Teacher leadership & **deeper learning** for all students

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Abstract & acknowledgments

CTQ's VISION:

a high-quality public education system for all students, driven by the bold ideas and expert practices of teachers

It's time for America's young people—all, not just a privileged few—to engage in *deeper learning*. But transforming how students learn and lead requires parallel changes in the systems that govern *teacher* learning and leadership. This paper is about that indelible link. Integrating a variety of research evidence and narratives, I examine current reforms' limitations, explore deeper learning's promise, and summarize a rich research literature about how teachers learn to lead as well as the conditions necessary for their expertise to spread. I also identify three promising shifts: next-generation accountability approaches that tap (and make more visible) teacher expertise, increasing awareness of how top-performing nations invest in teacher leaders (as well as of how leadership is flattening in the private sector), and online networks that make it easier than ever for teachers to learn from and collaborate with one another. I predict new investments that will be made in the teaching profession (including the emergence of micro-credentials) and offer next steps for crafting the excellent and equitable public education system all students deserve.

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Knowledgeable.
Versatile.
Creative.
Engaged.

Being college-
and career-ready
is no simple task.

Introduction

It's time for America's young people—all of them, not just a privileged few—to take part in *deeper learning*.[1] And it is time for policymakers and practitioners to create the *system* of teacher leadership necessary for them to do so.

> **Deeper learning for *all* students will only result from a *system* of teacher leadership.**

Growing numbers of policy and business leaders are joining progressive teachers and administrators in the realization that schooling in America must do much, much more than mass-produce a workforce conversant in basic skills. Deeper learning offers students opportunities to master important concepts and facts—and also to think critically, tackle sophisticated problems, and effectively communicate what they know and can do. It is about getting ready for the complex global economy—and also for responsible adulthood and citizenship in our democracy. It is about being ready for a world of accelerating and unparalleled change.

What does this look like at the classroom level? Instruction designed around deeper learning involves student voice and choice, incorporates feedback and revision, and typically culminates with a publicly presented product or performance. For example, students aren't expected merely to supply answers to row after row of math problems—but instead must explain how they are *using* and *applying*

concepts relevant to algebra, geometry, and calculus. Similarly, deeper learning requires that American history courses go far beyond memorization of names and dates; rather, students like Rahil Maharaj of Impact Academy (an Envision school in Hayward, California) must use the tools of historians to analyze the U.S. Constitution and write about the federal role in immigration policy. But deeper learning also requires rethinking how schools are organized and led as well as how (and how much) our nation invests in students like Danny Rojo of Social Justice Humanitas Academy, a teacher-powered school serving a high-poverty neighborhood in Los Angeles.

Deeper learning will do little for our economy and democracy unless it is accessible to every student.

All too often, low-income students have had to subsist on a pedagogical diet of basic skills instruction, with few opportunities to develop the academic mindset and self-directed learning habits they need for future success. Deeper learning is instead rooted in preparing students to think and solve problems as well as develop agency and confidence. It creates the right circumstances for students like Rahil and Danny, who come from very different backgrounds, to achieve in college and their careers, continuing to develop their own leadership.

Seeking both excellence and equity in public education will require American school systems to shift in dramatic ways. School curricula must be organized differently, as must the calendars and schedules that students follow. Accountability cannot be limited to consideration of students' scores on standardized tests.

The roles of teachers must be transformed.

Limitations of current reforms

Of course, education has long been touted as a way to support workforce development and a more stable society.

But what form should our investment in education take? For many decades, both researchers and reformers have claimed teacher quality is the key to closing the achievement gap. But longstanding inequalities in school funding have made it difficult—if not impossible—to secure access to qualified teachers for all students. And deeply divided debates over who trains teachers and how they are paid or tenured make it even more difficult to serve all students well.[2]

Federal education policy of the Bush and Obama presidencies—namely, No Child Left Behind (NCLB) and Race to the Top (RTTT)—have fueled reform efforts that purport to tackle achievement gaps. These recent reforms have focused on using high-stakes accountability to hold teachers responsible for student test scores and on advancing "disruptions" of teaching and learning (including charter schools, technology, and efforts to open up the marketplace for anyone to teach).

However, recent reports of "dismal" student scores on the National Assessment of Educational Progress, along with other consequences, have led reform enthusiasts to question many of these market-based policy strategies. In many schools, the curriculum has been narrowed in pursuit of increasing test scores.[3] "Value-added" test scores have failed to accurately measure which teachers are effective.[4] Analysts point out that charters have not been more effective than traditional public schools.[5] And shortcut training programs have created pathways for new recruits to enter teaching, but they have *not* improved quality or retention.[6] Reformers are beginning to recognize that these particular investment strategies may be leaving our nation's most vulnerable students with few opportunities to *learn deeply*.

Andy Calkins of the Next Generation Learning Challenges made the point of how recent reforms have missed the mark:

> The Standards Push era triggered deep, widespread changes in school practice through the use of heavy policy artillery. State and then federal mandates, often tied to funding and backed by tests that dictated student advancement, reshaped everything from district budgets to teacher evaluation. These were the policy equivalent of what the military used to call "Shock and Awe" tactics: blunt imperatives to force immediate behavior change.[7]

53%
of our nation's students report they are engaged in their formal learning

30%
of America's teachers say they are "actively engaged" in their jobs

Such investments could scarcely be expected to yield the kind of deeper learning that should be imperative in our quest for excellent, equitable public education.

Indeed, these "Shock and Awe" policies have had a profoundly negative impact. Only 53 percent of our nation's students report they are engaged in their formal learning, as measured by their enthusiasm for school, how well they are known there, and how often they get to do what they do best.[8] A recent report of the Annie E. Casey Foundation estimated that almost 6.5 million teens are disconnected from school as well as the workplace, with the percentages especially troubling among Latino and African-American teens.[9] While there has recently been a spike in high school graduation rates, this can mean very little for a young person's engagement in college and readiness for college and career.[10]

And a recent Gallup poll reveals that only 30 percent of America's teachers are "actively engaged" in their jobs. The poll offers important clues as to what is amiss. While a vast majority of current teachers report they see teaching as their life's calling, the Gallup survey showed that teachers "scored dead last" among 12 occupational groups in agreeing with the statement that their opinions count at work.[11] An increasingly discontented teacher workforce—who feel disconnected from decisions relevant to their jobs—is unlikely to be able to exercise the energy and enthusiasm to engage students in deeper learning.

Parents, too, are attuned to the failures of recent reforms. Frustrated by a narrowing curriculum and inaccurate assessments, many are having their children opt out of standardized tests. Superintendents like Desmond Blackburn of Brevard Public Schools (FL) are taking action by eliminating large numbers of student assessments. And the judicial system has begun to halt the use of student test scores, often measured with unreliable value-added statistics, for high-stakes teacher evaluation systems.[12]

Faced with this state of affairs, growing numbers of policy leaders—both conservatives and progressives—are recognizing that NCLB and RTTT have "distort[ed] schooling" and "infuriate[d] parents" as well as "micro-manage[d]" how teachers are to be evaluated.[13] Both school reformers and teacher union leaders have yet to capitalize on utilizing classroom experts, such as our country's 112,000 National Board Certified Teachers (NBCTs). As Marc Tucker suggested, America's teaching quality reforms of late have focused far more on efforts to "fire the worst" than to "invest in those [we] already have."[14] And now the media is raising questions about the severe limitations of charters as school reform instruments and the gross profiteering and abject failures of some online learning ventures. As Jack Jennings, founder of the nonpartisan Center for Education Policy, has pointed out, the policies of Bush and Obama will prove to have sparked "minimum improvement" while causing "considerable harm."[15]

A serious revolution in teaching and learning is needed.

School reformers are recognizing the need for a "fundamental redirection."[16] New designs are emerging, but taking them to scale will require a game-changing strategy: unleashing the potential of teachers to lead the transformation of their profession.

Emerging new developments

Just saying no to school reform is insufficient. Achievement gaps are very real and must be addressed. And the current ways of doing business in both traditional district schools as well as charter management organizations are not acceptable. But there is good news. I am buoyed by a number of school innovations afoot, in which high expectations for students are not compromised by efforts to deeply engage them in learning. And in each of these examples, teachers are *beginning* to lead in a variety of ways.

The history of school reform is filled with ambitious but abortive efforts to transform schooling, like the $500 million Annenberg Challenge of the 1990s, or more recently, Mark Zuckerberg's $100 million grant to Newark Public Schools. No doubt philanthropists, and now increasing numbers of education entrepreneurs, will continue to bring us a steady stream of efforts to overhaul education, including one of the latest, the XQ Super School Project (a $50 million effort to reimagine the American high school).

Yet these innovative approaches are typically siloed, with limited prospects for reaching all students. It's a problem that's haunted American schools for decades. For the most part, efforts to scale innovations have failed to "develop organizational

The revolution has begun...

- A number of new school designs, fueled in part by the Ford Foundation's More and Better Learning Time work, have created opportunities for students, particularly those in low-income communities of color, to be supported by a diverse set of community-based organizations who work with teachers to expand and enrich the curriculum.

- The Generation Schools Network supports innovative curriculum designs that expand learning time and reduce class sizes, and California's Summit charter network has created a unique blended, interdisciplinary learning approach. Both are fueled by teachers who have far more time for professional development than do most of their counterparts across the nation.

- The Big Picture Schools, now in 60 locales around the nation, have jettisoned traditional classes and standardized tests. Instead, students develop and execute their own personalized learning plans and their teachers use and share new assessment tools.

- In Pittsburgh, Remake Learning has created a citywide learning ecosystem in partnership with more than a hundred local subject matter experts, formal and informal educators, social workers, and program managers. To establish a competency-based system recognizing student growth, Remake Learning is relying on badges rather than grades for demonstrating acquisition of knowledge, skills, and dispositions.

- The Digital Youth Network is creating tools to allow students to earn badges, moving from novice to expert in areas like creative writing. And the Institute of Play is building a set of game-based pedagogical tools and design curricula that can be used in both formal and informal learning contexts.

- The Deeper Learning Network (DLN), fueled in part by the Hewlett Foundation, has supported a set of school networks (including approximately 500 schools in 41 states) that engage students through project-based learning. A recent study found that students whose high schools were part of this network outperformed their peers on a range of measures, including test scores, inventories of interpersonal and intrapersonal skills, on-time graduation rates, and college enrollment.[17]

structures that intensify and focus" reforms, rather than dissipate and scatter them.[18] Many a promising American school reform has flopped because of the lack of "intentional processes for [the] reproduction of successes."[19]

One in four of our nation's teachers is "extremely" or "very interested" in serving in a hybrid role where s/he can both teach students and lead reforms.

MetLife Survey (2013)

But today one in four teachers seek to serve in hybrid roles so they can both teach and lead,[20] and more of them, as they engage in external networks, are taking responsibility for looking outward for exemplars of deeper learning. Soon teachers, who are increasingly going public with their own pedagogical and policy ideas via social media, will take more control over the reform narrative that defines their profession.

The American people have always had a profound trust in individual teachers, particularly those who have taught their children.[21] Soon they will trust educators as a collective, and teachers, working with parents and their allies, will transform teaching and learning.

This paper is about the indelible link between teacher leadership and deeper learning for all students, bringing together a wide variety of research evidence and narratives. I begin with the promise of deeper learning, and the role that technology can, and cannot, play in the future of schooling. Next I summarize the research evidence on how teachers learn to lead as well as the conditions necessary for their expertise to spread. I conclude by pointing to how demand for teacher leadership will grow and identifying the high-leverage strategies that can scale it.

Social Justice Humanitas Academy, a teacher-powered school Los Angeles, CA

The promise of deeper learning

The William and Flora Hewlett Foundation has outlined six competencies of deeper learning that students must master: core academic content, critical thinking and problem solving, collaboration in teams, effective communication, self-directed learning, and academic mindset.

While the term "deeper learning" is relatively new, the general concept is not. More than 100 years ago, John Dewey, American educator and philosopher, called for students to be taught in ways that helped them take charge of their own learning. However, the idea of learning by doing has never really "stuck" in the United States. Jal Mehta and Sarah Fine offer a poignant explanation in their analysis of the prospects for today's reforms:

> The qualities associated with deep learning—critical thinking, grappling with nuance and complexity, questioning authority, and embracing intellectual questions—are not ones that [have been] widely embraced by the American people.[22]

But Mehta and Fine also point out that deeper learning has taken on a new urgency. At the end of World War II, knowledge was doubling every 25 years—now it is doing so every 12 months.[23] In addition, today's students must prepare for a future in which they are likely to hold a dozen or more jobs. And more and more of those jobs will require working through complex problems rather than applying simple formulas to routine tasks.

In response, many venture capital and philanthropic investors are placing big bets on *blended learning*, in which digital tools engage students with customized support. New media platforms, including multi-player games and virtual worlds, create opportunities for students to drive their own learning and participatory pedagogy. There is no shortage of best apps for teaching and learning—like Vroom, designed to provide parents and educators with just-in-time information on how to best support "brain-building moments" for their young children. And new organizations like Getting Smart and The Learning Accelerator are promoting scalable technological solutions to the barriers of blended learning and are supporting charters and school districts to transform how and when students learn.

That said, deeper learning is not "about" technology—although digital tools can provide teachers and students with powerful "assists." As education historian Larry Cuban has noted,

the student-centered, hands-on, personalized instruction envisioned by education technology advocates remains the exception to the rule—in large part because of the lack of time for teachers to "learn, experiment, and overhaul their practices in collaboration with each other."[24] A 2015 report from the Organisation for Economic Co-operation and Development, examining use of technology and student learning across the world, reached the same conclusion.[25]

If any single factor is central to deeper learning, it is not the integration of technology but the involvement of teachers who have both pedagogical expertise and a thorough understanding of students, families, and communities. Even in the most technologically rich environments, deeper learning can only achieve its aims—and do so for *all* students—when it is grounded in relationships. Parents and families will continue to seek schools as safe and moral places for their children to learn, where teachers know them well.[26]

KEY SHIFTS to personalized learning

The Institute for the Future has identified key shifts involved in the transition from schooling as an institution to personalized learning opportunities:

From episodic to continuous learning: Content will be accessible anytime, anywhere among networks of peers and instructors.

From assigning to enticing with content: In an information-rich society, teachers will design attractive, self-guided learning opportunities.

From content conveyor to content curator: The diffusion of knowledge shifts the teacher's role from lecturer to facilitator of student exploration.

From working at one scale to working up and down the scale: Educators and institutions will adeptly shift among facilitating highly personalized courses while also reaching hundreds (or thousands) of students when needed.

From degrees to reputation metrics: Students' future employers will privilege candidates' previous success on relevant tasks over traditional hiring criteria such as college degrees.

From grades to continuous feedback mechanisms: Rather than assessing learning periodically (e.g. at the end of the school year), teachers will tap big data and advanced analytics to provide ongoing feedback to students.

From lecture halls to collaborative spaces: Learning experiences will allow for both individual and collaborative exploration—taking place online and in redesigned physical spaces.

What can this look like?

I know of no better example than Social Justice Humanitas Academy (SJHA), a Los Angeles high school serving a high-poverty neighborhood dominated by two competing gangs. The SJHA narrative makes it clear that technology alone is not sufficient, and relationships (between students and teachers, between school and community) are paramount.[*]

One of 50 L.A. pilot schools approved in 2007 by the district and union, SJHA yields powerful student outcomes, including a 94 percent graduation rate, an astonishingly low suspension rate (.2 percent last year), and reports from students (more than 93 percent) and parents (95 percent) that school grounds are safe.

As significantly, co-lead teacher Jeff Austin reports that alumni—many of whom are now college graduates, with some in graduate school or en route to the Peace Corps—remain engaged with the school: "I mean, that's the challenge. . . . A lot of communities like this have kids that find their way out but don't want to come back. Ours are coming back." Current SJHA students speak with pride of their "network" of older peers who have beat the odds to thrive throughout the University of California system—and who offer them advice and support. And Austin tells us alumni like Danny Rojo, now a UCLA student, are active in a range of campus and community activities to encourage justice, equity, and youth leadership.

How did this kind of impact come about? SJHA and others took advantage of the dysfunctional and vitriolic debates between district and charter schools in Los Angeles to quietly carve out an *alternative approach*. SJHA relies on teacher learning and leadership and community partnerships, not rigid curriculum or high-stakes testing, to ensure educational excellence and equity.

Social Justice Humanitas Academy
Los Angeles, California

94%
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93%
of students report school grounds are safe

[*] See the work of my CTQ colleagues: Kohl, K. & Farris-Berg, K. (2014). Teachers design and run L.A. Unified 'pilot' schools. *Education Week*. Retrieved from http://blogs.edweek.org/edweek/on_california/2014/11/teachers_design_and_run_l.a._unified_pilot_schools.html

Below are some factors that matter in how this school facilitates deeper learning for students at risk:

First, SJHA is a teacher-powered school in which classroom practitioners have secured autonomy to make decisions often assumed to be the province of administrators. Teachers set the school's vision, determine the curriculum and assessments, approve the annual budget, select and evaluate the principal, and hold one another accountable for student learning through peer review. SJHA teachers collectively and annually write an Election-to-Work Agreement (EWA) that outlines the school's teaching and learning conditions, which are very different from those found in the district's collective bargaining agreement with its unions. For example, faculty members teach in teams and draw on Japanese Lesson Study to assess one another's practice. Teachers require themselves to achieve National Board Certification or start the process by their fifth year of teaching, setting a very high bar for teacher quality and professional development. SJHA principal José Navarro, an NBCT and former California Teacher of the Year, teaches several classes a week and proudly describes himself as a servant leader.

Every student at SJHA receives a personalized education plan.

Second, each student at SJHA has a personalized education plan. Every five weeks, teachers review a wide range of data—not just test scores—to craft strategies to support struggling students.

To help teachers better align instruction to students' strengths, faculty members are selected and developed to assess young learners' multiple intelligences and developmental assets. Austin says, "Working with students in this way, graduation ceremonies bring us the best high ever. We know them. We know their story, and the horrible circumstances they've overcome, with our help, to get that diploma." Every staff member steps in to "adopt" three high-risk students who need additional support in achieving their learning plans.

Students are well aware that they are seen as individuals at this school. As one student explained, "At first when I came here I was a little thrown off by the amount of respect I received. . . . I wasn't just treated as a student, I was treated as a person. In middle school it was always like, 'You're the student, I'm the teacher. I have more power over you.' And here it's not like that. And I feel like that's what makes students grow. It's transformational. . . . you grow to respect other people."

Teachers' personalization of learning cultivates self-advocacy, which these young people recognize they will need for future success—particularly as first-generation college students. As one student put it, "It teaches you to be vulnerable and to let people in. Don't be too prideful and say, 'Oh yeah, I can handle my stuff, I'm good by myself.' No. Now you realize you need help and you shouldn't feel bad about that. . . . Don't be self-defeating but do something about it by asking."

Third, SJHA teachers work in horizontal, grade-level teams to design thematic units across disciplines so students see subjects as a unified and organic whole rather than compartmentalized pursuits. For example, students learn about the original 13 colonies in American History class while reading Thomas Paine's *Common Sense* in their literature course. Recently, the entire 11th grade prepared a project-based learning event around *The Great Gatsby,* with debates, readings, drama, dancing,

and more—all representative of their classroom investigations of the Roaring Twenties. This interdisciplinary curriculum, designed by teachers, means that the school does not have to offer an array of isolated courses in English, social studies, science, and math. As a result, teachers teach about 80 students a day, including the all-important advisory period in which they work with the same group for four years.

Fourth, professional learning at the school focuses on teachers' collaboration to fine-tune their instructional practices (see text box below). Teachers spend at least 2.5 hours a week in team-based professional learning, creating and refining interdisciplinary units, lessons, and assessments. When math scores dropped by five percent, teachers worked together to integrate math subjects for students in every grade; thanks to the teacher-powered model, they had the curricular authority to make a quick shift in policy and practice. SJHA students responded better to this concept-focused approach than to taking algebra and geometry one course at a time. The school expects each teacher to conduct a peer review of a colleague's teaching for at least four hours over the course of a year. In addition, teachers frequently and voluntarily sit in on one another's classes to improve their practice.

STUDENTS SPEAK about deeper learning

Current SJHA students offer a number of reasons they think the interdisciplinary units crafted by their teachers work well: they aid memory, focus attention, and contribute to deeper understanding of multiple perspectives. And they emphasized the relevance of the school's rigorous curriculum to their lives.

A student recalled one of the first interdisciplinary units she experienced at the school: "In 9th grade, we were learning what a catalyst is in science, and in English, we were learning about activists and how they're catalysts for change. And one thing I remember. . . . Our English teacher was always talking about what it means to be a catalyst for change and how we can make a difference in our community. . . .

That has stuck with me, how I can be a catalyst for change."

Her classmate agreed, explaining that thanks to the unit, he realized that he was a catalyst in his own community: "Like for me, I'll be the first in my whole block to graduate high school. And actually to go to college as well. And there's a bunch of little kids on that block. Hopefully, seeing me go to college gives them hope somehow that they could do it and get out of this place. . . . There are a bunch of catalysts and they're not always the ones speaking."

A third student added that teachers were really trying to "set up the culture of the school," and that the catalyst unit, offered to entering ninth graders, strengthened their efforts: "It really makes you think about what kind of person you are, the kind of person you would be, based on the decisions you make."

The students—who spoke in awe of the connections they saw among their coursework—emphasized that their learning resulted from their teachers' collaboration. They explained that their teachers are in "constant communication" but that the team meetings are when they "make their secret plans" and ensure that projects are "in sync."
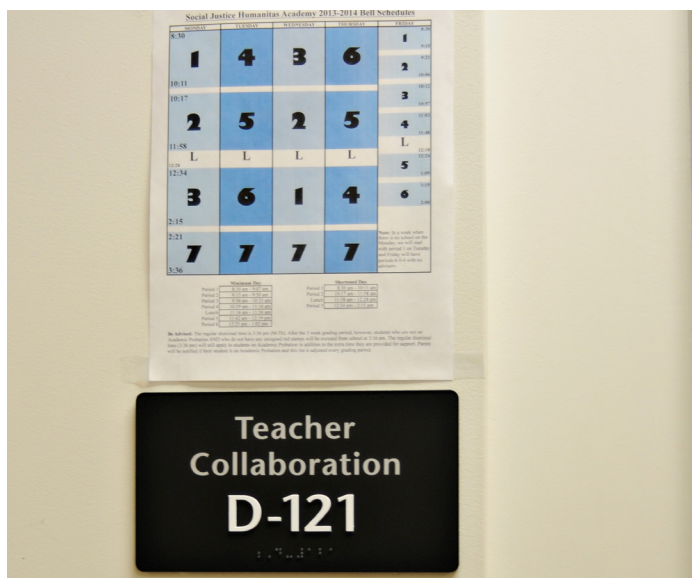
Teachers at SJHA spend at least 2.5 hours a week in team-based professional learning.

Finally, fueled by the nontraditional leadership of the principal and teachers, SJHA partners with a number of organizations. For example, the Los Angeles Education Partnership (LAEP) supports the school's professional development efforts by helping its busy teachers lead subject-focused retreats, action research, and visits to other school sites that utilize the Humanitas interdisciplinary strategy. In addition, the school partners with the EduCare Foundation, which supports teachers in building close relationships with students (and which currently employs three SJHA alumni to work with students at their alma mater), and Youth Speak Collective, which helps ensure all students have opportunities to improve their communities and develop leadership skills.

However, the school is dramatically underfunded, with less than $6,000 to spend per pupil. The district's pilot schools do not have outside investors (as many local charter chains do). The school does employ about 28 teachers and other support providers for its 510 students and has created hybrid positions in order to leverage more teacher leadership. And SJHA teachers, who have developed a sense of trust and collective agency, are persistent in facing numerous challenges associated with improving outcomes for high-needs students.

Navarro is a fierce advocate for his teaching colleagues and a firm believer in community schools. But the funding situation presents undeniable limitations:

> We still have students who fail. I still have students who have needs I can't meet. We can't do it alone. [Our] students need all the resources their community can offer.

Stacey Childress of the New Schools Venture Fund, along with several co-authors, has also pointed to the limitations of recent efforts designed to disrupt teaching and learning policies. They have not had the impact that many reformers had promised. In the future, Childress and co-authors argue, policymakers need to invest more and differently in students and those who teach them:

> Teachers often relish the opportunity to innovate and serve their students better, but struggle to reconcile new approaches with existing requirements—not to mention limited time and resources.[27]

America's education policymakers have a long history of ignoring the time and resources needed for teachers to sustain deeper learning for their students. Some of the resistance boils down to politics and a lack of commitment to investing in the teaching profession. But I also suspect that many decisions about teachers and their leadership are made without a deep understanding of how teachers learn to lead or of how their expertise can be spread.

I explore these matters next.

Teacher Wendi Pillars shares her teacher leadership story with CTQ researcher Jon Eckert.

How teachers learn to lead

In 2004, Jennifer York-Barr and Karen Duke concluded that we know a great deal about the dimensions and characteristics of teacher leadership but possess little evidence of its effects.[28] The lack of information about impact, of course, is directly traceable to the absence of consistent, sustained infrastructure for teacher leadership. As Judith Warren Little has aptly pointed out: America has had no "uniform tradition" by which classroom practitioners have been "granted formal authority" over matters of teaching and learning and how their profession is managed and led.[29]

Instead, for decades, teacher career ladders have come and gone, due to poor implementation and lack of commitment from top-level policymakers. And even though teachers have been "looked to with increasing regularity as agents of school and classroom change," the stark reality has been that their leadership potential has been tamped down by administrators who "appoint or anoint" them to serve in narrow roles.[30] Their training is often as confined as the roles they play, restricted to a slim number of technical skills. And even when teachers have opportunities to lead in slightly more ambitious ways, their roles are often financed by grant funding, and as a result, typically short-lived.

That said, researchers and other educators have written a good bit on what teachers must know and do to lead—drawing on teaching and learning and theories of adult development, as well as cultivating technical proficiencies in guiding colleagues through reflection on teaching practices. And ever since the publication of Marilyn Katzenmeyer's *Awakening the Sleeping Giant* in 1996, a slew of "how-to" books on teacher leadership have been written, and more are on the way.

In many cases, these resources have been used in graduate school courses and programs for teacher leaders.[31] But most often, whether in university-based master's degree programs or district workshops, teachers primarily *receive* training in how to coach their teaching colleagues, with the expectation of *delivering* new skills as opposed to *spreading* them more broadly. However subtle the difference may seem, research about how teachers best learn suggests that the distinction is an important one. After all, researchers have devoted significant attention to how teachers learn to *teach* effectively. Embedded in these findings are valuable clues about how they can learn to *lead* effectively.

In fact, learning to teach—and to do so embedded in a context of meaningful collaboration with other professionals—can also prepare a teacher to lead. That is, done right, teacher preparation and professional learning can help teachers propel their own students' success while also contributing to the success of a far broader swath of students in their schools, districts, and nation—and to the standing of teaching as a profession.

The work of teaching can be the work of leading. And...

The act of learning to teach, as the National Writing Project has shown since 1974, can be the act of learning to lead—*if teachers are expected to learn together and go public with their ideas and practices.*

Fifteen years ago, a national poll found 90 percent of NBCTs reported that the advanced certification process boosted their "credibility" with other teachers.[32] More recently researchers have found that NBCTs were more likely to be instructionally helpful than their non-NBCT colleagues.[33] However, other investigators found that few principals know much about how the certification process can be used for professional development.[34]

So what does a high-quality professional learning system look like? If we are trying to understand the kinds of collaboration and influence that are most beneficial for improving teaching practices (not just in one teacher's classroom but in her school and district), we can look to what researchers have observed in other nations.

As Ben Jensen and colleagues have discovered, accountability in top-performing nations hones in on "not only student performance, but also on the quality of instruction and professional learning."[35] As described in their report, commissioned by the National Center for Education and the Economy (NCEE) and the Bill & Melinda Gates Foundation, teachers in jurisdictions such as Singapore and Shanghai conduct *lesson study* to investigate one another's teaching of the same unit of instruction. In this way, teachers can not only improve their individual practice but also jointly assess students' deeper learning of content as well as publically present their findings to instructional directors, teacher educators, and well-recognized teacher leaders from other schools. In nations like Japan, schools have multiple cycles of lesson study annually, which is "organized and owned" by teachers themselves.[36] They are developing themselves as teachers *and* as leaders.

Dylan Wiliam has identified specific characteristics of particularly effective lesson study-esque approaches to professional development. Teachers improve instruction the most when they have opportunities to apply what they learn and to help

one another take instructional risks (not just "play it safe"). Teachers are influenced most by those who have pedagogical "credibility as a coach." Wiliam also found that observations of teaching by a coach (or assessor) are most beneficial when teachers are able to select the lesson to be critiqued. His investigations reveal that teachers improve their teaching when feedback is provided in ways that prompt *thinking*, not emotions, and when careful attention is paid to follow-up action taken by those observed and supported.[37]

As John Hattie has found:

> Collaboration is based on cooperativeness, learning from errors, seeking feedback about progress and enjoying venturing into the 'pit of not knowing' together with expert help that provides safety nets and, ultimately, ways out of the pit. . . . This is as true for student learning as it is for teacher learning.[38]

Hattie's empirical evidence, assembled over fifteen years of investigation of what works in education, and its focus on *Visible Learning*, means that teachers must become evaluators of their own teaching. Hattie's unique and groundbreaking research of over 800 meta-analyses on what best predicts academic achievement for K-12 students builds a narrative on the power of teachers, feedback, and a model of learning and understanding. And how teachers help one another offers a clear path for the future of teacher leadership.

As Stacy Szczesiul and Jessica Huizenga have found, teacher leadership is a "socially distributed phenomena" that develops over time as teachers gain efficacy; to do so, they must have "repeated opportunities" to reflect on what they master in the context of structured collaboration. Whether in the form of well-designed lesson study or similar practices, this type of professional development helps teachers get more comfortable with "feelings of failure" and "cop[ing] with difficult situations."[39] Teachers learn to lead by developing skills in asking probing but gentle questions about their own practice as well as that of those they seek to influence.[40]

What else do we know about how collaborative structures can best help teachers improve their practice and develop as leaders? Researchers also have shown teachers are most likely to learn to lead effectively (and I would suggest more boldly) when they:

- Make conscious decisions to devote their (often limited) time together on matters of teaching and learning, and find other means to handle the many managerial chores associated with their jobs;

- Remain "explicit and consistent in expressing the importance of working together";

- Use "specific practices and routines that organize discussion of reform goals and problems of teaching and learning"; and

- Develop and sustain "ties with external organizations and groups that supply intellectual, social, and material resources for their work." [41]

It's important to keep in mind that—while formal collaborative practices like lesson study can play a critical role in helping teachers learn to lead—there is a significant role for *informal* leadership as well. There are at least two interrelated reasons.

First, teachers value the highly contextualized and relational aspects of teaching students and often reject formal leadership that is defined and enacted far from the "daily grind" of classroom life. As Phillip Jackson described almost 50 years ago in his landmark book *Life in Classrooms*, teachers have "as many as 1,000 interpersonal interchanges" in a given school day, requiring them to uniquely negotiate teaching and learning.[42] This is one reason more than 90 percent of America's teachers report that other teachers contribute most to their success in the classroom—because their colleagues understand the nuances of the specific context in which they work.[43]

Second, most teachers have become accustomed to the isolation of classroom teaching, and embrace the profession's longstanding egalitarianism. Teacher leadership is more about peer influence, and is rarely "vested in one person who is high up in the hierarchy."[44] Our own work at the Center for Teaching Quality (CTQ) in documenting the impact of teacherpreneurs has uncovered that their leadership development seemed to emerge when their informal mentors, who helped them early in their careers, expected them to immediately *reciprocate* by paying forward the same kind of support, and to lead by listening and learning together.[45]

In a recent blog post, teacher Wendi Pillars, one of the many classroom experts with whom we work, employs both insightful words and inspiring images to narrate her leadership journey. We followed Wendi from a time when she "rarely ventured outside" her classroom with her pedagogical expertise to her recent publication of a book on visual note-taking.

Wendi describes how her virtual colleagues inside the safe space of the CTQ Collaboratory "increased [her] confidence and deepened [her] reflection," eventually helping her realize leadership potential she didn't know she had. Encouraged by her colleagues, she first went public with her pedagogical approach in a blog post, Visual Notetaking in the Classroom, inviting other teachers to try her methods and share their results.

They did—and asked tough questions that prompted "dialogue, more transparency, and reflection." Wendi notes, "I'd been invited to the proverbial table; I was energized and grateful to have this support which I hadn't found locally [in her district]."

Her blogging began to go viral. Then came an unexpected phone call: an invitation from the editor of a highly regarded publishing company to write a book.

Reflecting on the past couple of years, Wendi writes that her professional learning community has "expanded exponentially" and she now has "the confidence to jump in, and invite others to that transformative table, with support, feedback, and gratitude."
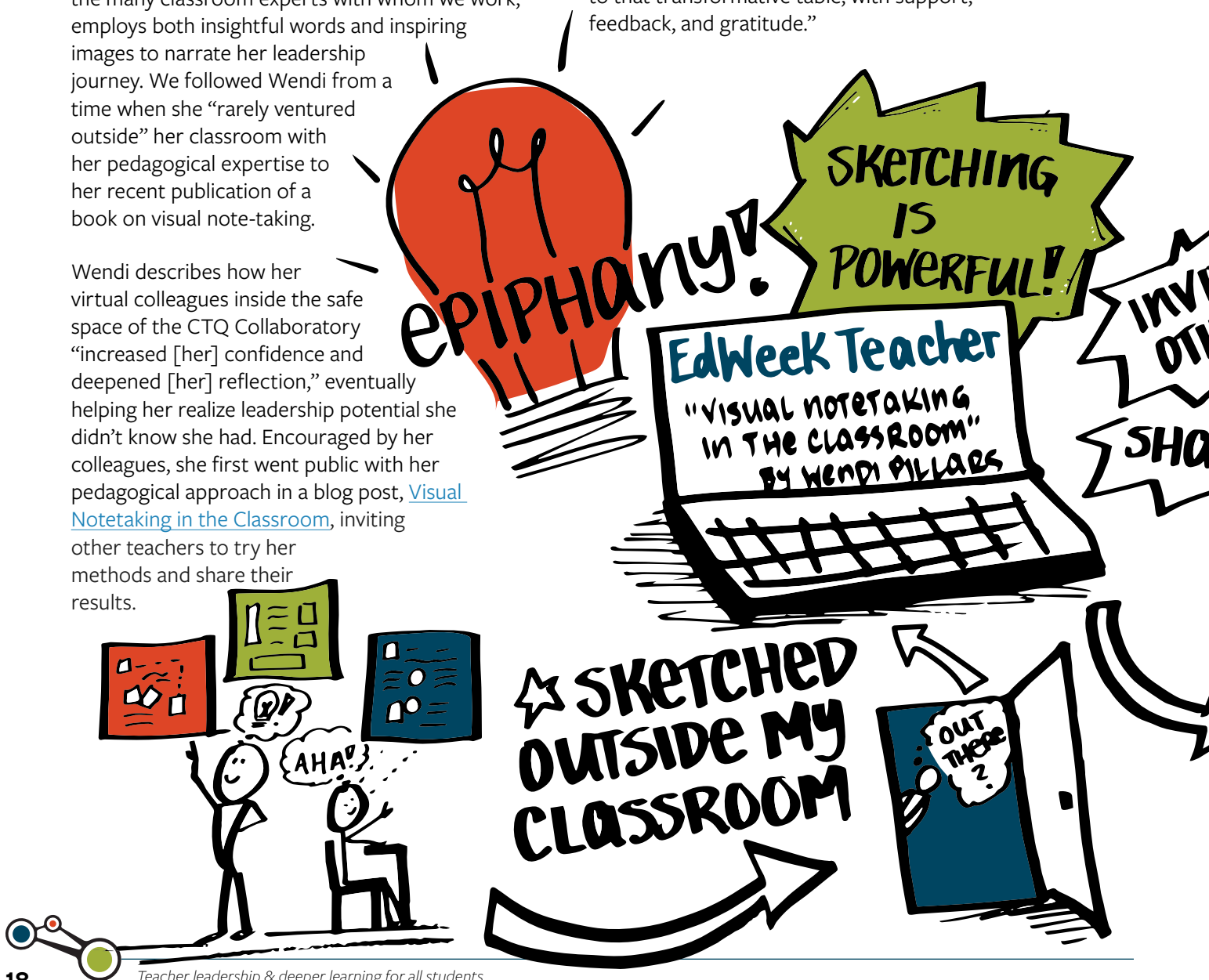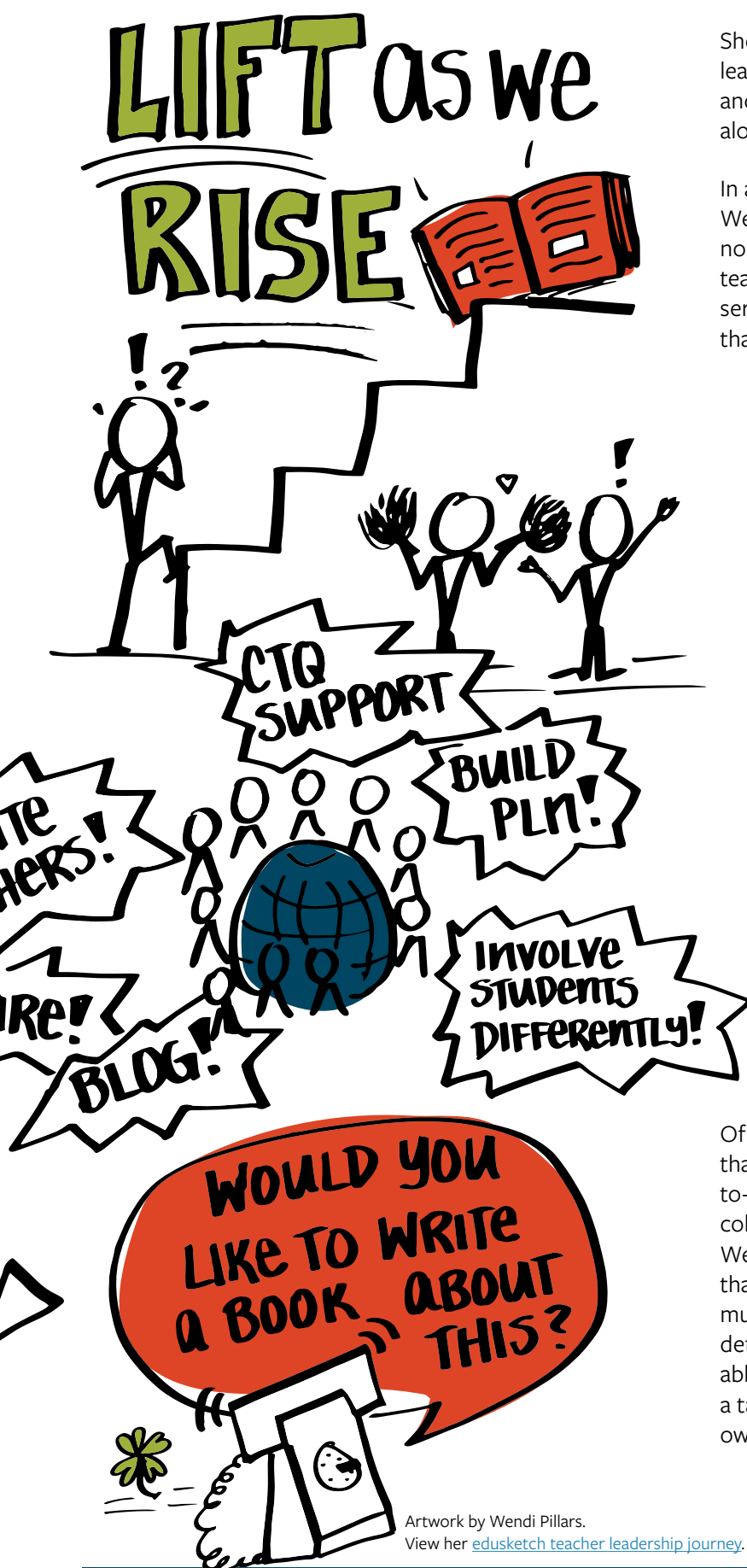
Artwork by Wendi Pillars.
View her edusketch teacher leadership journey.

She continues, "I have also, through the years, learned to honor my authentic self because it was, and is, accepted and nourished by so many others along the way."

In assessing each step of her leadership journey, Wendi informs us that she has learned that she no longer only represents herself but the entire teaching profession and the students who must be served. She shares five transformative takeaways that now inform her daily work:

- An effective teacher leader community is about the "do," not the "be." I've learned to focus on solutions, and how to take the "so what?" to the "now what?" phase.

- Teacher leaders push each other to be better through support and feedback rather than competition. I've learned to seek, trust, care about, then elevate, the potential in others.

- Teacher leaders take their work and expertise outside their classroom. I've learned it's no longer enough to just do what we do and that sharing is advocacy.

- Teacher leaders need to be authentic because people and the human element matter deeply.

- We as teacher leaders have a responsibility to support and encourage others using our hands, hearts, and voices. I've learned that we must always, always, lift as we rise.

Of course, cultivating teacher leaders—ensuring that they have access (virtually and/or also face-to-face) to professional dialogue, supportive colleagues, and opportunities to take risks like Wendi has had—is only one part of the equation that American policymakers and administrators must negotiate. A host of organizational conditions determine the degree to which teacher leaders are able to share their expertise at scale—and to have a tangible impact on student learning beyond their own classrooms.

Jennifer Barnett, Val Brown, and Nancy Gardner
design micro-credentials at CTQ teacher retreat, July 2015.

Conditions needed for teacher leadership

Most teachers in the United States do not work in schools organized for inquiry-based professional learning, a fact well-documented by researchers.[46] But rarely have school reformers addressed the underlying conditions necessary for teachers to spread pedagogical know-how. This is significant, as the most well-intended reform—grounded in the soundest research—will nose-dive without attention to the systemic conditions that impinge on its implementation.

50%
of U.S. teachers have *never seen* a colleague teach

For example, in recent years, states have implemented a barrage of evaluation reforms, many of them much needed. But American teachers still have little opportunity to improve by learning from one another. A recent survey of 100,000 teachers from 34 nations found that U.S. teachers are far less likely to see one another teach, and far more likely to have an administrator, not a peer, offer them feedback on their teaching.[47] In the U.S., 50 percent of teachers have never observed a colleague and offered feedback. In Japan, a mere 6 percent can say the same.

Even when U.S. schools try to implement lesson study, administrators often truncate the process. A recent inquiry found that state education leaders in Florida mandated Japanese lesson study but "shortened and simplified" the approach to "fit into the existing organizational structures and routines of professional development."[48] There was no effort to create the time and tools necessary for teachers to deeply study one another's practices.

This is no isolated example. CTQ connects with thousands of classroom experts in our work, including the Teacher Leadership Initiative (TLI), a partnership with the National Education Association and the National Board for Professional Teaching Standards. Our organization has engaged with teachers who have learned to lead in bold ways but whose leadership has been stifled by the systems in which they teach. The gravity of this crisis is magnified when we consider the pressing need for all American students to have access to deeper learning opportunities. Mehta and Fine have begun to surface some of the specific obstacles that teachers face in "engaging students in sustained, authentic, high-cognitive demand tasks."[49]

They point to organizational constraints, such as teachers with large classes and student loads, and policy barriers; after all, many American schools are under relentless pressure to cover content on high-stakes tests.

Other thorny obstacles that can get in the way of deeper learning are directly related to the spread of pedagogical expertise, Mehta and Fine note:

> Because most people in the system do not have much experience with deeper learning, it is difficult to find enough mentors and schools that would demonstrate what we want the next generation of teachers to do.[50]

TEACHER LEADER PROFILE

As of early 2016, the Teacher Leadership Initiative (TLI), launched by the National Education Association, has engaged more than 800 teachers from 13 states in a learning experience supporting their development as instructional, policy, and association leaders.

Dawn DuPriest (a Colorado math and science teacher) seized this opportunity to fuel her learning and leadership. Her capstone project focuses on helping teachers design rich computer science and technology learning experiences by integrating coding in math classes—a mission consistent with President Obama's 2016 initiative to ensure all students have the "skills they need to thrive in a digital economy."

Dawn has rewritten curricula for multiple courses and developed her own professional learning community for teachers who want to integrate coding in core classes.

Yet her school lacks structures to support teacher leadership, she notes in a recent blog post:

> "I want to drive STEM education forward. . . . [but] I have 90 minutes every day to plan up to 4 lessons and give feedback to my 200 students, respond to e-mails and fill out unnecessary paperwork. . . . this is impossible, and so I work many hours after school, and neither my leadership work nor my school work is getting proper attention."

Dawn is one of many teachers who have the knowledge, drive, and potential to bring about powerful instructional changes (here directly related to the President Obama's stated priorities). But policymakers and administrators have yet to recognize and support classroom experts in leading timely, relevant reforms.

After all, teacher preparation programs, including the growing numbers of short-cut pathways into the teaching profession, have not prepared classroom practitioners and their administrators for deeper learning. Mehta and Fine point out that even in promising deeper learning sites, such as the High Tech High network, teachers struggle to find the "sweet spot" in ensuring that "their material [is] authentic and connected to students' interests." They conclude that "teachers yearn to infuse their classrooms with greater vitality and depth [but] they lack rich models for what it might look like and what it might take to do so—and so they default to teaching in the ways that they themselves were taught."[51]

It's obvious: to make deeper learning a reality for all students, the spread of teacher expertise must be a priority. Teachers must be able to lead by sharing their effective practices, ideas, resources, and

assessments. Unfortunately, America's education policymakers have a long history of **not** investing in teacher development in ways that allow for teaching expertise to be assembled, curated, and distributed.[52]

More than 25 years ago, Mark Smylie and colleagues concluded that "little attention has been paid to preparing the school as a setting for new forms of leadership"—including the design and enactment of new roles for teachers.[53] Leadership in any field, but particularly among teachers, rarely occurs as "a chance organizational event."[54] And creating a teacher leadership system demands far more than developing standards, identifying competencies, and establishing training. CTQ's work with teachers, as well as our own investigations into the research evidence, suggests at least seven conditions that need to be considered.

Seven conditions for TEACHER LEADERSHIP

The seven domains were identified by Mark Smylie and Jon Eckert as consultants to the Center for Teaching Quality. For a more detailed review of the literature undergirding these conditions, see their paper, "A framework for teacher leadership development and a close look at school organizational conditions that may support or impede it," presented at the 2014 Annual UCEA Convention.

vision and strategy

supportive administration

adequate resources

enabling work structures

strong collaboration

blurred roles

inquiry and risk-taking

First, a **vision and strategy for teacher leadership**, with stated goals and clear images of tasks to be done, must be in place. The vision and strategy must be perceived as valid by teachers and administrators alike. Given the lack of opportunities for teachers to lead in the past, it is imperative that the vision and strategy serve as an educative tool for communicating for what is to be achieved and how.

Second, **supportive administrative leadership** is imperative. Most notably, principals must be willing to share power with teachers and must have the skills to cultivate them as leaders. Most school leadership programs train administrators to supervise teaching, not to support teachers as leaders. All too often, principals are wary of teacher leaders, primarily because of uncertainty about how to identify and utilize them. And as Gamal Sherif, a CTQ Collaboratory teaching colleague, reminded me: "Principals [can] dispense responsibility, sans authority, to their minions and the hierarchy remains in place, however well-masked." However, in the future, effective principals will be those who can identify the strengths of teachers and help them spread their expertise. Greater power for teachers need not mean less influence for principals: as teachers gain authority and responsibility, their principals' efforts will benefit from a growth of capacity and visibility.

Third, school financing formulas must ensure that **appropriate and adequate human, fiscal, and physical resources** are in place. School districts can rethink how people, time, technology, and money are deployed for deeper learning. Personnel dollars do not have to be allocated in traditional categories, which are often overly discrete. This isn't rocket science. Top-performing nations invest more of their education personnel funds in teachers (as opposed to administrators and supervisors), which means that more classroom experts can have opportunities to lead without leaving the classroom.

But let's be clear: Many school districts across America have struggled as budgets have been cut, as evidenced by the growing number of teachers who have to pay for supplies and classroom libraries out of their own pockets.[55] While nonprofits like

Education Resource Strategies help administrators make "trade-offs" in the face of harsh budget realities, states and schools need to establish comprehensive frameworks, including increased salaries and stipends as well as reduced teaching loads, so teacher leaders can drive deeper learning outcomes.

Fourth, **enabling work structures** are critical. In top-performing nations, school systems devise teaching schedules that embed effective professional learning practices in teachers' daily work. When it comes to this factor, additional resources are helpful but not essential. Instead, the work of teachers and the students they teach must be re-imagined. For example, teachers can teach in teams and work with the same cohort of students over a number of years, giving them more time to customize lessons. Professional learning communities can focus on sustained action research, as opposed to a hodge-podge of issues. And, as is the case in Singapore, some proportion of teachers could have a dedicated amount of "free time" to devise their own innovations outside of the official curriculum.[56]

Fifth, there must be **supportive social norms and working relationships**—characterized by the relational trust and orientation toward cooperation and collaboration found in schools like SJHA. Teachers and administrators must have respect for one another's differing expertise—and teachers must have a collective commitment to responsibility for larger groups of students.

But there is more. Schools should allocate incentives for teachers to go public with effective teaching practices. All too often, policymakers develop incentives to *motivate* teachers and administrators. Instead, policies and programs should be in place to *value* teachers spreading their expertise to one another, allowing teaching to be exercised as a team sport.

Sixth, **constructive organizational politics fuel blurred roles of teaching and leading**. Expanding the influence of teachers need not come at the expense of principals and administrators (including current district-level supervisors who have managed

teachers' professional development). However, it does mean roles will change, and if managed well, this shift will recalibrate what the district-union collective bargaining agreement entails. Teacher leadership for deeper learning will require unions to behave more like professional guilds and districts to flatten their bureaucracies. For example, the New Jersey Education Association is taking a major role in leading the implementation of the state's new teacher leadership legislation. And several school districts in Florida are creating more authentic and flexible structures so teachers can lead alongside administrators in a variety of formal and informal ways.

Finally, there must be a **school- and system-wide orientation toward inquiry and risk-taking**. This includes tactics for developing individual and collective teacher agency. Our schools must embrace experimentation and even intellectual playfulness, with teachers and administrators who are willing to fail in order to find the groundbreaking solutions required by deeper learning. School systems must be able to *interrogate* themselves about the extent to which they create opportunities for teachers to learn and lead in ways that spread teaching expertise and improve student outcomes.

These enabling conditions for teacher leadership will not just emerge. After all, many vested interests benefit from the lower professional status of teachers and the lack of opportunities they have to lead. Nonetheless, I see a slow but continuing shift from the dominant reform narrative of *fixing* teachers to a new one that hones in on *unleashing* the potential of those who teach. And I have some ideas about how this evolution might escalate.

Justin Minkel, Rod Powell, Paul Barnwell, and Brad Hurst engage in TeacherSolutions at CTQ rising leaders retreat, July 2014.

Cultivating and scaling teacher leadership

> **Deeper learning— achieved for every student—will hinge on the extent to which teachers can evaluate the impact of new practices on student learning and broaden their own reach.**

Twenty years ago Richard Elmore noted that ambitious curriculum reforms of the past failed to scale because there were hardly any means to "give visibility and status" to those teachers who exemplified effective practices.[57] How can this astute observation inform our efforts to ensure deeper learning outcomes for all students?

Deeper learning—achieved for every student—will hinge on the extent to which teachers can evaluate the impact of new practices on student learning and broaden their own reach. Growing numbers of teachers will need to "go public" with their practices and, as Elmore suggests, expand their "web" of influence, no longer thinking of themselves as "solo practitioners."[58] And, as I've explored here, schools will need to take new organizational approaches that develop teachers as leaders and create the conditions that allow (and encourage) their expertise to be tapped and spread.

Going to scale with deeper learning will be no simple undertaking.

PAST accountability systems encouraged teachers to teach to the test, not to the whole child.

NOW teachers are poised to play key roles in designing and scoring authentic assessments that accurately measure deeper learning.

But here are three major shifts linked to high-leverage opportunities that can increase the visibility of teachers who are already leading (and who can lead in the future).

First, there is now demand for a new kind of school accountability that accurately measures deeper learning. With the recently approved Every Student Succeeds Act (ESSA), states will have "wide discretion" in setting student achievement goals and holding schools and districts, as well as administrators and teachers, accountable for results. Standardized tests will be used, but only as part of a larger set of indicators that also address students' opportunity to learn, school climate, and teacher engagement.[59] As Linda Darling-Hammond recently noted, ESSA can push states to develop "richer measures of student learning that evaluate the critical thinking, collaboration, and problem-solving skills essential for success in today's society and workplaces."[60]

Darling-Hammond and colleagues have described in considerable detail "what a new accountability system could look like in an imagined '51st state' in the United States."[61] Soon more policymakers will recognize that assessing deeper learning requires more than standardized tests, including formative assessments that teachers themselves develop, calibrate, and score. The ESSA legislation, as well as growing frustrations with the limitations of recent school reforms, will drive the need for *teachers*

who can fill a vacuum in the student assessment enterprise. Our own work with the Center for Collaborative Education (CCE) has surfaced the fact that many teachers are already developing the necessary skills to do so, by creating engaging performance tasks that help students own their learning while also providing feedback to them and their school communities.

CCE's Quality Performance Assessment (QPA) framework provides a process and tools to create performance tasks that measure students' deeper mastery of content and skills and build a collective understanding of assessment goals and quality standards. The process entrusts and equips teachers to measure learning in ways that are sensitive to all students' needs.

As Dan French, who leads CCE, told me:

> New accountability systems should be focused on locally created, curriculum-embedded performance assessments, both common across districts to enable comparability and local within districts. Such a system requires building teacher capacity to become assessment leaders in designing, field testing, validating, and scoring high-quality performance tasks. In doing so, not only will students have multiple opportunities to demonstrate proficiency in completing rich, robust, and engaging

deeper learning tasks, but states and districts will build a new, more robust, and authentic accountability system with teacher leadership at its core.

Public education faces increasing challenges and shrinking budgets, and society can no longer afford to sideline the expertise of the professionals who work with students, assessments, and curricula on a daily basis. Imagine if, for a very small fraction of what was spent on RTTT reforms, policymakers invested in 30,000 classroom-based experts to lead assessment reforms for deeper learning.

This is no longer a pie-in-the-sky proposition.

New Hampshire and Rhode Island have become the first states in the nation to allow districts to reduce standardized testing in favor of creating "locally managed assessments that [are] more integrated into a student's day-to-day work."[62] Critical to New Hampshire's implementation strategy are teacher leaders like Jennifer Deenik of Souhegan High School, who works with her colleagues to calibrate scoring and ensure comparability and to further develop and refine common performance tasks.[63] Laurie Gagnon of CCE, who works with classroom experts like Jennifer, says that "teacher leaders help to show what is possible."[64]
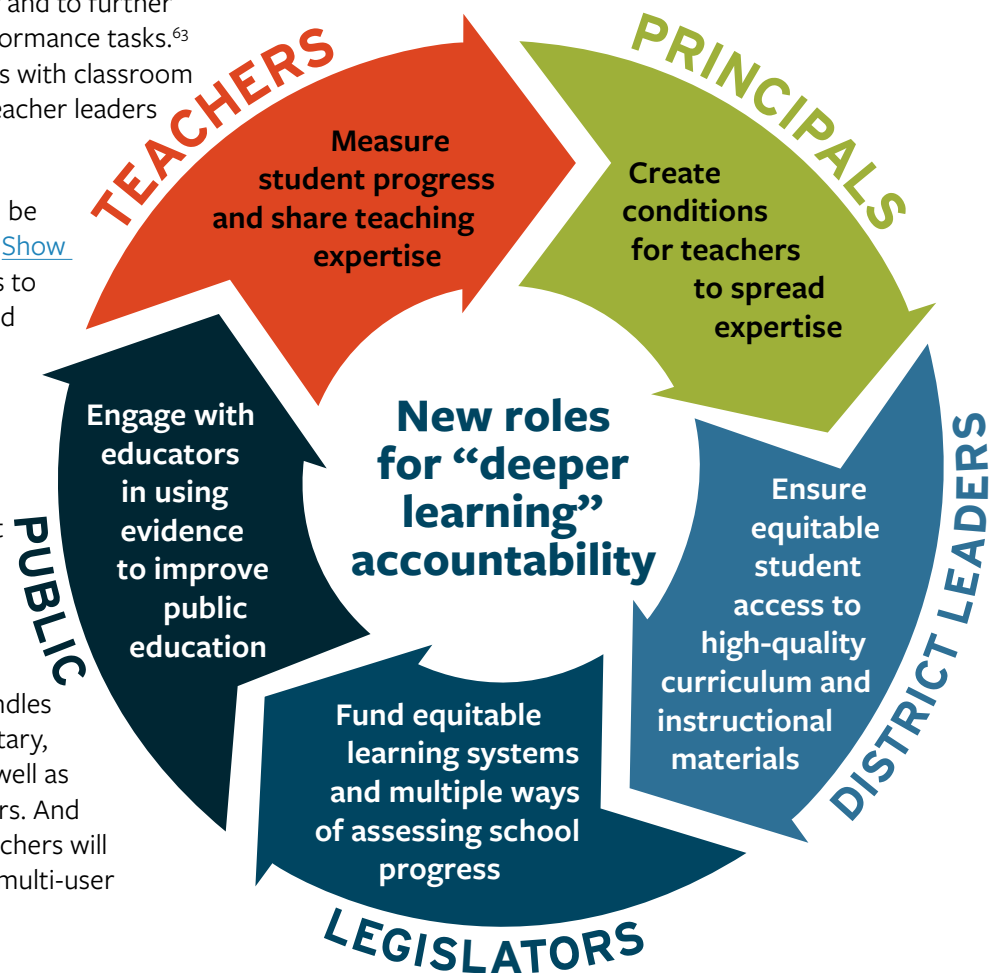
Soon more American schools will be able to use new technologies like Show Evidence to assign engaging tasks to students for deeper learning—and also to monitor their progress and report the results to parents and the public. Web-based video resources like ATLAS allow all teachers to see and understand accomplished practice and how it leads to deeper learning among their students. Databases driven by semantic Web applications will make it easier for teachers to upload and share assessment bundles (including images, data, commentary, and analyses) with colleagues as well as students and their family members. And soon professional training for teachers will routinely include how to work in multi-user

virtual environments: helping students engage in open-ended, collaborative inquiry and using their virtual work products to assess academic progress.

I am not naïve. There are not many *New Hampshires and Rhode Islands*—i.e., states and districts ready to unleash the powerful influence of teacher leaders in overhauling accountability. And even when policy leaders and administrators *begin to let go* of the what and how of student assessment, that alone will not be enough. New norms of teaching as well as organizational structures will need to be in place, too. As Jennifer noted:

> Teachers need to commit to collaborate on sharing curriculum, developing assessments, and scoring and analyzing student work together. But districts and administrators need to provide the structures that allow teachers time to collaborate, and the training and support for teachers to lead the work themselves and see the successes.[65]

Assistance is on the way.

New roles for "deeper learning" accountability

- TEACHERS: Measure student progress and share teaching expertise
- PRINCIPALS: Create conditions for teachers to spread expertise
- DISTRICT LEADERS: Ensure equitable student access to high-quality curriculum and instructional materials
- LEGISLATORS: Fund equitable learning systems and multiple ways of assessing school progress
- PUBLIC: Engage with educators in using evidence to improve public education
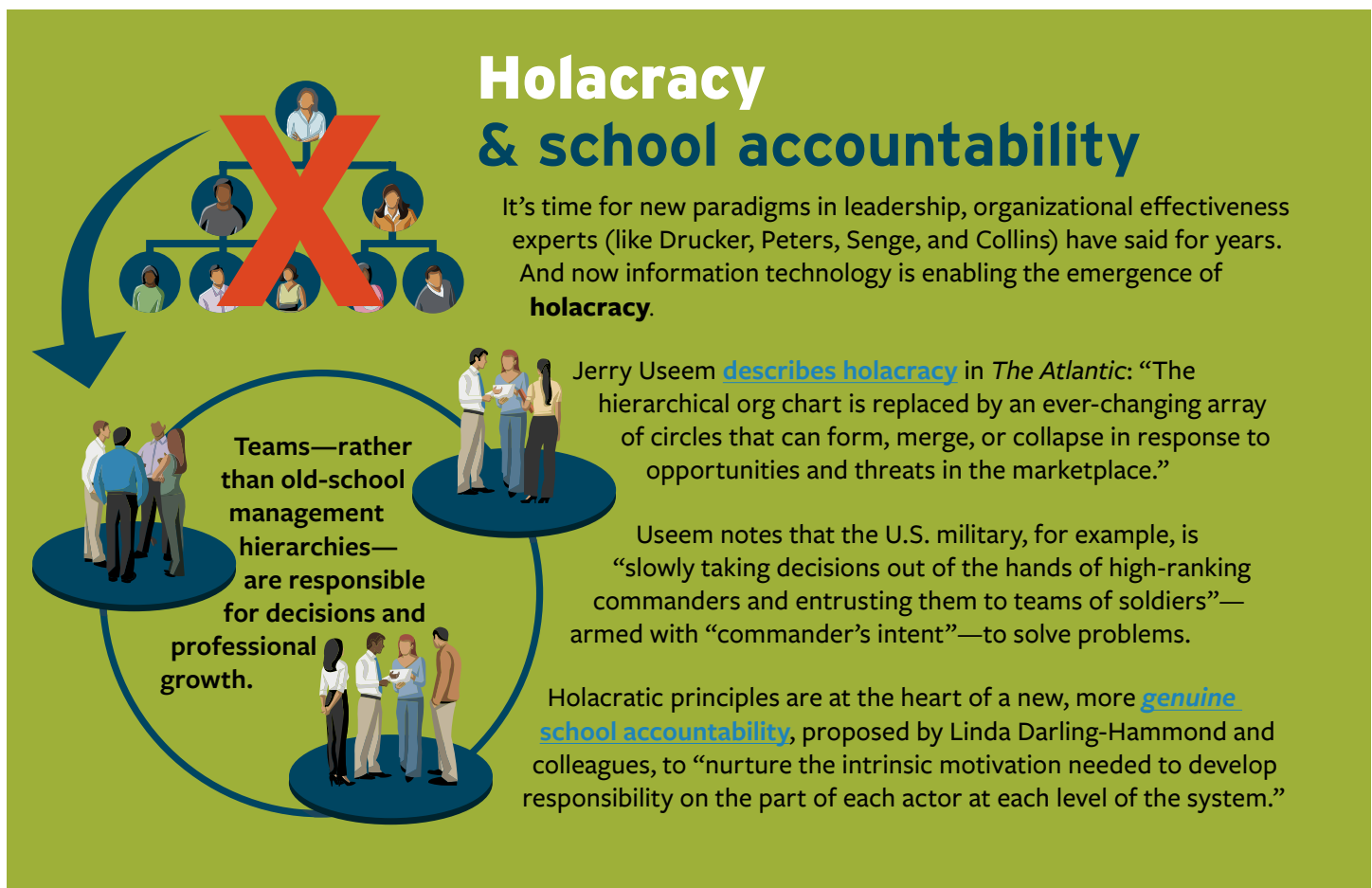
Second, there is increased visibility of innovative organizational designs that can spread teaching expertise. Growing numbers of business leaders are recognizing the importance of *redefining structures and processes to drive ingenuity and inspiration* from anyone and everyone. For example, more than 300 companies, organizations, and agencies in diverse sectors—ranging from Zappos to the U.S. military—are structuring work based on principles of *holacracy*. Rather than being supervised and directed within a traditional management hierarchy, employees are expected to engage in circles with their colleagues to vet new ideas and solve problems, as well as to evaluate and reward one another.[66] In such workplaces, accountability means more than achieving metrics that were mandated by someone up the organizational chain of command. Instead, it is about assessing one another and taking responsibility for results as a team.

Some skeptics will dismiss the potential application of holacracy, calling it impractical and unwieldy. And not everyone, even at Zappos, is ready to work in a flattened organization.[67] But many holacratic principles are evident in how the private sector is overhauling the meaning of accountability and leadership in organizational cultures. Granted, many administrators inside of school districts and charter management organizations are not ready to let go of the control to which they have become accustomed. But most school administrators, I believe, have not advanced teacher leadership (including teacher-driven accountability along holacratic principles) because *they simply do not know how.*

But this will change.

Holacracy
& school accountability

It's time for new paradigms in leadership, organizational effectiveness experts (like Drucker, Peters, Senge, and Collins) have said for years. And now information technology is enabling the emergence of **holacracy**.

Teams—rather than old-school management hierarchies—are responsible for decisions and professional growth.

Jerry Useem describes holacracy in *The Atlantic*: "The hierarchical org chart is replaced by an ever-changing array of circles that can form, merge, or collapse in response to opportunities and threats in the marketplace."

Useem notes that the U.S. military, for example, is "slowly taking decisions out of the hands of high-ranking commanders and entrusting them to teams of soldiers"—armed with "commander's intent"—to solve problems.

Holacratic principles are at the heart of a new, more *genuine school accountability*, proposed by Linda Darling-Hammond and colleagues, to "nurture the intrinsic motivation needed to develop responsibility on the part of each actor at each level of the system."

The NCEE has made substantial investments in documenting and disseminating how top-performing nations design schools for teachers and administrators to learn from one another. For example, NCEE and its partners are communicating with policymakers and practitioners about how small groups of teachers in Singapore take responsibility for conducting their own action research, or how in Shanghai, 360-degree performance management places a premium on collaboration and professional learning. In these jurisdictions, government officials are "subject to the same framework of performance evaluations as teachers and administrators" and their accountability systems include "an assessment of the amount of professional learning and its impact on teaching."[68] Professional judgment is central to school accountability. All professionals, including administrators and ministers of education (not teachers only), are accountable for their decisions.

Not all these lessons will translate from Asia to the United States, but many will.

American school administrators will soon *have tools to restructure time* *for teachers to lead their own learning*, including those being created by Australia's Learning First. More is being learned about how top-performing jurisdictions (including Shanghai, Singapore, Hong Kong, and British Columbia) recognize and develop teacher expertise through school-based research and then share it across multiple schools and districts. In Singapore, teachers and administrators draw on varied protocols to develop and communicate a shared vision for collaborative learning as well as to manage resistance and balance teacher creativity and autonomy with school goals.[69]

These school reform narratives, as well as the specific instruments, can help inform U.S. policymakers as well as administrators about how they can measure not just the results of student learning but the quality of instruction and professional learning. The Learning Policy Institute (LPI), recently launched by Linda Darling-Hammond, has released a toolkit to guide school districts in California on how to best utilize $500 million

for professional learning to implement new state academic standards, with a comprehensive set of strategies and resources. The National Center on Time and Learning offers useful resources for system leaders to rethink time, roles, and school design to advance professional learning. CTQ and its partner Education Evolving are supporting a network of teacher-powered schools, so that growing numbers of teachers can share resources and advice with colleagues who seek to design and lead schools that personalize learning.

Third, over the last several years there has been a dramatic rise in teacher networks and online communities—a development promising to increase the pace of change and the agency for it among those who teach in our nation's schools. In spite of the highly bureaucratic organizations in which most teachers work, these networks are beginning to break down long-standing barriers that have isolated individual practitioners. Nearly six in ten teachers are now using technology to work with teaching colleagues they "would not otherwise know."[70] New online teacher communities surface daily on Pinterest, Twitter, Instagram, and Facebook. And "mob rule learning" for teachers has taken off with the emergence of edcamps: free, participatory "un-conferences" organized by teachers for teachers on topics that range from how to teach quantum physics with dance to how to engage in public/private school partnerships.[71]

A recent national survey shows while teachers are not satisfied with their formal professional development opportunities, almost 3 in 4 classroom practitioners are pursuing informal learning (including participation in new networks and online communities) that does satisfy their quest to improve.[72]

Enter the **micro-credentialing** movement, which presents teachers with opportunities to document their learning (whether formal or informal) and maximize their engagement in online communities. An agile online system allows practitioners to identify competencies, submit evidence of mastery, and earn digital badges. Micro-credentials permit teachers, individually and in teams, to document their actual skills and abilities, not simply the

amount of "seat time" they have logged in their professional development.

Digital Promise has developed a framework to ensure that micro-credentials are rigorous, research-backed, and assessment-based— and has brought together dozens of partner organizations (including CTQ) to develop a system that puts teachers in charge of their own learning.

Teachers can now digitally assemble evidence of what they know and are able to do, regardless of how they learned it. The Digital Promise system under development is grounded in support for teachers (and administrators) to demonstrate market worth within schools, districts, and beyond.

Micro-credentials will offer new ways for teachers to document (and get credit for) what they've learned and accomplished— regardless of HOW they got it done.

Micro-credentials give teachers new ways to focus their engagement in formal and informal learning activities, finally earning "credit" for connecting with far-flung colleagues to effectively improve their teaching and leadership skills.

Among the 100+ micro-credentials already launched is a Digital Promise stack related to effective instruction for deeper learning. CTQ has also created micro-credentials for teachers and administrators who effectively lead virtual communities of practice, in addition to stacks on teacher-powered schools and going public with policy and pedagogy. And two more are under development. One, in partnership with Stanford University, will recognize teachers and administrators who effectively facilitate Common Core professional development in California. The other, in collaboration with CCE in Rhode Island, will certify those who are expert in leading student performance assessment reforms.

Micro-credentials will further de-isolate teaching by allowing teachers to connect with others who are qualified to mentor them or who are interested in pursuing similar professional trajectories. Systems will have new ways to identify practitioners with particular kinds of expertise—and to calculate where gaps may be filled. This evidence-based system also presents new opportunities for teachers to communicate with policymakers and the public about what deeper learning looks like for students and themselves. Education advocates, policymakers, and those who prepare teachers will find it an easier lift to identify practitioners, schools, and systems modeling what we need the next generation of teachers to do and be.

Indeed, micro-credentials can help systems leverage all three of the major shifts described above in the interest of cultivating and scaling teacher leadership and learning.
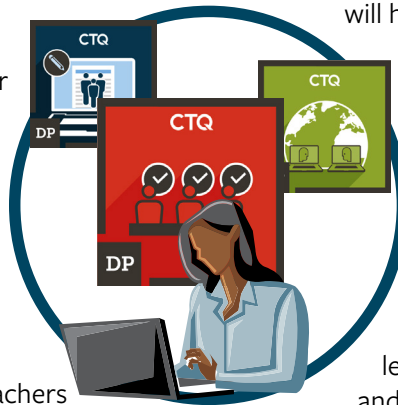
The teacher networking
BOOM

Here are just a few examples of networks and online communities that have emerged and/or rapidly expanded in recent years:

CTQ's Collaboratory has attracted more than 11,000 members in less than three years, creating unique opportunities for teachers to learn about policy and practice from one another and to go public with their ideas.

LearnZillion and Bloomboard provide e-platforms that allow teachers to curate and share exceptional lessons, tools, and resources connected to new student standards.

Literacy Design Collaborative offers a research-based framework that equips teachers to develop and share literacy-rich classroom assignments and courses across content areas.

The National Writing Project, the nation's foremost exemplar of how teachers teach one another, is at work in more than 200 locales—and is now expanding virtually.

The Teacher's Guild (released in beta by IDEO's popular Design for Learning Studio) promises to generate a "flood of new and better solutions designed by and for teachers."

Teaching Channel, a YouTube-esque medium, allows teachers to watch and analyze others' practices.

Every education stakeholder can help to advance teacher leadership for the kinds of schools that all students deserve.

Next steps

What needs to happen next? Every education stakeholder can help to advance teacher leadership for the kinds of schools that all students deserve.

Federal lawmakers can support states in using the new accountability rules under ESSA to invest in teachers' learning and demonstrating skills in designing and scoring new student assessments. Imagine what could be possible within five years if even just 1 in 100 American teachers has earned micro-credentials in assembling evidence for deeper learning for all students.

The U.S. Department of Education, with a redesigned approach to school improvement, can provide incentives for districts to create and support a fund for teacherpreneurism as well as teacher-powered or holacratic schools.

State education leaders can alter rules on teacher re-certification (currently defined in terms of workshop and coursework "seat time"), so teachers' competencies can be recognized through micro-credentials. State policymakers can also sponsor new programs allowing principals and teachers to lead together.

Local superintendents can create more authentic teacher leader and career pathway programs that focus on practitioners spreading their expertise, value both formal and informal leadership roles, and allocate time for a small proportion of classroom experts to incubate and execute their own ideas.

Middle-level school district managers can shift their attention from overseeing professional development to brokering teacher expertise and helping their teaching colleagues measure their impact on one another's and their students' learning.

Principals can shift their efforts from serving as instructional leaders to developing teacher leaders and ensuring schools are organized to maximize the spread of effective practices.

Teachers can take responsibility for their own and their colleagues' learning and effectiveness, as is the case at SJHA and other teacher-powered schools—and their unions can forge collective bargaining agreements to identify and recognize those who are best at doing so.

In closing, I am optimistic about American teachers reinventing their profession, particularly since one in four practitioners has indicated interest in both teaching and leading. As the Ashoka Foundation has so aptly noted:

> [Our] world is now rapidly giving way to a life in which it is increasingly difficult to thrive simply by following the rules or doing what we have always done. . . . In many places, we are moving from the ideal of 'one-leader-at-a-time' to 'everyone must lead.'[74]

Perhaps Ronnda Cargile, who teaches at Hughes STEM High School (Cincinnati, Ohio), said it best at the close of the first-ever Teacher-Powered Schools Initiative conference in November 2015:

> The excitement has been overwhelming. Teachers are thirsty. Administrators are thirsty. Parents are thirsty. And so it's been absolutely energizing to be around a group of people interested in taking back strategies and tools to increase student learning and to [transform] education.

The movement is already afoot. Next generation accountability approaches will allow American teachers' expertise—and the evidence of their impact—to be even more visible to their colleagues and administrators, as well as policymakers and the public. Meanwhile, policymakers and administrators are learning more about school conditions that allow teachers to document and spread effective practices. And teachers are tapping online tools and networks to support one another's learning and leadership growth in resourceful, impactful ways.

As we move toward the end of the second decade of the 21st century, I am hopeful. Serious questions about top-down reforms are being voiced by policymakers and parents alike. Soon new investments will be made in the teaching profession— because more teacher leaders will become more well-known to the public. And as a result, all students will have access to deeper learning—and the excellent and equitable public education system they deserve.

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