

Case Study IV

Carnegie Foundation for the Advancement of Teaching's Networked Improvement Communities (NICs)

Supplement to the white paper:

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CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING'S NETWORKED IMPROVEMENT COMMUNITIES

The Carnegie Foundation for the Advancement of Teaching is a nonprofit, operating foundation with a long tradition of developing and studying ways to improve teaching practice. The current president, Anthony S. Bryk, was one of the founders of the Consortium on Chicago School Research, a pioneering research alliance. He has led Carnegie's work on networked improvement communities (NICs), which reflect his belief that it is not enough to study policies and programs as they exist today. Research in education should also tackle rapid engineering and testing of conditions for improvement. Bryk explained:

Making progress in addressing educational problems requires a commitment to a rapid prototyping process by which researchers and practitioners co-develop innovations, try them in schools and other learning contexts, and then refine and try them again. This new infrastructure demands an engineering orientation in which adaptability to local contexts is a direct object of study.¹

For the past three years, the Carnegie Foundation has initiated three different NICs. The first, Quantway, is addressing the high failure rate of students in developmental mathematics. Eight community colleges in three states are part of this network, as are several intermediary organizations whose work focuses on curriculum, faculty development, and student support. The second NIC, Statway, is also focused on community colleges. It involves 19 colleges in five states and is a pathway to college statistics. The third NIC, Building a Teacher Effectiveness Network (BTEN), is working on teacher quality, specifically on developing and retaining teachers in the first three years of teaching. The BTEN network members include the Carnegie Foundation, the Institute for Healthcare Improvement (IHI), the American Federation of Teachers (AFT), New Visions for Public Schools (NVPS), the Austin Independent School District (AISD), and the Baltimore City Schools (BCS). Carnegie staff act as the primary facilitators of the work, guiding the improvement process. IHI and AFT also help facilitate the improvement work. AISD, BCS, and NVPS are sites that test ideas.

History

In 2009, the Aspen Institute convened representatives of the institutions that now make up BTEN. Initial meetings in fall 2009 and early spring 2010 resulted in four goals: (1) improve the entry of new teachers into the profession; (2) enhance the capacity of novices to learn to teach; (3) achieve measurable success in the retention of effective early-career teachers and the student learning gains assessed in their classrooms; and (4) build a learning community around this work.²

Since 2010, the Carnegie Foundation has facilitated the development of BTEN as a NIC, with a focus on organizing its work using the model of improvement science developed by the IHI.

Nature of the Partnership

Work in sites began in the 2011–2012 school year with a focus was on the quality of feedback that new teachers receive from people in their districts, especially principals. Carnegie staff produced a “scan” that synthesized existing research and advice from interviews with experts. This suggested that the quality of feedback is an important factor in new teacher development and retention. A Carnegie staffer explained:

While all the key drivers are important to address, the one that will likely cause changes in other drivers—especially at the feedback process level—is training coaches, especially principals, in the appropriate use of the district instructional framework and coaching and communication strategies.

The scan informed the development of several tools to guide improvement within BTEN. The first was the Program Improvement Map, which illuminated issues in recruiting, preparing, and retaining quality new teachers, as understood by network members and reflected in research. There is one map for the entire network, which was developed jointly by the Aspen Institute, AFT, and Carnegie before the districts became involved. The second tool was a Fishbone or

Ishikawa Diagram, a template for identifying the root causes of a specific problem. At one end was a clear problem (e.g., many new teachers leave the profession). Root causes of that broader problem are written at the end of what looks like the bones of a fish. There was a diagram for the whole network, as well as individual diagrams for each of the districts. The third tool was a Driver Diagram, in which teams specified the critical drivers of change toward a desired end. According to a Carnegie leader, Driver Diagrams play an ongoing role in “guiding improvement research, coordinating inquiry across the network, and providing for spread of warranted improvements.” The Fishbone Diagram is intended to feed into the development of the Driver Diagram; the drivers should address the most salient of the root causes identified in the Fishbone. As with the Fishbone, there was a network-level and a district diagram. As districts engaged in small tests of change, both diagrams were refined to reflect what was learned. In BTEN, the network-level Driver Diagram identified several clusters of drivers, including effective recruitment and placement, professional development and support in the placement, and assessment and evaluation that support enhanced performance (see example at back).

The districts have begun to engage in the Plan, Do, Study, Act (PDSA) cycles that are a hallmark of improvement research.³ In the Plan phase, the team made predictions about how many steps would be executed with fidelity and which steps, if any, they anticipated the principal having to modify during the feedback interaction. In the Do phase, the principal carried out the protocol, noting what happened during the interaction. During Study, the improvement team compared observations from the Do phase with initial predictions made in the Plan phase. Observations that confirmed certain predictions helped build confidence around the protocol tested; those that differed from the predictions (as well as other unexpected observations) served as the basis for learning and subsequent changes to be tested. Based on the analysis, the team decided, in the Act phase, to refine steps of the protocol and have the principal test the revised version through another PDSA cycle. After a few more PDSAs and further refinement of the protocol, the team had enough confidence in its efficacy to have other administrators try it, invoking another set of routines aimed at helping bring changes to scale across the system.

Consistent with the IHI model, the changes tested and described above were small. One Carnegie researcher said that they were “small in terms of the intellectual scope of the change, but also very small in terms of the sample set in which you initially test it.” The premise is that these local interactions add up to a positive or negative relationship between a new teacher and a principal in ways that are consequential for the teacher’s induction and development. According to a staff member at Carnegie:

The emphasis is on the “small.” Try with one person in one place, a couple of times, to learn whether it can be warranted as an improvement. Then take it up in five places, to study and learn the impact of context. Once you know that, and have tailored it and differentiated into a collection of change ideas, expand [to] 25 places, study how to make it a permanent change. Then, take it to “spread.”

In the districts, the bulk of the work—conducting small tests of change and collecting data—was shouldered by local staff, though the work was organized slightly differently across districts. In one district, a single principal conducted most of the tests himself and collected data on their effects for the first year of the initiative. He is now engaging the assistant principal and coaches at the school to support his efforts. The principal obtained some assistance from his district research office in analyzing data, and the research office recently fielded a survey to his new teachers. In another district, which focused on a comparative study of how different schools used common planning time for teachers, data collection was conducted by an improvement team, which included someone from one of the institutional partners (AFT). Staff from Carnegie and IHI assisted by facilitating the process.

Challenges

The NIC approach to improvement was new to most of the participants. It requires practitioners to adopt a new identity, that of “improvement researcher,” which has proven challenging. School and district leaders have many other job responsibilities besides prototyping improvement ideas and collecting data for the network. As a consequence, data have not been not collected or aggregated as often as intended within the

improvement model. The district-level leaders and Carnegie both acknowledged the difficulty presented by the addition of new responsibilities.

It also requires a leap of faith to believe small tests of change will lead to big, systemic improvements. On the Carnegie side, the team is pondering “How can small, or enough small, become big?” For one district leader, the challenge is maintaining enough political support for a project that takes a lot of his time, but has such small reach so far. Carnegie sees this design engineering approach as providing protection for innovation, while the practitioner feels vulnerable because of the amount of time she must devote to the project meetings.

Benefits

Even with these challenges, district personnel in BTEN find the work a rewarding professional learning experience. For example, one district leader said BTEN was “hugely valuable because we’re doing so much work around measurement and thinking about assessing teacher

performance, and what that looks like, how to use it.”

Another benefit is the attention the process gives to implementation, and what Carnegie describes as the “challenge of implementing good ideas reliably and at scale.” One district leader appreciated that researchers were taking up and responding to “real-world implementation issues” from people who are “building systems and wanting tools.” Another mentioned that the improvement process requires a careful mapping of “what’s happening in schools” and thinking through issues of implementation. Both of these leaders saw the process as building their own capacity for examining implementation of reforms in their school systems, a benefit that could extend beyond the immediate work on BTEN.

For more information on the Carnegie Foundation for the Advancement of Teaching and the Building a Teaching Effectiveness Network, see: <http://www.carnegiefoundation.org/>

Endnotes

1. Anthony S. Bryk, “Support a Science of Performance Improvement,” *Phi Delta Kappan* 90, no. 8 (2009): 598.
2. “Building a Teaching Effectiveness Network,” <http://www.aspeninstitute.org/policy-work/education-society/learning-networks/bten>.
3. William Edwards Deming, *Out of the Crisis* (Cambridge, MA: MIT Press, 1986)

References

Aspen Institute. “Building a Teaching Effectiveness Network.” <http://www.aspeninstitute.org/policy-work/education-society/learning-networks/bten>.

Bryk, Anthony S. “Support a Science of Performance Improvement.” *Phi Delta Kappan* 90, no. 8 (2009): 597-600.

Deming, William Edwards *Out of the Crisis*. Cambridge, MA: MIT Press, 1986.

BTEN DRIVER DIAGRAM Part I (Draft 5-29-12)
 Increase new teacher retention and effectiveness

