

## Abstract

Governmental entities around the world require schools, especially those labeled inadequate, to develop improvement plans. While these plans are intended to help schools be more effective, research shows many educators view the process as a compliance exercise. A design-based approach holds potential to reframe improvement planning as a rigorous, context-specific, and collaborative process. Design thinking is one way to enact a design-based approach, but little research has investigated the process's use for educational improvement. In this mixed-methods study, we examined a year-long professional development workshop on design thinking for improvement sponsored by a U.S. state education agency. Findings highlight that while design thinking helped educators devise more nuanced improvement strategies, participants remained skeptical about whether their efforts would be sustained. We close by discussing implications, specifically the need to create time and space for educators to engage in the slow, deep thought required by design thinking.

## Context and Research Questions

### Study Context

A year-long design thinking professional development workshop sponsored by a U.S. state education agency (SEA) and a university educational leadership capacity building center (“The Leadership Collaborative”)

### Research Questions

1. How do participants describe the design thinking process and its application to educational improvement?
2. What aspects of the design thinking process do participants believe enhances abilities to identify and address improvement-related issues?

## Conceptual Framework

### Educational Improvement Paradigms

- *Traditional Paradigm*
  - Good plans → improved school performance
  - Sanctions → improved school performance
  - Teachers teach
  - Administrators administrate
  - Teacher domain = inside classrooms
  - Administrator domain = outside classrooms
- *Design-Based Paradigm*
  - Gather data, test strategies, and refine strategies → improved school performance
  - Improvement work is team-based with various stakeholders
  - Considerable focus on root cause analysis before strategy development
  - Improvement planning is a dynamic and “live” process during the whole school year

### Design Thinking Process

- *Stage 1 – Empathize*
- *Stage 2 – Define*
- *Stage 3 – Ideate*
- *Stage 4 – Prototype*
- *Stage 5 – Test*

## Method

- Convergent mixed-methods design
  - Collected QUAN data and QUAL data
  - Analyzed data together to converge
- 58 participants
  - 50 workshop participants across 10 teams
  - 8 workshop facilitators
- Data sources
  - 4 surveys with open-ended items
  - 13 semi-structured interviews with participants
  - Documents submitted to the SEA
- Data analysis
  - Integrated coding scheme
  - Open coding of all data sources
  - Deductive coding via literature and framework
- Limitations
  - All participants “opted in”
  - Non-response bias
  - COVID-19's onset, which truncated collection

## Findings

### RQ1 – Applying Design Thinking to Education

- Design thinking both *preserved and challenged* the traditional improvement paradigm
- Design thinking *enhanced existing improvement processes* in schools and districts
  - Specific influence of design thinking's emphasis on empathy, root cause analysis, and overall flexibility
- Design thinking encouraged educators to “slow down” and “[sit] with [...] the problem”
- Design thinking *lowered the pressure* of having to choose the “right” strategy from the outset; it was “okay to be unsure”
- Design thinking reduced educator desires to identify and implement “the quick fix”
- Design thinking permitted educators to *devise more contextually-appropriate strategies* that their colleagues would actually implement
- Design thinking *clashed with prevailing norms* in the education profession (“not my job”)
- Participants had concerns whether efforts would be sustained past the workshop
  - Many “You can't...” factors, such as union contracts and the school calendar
- **Ultimately, the traditional improvement paradigm remained very influential**
  - The “hamster wheel” and the “standard box”

### RQ2 – Enhancement of Improvement Abilities

- Findings centered on design thinking's influence on participants' *mindset and practice*
- Pronounced self-reported mindset shifts, but need to see if practice actually shifts, too
- *Influence on Mindset*
  - “You kind of get stuck in this wheel of, ‘When this happens, this is what we do.’”
  - Break down the “big issue” and feel “a lot less gloom and doom”
  - Ways to “affect change in my small kind of locus of control”
  - “discussions move mindsets”; “mindsets move actions”
- *Influence on Practice as Educators*
  - Started gathering more “end user” perspectives, which provided “very candid feedback”
  - Started creating new data collection protocol to keep a “pulse” of their contexts
  - Started to better consider “the roots” of problems plaguing their contexts
  - Started to intentionally diversify the voices involved in and that have influence over improvement efforts

## Discussion and Implications

- Deep cognition about identifying contextual problems and their potential root causes is often notably absent from the traditional improvement paradigm
- The ability for educators to reflect and tussle over ideas and strategies—something the workshop provided—was a luxury amidst the bustle and fast-paced nature of schooling
- Design thinking's emphasis on empathy prompted educators to create more nuanced improvement efforts that were more appropriate to those charged with implementing the efforts
- SEAs and districts should provide structure and compensation for educators to think deeply about their contexts and what needs improving
- Existing team dynamics seemed to be amplified or exacerbated, so future research should address team readiness for engaging new ideas

## Research Team

**Bryan A. VanGronigen** is Assistant Professor of Education in the School of Education at the University of Delaware. His overarching research focus is on organizational resilience and change management in K-12 schools with specific interest areas in school improvement efforts, the preparation of educational leaders, and educational policy analyses.

**Lauren P. Bailes** is Assistant Professor of Education in the School of Education at the University of Delaware. She researches school leadership preparation and evaluation, school organizational characteristics, and the intersection of school leadership and policy.

**Michael L. Saylor** is Education Associate for School Leadership for the Delaware Department of Education. He creates and implements programming intended to improve the preparation and practice of educational leaders in schools and local education agencies.