

A Model for Program Improvement Using Reflections by EdD Scholars About Adaptation During a Pandemic Time

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ABSTRACT

The results of a reflective survey, used for program evaluation, demonstrate how EdD scholars used their learning about Improvement Science as an insightful lifeline and for practical guidance within their professional practice in an uncertain time. Scholars imparted valuable information to EdD faculty about the strains and challenges they were under. Faculty, in turn, enhanced their choice of content and approaches to teaching about how to manage actionable change and becoming a more reflective and resilient practitioner. In CPED-influenced programs such as ours, this exchange of learning is ongoing and natural, as scholars pitch up problems of practice in need of immediate progress and improvement—sharing insights into strategies (successful or failed)—with faculty. Program learning and enhancements, in light of our students' lived experience and learnings, are discussed. We conclude with guidance about tools and procedures to navigate turbulence in educational systems.

KEYWORDS

EdD programs, COVID-19 pandemic, Improvement Science, reflection, EdD program improvement

INTRODUCTION

The design of doctoral programs generally has focused on the co-location of required curricular components, which act as a blueprint for a degree. For Carnegie Project on the Education Doctorate (CPED) (n.d.) informed programs, these components include a signature pedagogy, laboratories of practice, and dissertations in practice. Faculty see the sense in the curriculum design to help scholarly practitioners improve outcomes in educational organizations. However, this may not be evident to scholars, especially if the connection between degree components and practical application is not explicit.

Background

As higher education institutions were rocked by the impact of the global COVID-19 pandemic, a clarion call to support educational leaders who were addressing unprecedented levels of change in America's schools and classrooms rang out loudly and clearly. For faculty, the priority was to grapple with how to engage and support students rather than what is on the syllabus this week. For many of us, work shifted from teaching the components of Improvement Science (IS) to embodying the tenets of IS in a manner that demonstrated the relevance of the work to the challenges at hand. Specifically, we sought to customize coursework and experiences to

increase their immediate relevance and to focus on the unique contexts that our scholars faced.

To accomplish that goal, we asked our scholars how they were engaging IS techniques as they navigated turbulence at work. Initially, this was done through informal conversations online, and it became increasingly evident that our scholars were using the principles of IS that formed the bedrock of our program. They explained that, at work, a Note-Taking Guide with IS-related informal questions was often a point of reference (Appendix A). Some had created multiple copies that they used in meetings. Others had expanded the IS principles (Bryk et al., 2015) to poster-size and mounted them on the wall of their offices. It became clear that we needed to use this natural entry point as an opportunity to gain information from our scholars about how to make program improvements and assist them as the pandemic persisted, hence the development of a qualitative survey that informed our evaluation of the program and next steps.

Systems, People, and Change

Educational leaders, such as our scholars, are taught to accept that all things in life will change. They are trained to adapt their leadership to the unique circumstances in which they find themselves (Heifetz et al., 2009). They understand how to engage in



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a variety of plans and processes for improving outcomes and moving a school or a district forward with an eye to context (Bryk et al., 2015). Primarily, their experience and expertise tend to be steeped in more stable and predictable situations. When systems are stable (Ansoff & McDonnell, 1990), there is limited change over longer periods of time and business as usual tends to continue. Leaders are on solid ground in the organization's management, their capacity to support their team members, and their ability to understand, decide, and move forward. Conversely, when large-scale changes occur over relatively short periods of time, leaders experience turbulent environments where there is no business as usual. Milliken (1987) coined the term *environmental turbulence* to gauge the impact of external environmental factors on an organizational system. When the global COVID-19 pandemic occurred in 2020, a seismic shift in educational systems (and that former solid ground) occurred. Educational leaders experienced changes of a greater magnitude than previously and at a faster pace than any of their crisis management responses could handle. The chronic nature of COVID-19 necessitated learning a new normal for workflow and forced adaptations.

Improving Support for Scholar-Practitioners

CPED-influenced programs typically use IS principles (Bryk et al., 2015) in addition to other change methodologies to help leaders plot a course for efficient change to solve the most difficult problems in educational systems. Providing space in EdD programs to reflect on the principles of IS fostered important adaptation habits during the pandemic, so did frequent temperature check-ins with the intention of making the curriculum better serve students. After the first six months of the pandemic, we used a survey with open-ended questions to help EdD scholars reflect and debrief their work experiences. We asked them to discuss their actions and change strategies and the successes and failures they had experienced. In addition to setting the stage for discussion in class as a new semester began, we also looked to the survey for guidance about how to enhance our EdD program during this fundamentally unstable time.

RESEARCH METHOD AND APPROACH

This study was situated within a large urban university in the southeastern United States that serves pre-service and in-service educators from surrounding school districts, which are experiencing a high degree of change in both student population increase and student body diversity. This program enrolls professionals who work for local high-needs school districts and engage with students who are often the most vulnerable and/or historically the most marginalized. EdD students are part of small cohorts of 12-24, take courses in a variety of formats (some of which meet on campus), and attend all-cohort gatherings several times a year.

Survey

The survey questions (Appendix B) were designed to engage scholars in a reflection activity about applying IS principles to their work during the pandemic's initial months. Scholars, all of whom work with special populations or in special education, were surveyed about problems of practice they experienced and how they applied an IS approach to help guide their actions through a global pandemic.

They discussed how they adapted their leadership styles to the problem of practice that emerged because of lockdown, how they navigated data (or lack of data) to improve conditions in their schools, and how they leveraged and improved their teams and networks to facilitate changes in response to continued uncertainty.

Sample and Data Collection

In August 2020, scholars attended a virtual program-wide advance meeting, during which the survey was administered online. Scholars (n=46) worked for PreK-12 campuses, school districts central offices, universities, and non-profits providing services to educational organizations. Scholars were all aged 21 or older and enrolled in EdD program coursework for Fall 2020. Data were de-identified.

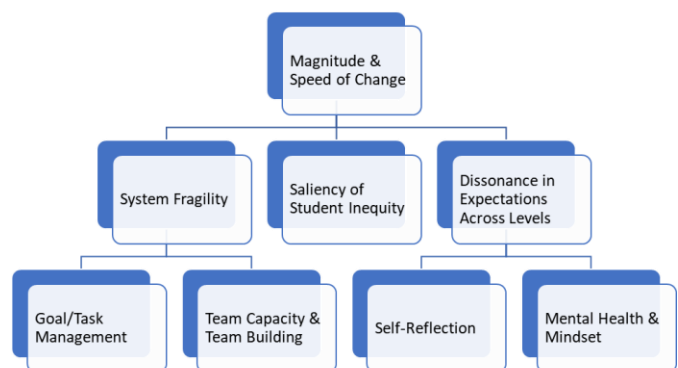
Analysis

Rather than using a survey to examine correlations among variables to test hypotheses, this survey became an activity for participant reflection, a type of asynchronous interview, and a listening device for faculty in the service of program improvements. Although the responses were easily organized according to principles of IS—and we did code responses based on the depth of information given for each principle (and subcategories of the principles)—we also read the scholars' stories individually and allowed the data to present additional themes. Faculty experiences and knowledge about the conditions of education at that time served this process (McCracken, 1988). Data was read, coded, reread, and discussed until themes were solidified (Creswell & Creswell, 2018; Lincoln & Guba, 1985).

OBSERVATIONS AND RESULTS

The analysis of the open-ended questions revealed that scholars were grappling with a high degree of quick change during the first six months of the pandemic. They discussed inequity in curriculum delivery for students, system fragility, and dissonance in expectations (Figure 1). We saw further details about how they handled goals/tasks and teamwork to solve problems in the system. We also read about how they evolved as leaders and considered mental health and mindset at work. We discuss each of these themes in turn.

Figure 1. Survey Themes





Magnitude and Speed of Change

Overall, affording leaders the space to reflect on the magnitude and the speed of change at work was an essential first step to helping them share the turbulence they were confronting. The simple task of journaling their responses in the survey provided many with both a private space to express themselves and an orienting structure that led them through a change process. This structure would later function as part of the foundation for their new normal.

For many, the context of their work lives changed dramatically and overnight. They described transitioning from place-based to virtual delivery of services. They felt the switch from a goal-oriented structure with a strategic plan to a situation of no structure in which they felt rudderless. They expressed having limited capacity to realize any goals or priorities that had been in place a few days prior—in that before-COVID time space that now felt underappreciated. Instructional experts became technology amateurs as they grappled with using various technology platforms, novel devices, and a revolving door of training and support meetings that consumed their time and energy. Their sphere of influence was extended to supporting families and communities. When at one time, that sphere of influence was constrained to supporting the 25 students in their classroom or the 1,000 students on their campus. They now knew more about family members and family struggles. Learning more about others and their circumstances prompted self-reflection about their own mental health and wellbeing, their own coping mechanisms, and their own ability to adapt to gargantuan and rapid change, which often appeared insurmountable.

While often engaging with more people in virtual environments, they expressed senses of loneliness, stress, and insecurities about the future that were novel for them. Social cues, responses from colleagues, and goals and expectations were different in virtual environments. They had plans, but those plans were no longer possible and re-baselining of processes and priorities had to get underway.

Saliency of Student Inequity and Difference

A key challenge for all scholars concerned serving students with inadequate access to resources, which made the delivery of educational services extremely problematic. One scholar noted that many of their students were dropping out or taking extra jobs as parents were laid off from their work. This scholar, who served students in the transition to higher education, also expressed a concern about the lack of jobs for those who persisted and graduated from high school. A solution was to help high school graduates to learn to self-advocate. Another solution concerned building rapport to help students feel connected to their educational goals. One strategy was to schedule meetings during lunchtimes for students who balanced work and school.

Many students in PreK-12th grade lived in households without sufficient internet connection/bandwidth or insufficient devices. One scholar described trying to understand the demands on families—increased hours required to be online, the need to interact with lessons during non-work hours for parents, and the fact that some families were unreachable at times. Students with severe disabilities were extremely affected as it was difficult to provide services and assessments via computer. Many of the students were unable to use the devices that were available, and their parents or family members did not have the skills to support them.

System Fragility

Challenges that related to equity and access led to recurring reviews of systems. Initially, it became apparent that most schools had one way to deliver services. That delivery system was people-focused and relied upon daily interactions with students, parents, and families in buildings. Participants noted that their systems were not prepared to respond to a remote world. That system incapacity meant that many felt unable to respond to the needs of some of the most vulnerable students in their educational system. Scholars' concerns involved more than the obvious lack of Wi-Fi, lack of technology devices, and unfamiliarity with technology systems. COVID-19 demonstrated how far behind the times educational organizations had been in recognizing the variety of alternative options for learning that was available. Failure to invest in these options led many to see how vulnerable their systems were to environmental turbulence. Scholars described educational systems that failed to understand how technology could be used to support student learning. While some had indeed purchased the technology, the capacity to use that technology was insufficient.

To address these systemic challenges, scholars focused initially on aspects of remote learning that could be purchased. These purchases involved devices for students and teachers, Wi-Fi hubs that were set up in school parking lots or home internet plans at no fee, and learning management systems that would encourage teachers to transition to remote classrooms. As devices, Wi-Fi access, and technology options were acquired, the focus of systemic challenges morphed into a recognition that the people who were implementing the supports, essentially the soft or human side of technology, did not have the skills to deliver what was expected. Often, educators were familiar with their content but were unfamiliar with delivering content in alternate formats. Scholars also noted that students were unable to respond in ways that demonstrated that learning had occurred. One scholar expressed that moving too fast could break the system further. There was a need to modulate the speed of change, understand where people were in their knowledge capacity, their mental health, and their tolerance levels for on-going change. Scholars realized that people needed to be brought together to generate solutions.

While technology was frequently identified as the system in need of change in the early phase of the pandemic, scholars discussed the shift in their focus to the people within their systems. They recognized that working together and relying on each other was essential to productivity and successful results. They described a conscious shift to a more user-centered approach to system change. New thinking about moving education forward meant that rules would change, practices would change, and support would change. Personnel who worked most closely with students and families became the leaders who guided the efforts to change practices. Determining the needs of those on the frontlines, who could support them, and what that support looked like became the focus. Essentially, listening to and understanding the needs of teachers, students, and families improved how systems functioned by coordinating, communicating, and problem-solving together. Recognition that we rely on each other to be a productive unit was essential to positive results. In addition, recognition that systems are about people and that systems must adopt a mantra of flexibility and grace in all things, especially during turbulent times, was clearly top of mind for most scholars.

Goal/Task Management

Prior to the global pandemic, the activities in which our scholars engaged related to the provision of instruction, assessment, and support services to some of the most vulnerable students in the nation's schools. Some were engaged in these activities directly, while most supported other educators to accomplish the work. For example, scholars had goals to ensure that: instruction was provided to the students and that progress was monitored, behavioral supports were implemented in accordance with federal mandates, assessments were completed within timelines, support service hours were delivered as agreed upon, and that requirements of individualized education plans were met. Many managed others who engaged in this work through professional development, coaching, and leadership. The focus was on what needed to be done. They worked with trained professionals who came to campuses with the skillsets to complete the work.

Many scholars discuss how COVID-19 necessitated the re-baselining of both goals and management style. They were forced to transition from what needs to be done to how do we do that? They described reshaping their leadership styles as their main focus. Rather than continuing with the list of goals to be implemented from a strategic plan, they now focused on how any of those goals could be accomplished. Day-to-day goals and accomplishments became the focus. Focusing on what to do next and celebrating small wins were important. Rethinking communication methods, deliverables, presentations, work schedules, and expectations were common themes. They had to expand their understanding of families and the responsibilities parents faced while both working from home and ensuring that their children's needs were met. Scholars often learned that the more flexible they were in adapting to changing circumstances the more appreciative and receptive the families were. They learned that allowing people the time to discuss their needs and giving them voice provided a way to move forward. Many learned that communication between leadership and staff was limited, and to accomplish their goals, they must increase communication and expand their activities beyond instruction, assessment, and support services that had constituted their previous remit. They reported learning more about the people with whom they worked and the struggles they faced. Listening, compassion, and consideration of the needs of others became cornerstones of their daily lives.

Teams

Modifications to workflow using teams were discussed in detail by scholars. Some reflected on their feelings about delegating work and expanding their networks. Scholars also solved data and measurement dilemmas in teams as they adjusted their expectations about how to measure student progress and employee goals.

Scholars shared the need to rethink their workflow, the delegation of tasks, and the membership of their teams. Often this meant an expansion of some aspect of group work—adding communication points such as additional meetings or forming new committees. One scholar gave a detailed account of layering teams with distinct roles to make progress in serving students. This scholar noted that they needed “smaller effective teams” because existing defined roles and responsibilities were not sufficient to fully shift to online learning. However, this smaller team of leaders, who analyzed the system at-large, worked in conjunction with existing Professional Learning Communities (PLCs) to synchronize the learnings of the

smaller leadership group with the larger partnership of professionals on campuses.

Some scholars discussed shifting roles within teams, such as dividing work up among various stakeholders. This was critical to one scholar who served English learners (ELs) and represented a moment in which the individual had to decide what control to relinquish to others to gain information about how to serve campuses equitably. Relinquishing control was discussed by other scholars who noted that one person cannot solve problems, especially during a crisis. In addition to delegating work, several scholars noted the importance of bridging traditional silos of departments in organizations or bringing in “outside consultants.”

Building trust was another theme found among the survey data. Scholars indicated that recognizing expertise missing from the group was critical. One scholar described this concern in relation to solving technology challenges for the delivery of services to students and their families. For this scholar, yielding control to others resulted in time to feel more creative. Another scholar noted that goodwill and willingness were important for successful teams especially while doing continuous testing of “change ideas” under pressure. Scholars discussed what this looked like as they parsed their teamwork experiences.

In some cases, the expansion of teamwork led to networks and partnerships in the community at large. One scholar described how a non-profit educational services organization focused on communication among the high school and college that served a group of students, in addition to the local food bank. This scholar stated: “I am now accepting what partnership means.”

Finally, the difficulties of collecting traditional data troubled many scholars who described how their teams met this challenge. Despite the pandemic, professionals still had to meet legal mandates, measure student attendance, and coordinate effort across levels within school districts or coordinate effort across departments in higher education. Many scholars indicated they relied on anecdotal data from students, families, and educators to get a complete picture of the system and its challenges in curriculum delivery. New surveys were constructed, and new opportunities for communication were permitted. Teams also tackled changing how they collected data.

This “informal data,” as one scholar labeled it, felt strange and unnaturally distant from the norm. This same scholar referred to this as “other people's data,” underscoring the common experience of having to rely on others in novel ways to see the complete picture of people's experiences.

The importance of moving beyond the past norms of measurement was expressed by another scholar as being an important “pulse check,” in which increased communication using both formal and informal measurement served as a critical measurement of the health of education.

Many scholars reported that the pandemic led to positive changes in increasing both the quantity and quality of communication with colleagues. One scholar stated: “It has been beneficial to assemble cross-functional teams with a specific focus, timelines, action-steps, and deliverables.” Another scholar noted that adapting their leadership style and breaking silos was an area of growth, especially in recognizing the expertise of others and reciprocating. This scholar indicated they were new to their job. Not only were educators forced to consider teamwork and communication in new



ways, but many also achieved this as they entered new roles and experienced staffing shortages.

Many scholars said they would keep increased frequency of check-ins and certain tools that were developed for team members. Looking to the future, one scholar noted the need for developing a “response system” to manage innovative ideas and to spread ideas implemented by others. This is a primary challenge for people attempting to scale up work or discover novel ways of solving specific problems, as evidenced by the work the Carnegie Foundation (n.d.) has put into tech tools to improve communication in this regard.

Dissonance in Expectations

Given their complexities, discord is common in educational systems even during stable periods. Bottlenecks in service delivery are common. Communication flows through organizational levels but is often perceived as a one-way encounter by those not in management. The speed of change is felt inconsistently, depending on one’s role. And some people feel excluded from important conversations and decision-making. The educational environment requires cooperation among specialists who have diverse professional values and expectations of work, and this required cooperation along with individual thought can evoke change.

During the pandemic, when school districts issued new directives about curriculum management, one scholar noted a common complaint—that campuses were insufficiently equipped with the technology necessary to serve students in an emergency. Other scholars noted that the speed of change led to haphazard, uncoordinated implementation. Feeling as though they could not do their jobs professionally was also reflected in the concerns of scholars whose fundamental role was to ensure compliance with federal and state mandates for students with disabilities. Also, it was easy to misread tone in written communication, according to another scholar; this was a tricky situation to remedy given physical separation. These situations reflected a loss of control for scholars.

On the other hand, discord led to personal reflection and autonomy to lay the foundation for change. Some scholars considered more effective committee structures that involved everyone in necessary problem-solving. Some considered how the voices of everyone were necessary to engage in systems improvement. Many scholars reported forging new partnerships. Scholars also thoughtfully considered their institution’s future. One reported thinking about the mission through a “different lens” and wondered about “reinvention.” Another wondered, “What is the greatest measure of success” in higher education for the student body?

Self-Reflection as a Leader

The experience of giving up traditional autonomous roles and relying on others has been discussed in relation to team modification and expansion, as well as concerns about meeting data collection requirements. This next section describes what scholars said about their personal challenges with communication, especially in relation to how they experienced leadership.

Educators needed to find value in their daily work during a period of extreme change. One scholar wrote: “My focus has been to ensure that my staff understands what their daily goals should be and what daily success looks like.” Constant reflection and trial and error became even more critical and fast-paced. One scholar noted,

“I have learned to temper goal setting with today’s reality.” Another said: “My leadership focus shifted from more doing to more stopping and listening...” to the needs of all users across institutions. For another scholar, their expanded leadership led them to take on a new role having to do with advocacy.

To relate more to their colleagues, one scholar described using an online form to organize feedback. This was done to show that (1) they cared about their colleagues’ needs and (2) to be able to support their colleagues. This occurred during and after meetings, and the scholar noted positive effects such as more sharing of resources organization-wide and more consistency in messaging from the top down.

Often positive change began with the individual and then was adopted by a team. Changes made by scholars included increasing adaptation, organization, the use of technology and tools, follow up with others, communication with stakeholders, and the implementation of additional or interim deadlines. One scholar noted that it was important to know how to advocate for more data especially if it was sensed that something was missing or that the data provided did not make sense. Another scholar stated: “The pandemic has helped me to take charge of what I need and what my students need to succeed.”

At times, change was not comfortable even when the scholar recognized it as necessary. Having to rely on different data was an uncomfortable situation mentioned by several. If they previously relied on formal data and that data was suddenly unavailable, a number of scholars who switched to data gained through conversations with colleagues found the reliance on other sources to be jarring. Much of this was discussed in terms of evaluating services or in meeting mandates. One scholar went further and discussed measuring student success, noting that possible cheating by students left them concerned about having reliable measurements. This was at odds with their professional values of “collecting data with fidelity.”

Scholars evaluated how they had changed as leaders. They noted that they had gained an intentional focus because of more frequent conversations, a more acute focus on listening, and learning to use tools to help maintain improved levels of communication and intentionality in meeting planning. One scholar wrote: “We need to better define how we determine the success of our actions more frequently.” For many, communication improved, and new habits were established, such as online meetings in which better norms led to more productive communication. For others, they noted their roles and responsibilities became more defined with room to grow. One scholar noted: “The techniques were simple. Identify a need, adjust my course of action, try to stay the course (even when it is against my nature).”

Mental Health/Mindset

As scholars shifted their focus from which goals to accomplish to how to accomplish those goals, the needs of the people involved in the delivery of instruction and support came more sharply into focus. Scholars described the variety of reactions that educators and families expressed because of the sudden and substantial changes that were occurring in their daily lives. Many discussed their experiences in terms of mindset. They found that some people were more tolerant of change than others. Those who were less tolerant demonstrated a more fixed mindset that did not coincide with transitioning to a virtual world. They experienced higher levels of stress and often struggled with how to engage students or adapt to

technology systems when face-to-face contact with students was not possible. Others embraced the transition to a virtual world but were less tolerant of the on-going adjustments that were made in virtual platform use, increased professional development, and the extended hours of online support that occurred in an attempt to meet the needs of families with multiple children and students who required greater levels of support. Some with growth mindsets thrived in the virtual format and found it allowed them to be more responsive to students and parents, to provide recorded information sessions that could be reviewed later and encourage access to free online learning support tools.

While work-related stress was often discussed, most scholars reported developing a greater depth of understanding of the impact of the global pandemic on the mental health of their colleagues. They discussed their growing realization of the personal health circumstances and concerns that others experienced, an increased need to consider personal safety, and a need to provide greater consideration for individuals who were single parents or who cared for elderly relatives or young children with disabilities. Many allowed spaces for discussion of concerns, incorporated a culture of care in the workplace, and worked diligently to be flexible in making decisions and meeting needs. Most reported learning more about the needs of others and their unique circumstances, while stressing an awareness of the need for self-care and making decisions that are right for an individual. Some described conscious capacity building for mental health support and concern for the individual. For example, the first few minutes of team meetings were used for check-ins and opportunities to work in smaller teams provided greater levels of consistency for interpersonal connections. Many used COVID-19 time as an opportunity to learn and improve as an educator and as a leader. They took more time to listen and consider the needs of others, while coaching them through their work and building kinship in the workplace.

DISCUSSION AND IMPLICATIONS FOR PRACTICE

At the beginning, we raised the notion that effective EdD curriculum design helps scholarly practitioners to improve outcomes in educational organizations. This study made salient the immediate impact of a quality curriculum on the work of EdD students' professional lives. The survey responses revealed that scholars were engaging in the principles of IS in real time. Specifically, principles that they had recently acquired through an intellectual pursuit in coursework and that were intended to inform their future work in applied research were now viewed as an essential lifeline to survival in a shifting landscape with an indeterminate endpoint or outcome. Journaling about these IS principles—how they were making their work problem-specific and user-centered, focusing on variation, seeing the systems with which they engaged (and their outcomes), generating and reviewing data, driving change, and working with teams—helped to stabilize their experience and provide a path forward. This knowledge led us to contemplate the benefits of incremental and flexible changes, the enhancement of our EdD curriculum, and the enrichment of our learning community.

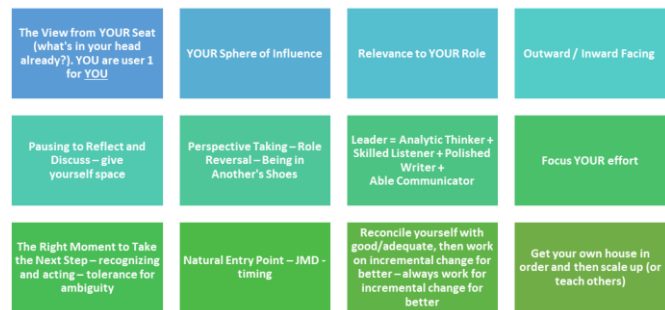
Flexible Change Management

Affording leaders a safe space where they could discuss these myriad stressors helped them to feel less alone, to experience a sense of safety with their colleagues, and to work on reinvented

structures for a future after-COVID was a conduit for moving forward that was, at least, familiar—the principles of IS. While during-COVID may have felt like quicksand, focusing on solutions to reclaim solid ground helped them to focus on one issue at a time, for one person at a time, do one thing at a time, and experience one success at a time. Progress was realized in the small steps, the daily successes, and the informal measures that were developed to assess procedural steps in the various novel processes that constituted their new normal.

In line with the university's mantra of flexibility and compassion during the global pandemic, responses to the survey were used by faculty to reflect on the content, format, and delivery of the degree program and to initiate actions that changed how students were engaged in their work towards a degree. This user-centered input about firsthand experiences, while leading through some of the most turbulent educational environments in the past several years, can enhance our program now and in any future times of instability. As special educators ourselves, we have focused on the tenets of Universal Design for Learning (UDL) throughout our careers (CAST, 2018). Hence, program design activities kept an eye on the overall arc of the degree and the ultimate functionality of the final product rather than the co-locations of course components. We also subscribe to the work of Argyris (1993) with specific attention to his concept of double-looped learning. It was not business as usual or changes based on what the faculty wanted to do. Rather, changes were implemented in alignment with the needs of our community of scholars with a focus on sustainability through what became a protracted pandemic. Given faculty and scholars' experiences during the past several years, we have modified the overall arc of our program and the way we approach decision-making rules. While the global pandemic most definitely posed problems to all involved, the evaluation of our program through the lens of IS helped us to define the problems differently and to look for additional solutions. We hope that our actions not only help us adapt but also help our students to anticipate changes that are inevitably ahead. The enhanced components are outlined in Figure 2 and discussed next.

Figure 2. Program Growth and Enhancements: Person-Centered Leadership



Program Enhancements

First and foremost, the enhanced program pays much greater attention to the user, our doctoral students, as we have moved forward from 2020. Specifically, our program flips the script by asking our students about the view from their seat, their sphere of influence, and the relevance of an issue to their role. Our focus on user-centered needs (a) helps enhance the relevance of the program to



their professional selves from the very first meeting, (b) ensures that what they research is relevant to their educational careers, and (c) can allow them to provide more rigorous supports for the educators they lead (Lenz, 2008). The notion of inward facing and outward facing learning (Almonte, 2021) helps them to interrogate how they manage themselves to perform their work and how they interact with others to support their change journeys. We have continued to engage Shulman's (2005) signature pedagogies in the professions and have expanded that content to incorporate opportunities to discuss the habits of head, heart, and hand that they embrace as they approach their daily work and how they can enhance their approaches to succeed. The need for spaces to reflect what the global pandemic wrought has been incorporated into courses, program meetings, and journaling activities. This encourages the habit of pausing to reflect and discuss as well as perspectives-taking that involves listening to others and engaging in role reversal activities, to enhance both leadership skills and mental health. The changes in leadership capacity that learning brings are demonstrated in a culminating portfolio component that asks scholars to demonstrate their capacity to think analytically, listen skillfully, write well, and communicate ably with a specific example of how they have focused their effort by engaging in professional (or personal) change.

From a systems perspective, COVID-19 has taught us all that timing and understanding levels of tolerance for ambiguity and uncertainty are important gauges for when to act and how far to move forward with others. Helping to recognize the right moment to take the next step and natural entry points for change have provided a perspective that change is about both the process and the impact that it has on the system as a whole. We have learned through this time that it is important to distinguish when to dip a toe in the water from when to jump in fully. We have incorporated attending to these subtle variations that exist within systems as key aspects of leadership. Using feedback loops and listening tours can guide progress by leveraging those entry points and engaging educators in change processes that are perceived to be within their respective just manageable difficulty zones.

From an outcome perspective, doctoral programs, and leadership in general, often feel like a race to the finish line and a standard of perfection. However, the process of learning and adjusting takes time and effort. Helping our scholars to reconcile themselves to good or adequate in their initial work and engaging in incremental change for the better as they move through the program has been one of the most challenging notions for many to accept. Allowing themselves the flexibility and grace to try, perhaps miss the mark, refocus, and rinse and repeat has been especially challenging when paired with the emotional upset that a global pandemic delivered. Providing a design space to demonstrate their capacity to get their own house in order, to be confident in their knowledge and skills to accomplish the tasks before they scale up also has been helpful for many as they hone their leadership skills.

Community

While continuing as a work-in-progress, our program faculty and doctoral students have built a greater kinship through working together to respond to the recent environmental turbulence in educational and social systems that have resulted in our new normal. At first we accommodated this new normal; now we are beginning to assimilate it. Accommodations, that occurred with such magnitude and speed, highlighted the deep inequities in current systems and

focused our efforts on meeting diverse needs in diverse ways. Within educational systems, ongoing challenges of structural dissonance and internal discord often manifested to impede progress and emphasize the fragility of those systems—especially in times of major change. Individuals sensed this also. They gained a deeper understanding that systems are engaged by people. When people experience gargantuan changes in their lives it is necessary to re-baseline goals, work together for the common good, pause to reflect on what is ongoing, and never lose sight of the welfare and mental health status of ourselves and our communities.

Embracing our new normal at the three-year mark means that we have taken the opportunity to enhance our program during times of instability and have built a more robust model that anticipates the incorporation of additional adaptations that may be necessary. We will continue to focus on internal change but will be ever mindful of the needs of our external audiences. Our scholars and the educational systems they support deserve our very best.

CONCLUSION

In responding to the survey outcomes, we became more user-centered. In asking how our scholars were using IS and what they needed, we recognized the variety of support that could drive future changes in our program's content and delivery. We learned more about our scholars, their work and community contexts, and their personal circumstances. We learned more about the areas in our systems where scholars could fall between the cracks. We learned that we were necessary but not sufficient to meet the needs of our scholarly practitioners as they advanced through the program. We had to work together, in teams. We had to work with our scholars, listen to them, and adapt to make progress. We had to engage increasingly diverse actions to adapt degree components while maintaining the integrity of those components for the institution. We have learned from these transformational experiences how to improve programs. To do otherwise would be both hypocrisy and a missed opportunity.

In summary, a program evaluation survey was used as a reflective activity, in which scholars revealed how their learning about IS was insightful and offered guidance within their professional practice in an uncertain time. In turn, they imparted valuable information to EdD faculty about the strains and challenges they were under, which affected faculty's choice of content and approaches to teaching about managing actionable change and becoming a more reflective and resilient practitioner. In CPED-influenced programs such as ours, this exchange of learning is ongoing and natural, as scholars pitch problems of practice in need of immediate progress and improvement—sharing insights into strategies (successful or failed)—to faculty. These faculty complement students' lived experience and learnings with guidance about tools and procedures to navigate turbulence in educational systems.

While explaining how they worked to adapt their systems, scholars imparted information about how they changed and adjusted as leaders. This was an essential (and immediate) growth-mindset experience for them. They inhabited a herculean role—addressing pernicious problems of equity within multi-level complex systems, in which their spheres of influence can vary and be unstable, under the most difficult of circumstances. Their problems were exacerbated by the community and family challenges for the many special populations of PreK-12 students served by the nation's school



systems, not to mention the overwhelming issues and sadness that constituted a pandemic. We read in their words how educators are at severe risk of feeling overwhelmed and not persisting in their professions (Edsall, 2022). These change leaders—at a time when much was asked of them—adapted their leadership to the context and responded to the political landscape of their work environments; assessed the needs of their networks; and forged best practices for incremental transformation (Bryk et al., 2015; Hawkins et al., 2019; Hawkins & Martens, 2021; Perry et al., 2020; Rasmussen et al., 2022). We intended to learn from them. We are all better for what we have learned.

REFERENCES

Almonte, R. (2021). A practical guide to soft skills: Communication, psychology, and ethics for your professional life (1st ed.). Routledge. https://doi.org/10.4324/9781003212942
Ansoff, H. I., & McDonnell, E. J. (1990). Implanting strategic management (2nd ed.). Prentice Hall.
Argyris, C. (1993). Knowledge for action: A guide to overcoming barriers to organizational change. Jossey-Bass.
Bryk, A., Gomez, L., Grunow, A., & LeMahieu, P. (2015). Learning to improve: How America's schools can get better at getting better. Harvard Education Press. https://doi.org/10.1002/sce.21223
Carnegie Foundation for the Advancement of Teaching. (n.d.). Resources. https://www.carnegiefoundation.org/resources/
Carnegie Project on the Education Doctorate. (n.d.). The CPED framework. https://www.cpedinitiative.org/the-framework
CAST (2018). Universal design for learning guidelines version 2.2. http://udlguidelines.cast.org
Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications.
Edsall, T. B. (2022, December 14). There's a reason there aren't enough teachers in America. Many reasons, actually. The New York Times. https://www.nytimes.com/2022/12/14/opinion/teacher-shortage-education.html
Hawkins, J., Henry, G. A., Jones, S. J., Santi, K. L., & Butcher, K. A. (2019). Implementing professional learning communities: improvement required. In R. Crow, B. N. Hinnant-Crawford & D. T. Spaulding (Eds.), The educational leader's guide to improvement science. Myers Educational Press.
Hawkins, J., & Martens, M. (2021). Empowering incremental change within a complex system: How to integrate Improvement Science principles across organizational levels. In R. Crow, D. T. Spaulding, & B. N. Hinnant-Crawford (Eds.), Teaching improvement science in educational leadership: A pedagogical guide. Myers Educational Press.
Heifetz, R. A., Grashow, A., Linsky, M. (2009). The practice of adaptive leadership: Tools and tactics for changing your organization and the world. Harvard Business Press.
Lenz, B. (2008, May 27). The four r's: Rigor in twenty-first-century schools. |Edutopia. https://www.edutopia.org/envision-schools-rigor
Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. SAGE Publications.
McCracken, G. (1988). The long interview. SAGE Publications. https://doi.org/10.4135/9781412986229
Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. Academy of Management Review, 12(1), 133-143.
Perry, J. A., Zambo, D., & Crow, R. (2020). The improvement science dissertation in practice: A guide for faculty, committee members, and their students. Myers Educational Press.
Rasmussen, H. T., Hawkins, J., & Crow, R. (2022). Adaptive leadership and improvement science: Natural bedfellows. In M. Raai, & H. T. Rasmussen (Eds.), Adaptive leadership in a global economy: Perspectives for application and scholarship. Routledge.
Shulman, L. S. (2005). Signature pedagogies in the professions. Daedalus, 134 (3): 52-59. https://doi.org/10.1162/0011526054622015

APPENDIX A: NETWORK IMPROVEMENT COMMUNITIES: NOTE-TAKING GUIDE (INDIVIDUAL OR GROUP ACTIVITY)

Problem of Practice:

Table with 2 columns: Question/Task and Your campus/district. Rows include: 1. Work is problem specific and user centered. 2. Performance will vary! 3. Get to know your organization. 4. Measures



<p>5. Drive Improvement – Interventions + Inquiry</p> <p>Differentiated solutions are necessary if user-centered principles guide our work. What are the variety of solutions that have helped ensure success in various contexts?</p> <ul style="list-style-type: none"> • What are the various interventions/solutions? • Create a Driver Diagram that links the components. • Set up a system to test the solutions: <ol style="list-style-type: none"> a. Plan – Problem-Specific User-Centered b. Do – Implement the intervention c. Study – Measure the outcomes d. Act - Adjust, rinse, and repeat until you're getting the intended outcomes 	Your campus/district
<p>6. Networks – Teams – Working Together</p> <p>Who will help to Plan, Do, Study, and Act?</p> <ul style="list-style-type: none"> • Specific Problems can be big • User-centered solutions can be complex • Scale starts with a Network • Identify supports. • Identify Network members 	Your campus/district

20	Open-ended	How has disciplined inquiry helped?
21	Open-ended	What were the main techniques used?
22	Open-ended	How did you decide to keep/change techniques?
23	Open-ended	How have you adapted your leadership with new techniques?
24	Open-ended	What is the importance for a leader to rely upon Disciplined Inquiry?
25	Open-ended	How has including networks helped?
26	Open-ended	Who were the network members?
27	Open-ended	Did you add or subtract members from networks?
28	Open-ended	How have you adapted your leadership to incorporate networks?
29	Multiple-choice	What is the importance for a leader to engage Network Improvement Communities?
30	Multiple-choice	What role best describes your Professional Career
31	Multiple-choice	What best describes your Professional Activities

Note. Dr. Jacqueline Hawkins, University of Houston, jhawkins@uh.edu. Adapted from Bryk, A., Gomez, L., Grunow, A., & LeMahieu, P. (2015). Learning to improve: How America's schools can get better at getting better. Harvard Education Press. <https://doi.org/10.1002/sce.21223>

APPENDIX B: SURVEY QUESTIONS

#	Type	Question
1	Open ended	How has being problem specific and user-centered helped?
2	Open-ended	What were the main problems?
3	Open-ended	Which users were your focus?
4	Open-ended	How have you adapted your leadership to focus on users?
5	Multiple-choice	What is the importance for a leader of being Problem Specific and User-Centered?
6	Open-ended	What variations in performance have you encountered?
7	Open-ended	For whom were these variations most evident?
8	Open-ended	How have you adapted your leadership to respond to variation?
9	Multiple-choice	What is the importance for a leader to focus on Variations in Performance?
10	Open-ended	How has adopting a system perspective helped?
11	Open-ended	What were the current system challenges?
12	Open-ended	Which system components were your focus?
13	Open-ended	How have you adapted your leadership to take a systems perspective?
14	Multiple-choice	What is the importance for a leader to adopt a System Perspective?
15	Open-ended	How have measures/data helped?
16	Open-ended	What were the main measures you used?
17	Open-ended	Which measures helped you the most?
18	Open-ended	How have you adapted your leadership to incorporate measures/data?
19	Multiple-choice	What is the importance for a leader to use Measures?