well as with school intermediaries (New Visions, Urban Assembly, International Network, and Institute for Student Achievement). The multiyear evaluation of these schools found increased high school graduation rates for large numbers of low-income students of color, at a cost per graduate that is roughly 15% percent lower than that of the control group schools.[20] This is especially important for students who are challenged by circumstances such as living in poverty or dealing with trauma.

A New Compact
Teachers at the Heart of the System

We need to help our teachers stay in the profession and thrive by empowering them to develop a system that is more flexible, innovative, and customized. By having more say in their professional learning, leadership roles and school culture, educators could remake their own jobs and their schools from the inside out while continually adjusting what they do based on evidence and results. In this environment, we need to ensure that teachers have the time and opportunity to shift their methods from encouraging students to find the "right" answers to helping students "own" what they learn and apply it in their daily lives. And we must do so for every child, no matter what they bring to the classroom, and help teachers value the diversity of their students, turning their array of experiences, talents, creativity, skills, grit, and drive into our country's greatest strength.

New Student Learning
New Learning Environments
New Organization of Teaching
New System to Support Teaching

This new way of thinking about teaching and learning will drive a new system that asks much of teachers but gives them the supports they need to be successful throughout their careers. Essentially, the new system will establish a new compact between teachers, states, and districts; between teachers, students, parents; and the education system as a whole.

This new compact and system of teaching and learning says to students:
- We're going to expect more of you as you create and seize the opportunity to show what you can do.
- We're going to change how and what you learn in school to match how you learn best.
- We're going to build a system that gives you access to great teachers.
- We're going to challenge you as never before but we'll let you direct more of your learning.
- We're going to use new tools and approaches to teaching that will inspire you and your teachers.
- We're going to develop all your talents to prepare you for success in school, work, and the world.

This system says to educators:
- We're going to expect more of you as you create opportunities to teach, lead, and develop.
- We're going to change the ways schools work to make them great places to teach and learn.
- We're going to pay you so that you want to come and you won't be in debt when you start.
- We're going to prepare you so that you will be successful and want to stay.
- We're going to treat you as professionals and elevate your ability to do what's best for the students you teach.
- We're going to listen to you and give you more voice about what needs to happen to help your school and the system improve.
- We're going to ensure that you have quality mentoring and opportunities to learn with your peers.
- We're going to hold you accountable for performance and hold ourselves accountable, too.

The system says to parents, the community, and other stakeholders:
- We're going to ensure that all students, regardless of who they are and where they live, will become well-educated, productive, and engaged members of society.
- We're going to ensure that schools no longer operate in a vacuum, disconnected from both their communities and the effects of technology that are transforming our work, our culture, and our lives.
- We're going to attract the strongest teachers to every community so that every student has the opportunity to succeed and excel.
- We're going to ensure that parents are partners in learning, that their input is valued, and that we work hard to ensure they are engaged participants.
- We're going to give you the tools to be advocates for your students and citizens.

With these shared commitments, we will be able to gain traction in our efforts to help all students and schools achieve at their highest levels.
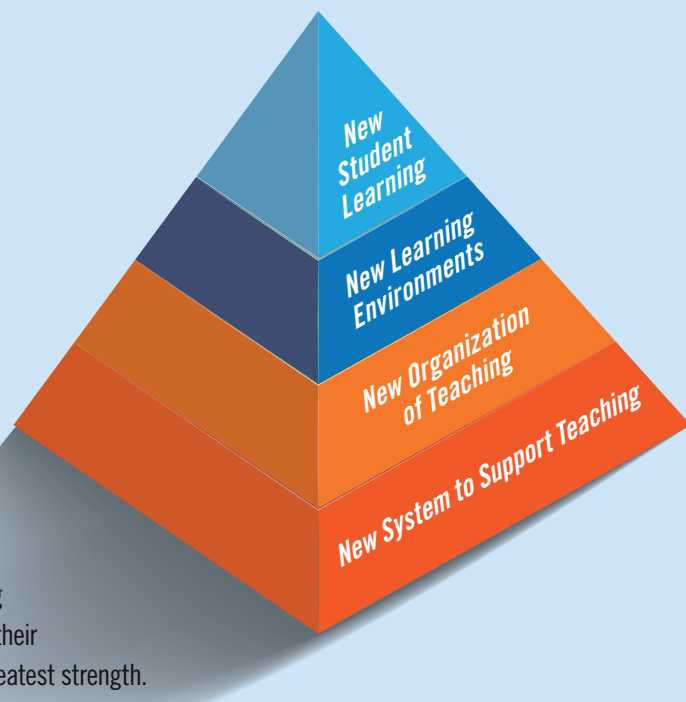
III. Every Student, Every Day: Organizing Schools for Success

Supporting all students to achieve meaningful, modern, relevant competencies depends on new approaches to individualize and deepen learning, led by teachers who model and exercise the same 21st century skills that we seek for our students. Reorienting teaching and learning in this way means we must rethink and redesign schools. To date, all too often we have often focused on improving conditions for individual teachers *within* the existing system; what's needed now is a different kind of schooling that enables skilled, supported teachers to work collaboratively in order to challenge traditional norms and bring inspiration and innovation to teaching and learning.

We believe that there are seven essential components of schools organized for success:

1. A common vision for deeper, 21st century learning and a shared understanding of which teaching practices lead to that learning
2. Classroom dynamics emphasizing new kinds of relationships between teachers and their peers, students, and community members
3. Collaboration in many ways, across multiple contexts
4. A culture of continuous learning and development for educators
5. Evaluation focused on support, not sanctions
6. Teacher leadership roles and opportunities
7. Great school leadership and shared decision making

1. Establish a common vision for deeper, 21st century learning and a shared understanding of which teaching practices lead to that learning

A common vision as the foundation for teaching and learning helps establish school-wide and system-wide goals as well as the practices and relationships that build

> 66 A series of studies confirms that great teachers have a profound effect on student achievement and learning, especially for students living in poverty and students of color— and that a series of great teachers can overcome the achievement gap between low-income students and their more affluent peers. 99

the capacity of teachers, teacher leaders, principals, and policymakers.

There's a lot that goes into the kind of skillful, effective teaching that leads to powerful, content-rich, real-world learning experiences for students. First and foremost, it includes the content and pedagogical knowledge individual teachers must have and develop, as well as the social-emotional competencies those teachers must use to build caring, respectful relationships in their classrooms. Additionally, it includes the kind of coordinated and collaborative teaching endeavor that's needed to reach all students—the social capital of teachers working together to identify and respond to the needs of their students and their school, which research has shown leads to improved learning by both teachers and students.[21]

Ultimately, this focus is important because a series of studies confirms that great teachers have a profound effect on student achievement and learning, especially for students living in poverty and students of color—and

that a series of great teachers can overcome the achievement gap between low-income students and their more affluent peers.[22] Twenty years ago, *What Matters Most* defined great teaching in this way:

> We know that students learn best when new ideas are connected to what they already know and have experienced; when they are actively engaged in applying and testing their knowledge using real-world problems; when their learning is organized around clear, high goals with lots of practice reaching them; and when they can use their own interests and strengths as springboards for learning.

Since then, many organizations have developed and discussed great teaching, and there's enough alignment among different definitions to distill some common principles. NCTAF mapped definitions of good, great and effective teaching, vetted it with partners and collaborators, and found these points of alignment:

- Grounded in what we know about how students learn
- Strong content knowledge paired with strong pedagogical knowledge
- The ability to teach for understanding and assess that students are grasping major concepts
- The ability to personalize learning for students, in ways that show cultural competence and an understanding of the strategies that work best for different types of learners
- The ability to curate collections of learning resources and integrate technology appropriately in order to achieve learning goals
- Skill development that anticipates what will be required of students in college, career, and adult life
- The ability to form caring relationships with all students
- Engagement in reflective practice
- The appreciation that a teacher's knowledge and skills are constantly developing, and that teachers must have the ability to identify and seek out relevant learning opportunities for themselves as well as their students

> 66 Teachers establish strong relationships with students for the purpose of finding out what interests them, personalizing learning experiences accordingly and motivating students to pursue their own learning with perseverance and passion. 99

2. Shift the dynamics of the classroom

For teaching and learning to shift so that students are empowered and inspired, and so learning is personalized, connected to real-life, wired and extended beyond school, the role of the teacher has to change to that of a *learning strategist*. Being a learning strategist requires teachers to shift fluidly among a range of roles — learning designer, facilitator, networker, and advisor who coaches, counsels, mentors, and tutors — depending on what's most needed at that moment. These new roles are described well in Monica Martinez and Dennis McGrath's recent book *Deeper Learning: How Eight Innovative Public Schools are Transforming Education in the 21st Century*. Embracing these roles means that teachers interact differently than many do today with their peers, students, and community members.

Teachers who focus on achieving academic progress and deeper learning outcomes empower students as learners. This means they use pedagogical approaches that help students become self-directed and responsible learners rather than passive rule followers. Teachers establish strong relationships with students for the purpose of finding out what interests them, personalizing learning experiences accordingly, and motivating students to pursue their own learning with perseverance and passion.

Jeff McClelland, a former principal of MC^2 STEM High School in Cleveland, Ohio, wants his teachers to be able to provide both academic and social-emotional support, saying "I look for teachers who are experts in their content and who are compassionate and understanding of teenagers. Kids have to be able to access content at a high level. So you can't love kids and not know your content. At the same time, you can't love your content and dislike kids." [23]

These teachers also connect learning to real-world issues and settings by ensuring that there are frequent opportunities for students to address real-world challenges and experience workplace conditions and expectations. Students do this by interacting with professionals and experts who help students deepen their understanding of content knowledge and apply that knowledge in relevant fields. Often students also take on a professional role when doing a project and present and refine their work in authentic, public settings. Educators become networkers, seeking out people in the community they can draw upon to enhance their teaching, enrich their curricula and projects, and provide students with greater access to a wide range of knowledge and perspectives. Carrie Bakken, teacher and Co-Director at Avalon School in St. Paul, Minnesota, says that teachers in the networker role must "know who is around and always keep their eyes peeled for what other people can contribute." [24]

The NCTAF STEM Learning Studios were designed to meet the growing need for STEM learning and literacy by integrating three individually successful strategies — collaborative teacher teams, STEM community partners, and project-based learning (PBL) — into a coherent set of activities that would benefit teachers' practice and students' learning. Launched in 2009 with support from NASA, the Learning Studios brought together four to six teachers within the same school to work as an interdisciplinary professional learning community focused on designing authentic, project-based earth science learning experiences. Teacher teams and students collaborated with local scientists and engineers to design and implement year-long investigations. Over time, the Learning Studios spread to more than 30 sites.

> According to the TALIS survey, U.S. teachers say that they see themselves as facilitators of student learning and inquiry, and yet only infrequently use the teaching strategies that would naturally follow from that perspective, such as small-group problem solving or long-term projects. This disconnect appears to be able to be addressed by professional development that is embedded and collaborative.

3. Collaborate in many ways, across multiple contexts

Research has repeatedly shown that meaningful collaboration among teachers and administrators positively affects student achievement, teacher quality, and school success, and that this holds true across all types of schools and grade levels. [25] For example, according to one recent study, "teachers working in schools with strong professional environments improved, over 10 years, 38% more than teachers in schools with weak professional environments." [26]

Teachers need regular, frequent, and structured opportunities to work together in a variety of ways, including but not limited to developing curricula; designing learning experiences; creating assessments; devising ways to improve their individual practice; analyzing student work and strategizing about the best supports for specific students; and helping each other with questions related to content, pedagogy, or cultural competence.

In high achieving countries across the world it has been demonstrated that focused professional collaboration can improve retention. In our own country, this holds true as well—even in high-needs schools that typically

experience higher turnover rates. For example, research-ers studying teacher mobility in Chicago Public Schools noted that retention rates varied widely among schools serving similar low-income minority populations and concluded that school climate, and in particular a strong sense of collaboration among teachers, was the key fac-tor: "Teachers are likely to stay in schools where they view their colleagues as partners with them in the work of improving the whole school." [27] However, in far too many schools in the U.S., teaching is still an independent individual activity with limited opportunities for teach-ers to collaborate with or even observe their peers.

In schools where collaboration *is* the norm, teachers learn about and from their colleagues' practice. Many of these schools carve out anywhere from five to 10 hours each week for teachers to plan and problem-solve together around stu-dents and subject matter, and to orient new staff to school-wide norms and approaches. Colleen Green of High Tech High International in San Diego, California shares an example of what teachers can do when regularly working together: "We work in teams and as a whole staff. Teachers share scaffolding resources with each other or will present a lesson, a project, or a task to one another and get feedback through a protocol teachers use. When teachers meet by subject, they will also share resources they have developed that align to the course maps they each have that articulate the curriculum for the course of the year." [28]

This is an area where effective use of technology can ac-celerate progress. For example, teachers are using their smartphones to record videos of classroom practice and take photos of student work samples. Then through a variety of apps or via shared online environments, oth-er teachers are able to review, annotate, and discuss the videos and images as a form of virtual classroom obser-vation. Social learning networks and virtual meeting platforms can enable teachers' asynchronous interactions within and beyond the school day. Teams can use proj-ect management tools to coordinate the face-to-face and virtual interactions of professional learning communities and to track tasks related to shared initiatives.

> **❝ A majority of U.S. teachers — 54% — never jointly teach as a team. Half of all teachers report that they never observe other classes, and 42% never engage in joint activities across different classes and age groups. ❞**

In the Anoka-Hennepin School District in Minnesota, teach-ers participating in professional learning communities sim-ply weren't getting enough time to meet face-to-face. "We needed the ability to share presentations and collaborate on the creation of documents in real time," says Tom Skoglund, an Anoka-Hennepin teacher on special assignment as a technology facilitator. "We also needed the ability to connect teachers from at least five different sites." Online confer-encing and collaboration tools allowed teachers to meet with their colleagues across schools to share strategies. Skoglund notes this has been particularly important for teachers of specialized or elective subjects: "These teachers often feel that they don't have access to the same level of peer support that other teachers have." The technology connects them to peers in other buildings, "helping them feel like they're not alone in dealing with the unique challenges they face." [29]

4. Create a culture of continuous development and learning for educators

The way teachers work and learn together should model the way we want students to work together. If we want students to develop the deeper learning skills of critical thinking, communication, collaboration, and creative problem-solving, then this must be the type of profes-sional learning that teachers experience too. We can't ex-pect teachers to teach in ways that they themselves may have never experienced.

For starters, teachers must have enough time for professional learning, and the intensity and duration of professional development offered to U.S. teachers should be at the level that research suggests is necessary to improve instruction and student achievement. While many teachers get a day or two of professional development on various topics each year, very few have the chance to study any aspect of teaching for more than two days, and the amount and quality of this professional development simply doesn't meet the threshold needed to produce strong effects on their teaching or their students' learning. Thus, in addition to formal professional development workshops, which may still help schools address compliance issues, good professional learning must also involve components like common planning time for teams of teachers, shared opportunities to examine student work, and tools for self-reflection.

Indeed, research suggests that professional development of 14 hours or less has no impact on student learning, while longer duration programs demonstrate positive and significant effects. One analysis of well-designed experimental studies found that a set of programs that offered more substantial professional development—ranging from 30 to 100 hours in total, spread over six to 12 months—boosted student achievement by approximately 21 percentile points.[30]

Thanks to studies about what makes professional "development" effective, a new paradigm of **professional learning** has emerged in contrast to the traditional and typically ineffective *professional development*. It is an important semantic shift that the Commission supports. Learning Forward's Standards for Professional Learning describe research-based characteristics of effective professional learning and provide powerful indicators to guide school and district leaders in planning, implementing, evaluating, and improving professional learning experiences. Building upon these standards, Learning Forward has convened the Redesign PD Partnership, a collaborative professional learning community of individuals from organizations committed to creating a demand for and delivering rede-

> 66 Schools and districts should also appreciate the intangible, but enormous, value teachers place on being listened to and involved meaningfully in their own growth and development. 99

signed systems of support that can guarantee that all educators have access to effective professional learning.

Unfortunately, while some schools and districts are implementing the type of professional learning envisioned in the Learning Forward standards, it is not the norm across the United States. Most U.S. teachers have no time to work with colleagues or engage in embedded professional learning during the school day, in contrast to teachers in high-performing nations. What's more, there is a dearth of good systems that schools, districts and states can use for monitoring or evaluating professional learning processes and outcomes.

Other nations are affirming the value of embedded, ongoing professional learning by carving out 15-25 hours each week for teachers to pursue their own development and learn from one another; many also provide two to four weeks of paid leave each year to attend institutes and seminars, visit other schools and classrooms, conduct action research and lesson study, and participate in school retreats.[31] Shifting the use of time, based on lessons learned from countries like Finland and Singapore, can help the U.S. ensure that every teacher has protected time for collaborative professional learning as well as individual skill-building.

Schools and districts should also appreciate the intangible, but enormous, value teachers place on being listened to and involved meaningfully in their own growth and development. In the context of professional learning, teacher agency is the capacity of teachers to act purposefully

and constructively to direct their professional growth and contribute to the growth of their colleagues. [32]

Teacher-led professional learning delivers many important benefits. Studies find that teacher-led experiences enable participants to strengthen their knowledge of academic content and how to teach it, while taking into account local needs and circumstances—qualities of professional learning that teachers especially value. [33] Research also shows that teachers are more likely to try classroom practices that have been modeled for them in professional development settings—modeling that current classroom teachers are perhaps best equipped to provide. [34]

Within any school or district, there is untapped teacher expertise that can be harnessed to improve professional learning. Recognizing this reality, district officials in Burbank, California hired two of the district's best teacher leaders to work full time as Teachers in Residence designing induction and professional development for educators. For middle school English teacher Rebecca Mieliwocki and 5th-grade teacher Jennifer Almer, the first step was talking with the teachers. They surveyed the 400 teachers from their 16 schools and got clear marching orders: no "big binder" that will sit on shelves but make no impact on their practice. Instead, teachers asked for feedback on their instruction, ideas to be more creative, strategies for how to use technology, models of best practice, and time to collaborate during the day. After conducting the survey, Mieliwocki and Almer brought together teacher leaders from each school to talk about the survey results and make teacher-directed plans for professional learning. The Burbank example is powerful because it taps into teacher leadership at the district and in schools and offers individual teachers choices about where to focus their learning. [35]

Moving from Compliance to Agency, a recent report from Learning Forward and NCTAF, provides many other examples of teacher agency in professional learning and offers a matrix with which to assess how well schools and districts are involving teachers in designing, implementing, and assessing the value of professional learning experiences.

> 66 Within any school or district, there is untapped teacher expertise that can be harnessed to improve professional learning. 99

5. Focus evaluation on continuous improvement

Over the past few years, the vast majority of states have introduced more rigorous and sophisticated evaluation systems. This has provided states, districts, and schools with more data about teaching practice than ever before, but in many cases these evaluation systems and the data they generate have not yet been coupled with educators' ongoing professional learning in a culture of continuous improvement.

In a recent Gates Foundation survey, only a third of the teachers surveyed agreed that professional learning has improved with new evaluation systems. [36] If teachers are to be evaluated on their effectiveness, then states, districts, and schools should be responsible for responding with appropriate tools, resources, supports, and development opportunities that will help them improve their instructional practice and make them more effective. In its 2015 series _Evaluation and Support: Strategies for Success_, Education First notes, "Evaluation systems that simply sort teachers or assign them ratings may be treated as compliance exercises rather than an opportunity to improve instruction." What's more, research suggests that if educators believe that the feedback provided during evaluations is intended for their development and growth, they're more likely to accept and apply it than if they perceive it as a judgment. [37]

In a high-quality evaluation system that supports continuous improvement, teachers work with instructional leaders at their school to develop individual professional learning plans that target a select number of growth areas. These plans are based in significant measure on the teacher's recent evaluation data and serve as the foundation for professional learning, coaching, observation, and evaluation over the next school year.

Principals and other school-based instructional leaders can utilize teachers' individual professional learning plans, student achievement data, staff surveys, and other measures to develop a school-wide professional learning plan. Districts can then work with school instructional leaders to develop professional learning opportunities that align with the needs identified by individual teachers and school leaders. In Greene County, Tennessee, one of five districts recently studied by Education First, a district official explained the district's vertically-aligned approach to professional learning this way: "Two principals and 15 teachers designed the PLP (professional learning plan) process. The idea is that all professional development should come from the ground up and should be teacher-based." [38] Contrast this to the norm in most districts, where fewer than a third of all teachers say they get to choose most or all of their professional learning opportunities. [39]

In many districts, systems for instructional improvement such as coaching, mentoring, and peer assistance are entirely separate from the mechanisms for formal evaluation and teacher accountability. While there are compelling justifications for preserving this firewall, all too often it means that teachers are receiving uncoordinated and sometimes conflicting feedback about their performance. [40] In addition, it also means that the quality of formal evaluation gets compromised as overburdened principals attempt to observe and provide meaningful feedback to dozens of staff members. In one recent survey, 82% of principals reported that they were the primary person responsible for the performance and growth of teachers in their schools. On average, principals are directly responsible for 37 teachers—compare that to managers of other highly skilled professionals who direct and support an average of just five employees. [41] What's more, in schools and districts with decoupled systems for instructional improvement and evaluation, only a small minority of coaches and other instructional leaders providing 'informal' supportive feedback feel that they have primary responsibility or any real accountability for the performance of the teachers they work with. [42]

In the Denver Public Schools (DSP), experienced Team Lead teachers receive up to 50% release time to work closely with others in their grade level or subject area. Team Lead teachers observe and coach, provide input into formal evaluations, and share responsibility for their team members' performance. DPS teachers express a high degree of satisfaction with this integrated system for instructional improvement and evaluation: 85% of those surveyed agree that their Team Lead is well-equipped to evaluate their practice and coach them to improve. DPS Superintendent Tom Boasberg says, "Our teachers know their Team Lead is empowered to lead their teams and that the Leads are working closely with the school leader. Teachers don't have to guess whose direction and guidance is relevant for them." [43]

No matter what mix of instructional leaders are involved in supporting and evaluating teachers, states and districts must provide those leaders with training to do so effectively. Teacher leaders, principals, and principal supervisors need ongoing support to build skills in the following areas:

- Fostering a collaborative, growth-mindset culture and building trust.

- Conducting frequent, substantive, and credible observations. In some districts, superintendents and other district leaders observe and coach principals as they conduct classroom observations, while in other districts cohorts of principals and other instructional leaders role-play observation and feedback sessions or hone their skills by "observing" videos of classroom practice.

- Providing constructive, actionable, and targeted feedback focused on goals identified in the teacher's individual professional learning plan, and ideally informed by a pre-observation conference to set the context for what's being observed.

- Leveraging technology to develop a richer understanding of what's happening in the classroom and enhance

A BETTER APPROACH TO TEACHER EVALUATION

The Teacher Advancement Program (TAP) offers one well-developed example of a highly structured and fully integrated teacher evaluation, support and career ladder system. In the TAP system of "instructionally-focused accountability," trained master/mentor teachers and principals evaluate each teacher four to six times a year.

After each observation, the evaluator and teacher meet to discuss the findings and make a plan for ongoing growth. TAP then uses teacher leaders to provide formal professional learning experiences that help teachers carry out their growth plans and meet the evaluation standards. Master and mentor teachers also provide coaching and other types of support.

Teachers in TAP schools report that these professional learning experiences are substantially responsible for improvements in their practice and the gains in student achievement that have occurred in many TAP schools. Data from this extensive teacher evaluation and development system is combined with evidence about schoolwide and individual teacher student achievement gains in making judgments about teachers' appointment to specific roles in the career ladder.

Interestingly, while TAP was originally touted as an innovative "pay-for-performance" compensation system because it ties a component of salary increases to evaluations, survey data of participating teachers confirms that teachers especially value its system of continuous feedback tied to collaboration time and professional development.

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the observation and feedback process. Tools like panoramic cameras enable teachers and instructional leaders to analyze classroom interaction, while digital portfolios can help teachers identify and examine particular strengths and challenges. Additionally, virtual collaboration platforms can extend the opportunity for reflection and discussion of observation feedback.

- Identifying and facilitating professional learning experiences that align with observation feedback and evaluation data and will help teachers improve their practice. Here again, technology can play a role, particularly online platforms that allow teachers to review their observation and evaluation data and access integrated and aligned professional learning courses, videos, webinars and other materials. [44]

- Assessing the impact of the feedback and support they are providing to teachers.

Some states are ahead of the curve: a recent study of the Massachusetts teacher evaluation system by the SRI International Center for Education Policy found that a key feature of the system is that it is adaptive to where teachers are in their career and their development. The cycles of assessments differ depending on experience level, and the resulting professional development plans differ depending on what teachers need. There are two separate scores: teachers' summative performance and student impact - as opposed to systems in other states that fold student impact into the summative score. Teachers work together to define individual and collaborative learning goals. The challenge in Massachusetts has been the time and the training needed for evaluators, observers, and teachers who are dealing with many different mandates at the same time. Fortunately, Massachusetts has a strong system of support due to existing PLCs and has employed a tiered evaluation system to reduce the workload and the number of observations and evaluations. In addition, because evaluation has often been seen as punitive rather than developmental, a priority for the state is to communicate with teachers about the developmental purpose of the system and its components.

6. Create new roles and opportunities for accomplished educators

When individuals develop into great teachers, we should do everything we can to encourage them to stay close to the classroom. Where teachers have opportunities for

leadership and influence over school-wide decision making, they're significantly more likely to stay in the profession. What's more, initial research suggests that instructional quality also improves in schools that offer teacher leadership opportunities. [46]

Teacher leadership can be understood as "the process by which teachers, individually or collectively, influence their colleagues, principals, and other members of school communities to improve teaching and learning practices with the aim of increased student learning and achievement." The job titles and responsibilities of teacher leaders vary considerably from state to state, district to district, and even from school to school. Public Impact's *Defining Teacher-Leader Roles* provides a helpful overview of potential roles and their descriptions.

Only 20 states have created policies to formalize the teacher leader process and recognize advanced or master teachers within their certification systems. [47] The lack of role flexibility in the U.S. stands in stark contrast to other high-achieving nations. In Singapore, for example, teachers advance throughout their careers. With help from the government, teachers can pursue three separate career tracks that help them become curriculum specialists, mentors for other teachers, or school principals. Master teachers are appointed to lead the coaching and development of teachers in each school, and a teacher can progress to the promotional grade and pay scale of a school principal if he or she reaches the pinnacle of the master teacher track. Similarly, a curriculum specialist can progress to the same promotional grade as a director. No matter what

STRENGTHENING THE PROFESSION THROUGH ACCOMPLISHED TEACHING

Through National Board Certification, a rigorous, peer-reviewed, performance-based process, teachers demonstrate that their teaching meets the profession's standards for accomplished practice. More than 112,000 teachers from across the country have achieved National Board Certification to date and nearly half work in high-need schools. [48] Research has shown that students of National Board Certified Teachers (NBCTs) make gains equivalent to 1-2 months of additional learning, and the positive impact is even greater for students of color and low-income children. [49]

Now, the role of Board certification is shifting from an individual achievement to a collective expectation and professional norm. Results like these may help explain why more than 80% of Americans agree that teachers should achieve Board certification in addition to being licensed to practice, similar to professions like law and medicine. [50] Districts are leveraging the expertise of NBCTs in a number of ways, including as mentors to new and struggling teachers, curriculum design and implementation experts, and instructional leaders in their schools. More than half of all NBCTs (54%) indicate that they're playing some type of leadership role within their districts. [51]

> ❝ Only 20 states have created policies to formalize the teacher leader process and recognize advanced or master teachers within their certification systems. The lack of role flexibility in the U.S. stands in stark contrast to other high-achieving nations. ❞

career track a teacher chooses to pursue—and teachers may move between the three tracks—the tracks bring equal recognition, extra compensation, and new challenges that keep teaching exciting.

Teacher leadership systems must be coherent, sustainable, and closely aligned with state, district, and local needs. All too often, however, these roles are rolled out piecemeal to staff special projects or retain specific personnel. For example, leaders in one urban district discovered that they had created 40 different types of roles and that more than 35% of teachers held one of them![52] State and district leaders interested in designing teacher leadership systems should consult the National Network of State Teachers of the Year's _Teacher Leader Model Standards_ as well as the case studies and design features described in its _Teacher Career Advancement Initiatives_ report. Additionally, the Center for Teaching Quality, the National Board of Professional Teaching Standards and the NEA have co-created a set of competencies for three arenas of teacher leadership.

Well-designed teacher leadership roles allow expert teachers to meet their own needs for new challenges and career advancement while also addressing critical school and district needs. In his book _Teaching 2030_, Barnett Berry coins the term "teacherpreneurs" for those in hybrid roles who combine teaching responsibilities with other duties, such as mentoring, facilitating professional learning experiences, engaging in community outreach, or providing specialized student support services. Berry notes that some of these teachers also spend time working closely with researchers on studies of teaching and learning, or conducting policy analyses that are grounded in their everyday classroom experiences.[53]

> One well-established example of teacher leadership is the Peer Assistance and Review (PAR) program developed in Toledo, Ohio, which has been embraced and adapted by several other districts across the country. In PAR, local union representatives and district administrators jointly manage a program to improve teacher quality by having expert Consulting Teachers (CTs) mentor and evaluate their peers. Unions have supported PAR because they believe it professionalizes teaching by making teachers responsible for support and evaluation.[54] With its specialized roles for expert teachers, PAR differentiates the work and career opportunities of teachers in participating districts.

This type of shared leadership, with teachers engaged in a range of leadership roles and in democratic decision making, is widely seen at schools where there's serious school-led professional learning.[55] Principals in these schools spend little time cultivating "buy-in" because teachers have helped to shape the vision and mission of the school and are leading its implementation.[56]

7. Cultivate great school leaders and distribute leadership across the organization

Over the past decade, interest in distributed leadership models has grown as research points to a positive relationship between distributed leadership, school improvement, and student achievement.[57] Teacher satisfaction typically improves as well: for example, in one recent survey utilizing the Employee Net Promoter Score, a measurement of loyalty and engagement used across multiple industries, the scores of teachers in schools with well-functioning distributed leadership models averaged between 45-55%, while the general teacher population scored -18%.[58]

Distributed leadership can involve sharing responsibility for many aspects of the school's operation, including budgeting, hiring, scheduling, leading meetings, and organizing professional learning. When it works well, it can reinforce collaboration as the cultural norm and foster a sense of shared accountability for the success of the school and its students. But for that to happen, it must be thoughtfully planned and executed. Reflecting on his district's move to a distributed school leadership model, Denver superintendent Tom Baosberg says, "Fundamentally redefining roles in schools that have been static for over 100 years presents an enormous change-management challenge. Absent a clear vision, a set of vitally needed professional learning supports for teacher leaders and principals, and peer-to-peer reinforcements among schools, all of the forces that are against change would defeat the possibility of significant progress in all but the most resolute of schools." [59]

None of this diminishes the vital role that principals play in creating the conditions for distributed leadership to occur—and in the success of their schools more generally. Principals establish the culture and working conditions that enable great teachers to pursue their own development, collaborate with their colleagues, and invest the time and effort needed to know their students. Great principals demonstrate their instructional leadership by articulating a shared vision of teaching and learning, organizing a productive school environment, accessing needed resources, mentoring and supporting novice teachers, cultivating teacher leaders and sharing responsibility with them, and motivating adults and supporting them in their learning. [60] This has a measurable impact on teacher satisfaction, retention, and student achievement. Indeed, the quality of school leaders and the specific practices they engage in are second only to teachers' influence in predicting student achievement. [61] Great leadership is also integral to meaningful whole-school improvement; as the authors of a 2004 study commissioned by the Wallace Foundation concluded, "There are virtually no documented instances of troubled schools being turned around without intervention by a powerful leader." [62]

> 66 As we work to ensure that all of our students have equitable access to great teaching, we must move away from a focus on individual teachers toward a vision of teaching as a collective endeavor. 99

Unfortunately, just as highly skilled teachers are inequitably distributed across U.S. schools, so too are effective and experienced school leaders. Principals of schools with high concentrations of poor, minority, or low-achieving students often have significantly less experience than do their counterparts at schools with different student demographics. What's more, these schools also experience higher levels of principal turnover. For example, a study of principal distribution in Miami-Dade County found that while 80% of principals in the highest-achieving schools remained at the school after three years, just 60% remained at the lowest-achieving schools. And after ten years, virtually none remained at the lowest-achieving schools, compared to 40% in the highest achieving. [63]

The inherent challenges of the job are compounded by the poor preparation that many principals receive. The authors of a Stanford Educational Leadership Institute study of principal development programs concluded:

Historically, initial preparation programs for principals in the U.S. have been a collection of courses covering general management principles, school laws, administrative requirements, and procedures, with little emphasis on student learning, effective teaching, professional development, curriculum, and organizational change. Relatively few programs have had strong clinical training components: experiences that allow prospective leaders to learn the many facets of their complex jobs in close collaboration with highly skilled veteran leaders. [64]

Even those who have "come up through the ranks" as assistant principals don't necessarily bring a wealth of professional experience, as assistant principals are often narrowly focused on disciplinary issues or other very specific school management concerns that aren't closely connected to curriculum and instruction.[65] What's more, many of the professional development offerings available to them are fragmented, low-quality, and don't reflect standards for effective administrator practice.[66]

To develop visionary and effective leadership on a wide scale, states and districts should create career pathways for expert teachers to move into roles as principals, supported by stable policies that would ensure a steady supply of able leaders, especially in the communities where they're most needed. These policies might include:

- Federal matching grant funding and technical assistance to states to develop competitive service scholarship programs that proactively recruit candidates with demonstrated teaching expertise and leadership potential. In exchange for at least four years of leadership service in high-needs public schools, a federal initiative could underwrite the cost of a full-year internship under the wing of an expert principal who's been successful in high-needs settings. Prospective principals would also study instructional leadership, organizational improvement, and change management in high-quality university programs tightly aligned to the clinical internship experience.

  The North Carolina Principal Fellows Program provides candidates with scholarships of $20,000 for two years of study, including a full-time internship with an expert principal during the second year. Thanks to more than 20 years of sustained state commitment to this program, most North Carolina principals have benefitted from an internship with a veteran principal as part of their training.[67]

- State policies requiring that principal training programs must be guided by rigorous performance assessments that test candidates' proficiency with teacher evaluation, organizing professional learning, and managing school improvement.

Connecticut is one state that has successfully implemented a principal performance assessment. The assessment probes skill with teacher evaluation: prospective principals observe a video of classroom practice, conduct an evaluation based on the video, and then recommend appropriate professional learning resources to improve teaching and learning. It also asks candidates to develop an improvement plan for a local school based on data about its strengths, needs, and challenges. The performance assessment determines candidates' readiness to assume leadership roles, and the state also uses the assessment in the accreditation of principal preparation programs. Further, because experienced Connecticut administrators score the assessments, it reinforces a shared sense of standards of practice throughout the state.[68]

- Federal challenge grants to launch and improve Leadership Academies in every state. These Academies, located in universities, state agencies, or other organizations, are centers where each state's top educational leaders gather to share practices and help create and coordinate the professional learning infrastructure for school and district leaders. As in existing successful Academies, these can serve as hubs to develop institutes, coaching and mentoring supports, and principal and superintendent networks that address the unique challenges encountered by leaders in diverse kinds of schools.

As we work to ensure that all of our students have equitable access to great teaching, we must move away from a focus on individual teachers toward a vision of teaching as a collective endeavor. We must respect teachers enough to give them a central role in directing their own professional learning, involve them in policy development and program design, and enable their individual and collective efforts to transform teaching and learning. Simply strengthening the knowledge, skills, and dispositions of individual teachers within the existing system will not deepen the impact of teaching. Instead, we must recognize that the conditions and contexts in schools and districts—like the seven conditions described above—impact teachers' ability to do their best work and to remain teaching in schools where they are most needed.

IV. Building Capacity: Recruiting, Training, and Retaining Great Teachers

In order to create this new environment in which teachers and students learn continuously and collaboratively, the ways that we recruit, prepare, and retain teachers need to change. This is particularly true in high-needs schools, which are consistently challenged by teacher turnover, especially in the early years of a teacher's career, and often employ teachers with the least preparation.

According to a recent study by the U.S. Department of Education, students in high-poverty districts are twice as likely to be taught by teachers with temporary alternative licenses as students in low-poverty districts. This includes both urban and rural high-poverty schools.[69] Additionally, nearly seven percent of the country's Black students—totaling more than half a million children—attend schools where at least one out of every five teachers does not meet state certification requirements. Black students are more than four times as likely and Hispanic students are twice as likely as White students to attend these schools.[70] Indeed, by every measure of teacher qualifications—including SAT scores, GPA, licensing, major, selectivity of undergraduate institution, experience, and others—high-poverty students and students of color are least likely to be taught by well-prepared, profession-ready teachers.

The reality is that in order to meet shortages, states and the federal government allow people to teach who have not yet completed their training or demonstrated their abilities. While we want and need all classrooms to be staffed by well-trained, fully credentialed teachers, we cannot ignore the fact that at the start of every school year, there are schools with many vacancies and no applicants. Schools and districts are regularly compelled to take drastic measures—hiring uncertified and out-of-field teachers, and in some cases teachers from other countries who may not have a connection to or an investment in the community. We must also acknowledge that these schools are "hard to staff" for a wide range of different reasons and therefore solutions must be carefully contextualized.

Strategic Educator Recruitment

The number of candidates enrolling in teacher preparation programs—including alternative preparation and certification routes—has dropped precipitously, from 623,190 to 499,800 from 2013 to 2014 alone.[71] This trend is especially troubling in light of a recent increase in teacher retirement rates. California is one of the states hardest hit, with a whopping 74% decline in teacher preparation program enrollments over a ten-year period.[72] Even potential interest in the teaching profession has declined dramatically. In another recent study of high school graduates, just 5% reported that they intended to pursue a career as an educator, a percentage that's dropped 16% since 2010.[73]

Educators Rising is a national organization dedicated to providing passionate young people with hands-on teaching experiences, sustaining their interest in the profession, and helping them cultivate the skills they need to be successful educators. Over 60% of teachers teach within 20 miles of where they went to high school; Educators Rising Co-Director Dan Brown observes that this statistic "makes it vital for every community to invest in growing their own great teachers today."[74] Educators Rising programs guide young people in high school through co-curricular programs, elective courses, and authentic teaching experiences, and then supports them through college and into the profession. In addition to these school-based programs, students and teachers can deepen their learning through the EdRising Virtual Campus, an online community that offers resources to support the development of great teachers.

Mary Vixie Sandy, the executive director of the California Commission on Teacher Credentialing, acknowledges, "We've had a period of time with reductions, layoffs, the whole accountability concern about whether schools are producing results—it may not have been the most attractive time for young, talented individuals to go into teaching. How we turn that narrative around is a very important question for the state."[75] Across the country in North Carolina, legislators made headlines defunding the highly regarded North Carolina Teaching Fellows scholarship program in 2011, eliminating teacher tenure in 2013 (only to have it

restored by court order shortly thereafter), and overhauling its salary system to eliminate the pay premium for earning a master's degree. Moves like these in North Carolina and elsewhere may be discouraging potentially promising candidates: for example, enrollments in the University of North Carolina's teaching programs, the major pipeline supplying teachers for the state, has fallen by 28% since 2010.[76]

The need to change the way we recruit teachers is especially pressing given the fact that the teaching workforce does not resemble or represent the student population. Currently, more than 80% of the teacher workforce is White and female, while students of color now make up the majority of the student population; a mere 2% of the nation's 3.4 million teachers are men of color.[77] Research consistently reports on the benefits of teachers of color for students of color: for example, studies show academic gains in math, reading and vocabulary for Black and Hispanic students when their teachers were of the same race. Research also shows increased matriculation, reduced dropout rates, fewer students placed in special education and increased placement in advanced and gifted and talented classes when Black and Hispanic students are paired with same-race teachers.[78] We need to look to the success of contextualized, local recruitment programs and focus our energies on better understanding how to support and scale such efforts.

Clemson University's Call Me MISTER (Mentors Instructing Students Toward Effective Role Models) program focuses on increasing the number of Black men who become teachers. By offering tuition assistance, a cohort model, academic supports, and a faculty support system, the program is a promising model for how to recruit new teachers from diverse backgrounds into teaching and support them as they begin their career journeys.

Since 2004, more than 150 men have gone through the Call Me MISTER teacher-training program and become educators in South Carolina elementary and middle schools—many of them in the highest need schools. Approximately 95% of them are still teaching in South Carolina. The program has also expanded to additional colleges and universities in South Carolina other states including Georgia, Pennsylvania, and Virginia.

> **❝The number of candidates enrolling in teacher preparation programs—including alternative preparation and certification routes—has dropped precipitously, from 623,190 to 499,800 in one year alone.❞**

This is not to say, however, that students can only excel when they are matched with a teacher of the same race. Research from scholars such as Gloria Ladson-Billings, Luis Moll and Pedro Noguera highlights the fact that teachers, no matter what their race, who gain knowledge and understanding of their students' cultures, lives, and experiences outside of school and incorporate that knowledge into their classroom practice can experience success with all students.[79] Whereas same-race teachers may have acquired some of this cultural knowledge through their own experiences, teachers of all races can learn, appreciate, and incorporate cultural knowledge into their teaching. This is an important consideration in thinking about professional learning opportunities in schools where student demographics have changed.

Beyond its benefits for students of color, we know that a diverse teacher population is beneficial to all students. Consider the fact that schools are resegregated to levels close to the 1960s.[80] Black students are, on average, in schools that are 48% Black, whereas White students are, on average, in schools that are 9% Black.[81] This school segregation reflects housing trends, which means students may have very little opportunity to form authentic relationships with people of differing racial or ethnic backgrounds. Teachers of color may be an important opportunity for White students to develop relationships with caring adults who have different backgrounds and

experiences than they do. Recruiting more diverse, qualified candidates into the profession would enable us to design learning experiences for all students that draw upon more varied funds of knowledge, and consider new and possibly divergent perspectives about how schools should engage students, families, and communities.

The national recruitment challenge is in part a reaction to the problematic conditions we expect teachers to work under, and the lack of alignment between what they learn in their preparation program and what they experience in their early classrooms. It's also a result of policies that for the last decade have undermined the public's respect for the teaching profession; in one recent poll of college students, nearly half said they believe that the teaching profession has become less prestigious. [82] If we are to improve our ability to recruit new teachers, we have to push back against the teacher-bashing in our political and civic discourse and talk about how teachers are part of a shared accountability system, not the target. Adding to those concerns, massive teacher layoffs in many states during the Great Recession of 2008 as well as well-publicized battles over public pension funds may have created a concern that teaching was no longer a steady, reliable profession. Lastly, given that the average starting teacher salary is $36,141 (compared to the average college graduate starting salary of $44,259) and that many potential teaching candidates leave college with student loan debt, their decision to seek out more lucrative opportunities is understandable. [83]

The United States has much to learn from how the highest-performing nations attract and retain great teachers. In Finland, only 15% of those who apply to teacher preparation programs are admitted; [84] the government then provides three years of graduate-level training, completely free of charge, and a living stipend. In Singapore, the government actively recruits students from the top third of each graduating high school class for fully-paid undergraduate teacher education programs and puts these students on the Ministry of Education's payroll. [85] In both countries, teacher shortages are not an issue.

We, as a nation, can continue down our current path—or

> ❝More than 80% of the teacher workforce is White and female, while students of color now make up the majority of the student population; a mere 2% of the nation's 3.4 million teachers are men of color.❞

we can emulate the leading countries in the world and attract the best and brightest candidates through competitive pay, intensive training, time for collaboration and professional growth, and public respect.

Invest in Teacher Preparation as a Driver of Change

Once high-quality candidates are recruited, it's essential to prepare them well. We know that when prospective teachers receive good training, they're more likely to stay in teaching. One recent study found that first year teachers who had entered the profession with strong pedagogical training were twice as likely to stay beyond their first year than their peers who received less intensive training. For the purposes of this study, robust training was defined as an array of courses covering methods, materials selection, learning theory and psychology, along with at least a full semester of clinical experience that incorporated observation of others and feedback on their own teaching. [86]

Successful teacher preparation programs are grounded in an understanding of the skills required for K-12 students to succeed in the 21st century and the teaching practices that foster those skills; these programs integrate an extended period of robust clinical experience and help beginning teachers learn how to evaluate and improve their own practice. Successful candidates experience subject matter content and pedagogy in the authentic settings

of K-12 classrooms, and reflect on what they are learning through aligned coursework that involves intensive study of child development, the science of learning, cultural contexts, culturally responsive teaching, curriculum, assessment, and subject-specific instructional strategies. Effective programs prepare candidates to address complex standards and assessments by teaching content in a way that focuses on depth over breadth, builds higher order critical thinking and problem solving skills, and that makes connections across disciplines.

Unfortunately, teacher preparation in this country is haphazard at best. The 2,100 teacher preparation programs training nearly 500,000 candidates through graduate and undergraduate coursework, alternative certification initiatives, and an array of face-to-face, online, and blended options represent an amazing variation. Some programs require intensive coursework and classroom experiences; others do not. It's no wonder, then, that in one recent survey, 62% of new teachers said they felt unprepared for the classroom.[87]

Given the complexity of the teacher preparation landscape, the Commission is focusing on three potential levers for accelerated improvement: clinical practice, teacher preparation program—K-12 partnerships, and performance assessments.

Clinical Practice. New and experienced teachers repeatedly cite classroom-based experiences and student teaching alongside an accomplished veteran as the most useful part of their preparation, but the quantity and quality of clinical training varies widely.[88] Unfortunately, access to these types of learning experiences are not guaranteed for all teaching candidates. A recent study of first year teachers using the nationally-representative Schools and Staffing Survey found that 21% of first year teachers overall, and a shocking 40% of science teachers, had no practice teaching before taking their first teaching job.[89]

While most states require student teaching, the majority are silent on what this critical experience should look like and how programs should be held accountable for providing it. For example, although roughly half of states

> 66 Teacher preparation in this country is haphazard at best. Among the 2,100 teacher preparation programs in the U.S., some require intensive coursework and classroom experiences; others do not. It's no wonder, then, that in one recent survey, 62% of new teachers said they felt unprepared for the classroom. 99

specify that student teaching should involve trained mentors (supervising teachers), they don't specify what should be required of the mentors, how they should be selected, or what the training should entail. In addition, in many states, candidates in alternative certification programs can become the teacher of record without any significant prior classroom experience—the "clinical" training is actually learning on the job. And because licensing and certification requirements vary widely by state, in one state a teacher could have a year of guided classroom experience while in another state a new teacher could be standing in front of students for the very first time.

The Commission recommends **a full year of student teaching in carefully selected placements**, with supervising teachers who model excellent teaching and with diverse students. This clinical preparation should incorporate structured reflection and discussion that help candidates analyze their experiences and their own effectiveness. The best clinical experiences also encourage student teachers to participate in all aspects of the school, including parent meetings, home visits, and community outreach; school-based support services for students; and faculty-led initiatives and projects aimed at improving

student engagement and achievement. This kind of participation helps fledgling teachers grasp the broader context for great teaching and deeper learning and begin to develop the skills they will need to collaborate in the service of school improvement throughout their careers. [90]

Partnerships with Schools and Districts. Exemplary teacher education programs develop strong relationships with local schools. Some of these partnerships are formal professional development schools (PDS) that partner closely with a university, much like teaching hospitals in a medical context. These "teaching schools" recognize the importance of clinical practice in authentic settings. In highly-developed PDS partnerships, faculty from the school and university work together to develop curriculum, improve instruction, and undertake school reforms. Many also advance educational equity by addressing the legacies of tracking, disparities in resource allocation, and systems that don't respond to the cultural and economic needs of families and students.

Studies of highly-developed PDS programs have found that graduates feel better prepared to teach and are rated as stronger than other new teachers by their employers and independent researchers. [91] Veteran teachers working in such schools confirm that their own practice improves as a result of the professional learning and mentoring they engage in.[92] School culture becomes more growth-focused, collaborative, analytical, and reflective.[93] And the end result is better learning: studies have documented gains in student performance tied to curriculum and teaching interventions resulting from PDS initiatives.[94]

The University of Colorado Denver (UCD) offers a variety of forward-looking undergraduate and graduate teacher preparation pathways. All programs include content-based majors with a focus on teaching diverse student populations, community-based and school-based field experiences and an extensive residency in conjunction with UCD's Professional Development Schools.

Over the last 20 years, UCD has built extensive partnerships with six Denver Metro Area school districts resulting in the Professional Development School (PDS) Network. In PDS classrooms, teacher candidates are immersed in real-world experiences while being mentored by practicing teachers and UCD faculty. The program views teacher education as inseparable from community engagement. Teachers are prepared so that they are not just caring, competent and committed, but also understand the importance of engaging with their school's community. Research shows that children learn more effectively if their teachers are aware of, respect, and use the community's cultural and intellectual resources.

Through its NxtGEN Teacher Preparation Program, UCD has also successfully created a differentiated induction program that begins in pre-service education and extends through the first two years of teaching. UCD's NxtGEN teachers nearing the end of their preparation develop individualized professional development plans with district mentors, targeting growth areas based on their own performance data. UCD then provides in-person and online professional learning opportunities, tools, networks and resources. After the first year of induction, teachers will work with UCD staff to revise their individualized professional development plans based on data from their state teacher evaluations.

Urban Teacher Residency programs are another compelling way to recruit and retain highly skilled, diverse candidates for work in high-needs schools. Over the past decade, several cities—including Chicago, Boston, New York, and Denver—have developed these programs as high-quality alternative routes into teaching. These programs carefully screen and recruit talented college graduates who are interested in a long-term career in urban teaching, offering them a year-long paid residency under the tutelage of master teachers. During this year of clinical experience, candidates (or "residents") also enroll in courses from a partnering university. These courses, which lead to certification and a master's degree, are carefully designed to complement the clinical practice. In this way, residents observe experts in action and are mentored toward accomplished practice. They continue to receive mentoring through their second year of teaching. In return, they pledge to teach for at least four years in the city's schools.

Residency programs like these exert high standards: for example, among the 22 programs that comprise the National Center for Teacher Residencies (NCTR), just

GAME-CHANGING TEACHER PREP

Programs based at universities across the country are working to bridge the gap between the traditional course-based approach and the more clinical approach. For example, The Integrated Bachelors/Masters (IB/M) teacher preparation program in the Neag School of Education at the University of Connecticut has been engaging teacher candidates in extensive clinical practice for more than 25 years. Students participate in clinical placements in nine partner school districts across the state every semester of the three-year program, culminating in masters' students completing a yearlong 18-hour per week internship.

Grounded in a PDS model, faculty and administrators in the Neag School of Education and in the K-12 partner districts work together towards the continuous improvement of both settings. The regular presence of IB/M students and the number of educators working with them in large numbers helps to create a school culture that emphasizes professional collaboration and growth. All the educators involved have a shared responsibility for creating a positive and challenging environment for learning in their school, from the students during their clinic placements, the university faculty who supervise those students, and the teachers and administrators who constitute the professional staff of the school.

The game-changer in the program is that a primary emphasis within the operation of the school is on development projects and research activities. IB/M students, UConn faculty, school district faculty, and school district administrators collaborate in these efforts. For example, IB/M student teachers complete an analysis of their impact on their students' learning. University supervisors, cooperating teachers and UConn faculty assist the student teachers in these analyses, helping student teachers to develop their teaching practices while also assisting them in supporting their K-12 students' learning. Similarly, IB/M Masters' interns work with teachers and administrators in partner districts on implementing practices and programs to improve student learning school-wide. The interns conduct inquiry projects on these practices and programs to provide partner schools with data to assess and improve these innovations.

22% of applicants were admitted in Denver, and only 10% in the Aspire residency program.[95] And they have been successful in addressing critical shortages, as in Boston's residency program where 49% of entrants are candidates of color.[96] Experience shows that the vast majority of these recruits stay on: in Chicago and Boston, for example, more than 90% of the first four cohorts of graduates stayed on past their four-year commitment. In 2013-14, 82% of teachers prepared via NCTR programs were still serving as classroom teachers after five years—a much higher rate than is generally found in urban districts.[97]

The New Visions-Hunter College residency program in New York City provides a year-long classroom-based experience for residents, which is supported by an intensive mentoring relationship and closely aligned coursework specifically geared towards urban education. Program applicants are carefully screened by the New York City Teaching Fellows, Hunter College Graduate Admissions, and a selection team at New Visions for Public Schools. After graduation, residents receive New Visions' teacher placement, mentoring, and induction services and continue to collaborate with their residency cohort. Schools that host the residents receive support in developing a collaborative and reflective professional culture. Results from an independent evaluation demonstrate that this program is having strong, positive effects on teacher retention and student achievement: nearly 90% of graduates from the first cohort are still teaching four years later, and students taught by residents of the program outperform students of other early-career teachers on key state exams and course grades.[98]

In Denver, the University of Colorado has been working with several partners over the last five years to build a transformative teacher preparation system with pathways leading to both conventional approaches; partnerships involving university, districts, and non-profit organizations; preparation contextualized

to the needs of participating districts and the goals of the state; and targeted recruitment efforts to meet the needs of each community and support the academic goals of students. All programs maintain a clear focus on closing Colorado's achievement gap for diverse students and addressing teacher quality, diversity, and retention. Programs include an undergraduate urban teacher residency with Denver Public Schools and an expansion of the 5th year licensure program to include rural partners.

Performance-Based Assessments. Finally, as important as the input and structure of teacher preparation programs are, it is critically important that new teachers demonstrate that they are competent to lead a classroom. Performance-based assessments have proven to be a reliable way to ensure that beginning teachers are "profession-ready," as research confirms that teachers' scores on these assessments are positively associated with their effectiveness during the early years of their careers.[99]

Performance-based assessments help district and school leaders select candidates who can teach well. States, school districts, universities, and other institutions are also using performance-based assessments to accredit and continuously improve teacher preparation programs; as a capstone requirement of teacher preparation program completion; as a condition for moving from a probationary to a professional license; and as a tool to differentiate induction for teachers who need more time and support.

Currently only twelve states have policies in place requiring a state-approved performance-based assessment as part of program completion, for state licensure, and/or for teacher preparation program accreditation/review; three other states are considering making it a requirement of program completion or licensure.

Missouri uses its Pre-Service Teacher Assessment (MoPTA) as a requirement for licensure and as a way to tailor new teachers' development plans for personal growth. MoPTA is aligned to the state's teacher standards and is grounded in research on the most important tasks and skills required of beginning teachers. Expert teachers, teacher educators, administrators, and professional organizations helped develop the content of the assessment and regularly review, revise, and approve all questions and exercises. Candidates complete the assessment during their clinical preparation before they leave their teacher preparation program, providing written responses, video, and other artifacts as evidence of their proficiency.

Induction and Mentoring

Even when we are successful in recruiting and preparing diverse, qualified candidates, nearly a third leave the profession within the first three years and half of all teachers in urban school systems leave within the first five years.[100] Over the past two decades, the annual attrition rate for first-year teachers has increased by more than 40 percent.[101] This turnover has numerous negative costs and consequences — from a loss of financial investments in new teachers to a disruption in school culture—and is worst in high-needs schools. As early as 2007, a NCTAF study found that teacher turnover can cost up to $7 billion a year nationally.[102] And these studies do not account for the academic and developmental costs to children who experience these losses over multiple years.

High-quality induction and mentoring programs for beginning teachers result in more teachers who stay in the profession and improved achievement for their students.[103] In a review of 15 empirical studies regarding the impact of induction programs, Richard Ingersoll and Michael Strong concluded, "Beginning teachers who participated in some kind of induction performed better at various aspects of teaching, such as keeping students on task, developing workable lesson plans, using effective student questioning practices, adjusting classroom activities to meet students' interests, maintaining a positive classroom atmosphere, and demonstrating successful classroom management."[104] Indeed, without the kinds of collaborative opportunities afforded by high-quality induction and mentoring, encouraging teachers to examine and improve their practices, teachers' performance plateaus after the first few years.[105]

Ingersoll and Strong also outline some of the most important features of high-quality induction: having a mentor teacher

in the same subject area, common planning time with teachers in the same subject area, and regularly-scheduled collaboration with other teachers. Induction is even more powerful when mentors are formally trained and provided with release time to provide one-on-one observation and coaching in the classroom.[106] The mentor role is an especially high-leverage one to attend to in policy and resource discussions: in a preliminary examination of student achievement data in a recent New Teacher Center study, researchers found that after just one year, students of new teachers who experienced a well-structured mentoring relationship gained 2 to 3.5 months of additional learning in reading compared to control teachers.[107]

Many high-achieving countries invest heavily in structured induction support programs for beginning teachers. In South Korea, for example, beginning teachers participate in a six-month induction program that's managed by school administrators and advisor teachers. This is particularly noteworthy given that in South Korea 65% of the standard workday for all teachers is *already* devoted to shared planning and professional learning. In Singapore, trained, expert mentors provide a full year of support for all beginning teachers. During this year of structured mentoring, beginning teachers also complete coursework covering reflective practices, assessment, and classroom management. The New Zealand Ministry of Education funds 20% release time for new teachers and 10% release time for second-year teachers to meet with mentors, observe colleagues, develop curriculum, and attend courses.[108]

Over the past two decades, induction has become more widely available in U.S. schools and districts. In 2012, 86% of first-year teachers reported that they had participated in some sort of induction program — up from just 50% in 1990 — and by 2010-11, 27 states were requiring some kind of induction support for new teachers.[109] The bad news, however, is that these programs vary considerably in quality and duration. A recent review of state induction policies by the New Teacher Center found that only three states (CT, DE, IA) require a multi-year induction program as a licensure requirement and provide some program funding.[110]

According to one study of beginning teachers who participate in induction, just 81% benefitted from a mentor's ongoing guidance, and only about half reported common collaboration and planning time with others in their grade level or subject area.[111] The problem is particularly acute in schools with high concentrations of poor and minority students, where fewer teachers participate in induction and mentoring, and those who do have mentors are often paired with teachers of different grade levels and/or subjects.[112] What's more, fewer than 20% of all inductees report a reduced teaching load or simplified schedule.[113] This is in sharp contrast to countries where a higher than average percentage of teachers report that their teaching time is reduced in order to provide additional professional development time, adjusted based on teachers' years of experience and classroom observations of the teachers' practice.

We know that effective preparation is only the beginning of a career-long pathway of growth and development for great teaching. As policy analysts Jon Snyder and Travis Bristol concluded, "New teachers can either become highly competent in their first years on the job—or they may develop counterproductive approaches or leave the profession entirely—depending on the kind and quality of help they encounter when they enter. Attitudes and beliefs developed during induction are carried for a career. Induction serves a key role in developing new members of the profession into the expertise expected by parents, students and the public, as well as colleagues and supervisors." [114]

Taken together, skillful recruitment, effective preparation, and strong induction and mentoring programs establish a firm foundation for individual teachers' future success and can contribute to more equitable access to great teaching in all of our nation's classrooms. Together these strategies communicate clearly to new teachers that they're involved in a collaborative endeavor in which they're valued as learners as well as teachers, and are viewed as individuals capable of developing and continuously improving the practices which support their students' academic and social-emotional learning.

V. All Together Now: Aligning Systems and Resources to Support Great Teaching

When it comes to ensuring equitable access to deeper learning and great teaching, changes in individual organizations like schools and teacher preparation programs will take us only so far. Beyond that, resource and policy shifts at the federal, state, and local levels will enable us to create and sustain systems organized for success for all students.

State and district policymakers have an opportunity under the new federal legislation to envision a new design for teaching and learning. This vision is then realized in standards that are supported by curriculum, assessments, resources, and partnerships. By establishing a new vision and proceeding with a comprehensive and aligned plan, states can seize this opportunity to provide great teaching for *all* learners. Implementing plans and monitoring progress will mean that states must reckon with the thorny but important issues of accountability and resource allocation.

In this chapter we discuss five essential components of larger-scale shifts to support deeper learning and great teaching for all students:

1. Establishing a coherent vision to guide policy
2. Assessing, reinventing, and aligning systems
3. Adopting shared accountability
4. Re-examining resources
5. Cultivating community support

1. Establishing a Vision to Guide Policy

Just as it's important for all the educators in a school to be guided by a common vision of deeper learning and the teaching that supports it, so too must policymakers at the state and federal level base their work on a research-based, compelling vision of 21st century teaching and learning.

> 66 Only three states — Connecticut, Delaware, and Iowa — require a multi-year induction program as a licensure requirement and provide some program funding. 99

In the Commission's work to better understand how to transform teaching and learning, the importance of a grounded yet aspirational vision came up over and over again. On topics ranging from accountability to resource reallocation to shifting school-level schedules, program and school leaders stressed how critical it is to start with a coherent vision, then include or eliminate policies, strategies, practices, and behaviors based on how they align with guiding vision. For example, if it is a priority to sustain and systematize teachers' collaborative work together in professional learning communities, changes must be made in school design, scheduling, and resource allocation.[115]

A strong vision for what students and teachers must know and be able to do must be grounded in clear, high standards. This belief has been a pillar of NCTAF's work over the years, from advocating for strong teaching standards and licensure requirements to supporting the development and implementation of the Next Generation Science Standards, the Common Core State Standards, and their state-level equivalents. Such standards are important because they confirm our belief that all students can learn and that teachers can develop as professionals; both are capable of great promise and progress. This vision for the future must also promote teaching as a professional continuum, rich with opportunities for growth, leadership, collaboration and meaningful impact.

Finally, strategic and sustained efforts to communicate the guiding vision are important but often overlooked or under-resourced. Communicating about successes can help build support for an initiative prior to and during its implementation, while a "listening tour" can inform initial

development, midcourse corrections, and additions. For example, the successes that Kentucky has had with Common Core adoption as opposed to the challenges that other states have faced has been attributed in part to a strong and wide-ranging effort to reach as many stakeholders as possible to discuss implementation and listen to concerns.[116]

2. Assessing, Reinventing, and Aligning Systems

Once the vision is established, a clear-eyed assessment of whether systems are moving in a coordinated way toward that vision is critical. The central questions need to be about whether systems are meeting the needs of the students and educators. Hard choices need to be made; no one has the time or the money to layer new structures over old ones that aren't working, and at times it can mean making difficult decisions, ending contracts, or turning away funding or partnerships that don't serve the vision.

ESSA gives states the opportunity to pause, reflect, and establish a new vision for their state's education system. Imagine if we then held up the existing structures against that vision — closely and carefully examining everything from professional development structures to accountability measures to time and scheduling.

There are several efforts underway that state and district policymakers can look to as they work to modernize and align systems with a new vision of teaching and learning. At the forefront, the Coalition for Teaching Quality represents more than 100 national, state, and local organizations committed to the principle that federal policy must ensure that all students have access to teachers and school leaders who enter the profession well-prepared to succeed and who prove themselves effective once there. The Coalition, which has a diverse membership of civil rights, disability, parent, student, community, educator, and education policy organizations, has put forth a _Roadmap for Transforming the Teaching and Principal Professions_, which outlines the policies that will modernize and align systems to support a continuum of teaching excellence. In addition, The Center for American Progress _Teach Strong_ outreach campaign is sharing the call to elevate and modernize teaching through its 60-member coalition and its outreach through teacher ambassadors and events across the country.

State and local policymakers must determine whether their vision of all children learning is being served by existing systems and whether supportive conditions exist in their schools. Facilitating supportive conditions is a complex task at the state level because it requires balancing a prescriptive response with local contexts, resources and needs. Research tells us that working conditions are particularly important for teacher retention; studies find statistically significant relationships between teachers' perception of school teaching conditions—specifically school leadership—and their plans to stay or leave.[117]

Assessing, reinventing and aligning systems at all levels must meaningfully involve teachers as expert resources and drivers of change. Many reforms have failed because they leave teacher training, capacity building, feedback and buy-in to the end of the process.

For instance, the New Teacher Center's _Teaching, Empowering, Leading and Learning (TELL)_ initiative is helping schools, districts, and states assess and improve the conditions for teaching and learning, fueled in large measure by input from teachers. TELL utilizes an externally validated survey administered to all licensed, school-based educators in a district or state, coupled with education partnerships at the state and district levels to support the gathering, documentation, and analysis of educator perceptions of teaching and learning conditions. NTC guides leaders in using the results to plan improvements so that educators have the supportive school settings necessary to do their jobs well and to be successful. More than 1.5 million educators across more than 20 states have responded to the TELL survey since 2009, and recognized and respected national researchers have used the data from the TELL survey to demonstrate the connections between working conditions, student achievement, and teacher retention.[118]

To ensure that changes are practical and sustainable, district and state leaders should also incorporate input from stakeholders such as parent groups, teacher preparation programs, and community organizations.

The major objective of the Teaching Excellence Network (TEN) is to connect districts, schools, and teachers committed to improving teacher practice, while providing a clearinghouse of excellence that teachers, families, and school leaders can equally access to improve classroom teaching. TEN is a program that comes out of the Institute for Sustainable Economic, Educational and Environmental Design (ISEED) in the Bay area. TEN bases its success on a solid body of research about the skills and practices used by effective teachers of poor and working class students of color. TEN is driven by The Urban Teacher Quality Index (UTQI), a tool that uses technology to create a dynamic teacher feedback loop that provides direct, immediate, and consistent feedback from key stakeholders including students, families, teachers, and administrators.

External partners can often help catalyze alignment by bringing in processes, schedules, evaluation rubrics, and compensation structures. The Teacher Advancement Program (TAP), for instance, works with 350 schools across the country to align professional learning, observations, compensation, and data use. With a focus on transparency and a structure that encourages cross-disciplinary collaboration among teachers and leaders, TAP prioritizes capacity building within a school and district as well as a regular sharing of accomplishments and challenges across sites.

3. Adopting Shared Accountability

The term shared accountability has been used to describe the collective responsibility for student success of large stakeholder partnerships that engage community organizations, health service providers, and early childhood programs.[119] Here we focus more specifically on accountability within schools and districts as it's manifested through student assessments and teacher evaluations.

Accountability is a critical aspect of moving a system toward its desired outcomes—we measure what we want to achieve. Effective methods for evaluation and accountability can be an important part of a system that ensures all children have access to quality teaching. Yet in too many places, we are over-measuring students and

> **❝Research tells us that working conditions are particularly important for teacher retention.❞**

teachers, and giving others in the system a "pass" on whether or not they are sharing responsibility for student learning. In a shared accountability structure, all stakeholders are accountable for their role in the system and their contributions to student success—from students to state policymakers. This is in contrast to strategies that lay the responsibility of student success at the feet of an individual principal or teacher. Shared accountability is a strategy that differentiates which roles are responsible for particular actions within a system, uses data and data analysis to determine and document progress against common indicators, and informs the continuation or adjustment of the shared plan accordingly.

As part of its "Moving Your Numbers" initiative, the National Center for Educational Outcomes (NCEO) reported on the work of five districts to rethink assessment and accountability in order to increase the achievement of students with disabilities. Educators in each district experienced a shift from an individual or departmental perspective towards a sense of collective responsibility for student success. NCEO describes how educators at all levels within each district worked together to build their collective capacity around the common goal of boosting the achievement of all students and specific student groups. All five districts used assessment and accountability data as a tool for reflection, analysis, and planning. NCEO notes "the notion of monitoring was redefined—from a heavy-handed gotcha to a joint responsibility for continually gauging progress and holding each other accountable for reaching common goals. Fear and isolated practice were replaced with collective, open dialogue among adults across the system." [120]

Evaluation systems need to focus on teaching as a collective endeavor, rather than on individual teachers. Evaluation focused on teaching rather than individual teachers reinforces shared accountability and makes it

possible to factor in teachers' contributions to collaborative work with colleagues and to whole-school improvement. Some teacher evaluations include a measure of a teacher's contribution to the school culture.

There are huge challenges to implementing new accountability and evaluation systems, and the impact of strategic errors can range from mass firings to a negative shift in a school's culture as teachers become anxious and mistrusting.[121] Multiple measures that are utilized for their intended purposes are critical in this regard. Student achievement measures provide information about the effectiveness of a teacher's classroom practice, which can be measured via indicators like language progress, portfolio submissions, pre- and post-tests, or progressive drafts. Too much weight on student test scores (which only measure outcomes) can obscure student growth In addition, positive relationships with the teachers' unions can be critical to implementing evaluation systems or trying to put new standards or peer evaluation processes in place.

Well-aligned policies and resources enable states, districts, and schools to develop locally-responsive evaluation and accountability systems. Research-based models and examples of innovative practices from other districts provide helpful examples, but states, districts, and schools must be responsive to their own unique contexts, needs, and priorities. Evaluation standards should reflect the district's vision for teaching and learning, and the process should embody how the district wants teachers, administrators, and other school staff to interact to support one another and their students.

4. Re-Examining Resources

When educators and students can access appropriate and equitable resources in their districts, states, and communities, we set up our schools for success. Equal parts social justice and smart investing, our nation must remedy the way it resources its schools if we're to realize the promise and potential of this generation of students—and its teachers.

Teacher compensation is just one consideration in this equation, albeit an important one: we know that teachers are strongly influenced by salaries and working conditions when making decisions about whether to enter and stay in the profession.[122] Unfortunately, we are not acting upon what we know, because U.S. teacher salaries are low overall and are more of a deterrent than an incentive.

Teacher pay has become an accepted failure in this country. We accept the fact that teachers need to take second jobs, purchase their classroom supplies, and are experiencing increasing financial challenges and debt. Not only do salaries start out low, but teachers do not experience pay increases in line with their increased experience, leading many to leave the profession as their expenses increase but their salary does not.[123] In addition, U.S. teachers are saddled with college debt from their teacher training—an expense that's underwritten by the government in high-achieving nations like Finland and Singapore.[124] Increasingly, teachers in the U.S. cannot afford a middle-class existence.[125]

According to a recent study by the Center for American Progress, teachers with ten years of experience often earn less than unskilled workers.[126] In 29 states, mid-career teachers who head families of four or more qualify for three or more public benefit programs, such as subsidized children's health insurance or school meals. And in 11 states, more than 20% of teachers work second jobs to supplement their incomes (not including those who work a summer job, when schools are typically closed).[127] Even in higher-paying states such as California, teachers struggle with the higher cost of living and lower purchasing power. In addition, there are great inequities in teacher salaries between districts, leaving some high-need, under-resourced districts at a staggering disadvantage in hiring: teachers at the top of the pay scale in affluent districts have salaries that are on average 35% higher than their counterparts in high-poverty districts.[128] Teachers in more advantaged communities often also enjoy easier working conditions, including smaller class sizes and more involvement in the school decision making.[129]

Salary disparities often exist *within* districts as well: the federal government's recent Civil Rights Data Collection

survey of every school in the nation found that nearly one in four districts with two or more high schools reports a teacher salary gap of more than $5,000 between high schools with the highest and the lowest Black and Hispanic student enrollments.[130] Another recent study of funding and salary disparities confirms that along with inequities in teacher pay, there are significant and corresponding differences in teacher qualifications and student achievement.[131]

While higher salaries alone are not enough to attract and keep great teachers, increasing and equalizing teacher salaries is a key piece of the puzzle. The Equity and Excellence in Education Commission observes:

> Such an investment would produce savings elsewhere, including a reduction in teacher turnover and attrition…not to mention the savings we get from teacher effectiveness: lower rates of student remediation, special education placements, dropout services, and much more. In addition…if such a human capital strategy helps close the achievement gaps between U.S. students and higher-performing systems abroad, and between students of color and their white counterparts, the impact on GDP over time would dwarf the investment in higher-caliber teacher recruits in the years ahead.[132]

In Washington D.C., the district's salary system provides incentives for educators to hone their skills and put them to use in the city's highest-need schools. Educators rated highly in evaluations are eligible for base salary increases and annual bonuses, with add-ons to each if they work in one of D.C.'s 40 lowest-performing schools. Thanks to annual bonuses of up to $20,000 and base salary increases of up to $27,000, some educators have seen their compensation more than double, and a teacher who works in a high-poverty school who consistently receives strong performance reviews can earn up to $125,000 after ten years.[133] DCPS teachers earn significantly more than teachers in other districts in the DC metro area, as well as teachers in similar urban school districts across the country.

Resources obviously come into play in the inequities of working conditions as well. Working conditions—including opportunities for professional learning and collaboration, ready access to a wide variety of classroom materials, class sizes, the safety of facilities, and the quality of school leadership—play an important part in teachers' decisions to stay in the profession as well as their ability to apply and develop their knowledge and skills.[134] Disparities in per student spending and local tax revenues translate into real differences in the teaching and learning conditions in each school, including class sizes and teaching loads; the availability and quality of books, curriculum materials, libraries, technology, science labs, facilities, and support personnel; and time for professional learning and common planning. In addition to salary, adverse teaching and learning conditions are driving many teachers out of the classroom.[135]

States and districts must make trade-offs and ask hard questions about whether budget allocations are resulting in the equity and outcomes they're seeking (more collaborative time, better retention of teachers, better recruitment). As Karen Hawley Miles of Education Resource Strategies (ERS) says, "You can do anything but you can't do everything."[136] ERS has developed a very helpful self-assessment tool called School Budget Hold 'Em to help policymakers examine their vision against their budgets and explore the costs of their choices—ideally in collaboration with other stakeholders.

> 66 Teachers with 10 years of experience often earn less than unskilled workers. In 29 states, mid-career teachers who head families of four or more qualify for three or more public benefit programs, such as subsidized children's health insurance or school meals. 99

> **❝** A systemic, integrated approach to community engagement has the potential to be a powerful driving force for supporting great teaching and deeper learning. **❞**

In discussions of how to improve teaching and learning, time is cited as a needed resource at least as often as money. "More time" is the item that tops many teachers' wish lists, and especially time to work with colleagues who teach the same subjects, share the same students, or have the same professional learning interests. Schools are finding a number of ways to address this important working condition.

For example, some redesigned high schools have secured seven to 10 hours of shared time per week by hiring more teachers and fewer non-teaching personnel; offering a more streamlined curriculum with fewer low-enrollment courses; organizing time in longer blocks, thus reducing teaching loads; and using times when students are participating in clubs and internships for teacher collaboration. In some elementary schools, classroom educators teach four full days of core classes each week and spend the fifth full day planning together in teams and pursuing professional learning, while their students rotate to resource classes in music, art, computer lab, physical education, library, and science lab.

Other schools have found shared planning time by reducing specialization and pull-outs, integrating special education teachers into teams, and eliminating separate Title I classes to reduce the size of groups for all students. Additionally, some schools "bank" time by slightly lengthening instruction each day and freeing up an afternoon weekly, biweekly or monthly for professional collaboration.[137] Many of these strategies involve little or no extra cost to the school, though it is worth noting that extra resources may be required to hire additional staff and/or to compensate teachers for professional learning time scheduled after their contract day or school year has ended.

5. Cultivating Community Support

Educators know that family and community engagement matter and can be a critical strategy for top strategies to improving schools.[138] But they need support to strengthen family and community engagement, which must involve federal, state, and local policy changes.[139] Although family and community involvement have been explicit components of many federal programs since the 1960s, these programs have not always made intentional connections between family and community engagement and student outcomes, and many have cast it as something that's supplemental, rather than integral to academic goals.[140]

Involving families and community members in the work of schools is not a new idea—but a systemic, integrated approach to community engagement has the potential to be a powerful driving force for supporting great teaching and deeper learning. Jose Arenas, an organizer for school improvement in high-need communities, puts it this way: "We all know that individual parents are the most powerful advocates for their own children. Organized parents working together become a powerful force for improving schools for their entire community. Public institutions tend to be only as effective as the public demands they be. A healthy democracy with effective public schools depends on having informed and engaged citizens who are connected to their community leaders and to each other." [140]

Many parents and community members stand ready to answer the call. In one recent survey of more than 1,500 parents, nearly a third indicated that they wanted to take on a greater role in shaping how their local schools operate and advocating for reform. Even among those parents who weren't ready to play this "potential transformer" role, nearly half agreed that getting parents more directly involved in running schools was even more important for public education than improving the quality of parent involvement at home.[142]

Traditional engagement strategies have typically been defined by the school and embody the school's goals, rather than shared goals, for students.[143] Reflecting on two studies

of administrators' family engagement practices in predominantly Hispanic immigrant schools, Susan Auerbach asks, "What if instead of seeking to contain, train, or manage parents in line with school agendas, schools sought out and attended to parent voices?"[144] We need to develop and share more research-based models of effective community-school collaboration, models which go beyond the token ways that families and community members have been invited into schools. *Engaging Families in Education*, a recent report from the National Conference of State Legislatures, highlights several states that have enacted legislation to strengthen family and community connections.

A more effective and comprehensive approach to community and family engagement would begin with commonly-accepted standards of practice that describe how educators should work with families and community members. Some states have developed such standards, including Ohio, Maryland, and Kansas, which used the PTA's National Standards for Family-School Partnerships as a basis for their work. Although Maryland's standards focus on strengthening family and community engagement in early childhood education, Maryland is a good example of how a state can identify and embed a new definition of family engagement across a host of state agencies and involve a wide variety of groups.[145] Building from a set of nationally-acknowledged common standards and leading indicators, state and local education agencies should then work with school and community leaders to identify what additional support and training might be needed to address the standards and indicators and how they plan to benchmark their progress.[146]

Educators will need preparation programs and professional learning opportunities that are aligned to engagement standards and that equip them with the knowledge and skills to work effectively with family members and community leaders. Where teacher preparation programs have addressed family and community engagement, they've most often done so related to early childhood education or special education.[147] Most educators are not receiving the preparation and

> **❝** We need to develop and share more research-based models of effective community-school collaboration, models which go beyond the token ways that families and community members have been invited into schools. **❞**

ongoing professional development they need in order to engage families and community members.[148]

Family and community members also need to be equipped with information and tools in order to see what's possible and advocate for change. Arranging visits to schools in other communities and enabling families and community leaders to hear personal testimonies from others involved in school improvement efforts have been cited as particularly effective ways to inspire and engage.[149]

Families and community members seeking more information about research-based instructional practices, educational reforms, and school-community partnership strategies can participate in initiatives like the Parent Institute for Quality Education (PIQE)'s Parent Engagement Education Program or the Harvard Family Research Project's Parent University Network, which currently encompasses more than 100 programs across the country. Families and community members can also access many videos, texts, and toolkits that provide information and examples of deeper learning, real-world connections, and meaningful community engagement: these include the Teaching Channel's Deeper Learning video series; Edutopia's Schools That Work series; the Partnership for 21st Century Learning's *What is 21st Century Learning and Citizenship All About?*; the Buck Institute's project-based learning resources for families; and Getting Smart's *Smart Parents: Parenting for Powerful Learning* book and blog series.

VI. A Summary of Strategies

Effectively facilitating the kind of learning that leads students to develop the skills and knowledge they need depends on great teaching. Great teaching requires skilled, supported teachers who work collaboratively to meet the needs of their students and school. The Commission's investigation distilled what we believe are the high-leverage conditions that will enable all students to experience deep learning and great teaching in schools organized for success. Taken alone, no single one of these strategies is capable of transforming teaching. But strategic, coherent, long-term investments will yield long-term returns for teachers, their students, and for our nation.

Ensuring broad and sustained access to great teaching and deeper learning depends on having well-aligned systems and resources, at every stage along the teaching continuum and from individual classrooms up through the national level. Accordingly, the strategies below outline the ways that individuals and organizations can contribute in the local, state, and federal arenas.

1. Demand that every child in America has access to schools designed for deep, rigorous, personalized learning led by competent, caring teachers

- Principals must establish a culture that emphasizes shared responsibility for all students and a shared belief that every student is entitled to and capable of achieving high academic standards and deeper learning outcomes.

- School and teacher leaders should cultivate community partnerships to provide students with authentic learning experiences beyond the classroom walls through project-based learning and workforce connections.

- Districts should develop an aligned system of policies, standards, and programs that promote effective family engagement beyond the traditional ways that families have been invited into schools. Strengthen systems within and beyond the school for working with students who have experienced violence, trauma, homelessness, hunger, or similar challenges.

- Schools and districts should leverage technology in a purposeful way to personalize learning, broaden access to deeper learning experiences, and to support collaboration and continuous improvement for both students and teachers.

- Revamp principal recruitment, preparation, and support to focus on instructional leadership, school improvement, school climate, and teacher working conditions.

2. Equip every new teacher with intensive, relevant, clinically-based preparation

- Teacher preparation programs should require coursework and clinical training in social-emotional learning as well as culturally relevant and responsive practice to ensure teachers understand students' cultural and/or economic contexts and can tap into students' assets to accelerate learning.

- Teacher preparation programs, in partnership with districts, need to ensure that clinical training includes participation in multiple aspects of school functioning so that teachers understand the broader institutional context for their work and begin to develop the skills they'll need to collaborate in the service of school improvement throughout their careers.

- States should require new teachers to complete a full academic year of clinical training prior to licensure that includes reflective pedagogical strategies and work in settings similar to those they will experience once on the job—especially in chronically hard-to-staff schools.

- States should set and enforce a 'profession-ready' standard for teachers, and require new teachers to demonstrate effectiveness via performance assessments.

- Teacher preparation programs and local school districts need to invest in and strengthen their partnerships, similar to PDS and teacher residency programs, in order to transform K-12 schools and teacher preparation programs.

> **Effectively facilitating the kind of learning that leads students to develop the skills and knowledge they need depends on great teaching.**

3. Invest in capacity building and career opportunities so that teachers grow and stay in the profession

- Federal and state leaders must support and scale recruitment programs that attract diverse high-quality candidates, fill shortage areas (e.g., STEM, ELL), and help staff schools in high-needs communities.

- States and districts must make teacher compensation competitive with the market for similar professionals.

- Districts must provide multi-year induction for all new teachers with carefully selected and supported mentors.

- Districts should adopt aligned induction, coaching and evaluation systems, and invest in the training and capacity of coaches, mentors, and evaluators to provide customized, actionable feedback.

- State and district leaders must ensure that evaluation is focused on teaching collectively as well as on individual teachers in order to set a developmental tone, promote growth, and make it possible to factor in teachers' contributions to collaborative work and to whole-school change.

- Schools and districts must involve teachers as partners in identifying professional learning that helps them improve their practice. All teachers should have individual professional learning plans informed by evaluation data, personal goals, and school and student needs.

- Schools and districts must allocate and protect 15% of teachers' time for structured collaboration, embedded professional learning including visits to other classrooms and schools, action research and lesson study.

- District and school leaders must train, support and utilize teacher leaders intentionally in coherent, sustainable teacher leadership systems, based on established criteria and demonstrated impact in the classroom and school community.

- Principals should distribute leadership responsibilities and increase the opportunities for shared decision making.

- Federal, state and district leaders should formalize educator-led bodies—such as educator standards boards or advisory councils—as part of the policymaking process.

4. Hold leaders at all levels accountable for providing adequate and equitable resources and driving continuous improvement based on multiple measures
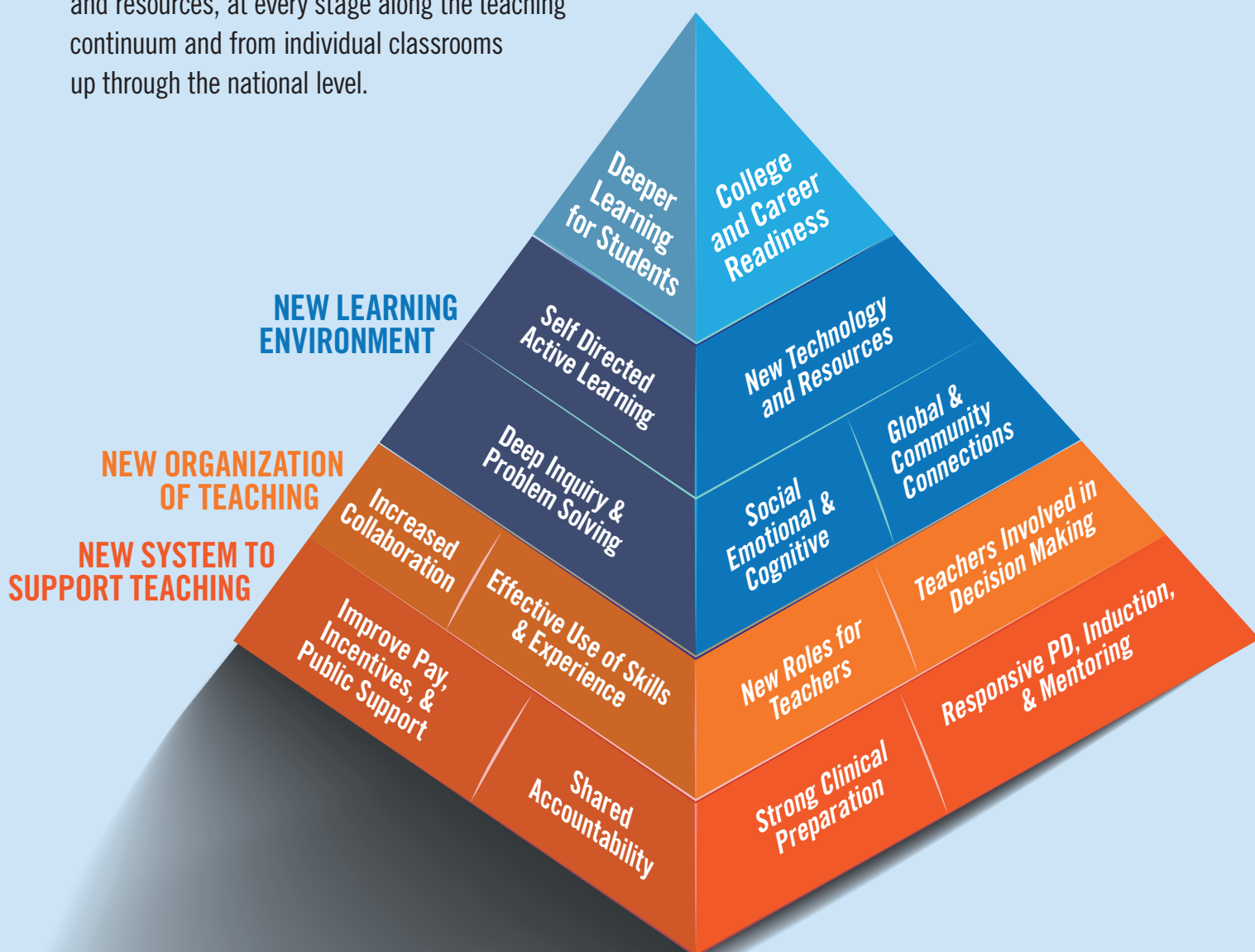
- Hold state and district leaders accountable for expanding equitable access to powerful, content-rich, real-world learning experiences through state-level data dashboards that don't obscure or aggregate student data.

- All states, districts and schools should report student outcomes through multiple measures, including indicators of growth.

- Research and data used for decision making should include multiple measures that incorporate teacher, student, and community perspectives.

- States and districts should regularly analyze the working conditions for teachers and their students, and improve accountability through annual reporting against research-based standards.

- States and districts must prioritize the assignment and distribution of effective and experienced teachers and principals to the schools and students that most need them. Reform compensation to incentivize educators to work in hard-to-staff schools, improve working conditions there, and publish data about the assignment and retention of effective educators in those schools.

Recommendations — The Way Forward

We must come together to demand that every child in America has access to schools designed for deep, rigorous, personalized learning led by competent, caring teachers.
We are calling for nothing less than a new system of teaching and learning in the United States that represents a dramatic transition from how schools are currently organized, but builds from what we know is possible.

Given their role at the heart of learning, the system begins with teachers, who are the key to how we will structure America's schools to serve all students well. Put simply, effectively facilitating the kind of learning that leads students to develop the skills and knowledge they will need in today's and tomorrow's world depends on great teaching. Great teaching requires skilled, supported teachers who work collaboratively to meet the needs of their students and school. Ensuring broad and sustained access to great teaching and deeper learning depends on having well-aligned systems and resources, at every stage along the teaching continuum and from individual classrooms up through the national level.

NEW LEARNING ENVIRONMENT

NEW ORGANIZATION OF TEACHING

NEW SYSTEM TO SUPPORT TEACHING

Deeper Learning for Students

College and Career Readiness

Self Directed Active Learning

New Technology and Resources

Deep Inquiry & Problem Solving

Global & Community Connections

Increased Collaboration

Social Emotional & Cognitive

Effective Use of Skills & Experience

Teachers Involved in Decision Making

Improve Pay, Incentives, & Public Support

New Roles for Teachers

Responsive PD, Induction, & Mentoring

Shared Accountability

Strong Clinical Preparation

In order to achieve this vision, the Commission recommends the following:

1. Policymakers should establish and broadly communicate a new compact with teachers

State and local policymakers — including school and teacher leaders — can contribute to the momentum behind the new system by clearly establishing a new policy direction that:

- Acknowledges the potential of teachers to drive improvement if given support and resources
- Treats teachers as life-long learners on a trajectory toward accomplished practice
- Increases teachers' access to capacity building and tools required to improve student learning
- Prioritizes greater collaboration and continuous improvement for both students and teachers
- Celebrates teacher agency and creates training and structures for teacher leaders
- Formalizes educator-led bodies, such as educator standards boards or advisory councils, as part of the policymaking process

2. Every state should establish a Commission on Teaching, Learning, and the State's Future

The shifts and supports required to support a new teaching and learning system are complex, interrelated, and require time and investment. Therefore, states will need multi-stakeholder commissions to assess whether they are meeting the needs of today's — and tomorrow's — students. Each state's commission will:

- Conduct an asset map and needs assessment of policies and practices with regard to teacher recruitment, teacher preparation, teacher retention, teacher practice, expectations for student learning, and professional learning
- Create a strategic plan for improvement based on local assets, standards, and priorities
- Examine state learning standards and how they are translated into rubrics to govern the teaching and learning process
- Review the form and character of statewide learning assessments and accountability systems

3. States and districts should codify and track whether all schools are "organized for success"

No one factor ensures student and teacher learning. Rather states should establish (or use existing) indicators of whether schools are organized to maximize access to learning opportunities, such as:

- Familiarity with, and ability to use, research on how students learn, what effective teacher practice looks like, assessment literacy, cultural competencies, and effective professional learning strategies
- Support and capacity building for teachers to make shifts toward improved student outcomes for all students
- Technology employed to personalize learning, broaden access to deeper learning experiences, and support collaboration for both students and teachers
- A demonstrated commitment to recruiting, retaining, and developing great teachers
- Protected time — at least 15% — for professional collaboration such as shared assessment work, co-teaching, and observations of colleagues' classrooms
- A system of shared accountability that is focused on improvement
- Meaningful engagement of family and community through projects, workplace partnerships, and a commitment to collecting and using data and information from community feedback

4. Teacher preparation should be more relevant and clinically-based

To stem chronic shortages and turnover and to improve teachers' experience and efficacy, it is particularly important that pre-service teachers gain significant experience with real classrooms. Therefore,

- Teacher preparation should include a year of clinical experience
- Coursework should include social-emotional as well as academic learning, and experience in culturally knowledgeable and responsive practices
- Performance assessments, proven to be a reliable way to ensure that beginning teachers are competent to lead a classroom,[149] should be used as a strong indicator of teacher readiness
- Teacher preparation programs and school districts need to invest in and strengthen their partnerships to improve teacher candidates' effectiveness and retention

5. States should support all new teachers with multi-year induction and high-quality mentoring

New teacher induction and mentoring leads to improved teacher retention, satisfaction, and efficacy. Yet currently only a few states provide this critical foundation for their teachers. States should:

- Require a multi-year induction program as a licensure requirement
- Provide sustained program funding
- Require multi-year mentoring, with carefully selected and trained mentors
- Consider additional release time for new teachers as is done in other countries
- Consider pilot programs that provide differentiated induction for teachers from different pathways

6. Education leaders should evaluate ALL professional learning for responsiveness and effectiveness

We must raise our sights for professional learning. The design should be done at the school level with a high degree of teacher input and a focus on real day-to-day instructional issues. We need to make a commitment to evaluate all teacher professional development programs to determine whether they:

- Allow a significant portion of teacher professional learning be teacher-led, driven by individual professional learning plans and tied to teacher evaluation
- Provide ongoing opportunities for collaboration, reflection, and project-based learning
- Expose teachers to new ideas and ways of working that are relevant to them and their schools
- Map to research-based tools and guidelines
- Are tracked by cost and evaluated regularly
- Align with and support teachers to achieve high professional teaching standards

7. We all must adapt to the world of expanded learning opportunities

The structures and operating principles of the entire education system need to adapt to the reality that learning and teaching has changed dramatically in the past 20 years. To do so:

- School and teacher leaders should cultivate community partnerships to provide students with authentic learning experiences beyond the classroom walls through project-based learning and workforce connections
- Pre-service and in-service supports must be provided for teachers to experience effective community engagement strategies as well as purposeful uses of technology to expand the learning environment
- State and district officials need to study — and where necessary, alter — school laws and regulations about use of instructional time and barriers to learning opportunities that extend learning from school to community, educational, and cultural agencies
- States also may seek to develop pilot efforts to develop new school models that push the boundaries of where, how, and when students learn

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