



Competency based tracking for interprofessional education leveraging institutional data

The Challenge

Healthcare education has been largely siloed and there are calls to shift to a collaborative and coordinated approach. Healthcare education programs are embracing interprofessional education as a way to modernize the teaching of future providers. The goal is to improve the quadruple aim of care: improved patient outcomes, improved patient experience, reduced health care costs, and improved provider wellbeing. U-M's Center for Interprofessional Education (IPE) has 5 defined IPE competencies that are tracked across approximately 35 IPE offerings and 5000 students from 10 schools across 3 campuses. With U-M's growing number of IPE offerings, the Center for IPE faces the challenge of tracking offerings, student participation, and IPE competencies gained by learners. Tracking is further complicated because learning occurs using diverse formats including formal courses, online courses, modules embedded in courses, one-time events, and experiential settings.

The Solution

Recognizing that data existed in multiple places, the Center for IPE identified an opportunity to collaborate with U-M Information Technology and Services (ITS) to implement their vision for managing and bringing together data within and across programs, schools, and campuses. The resulting process leverages the learning outcomes in Canvas to allow for curricular mapping of IPE competencies and to assign and track IPE competencies for students. The team first developed a process to ensure there was a Canvas course for all IPE offerings by using existing Canvas courses for traditional course offerings and creating shell Canvas courses for all IPE offerings that fell outside of the traditional course offering format. Then, a standardized rubric that incorporates the 5 IPE competencies (Values / Ethics, Roles / Responsibilities, Interprofessional Communication, Teams / Teamwork, Intercultural Humility) and level of competency achieved (introduce/reinforce/practice) was developed by the Center for IPE. Using IPE business data from the Center that links IPE competencies to the Canvas courses, ITS developed a process that creates an assignment in each course and attaches the IPE rubric along with scores for relevant learning outcomes. The process assigns IPE competencies for students enrolled in the offering. These data are then available in the Canvas data housed in the Unizin Data Platform (UDP). This process allows the Center to join competency data tied to specific offerings with student program data and IPE business data using Denodo for data virtualization and Tableau for visualizing the data.

The Learning Impact Outcomes

With the data, the Center for IPE can report to partner schools and leadership about participation in IPE offerings, school contribution to IPE efforts, and degree of competency acquired by health professions students in order to continually improve IPE education. It also allows the Center to review how IPE competencies are incorporated across the health science schools as well as how students build those competencies, all with the goal of ultimately improving patient care.

The Return on Investment

Leveraging institutional data, such as Canvas and student academic program data, in this new way creates opportunities for tracking and evaluating competency-based learning to inform curricular development with the goal of improving student outcomes. While this project was developed to assign uniform outcomes across multiple programs and within an institution, the technology solution developed could scale down to assigning learning outcomes to Canvas courses within a single program or scale up to assign outcomes across institutions.