

# PATHWAYS TO RESULTS

## IMPLEMENTATION PARTNERSHIPS STRATEGY BRIEF

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### Integrating Contextualized Math in the MultiCraft Curricula at Sauk Valley Community College

by Marci Rockey

Sauk Valley Community College (SVCC) has returned to the Pathways to Results (PTR) process to analyze and improve a new pathway each year for the last five years. They have become so invested in PTR they have institutionalized its use into their approach to program review and continuous improvement, creating an institutional PTR team responsive to needs that arise on their campus. In 2014, faculty members partnered with student services and industry at SVCC to explore and enhance student success within the MultiCraft Technology pathway. This pathway includes several stackable credentials earned on the way to completing the associate in applied sciences. In addition, articulated transfer agreements exist with two state universities, allowing students to continue on the pathway to earn a four-year degree in Engineering Technology.

#### Identifying the Problem at SVCC

While the team was initially focused on enhancing equity in relation to gender within the MultiCraft pathway, the data clearly revealed another concern. Students were putting off general education requirements and taking their technical classes in the first two or three semesters. Compounding this problem were skills gaps in math and reading that had to be addressed by the completion of developmental coursework. In light of these findings, the team realized that developmental education needs and structures were a distinct barrier to achieving equitable outcomes within this pathway.

#### SVCC's Innovation

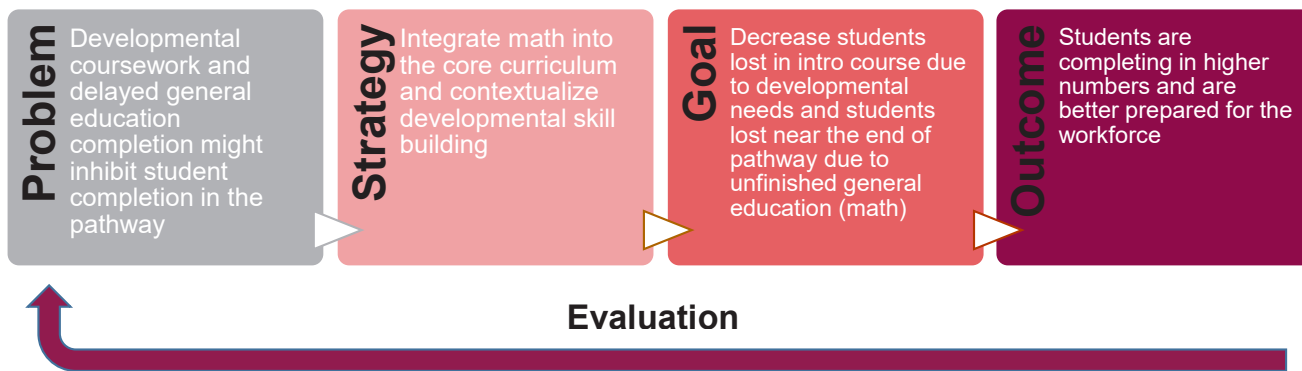
As SVCC sought to address the identified equity gap, an exploration of the math curriculum within the pathway was warranted. The team concluded the curriculum could be revamped to integrate math concepts within the technical courses as opposed to requiring one technical math course that may not align specifically to the manufacturing pathway. After bringing students and industry partners into the conversation, the team found the integration of math across the curriculum had the potential to not only alleviate the obstacle of developmental math requirements but also to better prepare students for the workforce and boost their confidence. In addition to the implementation of an integrated math curriculum, reading supports are being established. With approximately 56% of incoming SVCC students testing into at least one developmental education course, institutional efforts to address developmental education needs beyond this pathway have been embraced.

#### What We Know from the Field

Addressing the equity challenges facing higher education requires fully deconstructing and rebuilding the placement and remediation structures that have been shown to further stratify and disadvantage underserved students without offering significant developmental benefits (Hern & Brezina, 2016). As indicated in the experience of SVCC, colleges can address the challenges inherent in traditional developmental education by understanding the diversity of students placed into developmental courses, emphasizing teaching and learning, and implementing whole-college solutions (Zandt, 2014). Institutions that invest in initiatives and professional development aimed at reforming developmental education report a shift in faculty and staff mindset regarding student capabilities (Coleman, 2015; Zandt, 2014).

#### About Pathways to Results: Implementation Partnerships

PTR is an outcomes-focused, equity-guided process to improve student transition to and through postsecondary education and into employment. The process engages community college practitioners and their partners to identify and understand the problematic aspects of systemic design--whether processes, practices, policies, or pedagogies--and to find sustainable solutions that will support equitable student outcomes. In 2016, a second project year was added to the Pathways to Results model, titled PTR: Implementation Partnerships. Teams who participated in an Implementation Partnership, or "Year Two," project work to implement, evaluate, and scale their work in a network of other colleges striving to improve equitable student outcomes in innovative ways.



### Mapping Sauk Valley Community College's Intervention Logic Model

SVCC's specific approach to redesigning developmental education involves contextualization that makes connections between classroom learning and student experience using a platform available through ACT's WorkKeys program. WorkKeys is at SVCC for job skill development. For this project the college will pilot the use of WorkKeys to deliver targeted skill development in a contextualized setting, alongside a separately integrated math curriculum. It is valuable to note that some evidence suggests this strategy is most effective when "contextualization is less about explicit connections to a student's career and more about making sure a student can connect with the material and understand its relevance" (Zandt, 2014, p. 9), a finding that aligns with SVCC's industry partner's observations about the need for stronger broad, critical-thinking and problem-solving skills within this and similar career pathway fields.

### Notes on Scaling

Rethinking developmental education to enhance equitable outcomes is of national interest. Findings from research conducted by the Community College Research Center (see for example Edgecombe, 2011), The California Acceleration Project (Hern & Snell, 2013), and others highlight the value of redesigning with contextualization and acceleration of learning in mind. SVCC's effort to address their deficiency in developmental supports for students through piloting a contextualized and accelerated intervention in a pathway would be an innovative application of their software of choice and certainly one worth evaluating with particular attention to the potential to close student achievement gaps.

Moreover, SVCC reached the decision to test this intervention for math and developmental success from a desire to address equity gaps, not only to improve overall completion. In OCCRL's discussion with the broad SVCC partnership, which included administrators, faculty, and industry leaders, the group was able to have a series of "aha" moments that would not have been possible with a less invested or broad team base. The team's institutional researcher and the lead faculty recognized that much of the racial or ethnic diversity in the program seemed to "get lost" in the pathway's introductory course as a result of needed math or reading skills that inhibited their success, despite what seemed

to be their best efforts. This program had no specific supports to aid students in critical skill development within the context of the program curriculum. The industry representative provided insight into the importance of strong and contextually developed math, reading, writing, and problem-solving skills for workforce success. Administrators were able to see the opportunity for scale and sustainability in the institution-wide effort to redesign developmental education.

This program-specific intervention to improve contextualized skills for greater outcomes equity through an integrated college-level math intervention, and a skill-building intervention for developmental needs, could act as something of a pilot that could be rolled into larger, permanently funded institutional efforts for improvement. This end result was only attainable as a result of the sustained engagement (to achieve a broadened definition of equity) of a broad partnership (to identify different facets of needs and resources to drive this particular intervention).

### References

Coleman, D. (2015). *Replicating the accelerated learning program: An update*. Boston, MA: Center for Applied Research.

Edgecombe, N. (2011). *Accelerating the Academic Achievement of Students Referred to Developmental Education. CCRC Brief (No. 55)*. New York, NY: Community College Research Center.

Hern, K. & Brezina, J. (2016, Winter). *Transforming remediation: An essential part of campus equity efforts*. Diversity & Democracy, 19(1).

Hern, K., & Snell, M. (2013). *Toward a vision of accelerated curriculum and pedagogy: High challenge, high support classrooms for underprepared students*. Oakland, CA: Learning Works.

Zandt, A. (2014). *Right from the start: An institutional perspective on developmental education reform*. Silver Spring, MD: Achieving the Dream.