Proctored and unproctored placement testing tailored to curriculum

Effective placement testing selects courses from a curriculum most appropriate to student knowledge. Reliability of placement outcomes depends on reliability of the assessment instrument and its alignment with the target curriculum. Tailoring placement exams to the curriculum, testing exam reliability, and employing random parameters to prevent memorization are effective ways to increase placement outcome reliability.

Two tailored mathematics placement exams were developed – one at Colorado State University (CSU), and another at the University of Wyoming (UW). The exam at CSU replaced a tailored paper exam with an online randomized exam. A new tailored exam at UW, for which a Cronbach's alpha of 0.9 was measured, replaced a standardized online exam. Both exams support sectioning scores along multiple subtest axes, and permit both proctored and unproctored attempts by students, with different outcomes possible for each. We discuss the exam designs, outcomes, reliability analyses, and student response.