All systemic change depends upon the hard work and commitment of the people who are on the front lines of the work. Engaging these stakeholders in a positive and effective process is a key leadership challenge. In the case of implementing mathematics pathways, many leaders are concerned about how to support mathematics faculty in the change effort. Engaging faculty is especially difficult in situations in which change is seen as a mandate, faculty are already suffering from initiative fatigue, or the institution is facing other disruptions such as budget cuts or turnover in leadership.

Metropolitan Community College–Kansas City (MCCKC) took a strategic approach to supporting and engaging faculty in mathematics pathways. This approach provides lessons to others engaged in similar efforts. MCCKC serves more than 37,000 students on five campuses in the Greater Kansas City, Missouri region. As often happens, the impetus for implementing the pathways originated from external sources.

**TAKEAWAYS**

- Cultivating faculty support can be an early challenge in the implementation of mathematics pathways.
- Faculty concerns about implementing mathematics pathways may be addressed by engaging them in the process.
- Actively collecting data about faculty concerns and then directly addressing those concerns can have substantial impact on the success of a mathematics pathways initiative.
Background

In 2010, then-Governor Jay Nixon challenged the state's educational institutions to increase the number of Missourians completing postsecondary education. Legislators, the Missouri Department of Higher Education (MDHE), faculty, and administrators began working to respond to that challenge. Mathematics emerged as a critical factor in increasing rates of completion.

In September 2014, the MDHE hosted the Missouri Mathematics Summit to engage faculty and administrators in discussions about improving mathematics pathways for students, course redesign, and best practices. All Missouri institutions of higher education were invited to attend. In October 2014, Complete College America and the Charles A. Dana Center selected Missouri, along with five other states, to participate in the Building Math Pathways to Programs of Study initiative. To guide the state's work, the Missouri Mathematics Pathways Task Force (MMPT) was formed, whose charge was to develop strategies to implement alternative approaches to the assumption that College Algebra should be required for all students. The task force released its “Report of the Missouri Mathematics Pathways Task Force on Building Math Pathways into Programs of Study” in June 2015 and the MDHE hosted a second summit in October 2015.

Challenges

After the completion of the MMPT report, task force member Bill Morgan, an MCCKC mathematics faculty member, and other MCCKC leaders began planning to make mathematics pathways a reality at their institution. There were a few challenges facing them in this endeavor. For example, each campus has its own separate mathematics department and a culture of operating independently. In addition, the college was already in the midst of work on a Title III grant from the U.S. Department of Education's Strengthening Institutions Program, which included redesigning mathematics courses, implementing new tracking systems, and introducing proactive advising. The Title III reforms took place within a condensed timeframe that was challenging for staff, faculty, and students alike. While the work led to lessons learned, it also caused a sense of unease institution-wide when the state mathematics pathways task force released its report advocating yet more reforms.
Solutions

With this background in mind, MCCKC circulated a four-question survey to its math faculty about the math pathways curriculum initiative. Concerns about faculty resistance proved unfounded. The survey results revealed that a majority of faculty were in favor of implementing math pathways although they were very concerned about the transferability of the new courses to four-year institutions. To address this issue and to engage faculty in meaningful discussions about the changes, MCCKC organized its own summit in May 2016. The college invited faculty, advisers, math support personnel, and administrators from all five campuses. The daylong summit was facilitated by MDHE Assistant Commissioner of Academic Affairs Rusty Monhollon and a consultant from the Dana Center.

According to Morgan and Jason Pallett, a faculty member who was heavily involved in the math pathways initiative, the summit provided an open forum for faculty to raise concerns directly with a state-level higher education administrator (Monhollon) and to gain reassurance that transfer institutions would accept the math pathways courses. The meeting also allowed Monhollon to share similar work already being done at other two-year and four-year institutions. The summit is credited with easing faculty concerns related to the transferability of the new courses and providing a vision for how the reforms could be implemented at MCCKC.

Mirroring the statewide task force created in 2014, the MCCKC mathematics pathways summit ended with the creation of a work group charged with leading the math pathways initiative at the five campuses. Both Pallett and Morgan are members of that work group, which includes representatives from each campus. According to Pallett, the work group’s monthly meetings provided “some of the best discussions we’ve had” about challenges in implementing math pathways. Morgan and Pallett also acquired statements of support for the math pathways courses from MCCKC’s transfer institutions, strengthening the case that the college was on the right track.

Results

One year after the MCCKC summit, three options for gateway math courses are now offered for incoming freshmen pursuing an AA degree. All three courses meet the state-level outcomes required for transferability. The work group increased its meeting frequency during the summer months to develop curriculum that will likely be implemented in Fall 2018.
In Fall 2017, Metropolitan Community College–Kansas City began planning professional development events for math faculty with a goal of fostering pedagogical ideas for teaching math pathway courses. MCCKC was also chosen to host the Kansas City Regional Math Pathways Event with colleges, universities, and high schools from around the region.

In addressing how to engage and support mathematics faculty, MCCKC took several critical and effective steps. Before delving deeply into the work, MCCKC began by collecting data about faculty attitudes and concerns, and provided a forum to address those concerns. The college also created a structure for local leaders to own the work.

Both Morgan and Pallett note that the vision set by the state task force allowed the MCCKC work group to establish a local plan based on direct knowledge of its student population. They also credit the participation of a state-level official as vital to having a robust discussion about transfer.

Contact Information

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Endnotes

1. [http://mcckc.edu/our-history/](http://mcckc.edu/our-history/)

About the Dana Center

The Dana Center develops and scales math and science education innovations to support educators, administrators, and policy makers in creating seamless transitions throughout the K–14 system for all students, especially those who have historically been underserved. We focus in particular on strategies for improving student engagement, motivation, persistence, and achievement.

The Center was founded in 1991 at The University of Texas at Austin. Our staff members have expertise in leadership, literacy, research, program evaluation, mathematics and science education, policy and systemic reform, and services to high-need populations.

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