

EXECUTIVE SUMMARY

After much discussion, review of our own data and review of the literature, the Department of Psychology is using the forward-only format for MC/short answer exams in some courses. The reasons are outlined below but they relate to test validity, fairness, equity, and pedagogy. We fully recognize that the online testing environment is novel, unfamiliar and therefore potentially stressful to students: We describe below our efforts to address some common student concerns.

PSYCHOLOGY DEPARTMENT STATEMENT ON FORWARD ONLY TESTING

As a department in the Faculty of Science, and a department that studies human behaviour and assessment, the Psychology Department has reviewed literature on on-line assessment and collected and reviewed our own data from the Winter and Summer semesters. Based on this, the Department of Psychology is using the forward-only (or “no-review”) option in courses with MC/short answer assessments. This was decided after extensive discussion in the department and on the Faculty of Science Assessment Committee which met multiple times over the summer and released its formal guidelines in July.

Our decision was based on the following considerations:

- 1) Validity: In Psychology, correlations between proctored midterms and unproctored finals were much higher in courses that used forward-only in the Winter. Thus forward-only examinations yielded results in line with proctored exams, a finding that has also been reported in the empirical literature (Beck, 2014; Stack, 2015; Feinman, 2018).
- 2) Pedagogy: Research has shown that students taking proctored exams study significantly more and acquire more knowledge than students taking unproctored exams (Wellman & Marcinkiewicz 2004). While all of our exams will be unproctored, exams that use forward-only, randomized question order, and limited time windows have been reported to yield results similar to proctored exams.
- 3) Fairness: Every student has the right to a fair assessment and a fundamental part of a fair assessment is one that reflects one’s own knowledge, and one where one’s grade relative to others reflects one’s knowledge relative to others. Therefore, assessments need to ensure to the extent possible that the work is the student’s own, and that the grades have some validity. Our own data indicate that the forward-only option enhances the association with proctored examinations and the academic literature indicates that on-line examinations that implement forward-only yield results more similar to proctored examinations, which are the standard. Thus the forward-only format enhances fairness.
- 4) Equity: A large meta-analysis of research on cheating in an academic context showed that low-income students, and students who work part-time to support their studies are significantly less likely to cheat (Whitley, 1998). Choosing assessment strategies that reduce cheating is thus an equity imperative, as assessment conditions that make cheating easy – even if only a small number of students cheat - will compound the disadvantages already faced by students who enter university at an economic disadvantage.

Our responses to student concerns on the following issues:

- 5) Familiarity and Anxiety: On-line examinations in general, and the forward-only restriction in particular, can be concerning to students because they are unfamiliar. Professors are working to help students acclimatize to the new assessment environment using a range of approaches from posting practice or low-stakes quizzes to allowing for flexible grading to downweight early assessments. Further, it is worth remembering that although adapting to a new on-line scenario is stressful, McGill’s proctored examinations were often taken at the Fieldhouse, in the company of 1,000 other students, for three hours on uncomfortable chairs, with no access to notes. Taking exams at home with double the time window and access to notes has the potential to be significantly less stressful once students are habituated to the process.
- 7) Exam Strategy: Experienced students typically answer questions in a strategic order with questions they are sure of answered first, and difficult questions allocated whatever time remains. This strategy is particularly important in time-pressured exams so that the student is sure to answer all easy questions

before time runs out. However, our on-line examinations will last twice as long as the time necessary to complete them. Thus the strategic allocation of time does not play as great a role as it does in a standard examination. Further, multiple-choice/short-answer exams, which are the only exams using the forward-only format in our department, are not like essay exams or exams involving proofs where one cannot know how much time to allocate one question without seeing the difficulty of later questions.

8) Web Accessibility and the TLS Statement: Although TLS has taken the position that forward-only exams violate the Web Content Accessibility Guidelines (WCAG) 2.0, our reading of these guidelines is different. WCAG 3.3.4 specifically addresses "data input errors" in the context of cognitive and motor disabilities. The guidelines explicitly state in their explanation ("Understanding 3.3.4") that the intent of Success Criterion 3.3.4 is to help users with disabilities avoid serious consequences as the result of a mistake when performing an action that cannot be reversed. The three steps that are needed for this WCAG Success criterion to be met for students with disabilities are these:

Reversible: Submissions are reversible.

Checked: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.

Confirmed: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.

In MyQuizzes, each forward-only question is a 3-step process.

- 1) The student reads the question and chooses their answer.
- 2) After the answer is chosen, the student can review their answer, change their mind and choose a different answer. When the student has confirmed in their own mind that they have chosen the answer that they want, or changed the answer to a different answer, they click Next.
- 3) After the student clicks Next, they receive another prompt to consider their answer again and confirm that this is the answer they want. If, after reviewing, it is not, they can go back and change it. After any change, they will be prompted again to confirm before submitting.

The system is designed to prevent data input errors and allows students multiple opportunities to check and correct input errors. Thus forward-only is administered in a way that meets the success criteria of the WAG 2.0. Whether or not students with disabilities can request and receive additional accommodations is up to the OSD. Indeed, OSD has requested and received such accommodation for individual students already this term.

Finally, we invite all students to consult the following statements by the university:

- Student Assessment Policy: *All forms of Assessment shall be conducted in such a manner as to preserve academic integrity.*
- As the McGill webpage on Student Rights and Responsibilities states: *keep in mind the students who are doing their work honestly; cheating tilts the playing field and undermines the value of their work, the academic integrity of the University, and the value of the degrees we offer.* <https://www.mcgill.ca/students/srr/honest/staff>

References

- Beck V. (2014) Testing a model to predict on-line cheating—much ado about nothing. *Active Learning in Higher Education*, 15:65-75.
- Feinman Y (2018). Alternative to Proctoring in Introductory Statistics Community College Courses. (Unpublished Doctoral Dissertation). Walden University, Minneapolis.
- Stack, S. (2015). The Impact of exam environments on student test scores in online courses. *Journal of Criminal Justice Education*, 26(3), 1–10.
- Wellman GS, Marcinkiewicz H (2004). On-line learning and time-on-task. Impact of proctored vs. unproctored testing. *Journal of Asynchronous Learning*, 8: 93-104.
- Whitley B. (1998) Factors associated with cheating among college students: a review. *Research in Higher Education* 39, 235–274