4th International Conference on E-Learning and Distance Learning

Theme: Quality issues in innovation & creativity

Online Assessment: Balancing accessibility, student privacy and the integrity of online courses.

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Abstract

Despite some disagreement as to whether online courses are more susceptible to academic dishonesty than their face to face (F2F) counterparts, we all agree that online education, while increasing access to postsecondary educational opportunities, brings with it different challenges not found in the face to face context. At the University of Manitoba, one of our goals is to improve access to education by ensuring our students benefit from the convenience and flexibility of online courses without sacrificing the academic integrity necessary to maintain quality courses. Currently, students enrolled in online courses and living outside of Winnipeg must write their final exams in exam centres established by the University or, in specific situations, find their own invigilators. This situation might prevent some students from taking online courses which are, in many cases, the only way they can access quality postsecondary education. In a pilot project, where we used an online proctoring system to overcome such physical barriers, we discovered another parameter that is an important consideration: student privacy. In this paper we will discuss how we tried to balance the following needs and concerns: academic integrity, accessibility, and student privacy. We will also present some of the lessons learned and our future plans for overcoming other challenges.

Key Words: E-Learning Quality, Academic Integrity, Flexible Learning, Privacy

Academic Integrity and Online Courses: Myths and Realities

One of the most important aspects of quality courses, regardless of the format (F2F or online), is the learning assessment. The nature of online courses makes it difficult to proctor all assignments as we would do in the face to face context. This fact increases the perception that academic dishonesty behaviours are more prevalent in the online context. Yet, there is very limited evidence to substantiate this perception. While some researchers show that students and faculty members tend to believe that academic dishonesty is more prevalent in online environments (Dietz-Uhler, 2011; Hancock, 2011), others demonstrate that the learning environment makes no difference, while (McNabb & Olmstead, 2009; Spaulding, 2009) still others indicate that students perceive there is less cheating in online environments (McGee, 2013). As McGee writes: “While there is a perception that more academic dishonesty occurs in online environments, there is little evidence to support that this is the case” (McGee, 2013). McNabb (2009) conducted research to learn more about faculty beliefs regarding academic honesty among students. She found that half of faculty believe there is no difference in the
opportunities for cheating online or on campus courses, but 32% believe there are more opportunities online (Faculty Focus, 2010).

Whatever our beliefs about the prevalence of cheating, we must admit that technology is changing the way students are accessing information. We must also recognize that technology not only makes cheating easier but it makes monitoring and preventing it easier too. In this pilot project, we implemented a technology, namely an Online Proctoring System, to improve the academic integrity of our online courses.

**Approaches to Improving Academic Integrity**

Several strategies can be used to improve academic integrity, including pedagogical, technological and institutional ones (McNabb and Olmstead, 2009; Faculty Focus, 2010, McGee, 2013).

**Pedagogical Strategies**

- Design assignments in collaboration with your library that develop genuine research skills
- Design assignments that build sequentially on previously submitted work, such as revisions of drafts.

“Essays and performance assessments that require students to use unique information and reasoning are more engaging and harder to fabricate (McGee, 2013).

- Use varied assessments: for example, portfolios, self-assessment, peer assessment.

**Technological Strategies**

- Use browser lock down software
- Randomize questions/answers
- Change the test bank regularly
- Use timed windows
- Show questions 1 at a time
- Use plagiarism detection software such as Turnitin, iThenticate etc. (McGee, 2013)

**Institutional Strategies**

- Must be Institution Wide
- Part of Student Orientations and First Year Seminars
- Part of the Syllabus and Assignment descriptions
- Reflected by faculty, library, IT staff, student support staff

**Background**

The University of Manitoba in Winnipeg (Canada) has Nearly 150 Online Courses. The majority of them have proctored final exams. Students living less than two hour drive from Winnipeg must come to campus to write their final exams. Students outside of this radius are sent to exam centres or are required to find their own invigilators. Having only one proctored assessment tool, the final exam, has pushed some departments to put more weight on this exam (up to 60%). This situation has increased students stress as they feel they must do very well in the final exam in order to pass the course. Further, this unbalanced assessment approach is not pedagogically
sound. To deal with this issue, we decided to introduce proctored midterm exams to some of our courses starting with those preparing students for provincial/national boards or certification exams and prerequisite courses. The question was then: Should we ask our online students to come to campus twice during the semester? Doing so would greatly limit the flexibility our students are looking for when taking an online course. It would also increase substantially the cost of exam invigilation in exam centres. We decided then to try an Online Proctoring System.

The Product

An online proctoring system (OPS) consists of “proctors monitoring an exam over the Internet through a webcam... authenticating the examinee as the person who should be taking the exam.” (Foster and Layman, 2013).

Foster and Layman (2013) did a great job comparing the major vendors of online proctoring. The table below is a modified version of their Proctoring Features matrix, including the three products we looked at.

<table>
<thead>
<tr>
<th>Proctoring Features</th>
<th>Software Secure</th>
<th>B Virtual</th>
<th>ProctorCam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Proctor During Exam</td>
<td>No²</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Continuous Internet</td>
<td>No</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Encryption for Data Transfer</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Schedule Availability</td>
<td>24/7/365</td>
<td>24/7/365</td>
<td>?</td>
</tr>
<tr>
<td>Proctor Management</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Supervised</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Training</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Certification</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Interaction with Test Taker</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Live Chat</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Live Instruction to Examinee</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Proctor Views examinee Screen</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Proctor as Collusion Threat</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Later Video Review Proctoring</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Later Video Review Capable</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

In consultation with the University of Manitoba Privacy Office, we evaluated the three tools above and selected B Virtual. This product allows students to take exams online using their own
technology, at their convenience, in their chosen, private location. Students are monitored by a live proctor, and their exam session is recorded.

The online proctored assessments were designed for online courses with the following assumptions:

i. Online proctoring provides students with the opportunity to be evaluated in conditions similar to those of on-campus proctored assessments.

ii. Proctored assessments increase the academic integrity of online courses. The improved integrity allows for the weight distribution among the assessments to be split more equally, allowing for a fairer course outcome for students.

iii. Online proctoring prepares students for national/provincial boards or other certification exams tested in a similar manner.

The Pilot

A pilot project using B Virtual was implemented on March 20, 2014. This pilot involved managing all activities associated with proctoring mid-term exams in two online courses: ACC 1100 and FIN 2200, for the Summer term. This pilot included initial meetings with the vendor, a privacy impact assessment, development of new processes, customization of the vendor’s site, as well as the development of an operational guide and communication plan. In total, 9 students used the proctoring services to take the mid-term exam. No final exams were included in the pilot, as final exams for at-a-distance students are organized by the Registrar’s Office in different examination centres.

Results

The following key objectives were met:

- We implemented B Virtual proctoring service for mid-term tests in two courses for Summer 2014.
- We provided the functional support team with training and documentation to ensure that students and faculty in courses using B Virtual for mid-terms would be efficiently supported in future terms.
- We surveyed students and instructors regarding their user experience with B Virtual.

User Feedback

Instructors received little negative feedback from students, indicating that the process went well.

“I have not heard anything negative about the exam writing process. The only thing we will need to think about is how to prevent people who should write on campus from registering for Bvirtual” (J. F. Professor, School of Business).

A survey was sent to the students who used the service in the Summer and Fall terms, but we only received one response from a student during the Fall term. The student found communication with our department prior to the exam, and with the proctor during the exam, helpful and that signing up and scheduling the proctored exam was very easy. If given the opportunity in other courses, this student would choose the online proctoring over face-to-face.
"Writing an exam in university examination halls is incredibly stressful for me personally. It's distracting with other students coughing or invigilators talking to one another. I would much rather write an exam in a secluded room, in the comfort of my own home". (a student from the School of Business)

Lesson Learned

- The maximum number of students that B Virtual can proctor concurrently is between 10 and 20 students. Until B Virtual is able to increase capacity, it is not possible to use this service when an exam requires a specific time slot with a high number of students.

- The time slots shown to the students while scheduling are half hour slots. Specifically, students choose a half hour slot, which indicates their start time. This needs to be considered when creating exams with a limited time window (a consideration more for mid-terms than for finals).

- One student had an issue with a firewall at his office, which caused a delay in writing his exam. The B Virtual support person was not able to help him originally. However, with our follow up, the root cause of the issue was detected and resolved. The response time from B Virtual staff was prompt, and the responses were helpful.

- Some proctors asked for student ID as well as a government issued ID, as is the practice at other Canadian universities. It was communicated during the site setup, per the Student Privacy Office’s direction, that proctors are to only ask for the student ID. We have informed B Virtual, again, that they must ask only for student ID.

- Due to the nature of the test (requiring printer and scanner), some students wrote the exam in their offices, and in one case, in an office with others present. Departments will be consulted about what is considered an acceptable space for exam writers, and this information will be conveyed to proctors.

- The proctors (except 1) took control of the students’ systems and cleared the scanned files. Similarly, most of the proctors, once the written part was scanned and submitted successfully, asked the student to destroy the working copies along with the submitted paper in front of them. We will provide clearer instruction to the proctors to ensure a consistent approach regarding this phase of the exam process.

Conclusion

The pilot project team successfully delivered the product and its related services. Due to the success, this product has been permanently incorporated into the two pilot courses and will most likely be used in future redevelopments or new designs of online courses.
References


