



The Six Core Principles of Improvement

1. Make the work problem-specific and user-centered.

It starts with a single question: “What specifically is the problem we are trying to solve?” It enlivens a co-development orientation: engage key participants early and often.

2. Variation in performance is the core problem to address.

The critical issue is not what works, but rather what works, for whom and under what set of conditions. Aim to advance efficacy reliably at scale.

3. See the system that produces the current outcomes.

It is hard to improve what you do not fully understand. Go and see [how local conditions shape work processes](#). Make your [hypotheses](#) for change public and clear.

4. We cannot improve at scale what we cannot measure.

Embed measures of key outcomes and processes to track if change is an improvement. We intervene in complex organizations. Anticipate unintended consequences and measure these too.

5. Anchor practice improvement in disciplined inquiry.

Engage rapid cycles of [Plan, Do, Study, Act \(PDSA\)](#) to learn fast, fail fast, and improve quickly. That failures may occur is not the problem; that we fail to learn from them is.

6. Accelerate improvements through networked communities.

Embrace the wisdom of crowds. We can accomplish more together than even the best of us can accomplish alone.

To learn more about how the six principles guide our work, check out *Learning to Improve: How America's Schools Can Get Better at Getting Better* (and read *Harvard Education Review's* [comprehensive summary](#) of the book).

Book Notes

LEARNING TO IMPROVE: HOW AMERICA'S SCHOOLS CAN GET BETTER AT GETTING BETTER

by Anthony S. Bryk, Louis M. Gomez, Alicia Grunow, and Paul G. LeMahieu
Cambridge, MA: Harvard Education Press, 2015. 280 pp. \$35.00.

In response to the continuing failure of many research-based interventions to spur broadscale instructional improvements, a number of researchers have turned their attention to the goal of enhancing organizational capacity. To achieve this end, researchers and practitioners in education have increasingly embraced the discipline of improvement science (Lewis, 2015), which relies on “rapid tests of change to guide the development, revision and continued fine-tuning of new tools, processes, work roles and relationships” (Carnegie Foundation for the Advancement of Teaching, n.d., para. 1). In *Learning to Improve: How America's Schools Can Get Better at Getting Better*, Anthony S. Bryk, Louis M. Gomez, Alicia Grunow, and Paul G. LeMahieu translate the major ideas of improvement science to educational settings, drawing on their work with the Carnegie Foundation for the Advancement of Teaching as well as high-profile examples of similar efforts in other sectors. The result is an eminently readable core set of principles that is likely to resonate with and challenge all who are involved in the work of improving educational outcomes.

The authors begin by developing a compelling diagnosis of the problem troubling those seeking to improve educational organizations. They argue that there is no universal mechanism in education for transforming the wisdom and knowledge experts accumulate as they work into a broader professional knowledge base. They also provide a number of examples of how well-intentioned educational reforms across the ideological spectrum were unsuccessful because they were formed around a novel solution (such as the small schools movement, an outgrowth of the trend of corporate downsizing) rather than a practitioner-driven problem and were imposed from above without attention to the ways local conditions might require adaptation. To address these two challenges, the authors argue that practitioners, policy makers, and researchers should collaborate across traditional organizational boundaries to engage in ongoing disciplined inquiry. The book introduces six key principles that are foundational to the application of improvement science to the work of school improvement within and across networked communities.

The first principle is *making the work of improvement problem specific and user centered*. A common tendency—one certainly not unique to the field of educa-

tion—is to begin the work of improvement with a solution but no clear understanding of the problem the solution is meant to address. As an example, Bryk et al. describe the recent federally supported effort, grounded in microeconomic theory, to push schools to adopt financial incentives for teachers based on student growth on standardized tests. Such an approach is intuitive and elegant but assumes a problem that is not actually borne out by the research: poor performance is primarily a result of a lack of effort on the part of teachers. Nevertheless, merit pay has spread rapidly over the past few years, and, unfortunately, evidence from randomized control trials suggests that such reforms have not resulted in improved student outcomes.

An alternative approach, the authors suggest, would begin with understanding the problem—one being the poor performance and attrition of many new teachers. By focusing on the problem, Bryk et al. highlight two important insights that make the solution of financial incentives less compelling: teachers are more likely to persist when they have strong ties to their colleagues, and poor performance is primarily due to a lack of know-how, not a lack of effort. To illustrate their point, the authors tell the story of one district leader trying to improve the quality of teacher feedback. Instead of simply developing a new protocol, he first talked to new teachers about their experiences receiving feedback. He quickly found that the problem was not that teachers were not receiving enough feedback but that there was an incoherent system of providing feedback, with some teachers receiving too little, others too much, and most receiving feedback that contradicted advice from other sources. Bryk et al. conclude the chapter with a refreshing step back, emphasizing that the approach of focusing on the user (e.g., the teacher who receives feedback) is not just more effective, but it also gives dignity and respect to those practitioners working in schools each day.

The second principle, *focusing on variation in performance*, has far-reaching implications for educational policy, as Bryk et al. highlight the weaknesses of both methodological and organizational practices that do not leverage the insight embedded in performance variation. First, they critique the reliance on randomized control trials to guide educational improvement, arguing that such research prioritizes precise measures of average effectiveness over illumination of the variation in effectiveness across particular contexts. They argue that there is more of a need for research that investigates variation in the effectiveness of an intervention across contexts in order to highlight and learn from positive deviants, or the subset of individuals who are most successful in implementing a particular intervention. Thus, variation, when strategically used, can be a tool for organizational learning.

Additionally, they argue that the goal of decreasing variation can also result in the design of “teacher-proof” classrooms, where teachers are not allowed to exercise judgment to adapt materials to their particular contexts. In order to avoid this outcome, while still minimizing unnecessary or harmful varia-

tion, the authors advocate for the use of standard work processes, routines around important aspects of instruction that are intended to “assist, rather than replace, the deeply intellectual work of educating children” (p. 50). They use the example of balanced literacy to illustrate how standard work processes can organize important aspects of instructional practice while still leaving much to the discretion of teachers.

In chapter 3, Bryk et al. discuss the principle of *seeing the system that produces the current outcomes*. They highlight two important ways reformers can misunderstand the system they are trying to improve, often with deleterious consequences. The first is to blame individuals who are most visibly connected to the poor performance of a system. For example, although it is popular to blame teachers for students’ poor performance, Bryk et al. describe how individual competence often accounts for only a small percentage of organizational performance; what’s more important and worthy of critical investigation is the underlying way we “organize the work that we ask people to carry out” (p. 61). Second, reformers often develop and implement new initiatives (e.g., a new teacher evaluation rubric) without considering how layers of past reforms might conflict with or distract from that initiative. To avoid these two challenges, the authors offer a number of routines for mapping out both the series of factors that are resulting in the problem of interest and also the set of organizational changes that are likely to work in tandem to produce meaningful improvements.

Chapters 4 and 5 concern some of the practical challenges of improvement once there is already a set of solutions in mind. Chapter 4 addresses the principle that *we cannot improve at scale what we cannot measure*. Bryk et al. emphasize a common challenge facing school leaders and researchers hoping to use data to improve performance: the measures that are the best for informing improvement are often quite different from those that most frequently inform research or accountability goals. In the case of teacher evaluation, for example, rubrics that inform improvement are often most helpful when embedded in a specific instructional routine teachers are attempting to master, while those that support evaluation need to be broad enough not to favor some approaches to instruction over others. The authors give an example from one of their improvement networks to highlight some of the steps to developing measures that can help shed light on a problem and assess whether steps taken are moving in the right direction.

In chapter 5, which focuses on *using disciplined inquiry to drive improvement*, the authors draw on one district’s efforts to improve how teachers receive feedback from administrators, illustrating the role different kinds of measures can play in guiding the work of improvement. Process measures, for example, can inform if a particular intervention is actually being implemented and can help leaders learn from those positive deviants who are having more success in implementing a particular process. The authors also suggest developing

balancing measures, which specifically are designed to measure unintended consequences of a particular organizational change (e.g., whether a new evaluation process is taking up huge amounts of principals' time). Beyond the intelligent use of appropriate measures, disciplined inquiry also involves making strategic choices about the pace at which to test a new process. Consistent with much organizational literature, Bryk et al. argue for leaders to begin with very-small-scale experiments before gradually testing their improvement on a larger scale as a means of building capacity, refining the intervention, and garnering buy-in.

Thus far, most of the insights from this book could apply to an individual school or district. However, in chapter 6, Bryk et al. suggest that schools can *accelerate learning through networked communities*. They define a networked improvement community as a group of organizations united by the same improvement goal and working theory that come together to use disciplined methods of improvement research to accelerate the refinement and diffusion of solutions to their shared problem. Drawing on their experience with almost thirty community colleges they brought together with the common aim of improving low passing rates in developmental math courses, they discuss how communities of organizations with shared improvement goals can benefit from the diverse perspectives and assets that each organization brings, while also stressing the challenges that come with trying to unite organizations of differing contexts and capacities around a shared problem, language, and working theory.

Bryk et al. preface this book with an apt disclaimer: "This book is merely a starting point" (p. xvi). Indeed, those looking for a step-by-step guide to bringing the lessons of improvement science to educational settings will have trouble with the nonlinearity of their principles and lack of consistent attention both to the inherent messiness of such a process and common pitfalls first-time users might encounter. One question this book does not quite resolve is whether such a blueprint could even exist without oversimplifying the work of improvement in varying and complex contexts.

Still, *Learning to Improve* offers a unique mix of perspectives that should provide a valuable orientation for researchers, practitioners, and policy makers alike—one that aims to leverage economies of scale while still seeking to empower and prioritize the voices of teachers and students in driving improvements; that values data-driven decision making but recognizes the limitations of the outcome measures and methodologies that too often crowd out other indicators and approaches to inquiry; and that focuses on discrete, user-centered problems while still seeking to map out how a complex system might contribute to these challenges. Ultimately, the power and impact of this book come from Bryk et al.'s ability to discuss these tensions in a way that is likely to persuade and resonate with individuals with a diverse set of ideological leanings and from a variety of positions in the field of education.

M.Y.

References

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