

Collaboration: Closing the Effective Teaching Gap

Barnett Berry, Alesha Daughtrey, and Alan Wieder

December 2009

Closing the Effective Teaching Gap

Over the last decade, policy and business leaders have come to know what parents have always known: teachers are the largest school-based factor in student achievement.¹ Yet not all schools have equal access to the most effective teachers. High-needs schools that serve large proportions of economically disadvantaged and minority students are more likely to have difficulty recruiting and retaining teachers, particularly in high-demand subjects like math and special education.² As a result, they are much more likely to fill those openings with out-of-field, inexperienced, and less well-prepared teachers.³ Simply put, the student achievement gap is largely explained by an effective teaching gap.

The important question is how we seek to close that gap. Some pundits and policymakers suggest that effective teachers are born, not made – and that the academic ability and personal traits of new recruits are more important for teaching effectiveness than pedagogical training. However, recent studies have shown that teachers are significantly more effective if they are fully prepared when they enter teaching, are certified in the specific field they teach, have higher scores on their licensing tests, have graduated from a more competitive college, have at least two years teaching experience, and are National Board certified.⁴

In addition, a new body of research suggests that teaching experience and pedagogical preparation matters for student achievement when teachers have opportunities to learn from their peers in their schools over time. Working conditions seem to matter a great deal for teacher effectiveness — but which ones? In this policy brief, the Center for Teaching Quality (CTQ), in partnership with the Teachers Network, offers a powerful perspective on teaching effectiveness and teacher collaboration. Drawing on surveys and interviews of teachers in urban, high-needs schools as well as a broader research literature, we offer evidence to show that when teachers are given time and tools to collaborate with their peers, they are more likely to teach effectively and more likely to remain in the high-needs schools that need them most.

Unpacking the Evidence on Collaboration and Effectiveness

About the Teachers Network Study

With the support of the Ford Foundation, the Teachers Network undertook a major national survey of 1,210 teacher leaders, to better understand the role that participation in teacher leadership networks plays in supporting and retaining effective teachers in high-needs urban schools. Follow-up interviews with 29 network participants provided a more nuanced view of ways in which opportunities for collaboration and leadership (within and beyond the classroom) can increase teacher efficacy and effectiveness, and improve the retention of the classroom experts students deserve. The survey sample was drawn from a diverse and accomplished group

of preK-12 teacher leaders in every subject area: 93 percent were fully state-certified in their subject area and grade level at the time of the survey, and 78 percent held at least a master's degree. A majority reported that they worked in urban, high-needs schools, where more than 75 percent of the student body was comprised of low-income or minority students.

The Teachers Network data have some significant limitations, both related to the instruments used and in the fact that subgroups of teachers surveyed were too small to permit meaningful disaggregated analysis.* In this series of briefs and a culminating research report, we have enriched findings from the Teachers Network study with results from CTQ's ongoing research on teacher working conditions and teacher effectiveness. We also provide context from the broader research literature to bear on these pooled data.

Collaborative Teachers Are Effective Teachers

Analysis of survey and interview data from teacher leaders provides additional evidence on what existing literature has shown is true of all teachers: that collaboration among teachers paves the way for the spread of effective teaching practices, improved outcomes for the students they teach, and the retention of the most accomplished teachers in high-needs schools.

1. Opportunities for peer learning among teachers build collective expertise.

Teacher effectiveness has less to do with individual attributes, and far more to do with the extent to which teachers work with each other and provide collective leadership for their schools and communities. Mentoring has been shown to increase new recruits' pedagogical practices, teaching effectiveness, and retention.⁵ However, new studies suggest that teachers *at any experience level* stand to gain from collaborative work. Teachers who have consistent opportunities to work with effective colleagues also improve in their teaching effectiveness.⁶

Accomplished teachers instinctively understand that teaching – particularly in a high-needs school – is necessarily a collaborative enterprise, requiring significant peer support and input for success. Sixty-four percent of respondents to the Teachers Network survey said they joined their local collaborative networks primarily because they "wanted a professional community" of other teachers with whom to exchange ideas and best practices for their classrooms. This hunger for collaborative opportunities far outstripped any other reason for joining networks – including opportunities for fellowships or other funding, suggestions from their principals. Whether they collaborated in face-to-face meetings (63 percent) or virtually (76 percent), most teachers involved in Teachers Network communities were actively engaged in ongoing activities that connected them to other classroom practitioners who could help them "raise their games."

Moreover, networked teachers overwhelmingly said that support specifically from peers was important to them for support and for help with their classroom practice. As Figure 1 illustrates, a very large majority of respondents cited "other teachers" as their primary supports and sources of information, surpassing even their department chairs, principals or other formal leaders in their schools.

2

^{*} For a fuller discussion of the limitations of these data, please see the full report that accompanies this series of briefs, forthcoming from the Center for Teaching Quality and Teachers Network in February 2010.

Figure 1a: Sources of support and help for teachers

To whom do you turn for help about teaching?

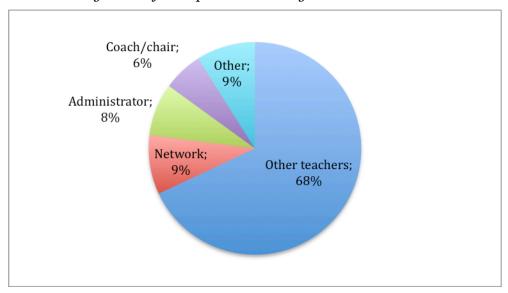
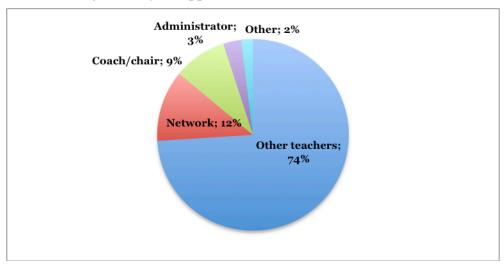


Figure 1b: Sources of support and help for teachers

To whom do you turn for support [as a teacher]?



DATA SOURCE: Authors' tabulation of Teachers Network survey data

Access to such collective expertise makes teachers more effective in advancing student learning.

Collaboration may build the knowledge base among teachers in a school or professional network, adding value to the education students receive. But precisely how much value does that peer learning have, measured in terms of student outcomes? Studies show that students perform better on tests of mathematics and reading when they attend schools characterized by higher

levels of teacher collaboration, creating a tipping point for sustained school turnaround.⁷ More specifically, a recent study using 11 years of matched teacher and student achievement data was able to examine this relationship even more granularly, by isolating and quantifying this added value brought by collective expertise. Drawing on very sophisticated analyses, the researchers found that peer learning among small groups of teachers seemed to be the most powerful predictor of student achievement over time. Fully 20 percent of a teacher's "value added" effects, as measured by student test score gains, was attributable to shared expertise. ** Education Week*, in reporting on this groundbreaking study, concluded, "[T]eachers raise their games when the quality of their colleagues improves." 9

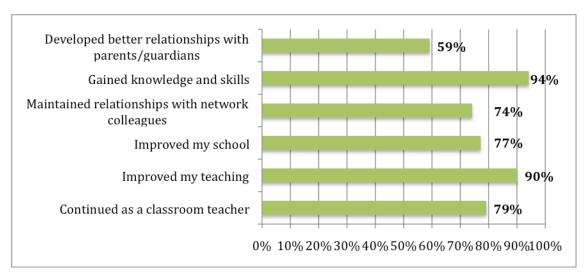
CTQ's own case study research, funded by the Ford Foundation, has surfaced how teachers collectively refine their teaching strategies in order to ensure that low-performing students reached their achievement growth targets. A master teacher within their grade level tested out new ideas for instruction that were generated by the whole team, to be sure that the innovations were effective before introducing them more broadly:

[If my colleagues] want to implement something, ...I've said, 'Well, let me try it first and let me see if it [works well]. And if it's a keeper I'll let you all know about it.' Sometimes that knocks the kinks out of the [new lesson or strategy] if just one class tries it versus everyone [in the grade], and that...really saves a lot of time [with trial and error].

Respondents to the Teachers Network survey were also clear about the benefits of their participation in collaborative activities through their local networks, summarized in Figure 2 below. Over 90 percent of the teachers reported that their network participation improved their teaching practice, and over three-fourths feel that it has improved their school overall.

Figure 2: Teachers Network Survey Responses

"As a result of network participation, I have..."



DATA SOURCE: Authors' tabulation of Teachers Network survey data

Of course, not every school nurtures collaborative engagement among teachers. For these teachers, participation in a larger cross-school professional network for teachers, such as those offered by Teachers Network, helped to offset limited opportunities for collaboration in their respective local school communities:

There was not a [professional] learning community [in my school] and a place where [issues with teaching and learning] could be discussed...comfortably. And being a part of that [Teachers Network community] and being encouraged by them, ...knowing that my problems were not uncommon to their problems, and thinking out solutions about how to fix those problems...has been a wonderful experience, a real learning process for me...as a professional.

For other teachers, having a broader professional network with which to share and collaborate had additional benefits, whether they had opportunities for collaboration within their buildings or not:

One of the things I love about [my work with other teachers through the network] is that [the discussions are] at the academic and intellectual level of...a master's degree program. ...I've had to reflect on my classroom, my school, in the context of being a laboratory for [me as] an agent of change. So that's made me really look at what's going on from more of a systematic [and] scholarly approach. ...We're really looking beyond the [current slate of] standardized tests, like what are other impeding variables that may factor in [to why students do or do not experience the learning growth that they should].

In addition, the majority of respondents (59 percent) also reported that network participation helped them to develop better relationships with their students' parents — an extremely critical piece of the school improvement puzzle. CTQ's recent case studies of three high-needs schools in an urban district suggest that finding ways to engage parents — or in their absence, the resources of the broader community for supporting the school financially or with volunteer assistance — are critical to the success of school improvement plans and student achievement gains. Such expansions of collaboration beyond the classroom walls are also strongly associated with better educational and life outcomes for students in high-needs communities.¹⁰

Moreover, as Figure 2 reveals, almost 80 percent claimed that their network involvement fueled their intention to stay in teaching. One member of a Teachers Network community put it succinctly, saying, "Teachers stay when they feel that they are supported and that they have good professional relationships [with their colleagues]." In fact, regression analysis of Teachers Network survey data reveals that – controlling for a variety of school factors – colleagues' support was the *only* school culture factor significantly associated with teachers' planned long-term retention. Teachers who planned to stay in the classroom for up to 5 years cited opportunities for professional learning or high standards among staff as most important. But collaboration was by far the dominant factor in retaining these teacher leaders for 10 (p<.05) or 15 (p<.01) years.

Our analysis of the teacher interviews explicitly uncovered these connections between collaboration, improved effectiveness in the classroom, and retention of those newly more effective teachers in high-needs schools. One teacher claimed: [I]f I had been in [a high-needs] school and just shut my door..., I would've fallen apart. But the fact that I had this very supportive group of people and we were always addressing the issues [that our schools and students faced], and...helping each other work through things [to improve student learning] – that kept me at that school.

These findings are hardly unique to the Teachers Network sample. The Center for Teaching Quality's surveys and case studies in other urban districts across the country show that opportunities for meaningful collaboration are one important factor in teachers' decisions to remain at their current schools – or remain in teaching at all.¹¹

Making Collaboration Work

The Teachers Network survey did not ask teachers to identify the ways in which collaboration at their schools or in their networks were structured. However, evidence suggests that the structure of collaboration matters to its impacts on teacher effectiveness. However, our on-going studies at CTQ have begun to suggest best practices for collaboration that are most tightly linked to teacher effectiveness. These include:

Scheduling adequate time for collaboration. Whether teachers are trying to collaborate within a grade level group or a subject area department, schedules must be aligned to allow for common planning time. Collaboration rarely "just happens" in schools; teachers are busy keeping up with their students and often get siloed within their own classrooms. Aligning teachers' schedules to create common planning times sets the tone by showing that school leaders value collaboration. Doing so has been linked to more effective instructional innovation among teachers.¹²

One principal whom we recently interviewed emphasized that the *amount* of time that teachers had together was critical, and recommended at least 90-minute blocks:

[Otherwise, teachers wouldn't have] ample time [for collaboration.] ...They wouldn't go in depth in terms of what had worked [with students], what hadn't, what data do we have...to know if this works? The conversations are too pro forma [in shorter meetings].

Teachers in that principal's school strongly agreed. One told us, "Having the time to look back at the [student] data or prepare [your lessons with colleagues in my grade level]...is a big factor [in effective teaching]."

■ Aligning collaboration structures for both horizontal and vertical collaboration. Traditionally, teachers collaborate horizontally, with teachers in their same grade level or subject area department. Vertical collaboration across grade levels is much more rare, but may be at least as important as horizontal collaborations for allowing teachers to "hand off" knowledge about students' needs to the next teacher — which may be especially important for high-needs students. CTQ's case studies have revealed that teachers and principals find vertical collaboration especially useful for aligning instructional strategies across grade levels for key tested subjects, in order to

make targeted achievement growth for reading and math. The structure of collaboration, then, should follow school goals for teaching and learning.

- Structuring collaboration meetings formally. Teachers who participate in structured dialogues to analyze student work or solve problems in their schools are more likely to implement positive changes in their teaching practice and improve their students' achievement.¹³ One teacher unsurprisingly noted: "It helps to have specific agenda items in mind, at least, when we sit down. ...That way, we stay focused...not going off on a tangent."
- Creating an atmosphere of mutual trust. Collaboration sharing knowledge and ideas implies risk. Both survey and interview data gathered by CTQ in various urban districts drives home the point that collaboration is difficult to execute without a sense of trust among teachers. Where rifts are deep between new and more established teachers, opposing teaching philosophies, or clashing individual personalities teachers report that collaboration becomes less effective: "If you…don't mesh well, then it becomes very difficult to feel successful in a model where you must rely on someone else and their judgment."

Teachers who work in trusting environments have a basis for inquiry and reflection into their own practice, allowing them to take risks, challenge and critique each other, and collectively solve tough problems.¹⁴ And teachers who feel valued by their principals, and believe they are afforded professional respect, are also more likely to stay in teaching and produce whole school improvement (including student achievement gains).¹⁵

Implications

Human capital decisions have increasingly been a focus of education policy and school reform efforts. Some recent teaching quality reforms have begun to focus on talent management, but not necessarily on teacher development that is fueled by teachers themselves. Evidence from the Teachers Network survey, and in the research literature as a whole, strongly suggests that collaboration and networking among teachers is essential to developing teaching talent among existing staff within schools. Opportunities for collaboration strengthen the skills of new or struggling teachers and can make the best teachers even better.

- Moreover, schools that operate collaboratively tend to be more attractive schools in which to work, assuring that the best teachers will gravitate towards and remain in schools that prioritize collaboration – whatever other challenges they or their students may face.
- To be most effective, though, collaboration should be structured carefully. Principals and other school leaders should allot adequate time for collaboration, organize class schedules to include common planning times that permit horizontal and vertical collaboration, and actively seek to reduce divisions among staff that may prevent open and productive exchanges among teachers.

Many high-needs schools are likely beset by ineffective teaching. However, many of those ineffective teachers never were sufficiently prepared or supported to succeed in high-needs classrooms – and simply removing poor performers will not ensure that effective teachers will be waiting in the wings to replace them. Specific strategies to spread the expertise of the most accomplished teachers may be the key to turning around low performing schools.

Raising the quality of teaching and boosting student achievement in high-needs schools require an intensive focus on a range of working conditions, including effective principals and appropriate teaching assignments. But what may be most important is adequate time to work with colleagues and professional development that focuses on systemic, sustained, and collective study of student work where peers critique and help each other teach more effectively.

About Teachers Network and the Center for Teaching Quality

Teachers Network, a national nonprofit organization, leverages the creativity and expertise of a national and international community of outstanding educators to transform public schools into creative learning communities. Over the past three decades, Teachers Network has brought together 1.5 million classroom teachers in over 20 network affiliate communities for professional development that hones both classroom practice and instructional leadership.

The Center for Teaching Quality (CTQ) seeks to improve student learning and advance the teaching profession by cultivating teacher leadership, conducting timely research, and crafting smart policy. Core to CTQ is its own Teacher Leaders Network, a *virtual* community of some of the nation's most expert teachers whose ideas and actions are assembled and spread in order to dramatically improve academic achievement for all students.

Works Cited

¹ Ferguson, R.F. (1991). Paying for public education: New evidence on how and why money matters. *Harvard Journal on Legislation*, 28(2): 465-498; Hanushek, E.A. (1996). *School resources and achievement in Maryland*. Baltimore, MD: Maryland State Department of Education; Sanders, W.L. & Rivers, J.C. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center; Rivkin, S.G., Hanushek, E.A. & Kain, J.F. (2005). Teachers, schools, and academic achievement. *Econometrica* 73(2), 417–58; Rockoff, J.E. (2004). The impact of individual teachers on student achievement: Evidence from Panel Data. *American Economic Review*, 94(2), 247–252; Boyd, D., Lankford, H., Loeb, S., Rockoff, J. & Wyckoff, J. (2007). *The narrowing gap in New York City teacher qualifications and its implications for student achievement in high-poverty schools*. CALDER Working Paper 10.

² Strizek, G. A., Pittsonberger, J. L., Riordan, K. E., Lyter, D. M. & Orlofsky, G. F. (2006). Characteristics of schools, districts, teachers, principals, and school libraries in the United States: 2003-04 Schools and Staffing Survey. Washington, DC: US Department of Education, National Center for Education Statistics.

- ³ Ingersoll, R.M. (1999). The problem of underqualified teachers in American secondary schools. *Educational Researcher*, *28*(2). Retrieved September 15, 2008 from http://www.gse.upenn.edu/faculty_research/docs/ER-RMI-1999.pdf; Mayer, D. P., Mullens, J. E., & Moore, M. T. (2002). Monitoring school quality: An indicators report. Washington, DC: National Center for Education Statistics. Retrieved September 15, 2008 from http://nces.ed.gov/pubs2001/2001030.pdf.
- ⁴ Clotfelter, C. T., Ladd, H. F. & Vigdor, J. L. (2007). Teacher credentials and student achievement: Longitudinal analysis with student fixed effects. *Economics of Education Review*, 26, 673-682.
- ⁵ The National Commission on Teaching and America's Future (2002). Unraveling the "teacher shortage" problem: Teacher retention is the key. Washington, DC: NCTAF; Quinn, R. J. & Andrews, B. D. (2004, March/April). The struggles of first-year teachers: Investigating support mechanisms. *The Clearing House*, 77(4), 164-168; Smith, T. M. & Ingersoll, R. M (2003). Does teacher mentoring matter? Unpublished manuscript.
- ⁶ Viadero, D. (2009). Top-notch teachers found to affect peers. *Education Week*. Retrieved September 1, 2009 at http://www.edweek.org/ew/articles/2009/09/01/03peer.html?tkn=VQ[F91pv4%2Fm1Ho5QrumV3xEwIqnZkr5Dl8iG. ⁷ Goddard, Y. & Goddard, R. D. (2007, April). A theoretical and empirical investigation of teacher collaboration for school
- ⁷ Goddard, Y. & Goddard, R. D. (2007, April). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record*, 109(4), 877-896.
- ⁸ Jackson, C. K. & Bruegmann, E. (2009, July). Teaching students and teaching each other: The importance of peer learning for teachers. NBER Working Paper 15202. Cambridge, MA: National Bureau of Economic Research.
- ⁹ Viadero, D. (2009). Top-notch teachers found to affect peers. *Education Week*. Retrieved September 1, 2009 at http://www.edweek.org/ew/articles/2009/09/01/03peer.html?tkn=VQ[F91pv4%2Fm1H05QrumV3xEwIqnZkr5Dl8iG.
- ¹⁰ Patrikakou, E. N., Weissberg, R. P., Redding, S., & Walberg, H. J. (2005). School-family partnerships: Dimensions and recommendations. In E. N. Patrikakou, R. P Weissberg, S. Redding, & H. J. Walberg (Eds.), *School-Family Partnerships for Children's Success*, 189-194. New York: Teachers College Press.
- ¹¹ Berry, B., Daughtrey, A. & Montgomery, D. (2009, August). Teaching and learning conditions 2009: An interim report. Hillsborough, NC: Center for Teaching Quality.
- ¹² Louis, K. S., Kruse, S. & Marks, H. (1996). Schoolwide professional community. In F. Newmann and Associates. *Authentic achievement: Restructuring schools for intellectual quality*, 179-203. San Francisco: Jossey-Bass.
- ¹³ Cohen, D. K. & Hill, H. C. (2001). Learning policy. New Haven, CT: Yale University Press,
- ¹⁴ Bryk, A. S. & Schneider, B. (2002). *Trust in schools: A core resource for improvement.* New York: Russell Sage Foundation; Tschannen-Moran, M. (2004). *Trust matters: Leadership for successful schools.* San Francisco: Jossey-Bass.
- ¹⁵ Bryk, A. S. & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. New York: Russell Sage Foundation; Tschannen-Moran, M. (2004). *Trust matters: Leadership for successful schools*. San Francisco: Jossey-Bass.