

## PEAR – Student learning through online Peer Evaluation, Assessment and Review at the University of Guelph

### Opportunity

A professor in the College of Biological Science at the University of Guelph wanted to lead his senior students through the process of writing, revising, and submitting a peer-reviewed article. He had the students prepare the articles, send to each other for review, evaluate changes, make revisions, and re-submit articles. However, the logistics quickly became overwhelming in terms of process and paper.

The decision was made to design software that would allow this process to be done online and adapted to the needs of different courses for wide, restricted, or anonymous distribution of student submissions for peer review.

### Innovation

PEAR, a peer evaluation, assessment, and review tool, developed in Teaching Support Services (now the Centre for Open Learning and Educational Support) facilitates and automates much of the administrative work associated with student peer review, making it more practical for learning, even with large classes.

## PEAR **BETA** Peer Evaluation, Assessment and Review



Professors have complete authority over the file access process as the student submissions for the peer review process are sent to them and PEAR facilitates the professor's selected distribution, timelines, controls, and reports.

The peer review process can be as open or restricted as the professor wishes; the submissions can go from student to professor, to professor and editor, to classmates, to outside reviewers, or an iterative process through these steps. Reviewers can share

comments with each other; the students can respond to comments and explain their choices of revisions; and class groups can be created with assigned articles to review. The project overview keeps track of all exchanges, submissions, reviews, and responses.

The key elements of PEAR include:

- Predefined automated dates for submission, reviews, responses, and due dates;
- Accepting and tracking of submissions of multiple documents and formats throughout the stages of the process;
- Assignment and distribution of submissions to peer reviewers (anonymously if desired) and instructors;
- E-mail confirmations and notifications throughout the process;
- Creation of custom grading forms by the instructor for each state of the review, allowing for group and self assessment;
- Grade calculation and export functions;
- Integration with the learning management system (LMS) so that instructors can import class, group, role, and user information; and
- Availability of online tutorials to assist instructors and students throughout the PEAR process.

## Outcomes and Benefits

Through the online use of PEAR, students in small and large classes can be exposed to the benefits of peer review. Peer review offers students the opportunity for a broader experience of the writing, researching, verifying, and articulation process, as they learn to be more analytical and critical of their own writing through examining the work of others. A higher calibre of writing is encouraged, as are the skills of editing, revision, and assessment.

The ability to read the writing of others and assess presentation, effectiveness, completeness, and message is also enhanced. In academic writing, the submission of papers for peer review is employed to maintain quality, improve performance, and provide credibility.

PEAR eliminated the need for paper copies and concerns with differing document formats for online exchange.

## Challenges and Enhancements

The grading form has been made more flexible allowing for comments, agreements with qualitative statements, submitting a numeric response, and selecting comments from an option list. The system provides a choice of grading forms that can be customized and included by the instructor.

To limit the numbers of reviews, the capacity for group reviews was created.

## Potential

PEAR is now being widely used in distance education courses at the University of Guelph. Currently, work is being done to provide greater detail on the reporting pages for the instructor. All grades in PEAR can be pulled into the LMS; the next step is to have them registered automatically.

PEAR is written in Coldfusion, for which a Microsoft license is needed. The University would like to translate it into a more open architecture and is currently negotiating with another institution to establish a partnership. In the meantime, they are willing to discuss and demonstrate the project.

## For Further Information

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<http://2010.oucc.ca/program/facilitating-peer-reviews-online-pear>