

Forum / Tribune

Electronic Publishing, Scholarly Communication, and the *Canadian Journal of University Continuing Education*

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ABSTRACT

Although in some parts of the academic community the popularity of electronic journals allows research to be conducted almost exclusively online, the social sciences, of which education is a part, have generally been slower to accept the electronic publishing (e-publishing) of journals and research data. Using a nationally distributed questionnaire, the readership of the *Canadian Journal of University Continuing Education* was asked to provide input on this topic. The discussion paper that follows presents the results of that questionnaire, framing them within the issues that

RÉSUMÉ

Bien que dans certains domaines du monde de l'enseignement, la popularité des périodiques électroniques permette que la recherche soit faite presque exclusivement en ligne, les sciences sociales, dont l'éducation fait partie, sont en général plus lentes à accepter la cyberédition de revues et de données de recherche. En utilisant un questionnaire diffusé à l'échelle nationale, on a demandé aux lecteurs de la *Revue canadienne de l'éducation permanente* leur participation à une discussion sur ce sujet. Le document de discussion suivant présente les résultats de ce ques-

underlie academic journals' decisions to move to e-publishing formats. As a Forum contribution, this paper is intended to generate response or discussion.

tionnaire, les encadrant à l'intérieur des questions étant à la base des décisions prises par les revues académiques pour s'orienter vers des formats électroniques. Comme contribution au Forum, cet article est destiné à générer une réponse ou une discussion.

INTRODUCTION

For some of those engaged in the print-versus-electronic dialogue of scholarly publishing, the bold statement that the "question of whether most scholarly journals will be electronic or not is thus settled" (Odlyzko, 1999) is a fair evaluation of the state of things. In support of this conclusion, the literature overflows with statistics detailing the number of electronic journals that now exist, the societies that sponsor or house them, and the disciplines in which electronic data have become the bread-and-butter of scholarly activity (Chan, 1996; Hitchcock, Carr, & Hall, 1996; Odlyzko, 1999).

For advocates such as Odlyzko (1999), the debate is already over. Other scholars are not so sure. From the results of a questionnaire distributed nationally to Canadian Association for University Continuing Education (CAUCE) members, I present in this paper one professional educational association's views on moving to e-publishing. Introductory remarks about CAUCE and about the *Canadian Journal of University Continuing Education* (CJUCE) and its current e-presence precede a discussion of the issues underlying scholarly e-publishing and a closer look at the questionnaire.

CAUCE, CJUCE, AND E-PRESENCE

The *Canadian Journal of University Continuing Education* (CJUCE) is one of the research arms of CAUCE. CJUCE has a long history of national readership across Canada, serving as a dependable vehicle for the dissemination of research data among like-minded practitioners in the fields of adult, extension, and continuing education. CJUCE is recognized as a principal print-based meeting place for the generation of theory and the sharing of knowledge in our field. In short, it is a valuable and respected institutional tool—both a process and a product.

Recently, however, new technologies have left their mark on many parts of the educational enterprise, including academic publications—the heart and soul of scholarly activity. Following the examples of more public venues such as commerce and marketing, academic journals have to varying degrees broken from years of print-based history to join in the revolution to become available online. Research data, once snugly tucked into the pages of academic journals, have leaped from library shelves onto computer screens.

To date, *CJUCE* has entered cautiously into e-publishing. Currently, the *CJUCE* website provides access to only the abstracts of recently published articles. After an embargo period of one year, full texts are made available on the site, indexed by author, title, and issue number. Readers are able to download PDF versions of articles. *CJUCE*'s limited access to published items, while not unusual, is sparse compared to the adoption of the online genre by other academic journals.

CJUCE, through its host institution CAUCE, is committed to implementing a more comprehensive online presence. In order to determine the most appropriate direction for such a move, a national survey was conducted in which CAUCE members were asked their views on moving to a more fully online presence.

THE QUESTIONNAIRE

To gather data on CAUCE members' opinions on the current and future adaptation to e-publication of *CJUCE*, the editorial team, with permission of the CAUCE executive, distributed a questionnaire in the spring/summer of 2001. Initially piloted at the 2001 conference in Victoria, British Columbia, the questionnaire was distributed in both hard copy and electronic form. Paper copies were sent across Canada to CAUCE's member institutions, and institutional recipients were asked to make the survey available to as many members as possible. However, it is impossible to know how many people received the survey due to the continuous flux in potential population among the CAUCE membership. An electronic copy of the same questionnaire was also mounted on the CAUCE website. Both sources eventually yielded a total of 107 responses.

The questionnaire consisted of yes/no and open-ended questions. No demographic data were collected. All the questions pertained to current *CJUCE* usage, online journal usage, and possible future directions for *CJUCE* in terms of paper and/or electronic editions. The questionnaire also invited respondents to contribute any other comments regarding the *Journal*.

Percentages were tallied to indicate the strength and commonality of certain responses. Qualitative data were analyzed by thematically grouping and categorizing the data.

THE ISSUES UNDERLYING ELECTRONIC SCHOLARLY PUBLISHING

Moving from the realm of traditional paper publishing raises a range of underpinning issues. Although economic considerations are important drivers for many academic journals, *CJUCE*, like other small educational journals supported by a host association, is exempt from the large-scale span of economic issues.

Correspondingly, sets of technical concerns that are critical to larger operations are not decision-making issues for *CJUCE*. A discussion of more relevant, academically focused issues follows the discussion below, which broadly frames e-publishing's economic concerns.

Economic Concerns

For many large scholarly journals, the evolution of e-publishing crystallizes a set of economic difficulties that has developed in recent years. Commercial publishers in the business of disseminating university-produced knowledge for profit have handled "virtually all the tasks involved in publishing, marketing, and distributing the material [and have made] the decisions about the subscription rates" (Willis, 1995). Jointly squeezed by reduced institutional budgets and rising production costs, university libraries have resorted to reducing their journal subscriptions to meet budget targets (McGettigan, 2001; Odlyzko, 1995; Singleton, 1999; Willis, 1995).

A member of the Canadian Association of University Teachers' (CAUT) Librarians Committee, commenting on the "crisis in scholarly communication" (*CAUT Bulletin*, 2002, p. A5), reflected on a market where

[a]s a result of mergers and consolidations, the industry is now dominated by a handful of large players who have utilized their market control to increase subscription rates at a pace far in excess of inflation. The existing system was becoming untenable. . . . Journal cancellations in university libraries became an everyday fact of academic life and it was inevitable that alternatives would arise. (p. A5)

E-publishing presents an alternative to the potential decrease in academic publishing due to economic constraints by providing new mechanisms for production, distribution, and subscription (*CAUT Bulletin*, 2002; McGettigan, 2001). Widely recognized as potential avenues for prying control away from commercial enterprise, models of production that distribute the balance of power from commercial outsiders to faculties, web groups, or libraries have been created (Hitchcock, Carr, & Hall, 1996, 1998; Willis, 1995). But even those at the vanguard of change acknowledge hesitancy, and e-journals

have not yet been crowned as “viable solutions to the crisis in scholarly communication” (*CAUT Bulletin*, 2002, p. A5; Hitchcock et al., 1998). Academic and knowledge-based issues that reflect the values placed on research and knowledge both within the academy and outside of it are key to the discussion of e-publishing.

Academic Concerns

At the root of academic contention around the transition to e-journals is the issue of the journal itself. The question “Who knows what journals really are?” (Singleton, 1999) is itself a rubric for an entanglement of values surrounding academic work and those who do it.

The Nature of Journals

In examining the dynamic between what is written and what is read, between what is observed and what is produced *for* observation, McLuhan declared that the user was the content. In the scholarly domain, McLuhan would have it that the journal, as the content, *is* the user. That is, the market is for academics and by academics; it is at the heart of the academic enterprise.

In the current system it is often tacitly understood that authors are the main market, not for reading or buying the journals but to be sold on submitting to the journal. They “pay” for gaining part of the reputation and visibility of the journal by submitting their paper. . . . Journals are the territory of claim, and counter-claim, of verification and refutation, of even proving that you have done some worthwhile research . . . (Singleton, 1999, p. 103)

The traditional form of academic journals reflects, quite deliberately, the nature and shape of the arguments they contain (Singleton, 1999). Our comfort with the paper product is a function of function. Therefore, “we should not be surprised if most scholars wish to preserve the basic form of the paper well into the electronic era, perhaps even indefinitely” (Singleton, 1999, p. 101) in spite of the fact that multimedia formats could provide more diversity in style. Similarly, O’Donnell (1995) spoke for traditionalists in saying: “The basic protocol of publication in a scholarly journal . . . is independent of the medium. There is no reason to change that highly successful protocol in converting from print to electronic network publication” (p. 186).

In addition to creating and sharing scholarly works, the academic writers of journal articles have performed gatekeeping roles through the peer review process. A more liberal access to knowledge presents the potential of enhancing the gatekeeping role as recourse to concerns about the quality of the refereeing process in which some electronic journals engage (Willis, 1995).

Academic journals have used a standard model that divides the work of publication among scholars, publishers, and libraries—libraries' roles being archival in nature. Libraries are shifting, however, from "just in case" stances—the emphasis on collections—to "just in time" stances—"the timely provision of access to information" (Willis, 1995). The "just in case/just in time" positions on the distribution of scholarship are reflected in a range of e-publishing options.

Credibility

Many universities do not weight electronically published articles with the same value in tenure and promotion decisions as their print counterparts (*CAUT Bulletin*, 2002), in the same way that online teaching is not, in some institutions, yet as valued as face-to-face classroom experience (Willis, 1995). Moreover, McGettigan (2001) alleged that "aggressive efforts have even been undertaken to undermine the legitimacy of e-publications, and, thus, the scholars associated with them." The print tradition is time-revered and the academic tradition is conservative, not particularly enamoured of the technological revolution (Odlyzko, 1995). "Papyrocentrism" suits aspects of some of the academy comfortably: offices, books, briefcases, student papers, much of the grading system—all revolve around the nucleus of the written word.

The credibility of e-publishing looks considerably different to publishers than it does to research-centred scholars who cringe at the notion of "exploitation" by "bundlers, by subscription agencies, by commercial sponsors of electronic libraries" (Tomlins, 2001, p. 34), all of whom court business in the academic sector. Bennett's (2001) suggestion that a "new age of electronic publishing is now upon us" (p. 243) aptly reflects literature that outlines a wide range of commercial concerns. The rapidly changing publishing market, dragging its client libraries into the mix, has forced commercial publishers to re-evaluate the nature and scope of their service and their products. Grasping "the ring that represents profitable electronic publishing" (Bennett, 2001, p. 243) may not be simply a matter of pouring old wine into new bottles; the industry is exploring whatever shape new bottles may take.

Accessibility

The Internet's endless information flow intrudes into our lives in many ways. Pop-up advertising screens and unwanted junk mail notwithstanding, technology celebrates new access to valuable knowledge and learning. The narrowness of distributed knowledge, once guarded by some academics and publishers, each for their own sets of reasons, is giving way to more democratic access. Round-the-clock access to material, instant print-out capability, regularly updated information, and the resulting saving of time are factors contributing to the rise in popularity of electronic data (Brown, 1998). More important, the balance of power has shifted "to the empowerment of the

end-user" (Brown, 1998, p. 172), relieving librarians and others of their custodial roles. The popularity of the move to instant access has been furthered in some cases by a younger generation of new scholars who have cut their teeth on a *Sesame Street*-type, bits 'n' bytes culture that is characterized by rapidly flowing information.

Another facet of accessibility is the issue of security. On the face of it, security may appear to be a technical, password-ish concern that could be remedied with new site engineering. Ultimately, however, the path leads back to the issue of stakeholders, entitlement, control, commerce, and the nature of disseminating knowledge (Brown, 1998). Which audiences should have unlimited access to a secure site? Need the site *be* secured? Who will pay for access, when, and how much?

Longevity

A primary concern that is often raised around the notion of adopting e-publishing formats, longevity—the potential lifespan of research documents—is described as a “transitory barrier” that, along with other hurdles that invariably accompany new developments, will find resolution in due course (Brown, 1998). Similarly, in response to the question of whether tapes and disks can preserve data into perpetuity, Harnad (1995) asks: Can libraries? Early adopters lump these kinds of concerns into the need for a “cognitive and behavioral paradigm shift” (Harnad, 1995) that challenges current perspectives.

Practical Concerns: Finding the Model

A brief discussion of e-publishing models is provided here, mindful that the broad variety of delivery formats available, their biases rooted in economies, traditions, and research perspectives (Harnad, 1995; Odlyzko, 1999), makes a complete discussion of options impossible. The literature of e-publishing, however, contains many survey pieces that describe and document cross-disciplinary responses to this new medium (Chan, 1996; Hitchcock et al., 1996; Wells, 1998/99).

Potentially, e-publishing makes available more services and greater access to research data and information. While continuing to provide the traditional peer-reviewed academic product, publishers will also be able to offer “reference linking, document delivery, electronic gateways and customizable information delivery” (Bennett, 2001, p. 244). These are long-term and costly features and sit at one end of a spectrum of service options, emphasizing the sweeping differences in electronic possibilities that exist between two major journal categories: electronic-only and electronic editions. The nature of the choice of category has been tied typically to the subject of the journal (Hitchcock et al., 1998). Mathematical journals, physics journals, medical and

biology journals have benefited from electronic formatting capabilities, although prestigious medical journals remain paper based.

According to Dr. Pieter Bolman, chief executive of Academic Press, there must be a move from the current "first frontier" of electronic journals' provision, usually as PDF Acrobat images, to a "second frontier," which would add functionality not currently imbedded in electronic journals (Brown, 1998, p. 178). Singleton (1999) countered this suggestion by pointing out that the dry, organized language and style of academic writing "does not always lend itself to the delights of multimedia" (p. 101). Furthermore, he writes, multimedia could actually enhance communication, but "communication is not the only, perhaps not even the chief, role of the paper—for decades, communication of the essentials of the paper will have often taken place earlier by a variety of informal methods" (p. 101).

Nonetheless, e-publishing offers a range of publishing formats beyond the traditional "issue" concept. Issues could be eliminated and replaced by a more fluid system that features the arrival of papers one by one as they are accepted for publication. "Notices of availability" would be sent to subscribers, announcing titles or abstracts. Readers could download material: in some cases, abstracts only; in others, full papers. A journal could use a LIST-SERV approach to disseminate the table of contents for new issues, and readers could download full copies of individual papers. The business model adopted by journals would determine whether they chose to operate a subscription, "just-in-case" service that supplied full copies of "issues" to their readership, or whether the "just-in-time" approach would guide readers, by announcement, to papers that were of immediate and compelling interest.

There is little consensus on the future directions of e-publishing—on what will most likely happen or on what should best happen. While pointing out that it is inappropriate and impossible to attempt to summarize a field that is both so diverse and changing quickly, Hitchcock et al. (1996) categorized the future of e-publishing based on economies of scale, concluding that "the immediate future of online journals is set to be dominated by electronic editions based on established paper journals and retaining the appearance of familiar paper layouts through Adobe Acrobat." Clearly, decision-makers contemplating future development must responsibly consider the matrix of conditions that will shape their journals' directions.

The Canadian Journal of University Continuing Education

The *Canadian Journal of University Continuing Education* (CJUCE) is a small-readership publication. Those who study e-publishing trends predict that this kind of scholarly publication will "most likely be converted to electronic-

only formats because the cost of printing and mailing can be eliminated" (Willis, 1995). The following *CJUCE* questionnaire results present readers' preferences in this regard. The figures are expressed in percentages except where indicated.

Current <i>CJUCE</i> Usage (%)	Yes	No	Unsure
I currently receive/access <i>CJUCE</i> (paper)	92	8	
I am aware of the online version of <i>CJUCE</i>	34	61	2
I access <i>CJUCE</i> online	21	78	2
Of those who visit <i>CJUCE</i> online (22)	Yes	No	Partly
Current <i>CJUCE</i> online availability suits my needs	50	45	9
I consult the paper copy as a follow-up	59	36	
Other online journal usage	Yes	No	
I access other journals online	56	31	
Future <i>CJUCE</i>, online	Yes	No	Doesn't matter
I prefer full text available upon publication	71	8	5
I would still use paper journal, given the above	54	26	8
	Yes	No	Maybe
Given full text, should paper be discontinued?	35	51	5
Would you participate in online interactive fora, discussions of papers, reviews, etc.	25	22	22

A Closer Look

Several questions on the questionnaire were open-ended in nature and several asked yes/no questions first (results tabled above) and then followed with open-ended questions that asked for explanation or comment. The data from these responses are categorized below.

*Not accessing *CJUCE* online*

Most respondents (78%) indicated that they did not access the online version of *CJUCE*. When asked why not, there were many responses. Some 61 percent of respondents were not aware of *CJUCE*'s online presence, although 56 percent of respondents indicated that they accessed other journals electronically. The responses to the question of why they did not access

CJUCE online are listed below, in descending order, according to the frequency of their occurrence.

	No. of people
• I didn't know about it.	36
• I prefer hard copy (print).	20
• Hard copy is convenient.	12
• No reason given	9
• I have all the back issues.	4
• I may try online in the future.	4
• Not enough time/too busy	4
• I don't read long articles online.	3
• It's inefficient to print it out.	2
• I didn't think about online.	2

Each of the following reasons for *not* using the online version of *CJUCE* was given once:

- I would not read the online version. I only use it for research.
- The Journal comes to me automatically. I do not have to find it.
- My eyesight makes for difficult onscreen reading.
- I like to go to the library.
- I have good intentions, but no action.

Accessing CJUCE online

Those people who visited the online version of the *Journal* were asked why they did so. Their answers are below.

• I am able to search within articles and cut and paste.	16
• I do not have convenient access to hard copy.	4
• I prefer to read onscreen.	1
• I can access online at home (hard copy is at the office).	1
• I can take a quick look at what is inside the issue.	1

DISCUSSION OF RESULTS

In the discussion that follows, *CJUCE* readers' opinions and responses are considered in light of e-publishing literature that describes both other users' experiences with e-publishing and the issues that not only underlie but also result from e-publishing decisions.

Convenience of Access, Time, and Efficiency

The majority of discussions about online efficacy revolve around ease of access in terms of convenience and use of time (Baldwin & Pullinger, 2000). The nature of *CJUCE*'s distribution system biases its readers' responses on this scale, however, because most readers have their *Journal* copies directly delivered to their workplace mailbox. Although many readership surveys involve lengthy discussions of the most convenient access routes to sought-after knowledge, *CJUCE* readers are used to receiving the *Journal* directly. Such a distribution system removes the need for lengthy or fruitless visits to the library, for photocopying articles from library holdings for annotation and future reference, or for turning to electronic access to that information. The ease of current access was mentioned by many questionnaire respondents as both reasons for endorsing hard copy and for previously not seeking out online copy. In a two-year research project that examined how readers used electronic journals (Baldwin & Pullinger, 2000), the responses to the "disadvantages of printed journals" strongly reflected issues related to the awkwardness of searching for, acquiring, printing, and storing of copies of library-held articles and the resultant time wasted from engaging in these activities.

Conversely, Baldwin and Pullinger (2000) reported that the greatest expectation of benefit from using electronic journals is access. In the *CJUCE* survey, only 34 percent of respondents were aware of the *Journal*'s online presence. Its limited online presence (abstracts only, with full text embargoed for a one-year period) makes difficult a comparison of readers' views on access. However, 76 percent of those who used *CJUCE* online listed the ability to easily search within articles for data as the most compelling benefit to using online material.

The Lure of the Library and Reading Spaces

Where journals are read is an interesting and important aspect of readers' adoption or rejection of electronic options and is dependent, in part, on the uses readers are making of their journal searches. However, discerning readers' reading habits from their questionnaire responses is difficult, and it is even more difficult ascribing reason or motivation to their choices.

The rhythms of research and the techniques for staying on top of the field, for example, differ between the sciences and the social sciences (Baldwin & Pullinger, 2000). Scientists who are dependent on high-quality graphics and preciseness of presentation in tables and figures must be able to access original copies of necessary data. Readers who indicate, therefore, that their needs are better met by the library may be basing their responses on the nature of required tasks (tracking trends, specific data gathering, following dialogue on timing), on the frequency of publication, and on the breadth of the field to be covered. They may, however, be using, as a part of their evaluation process, more tacit but equally valid aspects of library visitation: a chance to run into colleagues, to browse materials in familiar ways, to deviate from the routine of the office or the lab. One *CJUCE* respondent stated simply: "I like to go to the library." Baldwin and Pullinger (2000) reported that 34 percent of their respondents continued to use the library as they previously had (before having electronic access); more than twice as many social scientists as scientists were included in this group.

CJUCE readers echoed other survey respondents in indicating that they like to read at home. In the past, the tendency to read at home has been associated with paper copy. Today, reading at home could also reflect the process of downloading and printing off electronically located items. Similarly, the expressed preference to "read in the office" could include reading photocopies of library journal articles, actual subscription copies of journals, online papers, or printed versions of those papers.

The Best of All Worlds

As "there isn't any 'one' reason that academic researchers read journals" (Baldwin & Pullinger, 2000, p. 230), there isn't any one system of access that would suit all needs. *CJUCE* readers, in concert with other readers polled on their "druthers," indicated that they would, understandably, like to have the best of both worlds. That is, they would like to have the option of accessing full-text articles on line when needed or desired (71%), and they would like to be able to follow up with paper copy, preferably contained in a bound journal edition (59%). A majority would like to see full-text electronic copy exist side-by-side with paper copy (51%). These findings are consistent with other data that support a multi-format approach to journal presence within the library structure:

Users do not perceive electronic journals to be a 'replacement' for the library as an institution. They value the library as a place to visit and browse through journals, the location of the journal archive, and where they can find helpful staff. However, they do perceive electronic journals as a replacement for the *process* of getting copies of journal articles

more quickly and easily than visiting the library or requesting interlibrary loans. (Baldwin & Pullinger, 2000, p. 238)

In the case of *CJUCE*, the issue of library access is not perceived to be as central to the discussion given *CJUCE*'s direct mailing to most respondents.

CONCLUSION

As long ago as 1997, the Academia Europaea thought it timely to hold a workshop on the impact of e-publishing on academic communities. Although representation was largely European, there were also present contributors from the United States. In his introduction to the book that formed the report from that session, the editor, and chair of the workshop, remarked that in his physics research group at Imperial College, "young PhD students never, but never, look at a printed journal. They get all their information from the display screen" (Butterworth, 1998, p. 2). Harnad and Odlyzko, also strong voices from the scientific community, consistently reinforce Butterworth in what they perceive as obvious future developments in academic publishing.

CJUCE is not a scientific journal and does not serve a similarly motivated clientele. However, as an academic publication, it behooves all those engaged in the journal process to reach as broad and discerning a market as possible. At the scale on which *CJUCE* publishes, financial and technical considerations are not crushing decision points. Rather, prudent management, with eyes on financial practicalities and readers' preferences, should find a reasonable compromise that moves *CJUCE*'s e-presence into fuller, more fruitful bloom.

REFERENCES

- Baldwin, C., & Pullinger, D. (2000). What readers value in academic journals. *Learned Publishing*, 13(4), 229–239.
- Bennett, L. (2001). Electronic publishing in the new millennium. *Learned Publishing*, 13(4), 243–246.
- Brown, D. (1998). Scholarly journal publishing: Coming to terms with the Internet culture. *Learned Publishing*, 11(3), 171–178.
- Butterworth, I. (1998). (Ed.). *The impact of electronic publishing on the academic community*. London: Portland Press.
- CAUT Bulletin. (2002, January). Board abandons commercial journal; Highlights crisis in scholarly communication. ACPPU, A5.
- Chan, L. K. W. (1996). Exciting potential of scholarly electronic journals. *CAUT Bulletin* 34 (7). Retrieved November 20, 2001, from http://www.caut.ca/english/bulletin/96_sep/ejournal.htm
- Goldfinch, E. P. (2000). A limited study of online access and user preferences. *Learned Publishing*, 13, 241–245.
- Grenquist, R. (1997). Why I don't read electronic journals: An iconoclast speaks out. *The Journal of Electronic Publishing*, 3(1). Retrieved September 28, 2001, from <http://www.press.umich.edu/jep/03-01/Iconoclast.html>
- Harnad, S. (1995). Electronic scholarly publication: Quo vadis? *Serials Review*, 21(1), 70–72. Retrieved October 3, 2001, from <http://www.info.unicaen.fr/bnum/jelec/Solaris/d03/3harnad.html>
- Hitchcock, S., Carr, L., & Hall, W. (1998). *Making the most of electronic journals*. The Open Journal Project, Multimedia Research Project (pp. 1–13). Southampton, UK: University of Southampton. Retrieved October 3, 2001, from <http://xxx.lanl.gov/html/cs.DL/9812016>.
- Hitchcock, S., Carr, L., & Hall, W. (1996). *A survey of STM online journals 1990–95: The calm before the storm*. The Open Journal Project, Multimedia Research Group (pp. 1–17). Southampton, UK: University of Southampton. Retrieved October 3, 2001, from <http://journals.ecs.soton.ac.uk/survey/survey.html>
- International Association of Universities. (2002). A wiser world. *Newsletter of the IAU*, 7(5), 4. Paris: International Universities Bureau.
- Lewis, G. S., & Edwards, J. W. (1998). Home on the electronic range: Bringing the Journal of Animal Science online. *Learned Publishing*, 11(4), 265–270.

- Lorimer, R. (1999). Going electric: A few items for journal editors. Retrieved October 10, 2001, from the *Canadian Association of Learned Journals* Web site: <http://calj.icaap.org/going.electric.html>
- McGettigan, T. (2001). Where scholars fear to tread. *Radical Pedagogy*, 3(2). Retrieved January 22, 2002, from http://radicalpedagogy.icaap.org/content/issue3_2/editorial.html
- Naylor, B. (1994). *The future of the scholarly journal. Scholarly journals at the crossroads: A subversive proposal for electronic publishing*. An Internet Discussion about Scientific and Scholarly Journals and Their Future. Retrieved November 23, 2001, from <http://www.arl.org/scomm/subversive/sub11.html>
- Odlyzko, A. M. (1999). Competition and cooperation: Libraries and publishers in the transition to electronic scholarly journals. In S. Berry & A. Moffat (Eds.), *The transition from paper: A vision of scientific communication in 2020* (in press). Retrieved October 15, 2001, from <http://www.press.umich.edu/jep/04-04/odlyzko0404.html>
- Odlyzko, A. M. (1995). Tragic loss or good riddance? The impending demise of traditional scholarly journals. *International Journal of Human-Computer Studies*, 42, 71–122. Retrieved October 15, 2001, from <http://accounting.rutgers.edu/raw/aaa/aen/summer01/fd01.htm>
- O'Donnell, M. (1995). Electronic journals: Scholarly invariants in a changing medium. *Journal of Scholarly Publishing*, 26, 183–199.
- Singleton, A. (1999). Opportunities, threats and myths in journals. *Learned Publishing*, 12(2), 97–105.
- Tomlins, C. L. (2001). Just one more 'zine? Maintaining and improving the scholarly journal in the electronic present: A view from the humanities. *Learned Publishing*, 14(1), 33–40.
- Wells, A. (1998/99). *Exploring the development of the independent, electronic, scholarly journal*. Retrieved November 11, 2001, from <http://panizzi.shef.ac.uk/elecdis>
- Willis, J. (1995). *Bridging the gap between traditional and electronic scholarly publishing*. Retrieved October 13, 2001, from <http://pdts.uh.edu/~brobin/Educom95/EducomJW/index.html>

BIOGRAPHY

Dianne Conrad has recently relocated to the University of New Brunswick as Assistant Professor of Adult Education. From her position in the Faculty of Education, she is also responsible for coordinating the New Brunswick Community College Instructor Development Program.

Dianne Conrad a récemment déménagé à l'Université du Nouveau-Brunswick et est professeur adjoint en éducation des adultes. De son poste à la Faculté d'éducation, elle est aussi responsable de la coordination du Programme de formation d'instructeurs du Collège communautaire du Nouveau-Brunswick.