Department of Computer Science, UBC Vancouver

Implementation of a Modern Campus-wide Assessment Resource

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Objectives
We envision centralized support for a computer-based testing facility on a large scale. In alignment with the recommended assessment innovations outlined in UBC's Beyond COVID project, our goals are to:

- Increase student agency and equity by allowing them to schedule their assessments.
- Improve the speed, quality, reliability and consistency of assessment and feedback by combining manual and automated grading.
- Streamline exam logistics (including CFA accommodations) for course instructors freeing time for assessment design.
- Facilitate research into the effects of teaching innovations (e.g., second-chance testing, mastery learning) by ensuring robust and uniform delivery and collecting assessment data.

Assessment tool PrairieLearn [1]
- Facilitates rich and unconstrained question types
- Supports isomorphic questions and randomization
- Enables short exams that are more frequent at lower stakes and with second chances

Computer-based Testing Facility
Based on similar, well-studied and reported initiative at the University of Illinois Urbana-Champaign (2015 – present) [2], repurposed lab ICCS008 was modified to facilitate security, invigilation and student flow.

Scheduling tool PrairieTest
- Exam seatings offered every hour, on the hour
- Currently, a single course in each seating
- Invigilator responsible for check-in, exam timing via PrairieTest in accordance with any CFA accommodations
- PrairieLearn integrated and Canvas linkable

Progress so far
PrairieLearn is already implemented in 21 courses across five programs (Applied Science, Computer Engineering, Computer Science, Earth and Ocean Sciences and Mathematics). Many courses have extensive databases of mostly randomized and/or isomorphic questions that allow deployment of these questions across years and even context (e.g., use both as a practice and an exam question).

Objectives

- Create assessment instruments in summer 2022 (tests, exams, quizzes, etc.) in >7 new large courses adding ~3000 students.
- Document and report logistics and processes, including invigilator training.
- Standardize computer-based assessment experiences across FoS.
- Increase availability of computer-based exams.
- Facilitate community of practice around computer-based assessment design and delivery.

Want to get involved?
Would you like to create or migrate content to PrairieLearn and take advantage of randomized/isomorphic questions and/or a computer-based testing facility? Please reach out to Stephan König (stephan.koenig@ubc.ca) or Cinda Heeren (project lead, cinda.heeren@ubc.ca).

Reference / Bibliography

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