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Editorial: Publishing diverse perspectives and key issues in educational technology

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Happy New Year! It has been twelve months since the *Canadian Journal of Learning and Technology* moved to the University of Calgary. I am pleased to report that 2005 was a successful year for CJLT – three issues of the journal, comprised of a total of 22 scholarly articles and book reviews, were published and shared with the academic community. The journal received 50 new manuscript submissions and welcomed several new members to the Editorial Board. I am grateful to the authors, who have entrusted us with their work, and to the current and past CJLT Editorial Board members and regular peer reviewers, who make such an important scholarly contribution to CJLT and the field of educational technology research.

The Winter 2006 issue marks the beginning of our second year as the new Editorial Team of CJLT. Allow me to extend a sincere thank-you to Bruce Clark, François Desjardins and Jennifer Lock for their exceptional work on the journal. It is an exciting time to be an educational technologist and an academic journal editor! It is a privilege to receive and send for review a diverse range of manuscripts that describe innovative and cutting edge research and teaching that scholars currently pursue in our expanding field. In the first part of this editorial I introduce you to the eight articles that are published in this issue. Authors who have contributed their work to this issue of CJLT represent a variety of perspectives on key issues in educational technology. It has been a pleasure to work with each scholar to prepare these manuscripts for publication.

In this editorial, I begin a year-long reflection on the academic publishing process, with specific attention to practices and policies that currently guide the work at CJLT. I often get asked to explain, to describe and sometimes to defend how and why editorial and peer review decisions get made, how long it takes to get to print, what it takes to make a paper publishable, and so on. Some of the most common questions are addressed in this editorial. Academic publishing is a theme I will continue to build upon in subsequent editorials in 2006. In keeping with tradition, my spring 2006 editorial will take stock of CJLT's 2005 publishing year by reporting on the specific submission, acceptance and rejection rates, editorial and peer-review feedback, and journal activity.

A special issue of CJLT on **Knowledge Building** will be published in Fall 2006 that will examine critical issues in knowledge building theories, pedagogies, and environments in school and workplace settings. Guest editors, William J. Egnatoff, Queen's University, and Marlene Scardamalia, OISE / University of Toronto, invite submissions that address these four themes: (1) Theoretical models for knowledge creation; (2) Educational dynamics for knowledge building; (3) Globally networked knowledge building communities; (4) Knowledge building environments. The issue reflects the need for increased collective responsibility for knowledge innovation of benefit to society. Deadline for submission is May 15, 2006. Additional information can be found on the CJLT web site: http://www.cjlt.ca/call.html

Volume 32, Number 1

The current issue of CJLT contains eight articles about various approaches to educational technology research and teaching (five research papers, one case study, one evaluation report and one instructional development report). Authors use experimental, qualitative, case study and descriptive approaches to investigate key questions in our field. The first two articles investigate the use of educational technology in K-12 school environments. The first article serves to expand current discourse on computers in schools by providing evidence about the impact on learning when each student is provided with a computer for use throughout the day. The second article builds on the standard classroom versus lab debate to explore broader concepts of intentionally designed physical and symbolic spaces for technology in school.

A set of three articles in this issue share a focus on the design and delivery of online learning experiences. The first examines the online experiences of adult female students completing graduate study in the health professions. The second explores whether asynchronous online discussion supports secondary school learners. The third investigates the use of optional online quizzes to support achievement by college student learners.

Rounding out this issue are three papers that reflect different approaches to evaluating the design and development of a diverse set of educational materials to support learning. The first evaluates standards relative to the design of electronic pedagogical content, describes the development of an interactive environment, and concludes by discussing elements of instrument validation. The second is a case study of planning considerations for producing re-usable and sustainable educational streaming materials. The third is an instructional development report on an open source intranet for learning communities.

The first research paper in this issue, entitled "*Ubiquitous Technology Integration in Canadian Public Schools: Year One Study*", in which Sclater, Sicoly, Abrami and Wade explore the impact on learning when laptop computers are put in the hands of children. The authors provide rigorous, methodologically sound research on the impact of a large-scale, board-wide one-to-one laptop program on student learning. The data used to examine changes in student learning and teaching in the first year include provincial examination results, student and teacher composite questionnaires, interviews, school training materials, and school social-economic indices. Potentially the most interesting finding was the difference in achievement scores between the experimental and control boards. Results are reported for both elementary and secondary students and teachers with regard to technology use, attitudes and expectations, academic outcomes, and meaningful student-centered learning.

In the second research paper, the authors argue that where technology is located in a school impacts whether and how it might be used for learning. In "*Finding Space for Technology: Pedagogical Observations on the Organization of Computers in School Environments*", Jenson and Rose explore the concept of space as it relates to the frequency and quality of technology use in schools. They suggest that the direct/physical and symbolic location and organization of tethered and or wireless technologies delimits and shapes how teachers talk about and use

computers in schools. An investigative lens is focused on three case studies to highlight how the structuring and re-structuring of space in schools can be a significant factor in whether and how this technology is used by teachers and students. From the existing school that grappled with the classroom versus lab space decision, to the two newly built schools that considered technology early in architectural planning, the findings are clear: the distribution and organization of computers impacts the frequency and quality of teachers' integration efforts. This paper contributes a refreshing perspective on finding and making space for technology to create new possibilities for teaching and learning in schools.

In "*Creating Appropriate Online Learning Environments for Female Health Professionals*", Pinheiro, Campbell, Hirst and Krupa examine the experiences of seven female health professionals who are enrolled in an online graduate study program. Information about online learning experiences was collected via telephone interviews, participant journals and e-mails. Specific participant comments add depth to this analysis. A unique set of implications for the design and delivery of online courses based on challenges and benefits from a female perspective are offered. The primary reason for choosing a distance program was geographical and schedule flexibility. Key aspects of successful online learning experiences include interaction with classmates, developing local support and sustaining a mentoring relationship with the instructor.

In the second research paper on online learning, "*Using Asynchronous Online Discussion to Learn Introductory Programming: An Exploratory Analysis*", Kay builds on research conducted primarily in higher education to explore the use of online discussions by secondary school students. Forty-five male Grade 9 students participated in two consecutive online discussions that were designed to supplement the learning of HTML and beginning programming. Kay uses Ceci's (1990) model of intellectual development, summarized in a "context–person–process" framework, as a lens to organize and interpret online discussion literature and key discussion board use measures from the past ten years. Three sources of data were used: (a) coded online discussion board messages, (b) statistics on actual use, and (c) attitude survey data. Kay's evidence suggests that Grade 9 boys can use online discussions successfully to learn basic programming. A key contribution of this paper is the use of Ceci's (1990) model as a descriptive framework to organize findings from previous online discussion research and to interpret the results of this study.

In the third research paper in this set, entitled, "*Optional Online Quizzes: College Student Use and Relationship to Achievement*", Johnson explores the relationship between the use of optional online quizzes and college student achievement. One-hundred-twelve college students demonstrated from low to moderate to high use of optional online quizzes in preparation for proctored examinations. Analysis revealed that student use of online quizzes was associated with increased academic achievement. Short-answer and true-false online quiz items tended to be differentially associated with measures of academic achievement, suggesting that cognitive processing differed across item format. While this paper concludes with more questions than answers about the effective use of online quizzes as study tools, the findings provide an interesting springboard for future experimental research on the relationship between student achievement and optional online quizzes.

The final three papers in this issue explore issues such as sustainability, usability and standards in the design, development and deployment of learning objects and distributed environments. The first paper is an evaluation report, in French, entitled "*Concevoir des modèles de sites Web éducatifs en utilisant IMS Learning Design / Designing Educational Web site Models Using IMS Learning Design*", by Pacurar, Trigano and Alupoaie. In this study, the CEPIAH (Design and evaluation of interactive products for human learning) web-based interactive guide is developed and is comprised of three modules: Help for design, Help for evaluation and Help for online course structure design. This interactive environment aims to help educational Web site authors with the design and evaluation of their prototypes. A short synthesis and evaluation of the IMS Learning Design standards relative to the design of electronic pedagogical content is provided. The implementation of these standards is described and elements of instrument validation are discussed in the concluding remarks.

In a case study entitled, "*Considerations for Producing Re-Usable and Sustainable Educational Streaming Materials*", Calverley explores different approaches to maximising the useful lifetime of educational materials within short-term project constraints. This investigation focuses on the development of 163 learning objects, based on several licensed collections of streaming video procured for cross-sector educational use, to articulate useful guidelines and considerations for sustainability. She argues that careful planning can offer a better chance for resources and materials developed for learning to degrade through changes in educational requirements, rather than due to technological developments. Calverley's thesis is well-supported by careful consideration and documentation of the multiple and often changing variables that can impact the reusability and sustainability of learning objects.

The final paper in this issue, "*Shadow netWorkspace: An Open Source Intranet for Learning Communities*", is an instructional development report by Laffey and Musser. about a web application system designed to allow a school or any other type of learning community to establish an intranet with network workspaces for all members and groups. This is both a technical and an imple-menttation paper. The first section outlines the technical features of the web system along with a description of how the design and development of the system of integrated network services was guided by social constructs of roles, resource sharing and social presence. SNS is an ongoing project. This paper describes some ways the system is being used and reports on key lessons learned from the development and initial deployment of SNS with teachers and students in several elementary classrooms.

Editing an Academic Journal

The specific information that prospective authors want, and often need in order to shape their work for publication, does not tend to appear in general author guidelines. While information is provided for authors on the CJLT web site [www.cjlt.ca] and at the back of every issue of the journal, I tend to receive several inquiries per month from prospective authors about the specific publishing processes of this journal. Questions tend to focus on quality of writing, publication decisions and acceptance rates, the peer review process, structuring an article, selecting an appropriate journal, and so on. To shed some light on the submission and review process, I intend to expand upon the publishing guidelines and policies by reflecting on the practice of bringing an issue of CJLT to print in this and in future editorials.

The Canadian Journal of Learning and Technology welcomes papers on all aspects of educational technology and learning. Preferred topics are listed in order to guide, not limit, authors. So, while CJLT calls for papers on learning theory and technology, cognition and technology, instructional design theory and application, online learning, computer applications in education, simulations and gaming, papers on other aspects of the use of technology in the learning process are welcome. It is important for authors to assess whether their paper aligns with one of the listed topics when deciding whether CJLT is an appropriate venue for their work. No matter what the topic, manuscripts that are deemed appropriate for immediate peer review are very clear and specific about how the work makes a unique or interesting contribution to the field of educational technology.

The CJLT is unique in the field of educational technology in that we accept and publish manuscripts either in English or in French. Our editorial team and Editorial Board are very fortunate to include members who are fluent in both of

Canada's official languages. CJLT accepts manuscripts in seven broad categories: research papers, literature reviews, critical scholarship, position papers, evaluations, case studies and instructional development reports. It is vital that authors serve as good advocates for their work. To increase the chance that a manuscript will be accepted for review, authors must (1) demonstrate how the topic is appropriate for CJLT, and (2) clearly identify which of CJLT manuscript categories best describes the paper. Finally, strive to make a good first impression about the quality and integrity of your research by using spotless referencing, spelling, grammar and punctuation.

The first step we follow is to conduct an editorial review to judge a manuscript's suitability, contribution, accuracy, and potential interest to the educational technology community. The editor, or designate, also assesses whether the format adheres to the journal's publishing guidelines. If the editorial review identifies concerns that preclude a peer review, the author is notified with an explanatory letter as soon as that process is complete. Of the 50 manuscripts submitted to CJLT last year, 15 (30%) were rejected after editorial review. In a few cases, the decision to reject a manuscript as unsuitable for CJLT is based on the topic and interest. In most cases, the decision to reject a manuscript prior to peer review is based on a lack of clarity or logic in argumentation, vagueness about the manuscript category, or lack of adherence to our length and style guidelines (i.e., too short, too long, sloppy referencing, poor grammar and structure, unsubstantiated claims). In order to get through initial editorial review, authors need to submit a clearly organized paper that follows APA style guidelines. Authors should invite another scholar to critique the paper prior to submission. Good ideas that are poorly presented will be returned to authors as unsuitable for further review.

The second step in the review process is a blind, peer review. Ideally, a blinded paper is sent to two or three educational technology scholars. Reviewers are asked to comment on the suitability, quality and contribution of the paper and to provide a recommendation with regard to publication. Reviewers are also asked to comment on the manuscript's major strengths and, if needed, to provide feedback on minor and major revisions. When selecting reviewers, I aim to send the manuscript to at least one scholar, and preferably two, who is expert in the paper's topic area, and at least one reviewer who is an expert in a different topic area. I value and appreciate each reviewer's feedback and carefully consider each recommendation before I contact an author with a final editorial decision.

The peer review and editorial process is not a strict numbers or voting process – a publication decision about a manuscript is informed by the reviews, not merely determined by a majority vote. Instead, a number of qualitative and logistical variables tend to also influence whether a manuscript is accepted for publication. The following list identifies some of the variables that tend to impact a publication decision: (1) the quality and suitability of a manuscript, (2) the relevance and contribution to the field, (3) feedback and recommendations from reviewers *within* the topic area, and from reviewers *beyond* the topic area, (4) the experience and expertise of peer reviewers and the Editorial Board, and (5) space in the upcoming issue of the journal. As editor, I am grateful for the feedback and recommendations from peer reviewers, as these individuals are educational technology scholars who represent a vast depth of expertise and breadth of knowledge in the field.

CJLT is published three times per year: Winter, Spring and Fall. The Fall issue of the journal is usually devoted entirely to a special topic and is edited by a guest editor or team. The Editor / Special Issue Editor(s) tend to manage several tasks in order to get an issue of the journal to print: (i) receive manuscripts, (ii) complete an editorial review, (iii) decide whether to reject or peer review, (iv) send manuscript to 2–3 peer reviewers, (v) manage peer review process, (vi) communicate with authors, (vii) select manuscripts for inclusion, (viii) create a table of contents and article order, (ix) write an editorial, and (x) manage the revision and final layout stages with the copyeditor. A final version of each manuscript (in .doc or .rtf form) is sent to the copy editor for final revision and journal layout. English abstracts are translated into French and French abstracts are translated into English.

Authors must send final manuscripts to the editor for final review and approval six weeks prior to the print date. In order to mail the Winter 2006 issue of the journal on February 15, the editor must send the current manuscripts to the printer two weeks early. In order to create the final print-ready PDF copy of the current issue, the copyeditor needs a minimum of 2–4 weeks to fine-tune manuscripts and to do the layout. So, in most cases, the copy editor needs manuscripts no later than one month before sending files to the printer.

A good copy editor is worth twice their weight in gold! The CJLT is very fortunate to have a talented copy editor, Maureen Washington, who is also a graduate student in educational technology at the University of Calgary. The copy editor completes the final spot-check with authors and designs the issue layout. Final manuscripts and a Table of Contents are sent to the copy editor who then works with authors, does the final layout, and provides PDF files for the printer. The editor approves the final journal layout before it goes to print—this process is valuable for both the editor and the copy editor because we always tend to find minor errata and stylistic changes. The biggest challenge at the copy editing stage is to work with tables and graphics that do not convert easily to the journal's size and greyscale format. Therefore, authors who provide good tables and graphics are worth their weight in gold!

The PDF files are sent to the printer, a proof is created, and the editor approves the proof. The entire printing process can take two weeks. The AMTEC membership coordinator provides mail-out labels / inserts for current members and subscribers, and we send a copy of the journal to each author as a small thank-you for their scholarly contribution to the journal.

CJLT is published in both a print and an online version. The content of articles in the online version may contain selected graphics, multimedia elements, or links that may help illustrate a concept or project and that could not, by their nature, be included in the print version. Authors interested in this should contact the editor. The final version of each issue of the journal is sent to the web publishers for online distribution four months after print distribution.

In closing, perhaps the most useful advice I can give to prospective authors can be summarized in the following four points. First, read the specific submission guidelines on suitable topics and manuscript categories and specifically incorporate these in your paper. Be very clear and specific about how your paper makes a unique or interesting contribution to the field of educational technology. Clearly identify which of CJLT manuscript categories best describes the paper. Second, invite a colleague to review and give feedback on the quality and organization of your manuscript prior to submission. Third, make a good first impression with clean referencing, spelling, grammar and punctuation. Please submit a clearly organized and interesting paper that follows APA style guidelines. Provide good tables and graphics. Finally, when in doubt, contact the editor with specific questions related to your paper and the journal's submission guidelines. I prefer to discuss topic ideas and identify potential concerns with an author prior to submission rather than having to return a manuscript as unsuitable for the journal. I look forward to continuing this great adventure in academic journal publishing by receiving your latest paper on new ideas and findings in educational technology research!