Program Success: Proficiency model program in mathematics continues to grow and be successful (continued)

This markedly improved performance in developmental mathematics has translated to a commensurate improvement in student outcomes for the first college-level mathematics course: students who completed mathematics remediation here before the proficiency model used to succeed in the next course at a rate of 58%, but since the advent of the proficiency model they now succeed in it at a rate of 80%. This even outpaces the 65% success rate of students who placed directly into the first college-level course with no requirement for remediation. The results are clear: the proficiency model well prepares students to succeed in college-level mathematics.

Despite the more difficult content and greater performance demanded by the proficiency model, students immediately adapted to it and requested that it be applied to the first college-level course. In response the department launched proficiency sections of this next course in Fall 2013, with approximately half of all sections running under the proficiency model by Spring 2016. The proficiency model once again demonstrated its strength; over the last three academic years, student success rates in non-proficiency sections averaged 68% while they averaged 83% in proficiency sections.

While earning praise from UW-Parkside administration for its significant contribution to increased first-to-second-year student retention rates, the proficiency model has also received recognition from a much wider audience. In Spring 2015 the program received a grant via UW System from the Bill and Melinda Gates Foundation to develop new methods designed to move students requiring mathematics remediation into college-level courses as quickly as possible. The result was the creation of UW-Parkside Math Move-Up, a four-week summer bridge program that offers students who fall just short of placing into college-level mathematics the opportunity to work intensively with the proficiency-based developmental curriculum and thus enroll in a proficiency section of the first college-level mathematics course during their inaugural semester of university work. First attempted in Fall 2015, the Math Move-Up program proved highly successful, with 100% of participating students successfully completing the first college-level course. Propelled by this accomplishment, the Math Move-Up leading into Fall 2016 tripled the number of participating students, and current indications for their ultimate success are promising.

The proficiency model has also made a deep impression upon other institutions beyond the confines of the UW System. Most recently in August 2016 at a mathematics curricular summit involving representatives from UW-Parkside, Gateway Technical College, and the Racine Unified School District, the Lecture Manuals developed for UW-Parkside proficiency-based mathematics courses were of particular interest. These Lecture Manuals are authored in the department, printed on campus, and used instead of expensive commercial textbooks, offering students a pedagogically-focused, high-quality printed resource at only about 10% the cost of the commercial texts they were formerly required to obtain. Impressed by the content they saw, mathematics teachers in Racine Unified are now using these UW-Parkside Lecture Manuals in their Math Lab sections districtwide.

Moving forward, the UW-Parkside proficiency model will continue to affect mathematics curricular developments on campus and statewide. In no small part because of the acknowledged success of the proficiency approach, a member of the department was appointed Chair of the UW System Mathematics Placement Test Development Committee, and as such, UW-Parkside’s approach to developmental and introductory college mathematics has had a significant influence on the formulation of remedial mathematics standards and corresponding revisions to the UW Mathematics Placement Test mandated for all UW System institutions for Fall 2017. Given the proficiency-based changes already made to developmental and college-level mathematics on this campus, UW-Parkside’s plans for adapting to these new UW System requirements – plans that include revisions to course content, new editions of Lecture Manuals, and further expansions to Math Move-Up for Fall 2017 – are all well in hand and already underway. It is from this strong position that the department can reflect upon the successes of these last years with satisfaction and confidently look forward to those yet to come.