



Data for Decision Making (D4DM)

Leveraging statewide longitudinal data to improve technical education pathways

BACKGROUND

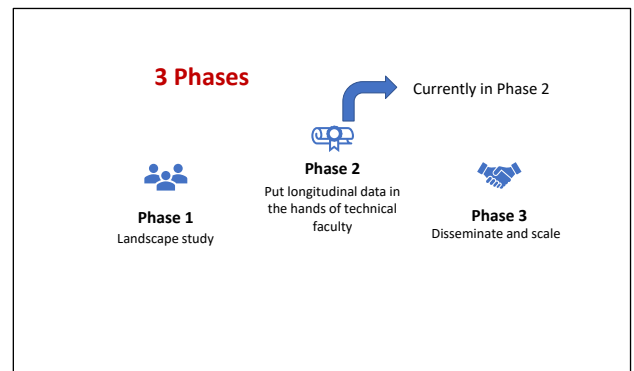
Community and technical colleges (CTCs) throughout the country are working diligently to recruit a diverse student body and boost completion rates at a time when the nation faces a shortage of technically prepared workers. At the same time, resource constraints limit data analysis of student outcomes to improve technical programs and pathways. Many factors contribute to limited data use, including the lack of knowledge and awareness of relevant data, difficulty accessing available data, shortfalls in quantitative research capacity, and limitations in how data are used to tell stories about student success. This three-year ATE research project will grow the capacity of CTCs by studying how organizational culture at the department level can support faculty's data-informed efforts to improve technical education programs and pathways.

This project is a collaboration between the University of Washington and three ATE funded partner colleges: Renton Technical College, Computer Network Architecture, funded 2017-2019; Seattle Central College, SAGE Project - Sustainable Agriculture Education, funded by NSF-ATE from 2009 to 2014; and Green River College, Expanding Career and Educational Learning in Information Technology (EXCEL-IT), funded by NSF-ATE from 2014 to 2019.



3 Research Questions

- What information about student outcomes do faculty need to facilitate data-informed improvements to technical education pathways and programs?
- What longitudinal data can be incorporated into data-informed processes and interactive dashboards to generate descriptive and predictive analytics for faculty to use to improve technical education pathways?
- To what extent does the development of interactive tools for data-informed decision-making affect organizational culture around improving technical education pathways and programs?



5 Findings from Phase 1

- The availability of student-level outcomes data varies widely
- CTE faculty data use varies by capacity, technical skills, interest, and the extent and form of institutional support
- External pressure looms large as a motivating factor for data use
- Uniqueness and innovation in the design of CTE programs challenges existing data structures and processes
- Addressing limited access to student-level data presents an opportunity

2 Emergent Propositions

Entrepreneurial efforts to analyze data among faculty drive innovation

Opportunities abound for data analysis even among organizational obstacles

NEXT STEPS

Put statewide longitudinal data in the hands of technical faculty! In partnership with the project's three partner colleges, implement data dashboards based on three data-informed improvement frameworks – Guided Pathways, Equity Scorecard, and Pathways to Results. Study how these interactive tools for data-informed decision making