

Online Marking – Marking assignments online to improve feedback for students at the University of Waterloo

Opportunity

Historically, The Centre for Extended Learning at the University of Waterloo coordinated the marking of thousands of student assignments annually. Assignments were received at the Centre, sorted and shipped to instructors for marking. Once marked, the Centre would mail them back to the students. The mail delivery of the marked assignments meant the feedback was delayed, and students often expressed concern that it was not received in time to help them with preparation of subsequent work. In addition, this consumed about 25,000 sheets of paper per term, significant printing and mailing costs, and considerable staff time.

Online marking was introduced in order to provide a superior learning experience for students in terms of turn-around time and richer feedback and an opportunity for the Centre to reduce costs.

Innovation

The Centre implemented an online marking system to replace its previous paper-based system in a number of its undergraduate courses. Instructors were invited to participate and offered training. Initially, 10 tablet PCs with the ability to digitally mark assignments using a stylus were purchased and lent to the instructors. The students submitted the assignments directly to the course using electronic dropboxes in the learning management system, and the instructors used the tablet to mark and return the student assignments electronically. The stylus was used as it would allow instructors to use a familiar tool.

The program has now been expanded to 30 tablets that are loaned to instructors. Those comfortable with typing may use Track Changes or Track Markup in Microsoft Word. Others use GradeMark in Turnitin, which also allows them to check for plagiarism and capture the final grade. Instructors can access these tools on the tablet or use any PC to do their online marking.

To facilitate the use of Word, the Centre for Extended Learning has started to build macros – shortcuts that allow the insertion of pre-set text for comments that are commonly used when marking assignments. Custom sets of macros are also being developed for the comments that are more specific to a discipline or an individual instructor.

A complementary strategy to augment the use of online marking has been to design assignments differently so that they can be completed online, such as quizzes, or to take advantage of the marking offered within the learning management system. The

Centre works with instructors to find the online marking options that work best for their courses and students and meet identified learning objectives.

Outcomes and Benefits

Online marking achieved its goals of providing students with improved turn-around time and richer feedback and an opportunity for the Centre to reduce costs.

The positive impact on the environment was expressed through the slogan 'saving the planet, one assignment at a time'.



Student reaction to online marking has been positive, as it provides them with more timely return of their assignments and the opportunity to incorporate the feedback into their next project. There have been comments about the handwritten comments provided via the tablet being more personal.

Instructors have also praised online marking as making corrections clearer and more professional, reducing concern about losing papers, easy and comfortable once you get used to it, and effectively reducing paper usage. One comment indicated an enthusiasm for moving to online marking for all his/her courses.

To date, 64 of the 81 courses with printed assignments have been converted to online marking. The saving in paper and other costs amounts to over \$100,000 annually. The three goals for the innovation have been met.

The shift has also had an impact on how courses are designed as instructors and instructional designers now work together to incorporate new marking strategies into the course development or revision. This may include new types of electronic assignments, the use of online marking, or the use of the Learning Management System.

Challenges and Enhancements

As in any change, one challenge is instructor resistance or concern with impact. Some of the instructors are more comfortable with marking paper assignments and some tried but could not adapt to the technology. Workshops and support, as well as commitment by department chairs to have all courses in the departments marked online, have facilitated the adoption of online marking.

In some courses, such as mathematics, physics, and chemistry, the nature of the assignments themselves makes a shift to online marking more difficult. Handwritten

assignments may be easier, especially for first-year students, than learning the complex programs necessary to insert formula electronically.

The initial financial outlay for the technology was significant and the maintenance, replacement, and training continue to be important cost factors. With more use of Microsoft Word, training demands have lessened, while familiarity with and willingness to use the technology have increased.

Potential

The Centre for Extended Learning seeks to expand the alternatives for online marking. One enhancement is the use of audio feedback as both Desire2Learn (D2L) and Word can record audio comments. D2L also has a marking application for the iPad in development and that, along with other possibilities, will be tested when it is released.

The Centre for Extended Learning is also looking at online proctoring, especially as an alternative to the current system of individual proctors for those students who do not write exams at the University or in exam centres.

Aldo Caputo, the Associate Director of Waterloo Online, sees online marking as the future for the handling of assignments for online courses. The University of Waterloo will share its experience with other post-secondary institutions in Ontario as well as participate in discussions on issues of joint concern. Other topics of interest to the University of Waterloo are discipline specific software to support math and science courses, credit transfer for online courses among universities, and supporting online students with special needs.

Further Information

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