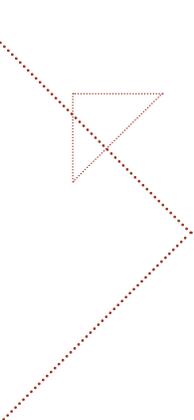


TEACHERS' TIME: COLLABORATING
FOR LEARNING, TEACHING, AND LEADING

Advancing a New Focus on Teaching Quality: A Critical Synthesis

By Elizabeth Leisy Stosich & Travis J. Bristol





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Introduction

There are many uncertainties in the PK – 12 educational policy landscape under the Trump administration. However, what is clear is that with the recent passing of the Every Student Succeeds Act (ESSA), the role of the U.S. Department of Education (USDOE) is diminished and states will play the primary role in designing levers to improve teaching and learning. Specifically, state educational agencies (SEA) must submit plans to the USDOE that articulate how ESSA will be implemented in their state. As SEAs design their plans and as the USDOE reviews and provides feedback on these plans, it is imperative that both federal and state policy makers develop a more expansive view of teacher quality to address *teaching quality*. We define teaching quality as the ability of teachers to support meaningful learning among students. We focus on *teaching* quality rather than *teacher* quality since the ability of teachers to support students' learning and development is influenced by not only their individual characteristics but also the conditions in which they work (Kennedy, 2010).

Influenced by federal incentives under No Child Left Behind (NCLB) and Race to the Top (RttT), state attempts to improve teacher quality have attended to discrete moments in the life course of individual teachers' careers, such as initial recruitment requirements and in-service evaluation and development. Specifically, recent policies and research related to teacher quality has focused on teacher inputs (i.e. teacher characteristics, licensure, test scores) and classroom effectiveness (i.e. students' test scores), paying limited attention to the dynamic nature or teachers' capabilities or the context in which they work. A growing body of research suggests that teachers' ability to enact quality teaching continues to improve long after their first few years in the classroom (Harris & Sass, 2011; Ladd & Sorensen, 2017; Papay & Kraft, 2015; Wiswall, 2013) and improves at greater rates when teachers work in supportive school conditions (Kraft & Papay, 2014; Ronfeldt, Farmer, McQueen, & Grissom, 2015). Given the current work by SEAs to draft ESSA plans and the USDOE's future work to provide feedback on state plans, we propose that state and federal policymakers focus on teaching quality as a primary lever for improving teaching and learning. In this article we review emerging research on the dynamics of teaching quality, present a framework for the conditions that support high levels of teaching quality, and discuss implications for educational policy.

A New Perspective on Teaching Quality

A focus on *teaching* quality is appropriate since the abilities of individual teachers can change over the course of their careers. Just as the goals of schooling are broad—from preparing caring and responsible citizens to mastering academic content—quality teaching depends on a wide array of personal and contextual factors. Teaching quality is influenced by individual teachers’ preparation (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009; Darling-Hammond, 2000), pedagogical content knowledge (Ball, Thames, & Phelps, 2008; Baumert et al., 2010; Hill, Ball, & Shilling, 2008; Shulman, 1986), understanding of learners and their development (Bristol, 2015; Lampert, 2001; Nelson, 2016), cultural competence (Warren, 2015; Watson, Sealey-Ruiz, & Jackson, 2016; Paris, 2012; Wallace, 2017) as well as their opportunities for learning on the job and with colleagues (Garet et al., 2010; Ronfeldt et al., 2015) access to and ability to use quality curricular materials (Croninger, Buese, & Larson, 2012; Hill & Charalambous, 2012), supportive principal leadership (Grissom, Loeb, & Master, 2013; Marks & Printy, 2003), and their district context (Hill, Blazar, & Lynch, 2015; White, 2016).

Scholars agree that teachers matter for students’ learning, but there is much disagreement about how to best strengthen teaching quality (Johnson, 2012). Furthermore, there is wide agreement that some teachers are more effective than others but much debate about what factors matter most for teaching quality. Researchers have sought to identify individual teacher characteristics, such as credentials, experience, and general content knowledge, which help to explain differences in teachers’ abilities to support student achievement on standardized tests (SJTUPM.FOUPSCarey, 2014). These studies explored questions related to general characteristics, such as whether veteran teachers were more effective, on average, than novice teachers. Reviews of this line of research suggest that these individual characteristics provide limited information about differences in teachers’ influence on student achievement outcomes (e.g., Wayne & Youngs, 2003). More recently, researchers have used value-added methodologies to measure individual teacher performance based on student test scores (Harris & Herrington, 2015; McCaffrey, Lockwood, Koretz, Louis, & Hamilton, 2004). Importantly, this focus on measuring teacher effectiveness has been part of an effort to retain and reward teachers deemed “effective” and eliminate those considered “ineffective” and, in doing so, has advanced the assumption that teacher effectiveness is a fixed trait that depends on individual capabilities.

An emerging and substantial body of literature has reframed the focus on teaching quality by examining how teachers’ abilities to influence student achievement change over the course of their career and how these changes are influenced by the context

in which they work. This series of studies suggests that teachers continue to grow more effective in supporting important student outcomes—academic performance, attendance, reading behaviors—long after their first few years in the classroom (Harris & Sass, 2011; Ladd & Sorensen, 2017; Papay & Kraft, 2015; Wiswall, 2013) and that teachers improve at greater rates when they work in supportive school conditions, including schools with opportunities for collaboration with colleagues and strong principal leadership, than when they work in less supportive conditions (Kraft & Papay, 2014; Ronfeldt et al., 2015). This research suggests that the ability of teachers to support learning among students is not a fixed individual trait. On the contrary, teaching quality can change as teachers gain experience, engage in professional learning, and have opportunities to work in supportive school environments.

What Matters for Teaching Quality? Early Explanations

For more than three decades, researchers have aimed to determine the most important factors related to teachers' ability to support student learning and effective approaches for assessing teachers' effectiveness (e.g., Hanushek; 1979, McCaffrey et al., 2004; Wayne & Youngs, 2003). Scholars have focused primarily on teachers' characteristics and measures of individual effectiveness. Although this body of literature has provided further information about factors related to teaching, it has failed to explain how organizational and social conditions influence teaching quality. Instead, this line of research has focused on how individuals succeed in supporting student learning regardless of the context in which they work.

Teacher Characteristics

Studies from the “education production function” literature have explored the relationship between individual teacher characteristics—teacher knowledge, licensure, and experience—and the learning outcomes of students. The motivation behind this approach is to identify the teacher characteristics or combination of characteristics that produce the greatest returns on investment for employers in terms of the desired output, student learning (Hanushek; 1979). This line of research suggests that students learn more from teachers who have stronger pedagogical content knowledge (Hill, Rowan, & Ball, 2005; Metzler & Woessmann, 2012) and greater experience (Chetty et al., 2011; Hanushek, 1996; Rockoff, 2004). Notably, comparing the average effects of novice teachers on student achievement to those of more experienced teachers led researchers to conclude that teachers improve a great deal at the beginning of their career, but these returns on experience quickly plateau (Boyd, Lankford, Loeb, Rockoff, & Wyckoff, 2008; Rockoff, 2004).

Researchers continue to debate whether and how teacher characteristics can or should be used for strengthening the teaching force. Some scholars argue that general qualifications, such as passing a licensure exam or completing a certification program provide little information about a teacher's ability to support student performance once in the classroom (Phillips, 2010; Rivkin, Hanushek, & Kain, 2005; Rockoff, Jacob, Kane, & Staiger, 2011; Wayne & Youngs, 2003). Other scholars argue, however, that more nuanced measures of the “inputs” that influence teacher quality are needed. For example, scholars find that teachers who have completed high-quality teacher preparation, such as programs that include significant fieldwork and content-specific coursework, are viewed as better prepared by principals and support higher levels of student performance on academic assessments than teachers who complete less rigorous preparation programs (Boyd et al., 2009). Furthermore, relying on some teacher characteristics for personnel decisions may

have adverse effects on workforce diversity. Specifically, scholars argue that raising requirements for licensure test scores may have only a weak effect on educational quality (Goldhaber, 2007) but adverse effects on Latino and African American teacher candidates (Bennett, McWhorter, & Kuykendall, 2006; Latham, Giotmer & Ziomek, 1999). This is of great concern given the demonstrated educational benefits for students who are assigned to teachers of their own race (Dee, 2004).

Individual Effectiveness

Given the challenge of measuring teachers' influence on student learning through observable characteristics, researchers have sought to measure teachers' contributions to student achievement on standardized assessments directly. Using value-added methods (VAMs), researchers have sought to measure individual teacher's contributions to student growth on standardized test scores (McCaffrey et al., 2004). This line of research has led to two main findings: 1) teachers are the most important school-based factor in student learning and 2) some teachers are much more effective than others (McCaffrey et al., 2004; Rivkin et al., 2005; Rockoff, 2004; Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997).

Although VAMs have led to a better understanding of the important role of teachers in supporting student learning and the variation in teaching quality among teachers with similar observable characteristics, there are significant limitations to using these methods in policy and practice. Researchers have raised questions about whether VAMs are a valid measure of teaching quality (Hill, 2009; Pianta, Mashburn, Downer, Hamre, & Justice, 2008; Schacter & Thum, 2004) and whether they reliably measure teachers' effects across different student assessments (Papay, 2011), student populations (McCaffrey et al., 2004; Newton, Darling-Hammond, Haertel, & Thomas, 2010), and model specifications (e.g., American Statistical Association, 2014; Ballou, Sanders, & Wright, 2004). In addition, data from interviews and surveys suggests that VAMs are limited in their usefulness for informing human capital decisions (e.g., hiring, assignment, termination, professional development) because of the lack of principal and teacher trust in these measures (Jiang, Spote, & Luppescu, 2015), their timing (i.e., results not available at the time of decision making), and the lack information they provide about what teachers actually do that makes them more or less effective (Goldring et al., 2015). Additionally, a teacher's "value-added" score may be more closely associated to the overall school-based working conditions than to the teacher's effectiveness (Goldhaber, 2015; Ronfeldt, Loeb, & Wyckoff, 2013). A focus on measuring individual teachers' ability to improve student performance fails to recognize the important role teachers' working conditions play in growing educator capacity. Furthermore, a focus on individual effectiveness may reinforce teacher individualism and isolation and, in doing so, make it more difficult to strengthen the teaching force (Johnson, 2015).

Study Design

In this article, we review emerging research that can help us to answer the following two research questions:

- 1) How, if at all, do individual teachers grow in their ability to support student learning and development over the course of their career?
- 2) What conditions (e.g., access to professional learning opportunities, peer expertise) influence how teachers' abilities to support students change over time?

To answer our two research questions, we conducted an exploratory review and analysis of empirical research related to teacher development. Building on Harris and Sass's (2011) review of research on teacher development and productivity, we limited studies included in our review to studies published in 2011 or later. To select the studies in this review, we conducted an extensive electronic search of scholarship on teacher development through Stanford University's library portal. In addition, we reviewed the reference sections of identified studies to broaden our search. This search resulted in a review of 10 studies published in peer reviewed journals. From this initial set of studies, we purposefully selected four studies for inclusion in this critical synthesis, each exploring a unique variable related to teaching quality, including teachers' ability to influence students' achievement on academic assessments, teachers' effects on student academic behaviors (e.g., attendance), the relationship between teacher development and professional working conditions broadly, and the influence of quality collaboration on teacher development more specifically.

What Recent Research Says about Teaching Quality

There is a growing body of research that challenges previously held assumptions that teachers grow considerably in their ability to support student learning outcomes during their first few years in the classroom and then quickly hit a plateau in productivity (e.g., Boyd et al., 2008; Rockoff, 2004). Six recent studies provide convincing evidence that elementary and middle school teachers, on average, improve most rapidly during their first few years in the classroom but also improve their ability to raise student performance, as measured by test scores in mathematics and ELA, long after their first five years on the job (Harris & Sass, 2011; Kraft & Papay, 2014; Ladd & Sorensen, 2017; Papay & Kraft, 2015; Ronfeldt et al., 2015; Wiswall, 2013). Questions remain about returns on experience for high school teachers (Harris & Sass, 2011). Teachers may also improve at supporting important student outcomes beyond test scores, including student absenteeism and reading behaviors (Ladd & Sorensen, 2017). Notably, research from Kraft and Papay (2014) suggests that teachers not only differ substantially in effectiveness but also in their growth trajectories over the course of their careers. Thus, examining not only *average* teacher improvement but also *individual* teacher improvement is essential for identifying the factors that can enhance teachers' development over time.

Previously, studies of teacher productivity or growth relied on cross-sectional data, comparing the effectiveness of teachers at different levels of experience at one point in time (Papay & Kraft, 2015). More recent studies, by contrast, use longitudinal data to trace teachers' improvement trajectories over time. This new approach more accurately estimates returns on individual teachers' experience by accounting for teacher attrition. In addition, it enables estimates of teachers' individual growth trajectories in addition to average teacher growth over time. There is widespread agreement that teachers play a significant role in supporting student learning and that some teachers are much more capable than others (e.g., Rivkin et al., 2005; Sanders & Rivers, 1996). However, the assumption that some teachers are "effective" and others are not fails to take into account "the substantial degree to which individual teachers improve over their careers and the large variation in this improvement" (Kraft & Papay, 2014, p. 494). As Wiswall (2013) explains, "It is important to separate the concept of the return on experience from the average level of quality by experience" (p. 73). In other words, a more experienced teacher is not necessarily more capable than a less experienced teacher; however, teachers are expected to make gains in capability over the course of their career, and these gains are greater for some teachers when compared to others. We review emerging evidence from four recent studies and how they inform our understanding of teaching quality.

“The Dynamics of Teacher Quality”

Wiswall (2013) uses data from 5th grade students and teachers in North Carolina to compare the influence of model specification on findings regarding returns on teacher experience. Allowing a non-parametric relationship between experience and teaching quality, Wiswall finds that additional experience is associated with substantial and statistically significant effects on students’ mathematics achievement. No statistically significant relationship was found between teaching experience and reading achievement. Importantly, Wiswall’s study demonstrates that previous studies (e.g., Chetty et al., 2011; Clotfelter, Ladd, & Vigdor, 2007; Kane, Rockoff, & Staiger, 2008) masked returns on teaching quality from additional experience because they failed to account for non-random attrition among teachers. In fact, Wiswall provides further evidence that teachers who leave teaching during their first two years in the classroom are more likely to be more effective, as measured by their students’ math performance, than teachers on average. These findings suggest that retaining teachers, particularly capable novice teachers who are at greater risk of leaving the profession, could positively influence teaching quality.

“Returns to Teacher Experience: Student Achievement and Motivation in Middle School”

Research from Ladd and Sorensen (2017) suggests that measures of teacher effectiveness should focus on not only teachers’ effects on students’ test scores but also teachers’ effects on the productive student behaviors that can support student learning. Examining the relationship of middle school teachers’ experience and student outcomes in North Carolina for the period 2006–2011, they find that ELA and math teachers become more effective at supporting student performance on assessments, preventing student absences, and ELA teachers increase their ability to encourage students to spend time reading for pleasure, as measured by student reports. The link between teacher experience and rates of student absenteeism was particularly strong. According to Ladd and Sorensen’s estimates, “[I]n an average classroom, replacing a new teacher with an experienced teacher could reduce the proportion of students with high absenteeism by more than half” (p. 263-265). Chronic absenteeism, commonly measured as missing 10% or more of the school year, is associated with lower academic performance, lower likelihood for graduation, and increased achievement gaps in elementary, middle, and high school (Allensworth & Easton, 2007; Balfanz & Byrnes, 2012; Ready, 2010). Furthermore, chronic absenteeism is most prevalent among students from low-income families (Balfanz & Byrnes, 2012; Romero & Lee, 2007). Consequently, Ladd and Sorensen’s findings suggest that hiring and retaining capable, experienced teachers in high-poverty schools could greatly benefit low-income students by supporting their cognitive development and encouraging positive behaviors, such as attendance, that contribute to their success.

“Can Professional Environments in Schools Promote Teacher Development? Explaining Heterogeneity in Returns to Teaching Experience”

Research by Kraft and Papay (2014) sheds light on the conditions that support increases in teacher productivity over time. There is a large body of research that suggests that school working conditions influence teacher retention (Boyd et al., 2011; Johnson & Birkeland, 2003; Ladd, 2011; Loeb, Darling-Hammond, & Luczak, 2005; Simon & Johnson, 2015), teachers’ opportunities to learn (Kardos, Johnson, Peske, Kauffman, & Liu, 2001; Little, 1982), and student achievement (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Johnson, Kraft, & Papay, 2012). Drawing on comprehensive data on teachers and students in fourth through eighth grade in one large urban district in North Carolina from 2000–2010, Kraft and Papay find that some teachers improve much more rapidly than others and that nearly 30% of the variation in returns on experience across individual teachers can be explained by differences in the schools in which they work. Using teachers’ responses on a survey of their working conditions, the authors find that teachers improve more rapidly when they work in schools with more supportive conditions, including a safe and orderly environment, a culture of trust and mutual respect, opportunities to collaborate with peers, sufficient time for professional development, meaningful feedback from teacher evaluations, and strong principal leadership. In fact, Kraft and Papay find that “teachers who work in schools at the 75th percentile of professional environment ratings increase their effectiveness by over 0.035 test-score SD more over the course of 10 years than a similar teacher at a school at the 25th percentile, a 38% difference in total improvement” (p. 494). Notably, schools in the study with stronger working environments were more likely to employ experienced and highly qualified teachers and less likely to serve students who were low performing, low income, or of color. Thus, differences in working conditions may further exacerbate inequities in access to quality teaching between historically underserved students and their more advantaged peers.

“Teacher Collaboration in Instructional Teams and Student Achievement”

Ronfeldt and colleagues (2015) focus specifically on high-quality collaboration as an essential element of the school environment that influences teaching quality. Using teacher survey and administrative data on students, teachers, and schools from the Miami Dade County Public School System over two academic years (2010-2011 and 2011-2012), the authors find that most teachers surveyed in this urban district work were part of a teacher team or group that worked together on instruction and that the quality of the collaboration in these teams varied greatly. Teachers who worked in schools with higher quality collaboration, including collaboration focused on developing instructional strategies and reviewing assessments, were better able to

raise student achievement in mathematics and improved in their ability to support student achievement at substantially greater rates than teachers who worked in schools with lower quality collaboration. This evidence suggests that engaging in high quality collaboration with colleagues around instruction is associated with both higher and improving levels of teaching quality in schools. Furthermore, this study sheds light on the need for further research on the specific conditions and the extent to which they must be in place to positively influence teaching quality.

School-based Working Conditions that Facilitate Quality Teaching

As we described above, teachers continue to grow in their capacity to improve student learning over time (Harris & Sass, 2011; Ladd & Sorensen, 2017; Papay & Kraft, 2015; Wiswall, 2013). Teachers' capacity to grow and to enact quality teaching is tightly coupled with positive school-based working conditions. To advance our framework of developing teaching quality, we turn to the research literature and draw attention to three school-based conditions that are prerequisites for facilitating high quality teaching and learning: meaningful professional development; opportunities to collaborate with peers; and strong principal leadership. Each of these conditions, or pillars, work synergistically to produce high quality teaching. Without one pillar, it becomes challenging for teachers to have the resources needed to enact quality teaching.

Meaningful Professional Development

New, experienced, developing, and accomplished educators face unique challenges and require targeted opportunities for professional learning. In a recent survey, however, less than half of teachers reported that the majority of their professional development (PD) experiences were tailored to their specific needs, development areas, or specific teaching context, specifically content area and needs of their students (TNTP, 2015). Notably, personalizing professional learning opportunities does not preclude collaborative learning opportunities. In fact, school-based opportunities for collective learning can serve as opportunities for teachers to engage in shared inquiry about how to teach specific content in ways that meet the needs of their particular students (Gallimore, Ermeling, Saunders, & Goldenberg, 2009; Stosich, 2016b).

Continuous, school-based, professional development (PD) for teachers can improve individual and collective teacher practice and increase student learning (Daly, Moolenaar, Der-Martirosian, & Liou, 2014). Researchers identify four key characteristics for school-based PD to improve teacher practice: it is sustained and focused; it addresses participants' knowledge and skills gaps related to teaching and learning; it is responsive to the contexts in which participants teach and students learn; and it includes both teachers and school leaders who collaboratively participate in ongoing learning, inquiry, and reflection (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; King & Bouchard, 2011). For example, programs, such as Reading Recovery, that provide teachers with ongoing support from expert educators as they work with struggling students, have been associated with improvements in teachers' practice and large increases in students' reading fluency (D'Agostino & Murphy, 2004; May et al., 2015). Specifically, expert teachers, over the course of one academic year, support Reading Recovery teachers by giving them feedback

on their practice (Briggs & Young, 2003; Brown, Denton, Kelly, & Neal, 1999). Meaningful professional development requires coordination with principals' leadership, school context and goals, and the specific learning needs of the faculty.

Opportunities to Collaborate with Peers

Efforts to improve teachers' professional capacity are more effective when they take into account individual and collective opportunities for developing capacity (Bryk, Gomez, Grunow, & LeMahieu, 2015; Stosich, 2016a). While the nature of teacher collaboration varies across U.S. public schools (Markow & Martin, 2005), when teachers engage in close collaboration with colleagues, knowledge about content, students, and pedagogy that was once private can benefit teachers' practice (Horn & Little, 2010; Johnson, 2012; Levine & Marcus, 2010). As teachers collectively share and examine artifacts of their practice (e.g., student work, classroom video) with a focus on improving student learning, professional communities begin to emerge (Borko, Jacobs, Eiteljorg, & Pittman, 2008; Bryk et al., 2010). These communities, commonly referred to as professional learning communities, are spaces where teachers share a common vision (Andrews & Lewis, 2007; Hord, 2004), take collective responsibility for student learning (Leithwood & Louis, 1998; Newmann & Wehlage, 1995), collaborate to solve dilemmas of practice (Fullan, 2001; Hord, 2004; Stoll, 1999), and ensure that collective and individual teacher learning occurs (Louis, Kruse, & Associates, 1995; Rosenholtz, 1989).

Opportunities for teachers to work alongside each other can improve not only their practice but also student learning (Goddard, Goddard, & Tschannen-Moran, 2007; Moolenaar, Slegers, & Daly, 2012). Moreover, there is convincing evidence that less capable teachers become more effective as they work with their more skilled peers (Jackson & Bruegmann, 2009; Sun, Loeb, & Grissom, 2017). Jackson and Bruegmann (2009) hypothesized that less skilled teachers became more effective by working alongside more skilled colleagues and were induced to improving their practice. In this study, researchers used value-added measurements on student assessments to measure teacher quality and found that students' achievement in math and reading improved when their teachers had the opportunity to work at the same grade level as more effective teachers. This evidence suggests that teaching quality in a given classroom is influenced by not only the teacher who works directly with students but also the collective teacher community who supports this teacher's work.

Principal Instructional Leadership

Another component for providing teachers with the conditions to facilitate teaching quality is the principal's instructional leadership - the capacity to support teaching and learning (Murphy, 1998; Leithwood & Jantzi, 2008; Tillman, 2008). Researchers point to several characteristics of instructional leadership that can drive school-wide continuous improvement:

- a clearly articulated mission (Hallinger, Bickman, & Davis, 1996; Sun & Leithwood, 2015);
- designing school-based professional development (Hallinger, 2005);
- working closely with teachers to improve teaching and learning;
- routine informal classroom observations to grow practice (Protheroe, 2009); and
- supporting students' socio-emotional development (Lomotey, 1993).

More recent research has identified three principal instructional leadership functions that predict student learning: coaching teachers, evaluating teachers, and creating coherence in the school's instructional vision (Grissom et al., 2013). In their role as coach, principals work to improve teachers' pedagogical content knowledge (Lochmiller, 2016). Moreover, evaluations through classroom observations provide principals, as well as teachers, with a common language for identifying high quality teaching (Kraft & Gilmour, 2016). Finally, to create coherence around an instructional vision in schools, effective principals are intentional about supporting teachers in maintaining a sense of purpose (Cochran-Smith et al., 2012; Jacobson, Johnson, Ylimaki, & Giles, 2005; Marinell & Coca, 2013) and high expectations for students (Day, 2005; Gurr, Drysdale, & Mulford, 2006).

In detailing each of the three pillars—meaningful professional development, opportunities to collaborate with peers, and strong principal leadership—we underscore the point, again, that to create the conditions to enact teaching quality across the school all three pillars must be present. For example, administrators who exhibit strong leadership recognize that teachers must have time and space to engage in meaningful professional development to grow in their ability to enact quality teaching. To ensure that all teachers in the organization can demonstrate teaching quality, administrators must also commit to enabling teachers to collaborate with each other. As principals facilitate teachers collaborating with each other as part of meaningful professional development, they also work to actualize the perspective on teaching quality described in this critical synthesis.

Implications for Policy, Practice, and Research

In this piece, we have articulated the importance of moving from *teacher quality*, which does not account for changes in teachers' capabilities to support student learning over time, to a focus on *teaching quality*, which recognizes that teachers have the capacity to improve their practice under positive school-based working conditions. Our review of recent research on teacher capacity can provide guidance for designing accountability systems that support meaningful learning enacted by professionally skilled and committed educators with adequate and equitable resources. We describe four core ideas that emerged from recent research and their implications for policy, practice, and research.

Policy and Practice: Teacher Effectiveness Is Not “Fixed”

There is mounting evidence that teachers grow over the course of their career in their ability to improve students' performance in core academic subjects (Harris & Sass, 2011; Papay & Kraft, 2015; Wiswall, 2013). Evidence from this line of research suggests that teachers not only vary considerably in their effectiveness at any given time, but that they also vary greatly in their improvement trajectories and that supportive working conditions are associated with higher levels of teacher growth (Kraft & Papay, 2014; Ronfeldt et al., 2015). This research suggests that policymakers and practitioners should focus on not only recruiting and rewarding teachers who are deemed “effective” at one point in time, but also creating supportive conditions for the vast majority of teachers to grow more effective. Targeted efforts to recruit and support experienced teachers in schools serving large populations of students who are low-income, of color, or have low prior academic performance is particularly important for closing gaps in access to quality teaching.

Policy and Practice: Supportive Working Conditions for Developing Teachers at Different Stages of Their Career

Working conditions that facilitate teacher collaboration with colleagues can support novice educators and experienced educators alike in improving students' learning opportunities (Stosich, 2016b). Researchers find that students learn at higher levels when inexperienced teachers have opportunities to work with more experienced and capable teachers (Desimone, 2011; Desimone, Porter, Garet, Yoon, & Birman, 2002; Jackson & Bruegmann, 2009). Furthermore, teachers who work in schools with higher levels of collaboration among teachers produce increased levels of student achievement in mathematics and reading (Goddard et al., 2007) and grow more in their ability to improve student achievement (Kraft & Papay, 2014; Ronfeldt et al., 2015) than teachers in schools with lower levels of teacher collaboration. Thus, school conditions that support teachers in learning with and from each other can

support teachers with varied levels of experience and capacity in improving their ability to support student learning.

Enduring inequities in access to committed and capable educators, inhospitable conditions for teachers' professional learning and growth in schools serving historically underserved student populations, and current teacher shortages raise urgent questions about future directions for teaching policy. Our review of recent research on teachers' learning and development suggests that teaching policies will be more effective in identifying and growing high quality educators when they include a focus on developing the individual and collective capacity of teachers as well as the conditions in which they work. Lessons from research suggest that states will be unlikely to meet their goals for supporting high levels of learning among all students if they continue to rely on policies that focus on individual "effectiveness" at one point in time rather than a more comprehensive approach to supporting continuous professional learning and improvement for educators at all points of their career.

Policy: Continued Focus on Teachers' Growth Over Time

Policies designed to improve the capacity of teachers in schools are more likely to be effective if they focus on not only recruiting teachers based on their effectiveness at one point in time, but also on retaining and supporting the development of educators over time. Teachers, on average, become more effective at supporting student learning and behaviors (i.e., reading habits, attendance) over time. Furthermore, recent research on returns on experience indicates that teachers grow more effective at different rates, and teachers working in supportive school conditions—strong principal leadership, opportunities for collaborative learning—grow more effective at higher rates over time.

Recent research examining teachers' professional growth over the course of their careers suggests that efforts to improve overall teaching quality and address the inequitable distribution of teaching quality in schools may require direct support to schools in developing the supportive conditions necessary for accelerating professional growth over time. Targeted policies may be particularly important for closing gaps in access to quality teaching between low-income students and their more affluent peers. Schools that have large percentages of students of color who are from low-income families are more likely to have large concentrations of inexperienced educators (Goldhaber, Lavery, and Theobald, 2015), higher rates of teacher turnover (Simon & Johnson, 2015), and poor working conditions (Johnson et al., 2012) than schools serving more affluent student populations. Recent research suggests that efforts to recruit *and* retain capable and experienced educators to work in high-poverty schools may lead to improvements in student learning in ELA and mathematics, attendance, and other important non-test outcomes (Harris & Sass, 2011; Ladd & Sorensen, 2017; Papay & Kraft, 2015; Wiswall, 2013).

Research: Continued Exploration of Factors that Contribute to Teachers' Capacity

While much is known, further research is needed to understand more fully the factors that influence teachers' capacity, including factors related both to individual teacher knowledge and experience *and* the conditions in which they work. Research should also expand the metrics used to assess teachers' ability to support student learning broadly, to include for instance, teachers' effects on students' social-emotional development, attendance, reading behaviors, and college and career aspirations. Test-based accountability policies have led to a narrow definition of teacher "effectiveness" in both research and policy as a teacher's ability to improve student outcomes on assessments in ELA and math. However, supporting meaningful learning for all students requires teachers attend to not only academic content knowledge and skills but also the positive learning behaviors that can support students in being successful in school and in life (Conley, 2015).

Conclusion

It is crucial that state policymakers turn away from teacher policies that focus narrowly on individual teacher’s capabilities. As we have discussed above, these policies have primarily focused on individual teacher quality, including teachers’ credentials (i.e. degrees, licensure) and demonstrated effectiveness (i.e. students’ test scores), paying limited attention to the context in which teachers work. Such policies fail to address essential school-based conditions that can both support teaching quality as well as accelerate improvements in teaching quality and, thus, facilitate deep and meaningful student learning.

We urge state leaders to revisit and to rethink their approach to teacher policy under ESSA. We argue that a large and growing body of research suggests that attention to *teaching quality*—the ability of teachers to support meaningful learning among students—is a promising approach for improving the quality and equity of educational opportunities in public schools. We have argued that policies focused on improving teaching quality attend to the conditions, resources, collaborative learning opportunities, and support from leadership that can accelerate the developmental trajectory of teachers and, in doing so, foster improvement among the teaching force broadly.

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