



Improvement Science in Times of Crisis

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By Brandon Bennett

On October 29th, 1929, the stock market fell 24.8%. In one day, a thriving successful economy was turned on its head, confidence was shattered, and the event became known as Black Tuesday. It marked the start of the Great Depression. What began as a rapidly unfolding crisis would drag on for the next ten years.

COVID-19 was first diagnosed in the United States on January 19th, 2020. In California, the shelter in place order began on March 19th, two months later. The effects on our state and our economy can only be described as a crisis. Unemployment has skyrocketed, supplies of essential materials are scarce in places, and children are physically out of school, some for a minimum of 5 months. Districts statewide are in crisis management mode. Questions of “how” are everywhere: How do we continue feeding our students? How do we ensure equitable access to digital classrooms? How do we track attendance? How do we track teacher student interactions? How will we reopen? How do we support teachers to teach in an unexpected distance environment? How do we support teachers who themselves are balancing work and parenting from home? The list goes on.

The central problem of leadership has always been prediction. During this moment, when so much is unknown, leaders are facing the tremendous challenge of managing their system while not being able to predict what will happen next. How can Improvement Science help?

Pivot toward rapid learning. A central tenant of Improvement Science has always been the application and use of rapid learning cycles, also known as Plan-Do-Study-Act (PDSA) cycles. In moments of crisis, PDSA is an extremely effective tool for guiding systems toward productive outcomes, even when the path to those outcomes is unclear. Consider a question like, how will we meaningfully engage students in an online environment? Undoubtedly, there are ideas, but which one is good and which ones are likely to fail? In the face of this unknown, the use of rapid cycle learning, trying an idea for a day or two, with a handful of teachers, can quickly determine the answer.

And what about: how will we reopen if physical distancing is still a requirement in the fall? Rapid cycle learning can be used here too. District teams could use rapid learning cycles to quickly simulate what movement through a school would look like, what new physical arrangements of classrooms could look like, and what protocols for entry and exit could look like.

Unsure what simulation is? [check out this clip from “The Founder”](#).

Focus on infrastructural change. The world on October 30th, 1929 looked about the same as it had on October 28th, but with the impact of Black Tuesday, it felt very different. With a collapse of the economy unfolding over the next 3 years, it became apparent to leaders that the United States could not “go back.” Moving forward, business and government would need to look different; it would require infrastructural change. It was during these years that the [New Deal](#) took shape; the Glass-Steagall Act (1933) would regulate speculation in banking and securities, Social Security was born (1935), and the Housing Act

was passed (1937, later to become known as the Department for Housing and Urban Development).

Leaders have a rare and unique opportunity right now. Their systems have been disrupted, often in unpredictable and negative ways. There is no “going back” to the way things were. Staff are more willing to consider change. People understand why change is now needed. Leaders can repurpose existing resources and, in some cases, allocate new resources toward the development of infrastructure that would better serve the purpose of their organizations in the future.

In some cases, this might mean investing in infrastructure that would support continuous learning and improvement. For example, building systems which could track and analyze data in closer to real time for decision making (e.g., local collection and analysis of DRA scores to improve instructional practices related to literacy). It could also mean working to create new physical environments that better meet student needs on return. In some systems, this may be a rare moment to simply engage in the maintenance of existing resources so those resources can still serve their purposes for years to come. How often is simple maintenance delayed because “we use that everyday and don’t have an alternative to use while we fix it.”

Investing in new or maintaining existing resources is key and it is important to recognize that not all resources are physical. In many instances allocating human resources differently or utilizing existing structures while changing their purpose will help better meet emerging needs.

The inability to predict can cause a great deal of anxiety, leaving leaders and staff feeling uncertain about what to do or how to do it. Utilizing tools like the Plan-Do-Study-Act cycle offers a path forward: learning our way into the future, shaping our systems to meet emergent needs while ensuring we remain fit for purpose. Taking the long view of investing in and repurposing our

resources can help us to stay focused, to keep moving forward, and to maintain perspective on what is most important: our students.

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