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Editorial

This issue brings together several articles that will be of interest to practitioners and researchers alike, as they reflect a range of theoretical insights and themes that are central to ICT integration, design, teaching and learning. Included in AJET 18(3) are articles by authors from Australia, Sweden and Canada, highlighting issues in design, evaluation, data collection and the management of innovation.

Mike Carbonaro, Joyce Bainbridge and Brenda Wolodko in *Using Internet surveys to gather research data* draw on their experiences in conducting a large scale Web based survey of elementary school teachers. The authors caution readers to not see Internet and Web based technologies as a panacea for carrying out survey based research, and that fitness for purpose must always be a consideration. One aim in their project was to design and develop a process for Web based survey research. Essentially, a self administered Web based questionnaire appears to have a number of advantages: providing fast access to the survey instrument, protecting against missing data, and automatic analysis or saving in file format which can be directly uploaded into a statistical program.

The article by Sinclair, Aldred and Smith draws attention to the processes and benefits of collaborative design of flexible materials. It is clear that successful flexible delivery design requires collaboration between content and multimedia experts. Particular attention is paid to how the boundaries separating content and multimedia knowledge and expertise are gradually broken down and blended during the design process, removing barriers and paving the way for effective design to proceed. The paper concludes by suggesting strategies that content and multimedia experts can apply in facilitating the process of design.



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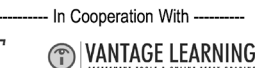
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Two articles in this issue present different perspectives and approaches to evaluation. Lars Svensson investigates the use of a bulletin board to support online discussion and the creation of an online community of students and teachers where attitudes, expectations and opinions can be shared and discussed. The results reveal how shared experiences such as students' frustration and satisfaction are frequent topics for discussion. The existence of a meta-discussion on shared norms for the evaluative debate is also evidence of an online community. At another level, the forum proved to be an interesting instrument of evaluation, with characteristics that complement traditional methods of evaluation. Analysis of the postings showed that students discussed many course related topics, and provided rich feedback and constructive suggestions on their learning.

Stacey and Rice in their article *Evaluating an online learning environment* describe their work in moving from informal evaluation of student satisfaction with an online program, in which the majority of participants believed that CMC facilitated their learning through small group teamwork processes. The focus of the evaluation was to research the roles of the social interaction, cognitive development and teacher presence, in order to evaluate the effects of the use of computer conferencing on students' learning. The paper presents a framework that can be applied to evaluate these dimensions of an online environment.

Catherine Lang's article provides observations and statistical data derived from a survey with over 550 female students in Australia, to posit that women perceive a strong link between mathematical ability and success in computing courses. Consequently, mathematics anxiety in women is a contributing factor to their under-representation in tertiary computing courses. The article is important in shedding light on factors that may contribute to under-enrolment of females in computing courses.

Managing innovation in educational institutions, by John Kenny, reviews project management practices to draw out key success factors in the context of high levels of innovation, uncertainty or change. He recognises the tensions inherent in project management in academic contexts, and proposes an organisational culture of openness, risk taking and learning to sustain innovation.

Kristina Love's article is largely concerned with design issues and in particular with the centrality of providing support for the education of preservice teachers in disciplinary knowledge and teaching strategies. The metaphor of scaffolding was conceptualised in such a way that it informed both the instructional content and the fundamental organising principle in the design of a CD ROM resource. Apprentice teachers are provided with explicit information about the structures and linguistic features of a variety of text types, models of writing and appropriate pedagogies. The article outlines the design principles and challenges involved in providing constructive forms of support to foster a range of professional skills.

Sue Gibson's starting point is the need for technology integration in the curriculum to help preservice teachers to develop new models of teaching and learning. Her article presents a case for interactive multimedia approaches based on problem based learning principles that may contribute to the next wave of improvements in the preparation of future teachers learning with technology. This article has presented one such possibility for helping preservice teachers to "rethink" traditional instruction, by immersing them in a constructivist, problem based learning environment with the assistance of the technology.

Overall, the articles in AJET 18(3) provide a rich source of exemplary practice in researching, designing and evaluating online learning environments, and on some issues in student support and equity.

Catherine McLoughlin
Editor

Databases and search engines: AJET's profile

In November 2000 AJET received an emailed invitation from a staffer at ERIC (the Educational Resources Information Clearinghouse) working in the area of Educational Technology and Library Science documents and journals [1]:

>Our clearinghouse thinks that your journal would be a valuable addition to
>the ERIC database and would like to be added to your list of complimentary
>subscribers. We would like to receive the issue of your journal Vol 16,
>Number 2, Winter 2000.
>
>Once processed by us, abstracts of selected articles from your journal will
>appear in ERIC's monthly bibliographic journal, Current Index to Journals
>in Education (CIJE), as well as in the computerized ERIC database. Persons
>requesting article reprints will be referred to your journal and to article
>reprint services.

As the inclusion of AJET in CIJE [2] is a major promotional step, we responded with prompt despatches of complimentary hard copy for Volume 16 issues 1, 2 and 3 (2000). I advised that "... we would prefer that you work from the web versions...", although it wasn't something we would insist upon. After all, ERIC is widely regarded as the most influential and comprehensive database in educational research and if they want hard copy, hard copy they shall have. It wasn't really necessary to remind us, as the invitation did, that:

>More than 1,000 libraries in 27 countries currently act as ERIC information
>service providers and ERIC users spend approximately 100,000 hours per year
>searching the ERIC database online. We feel sure that your inclusion in
>ERIC will result in wider professional visibility for your publication!

We despatched Volume 17 during 2001 and continued the despatches into Volume 18, 2002, with a little apprehension, because the per copy print and post (air mail to USA) expenses amounted to Au\$8.00-\$9.00 per issue, and nothing was happening in the ERIC IT (Information and Technology) database. Occasional searches of ERIC's list of abstracted journals [3] continued to produce the same result, namely only 8 journals found for the search term 'educational technology':

Actual Criteria Used: educational technology

British Journal of Educational Technology
Educational Technology
Educational Technology Research and Development
Educational Technology Review
Journal of Educational Technology Systems
Journal of High School Science Research
Journal of Special Education Technology
Programmed Learning and Educational Technology

After follow up emails on 5 June and 28 June 2002, I received an email from ERIC on 2 July! Great... but it turned out to be a request "to include the AUSWEB01 Conference Proceedings into our database." A worthwhile request, needing only a few minutes to redirect to AusWeb and refer ERIC to <http://ausweb.scu.edu.au/> [4], but not quite what we wanted to hear. Though it gave us an opportunity for another reminder, which elicited advice on 3 July 2002 that "Vol 17 Issue 1, 2, 3 & Vol 18 Issue 1 are with a reviewer..." Keep an eye on the CIJE Source Journal Index search [3] for developments.

Meanwhile, AJET's authors may be interested in our profile in a very different avenue for finding research articles - the Internet search engine, as illustrated, or even epitomised, by Google [5]. Google accords a flatteringly high degree of recognition for AJET (Table 1), does not require reminders or hard copy despatches, the period to get each new issue of AJET scanned is relatively brief, and it is very effective with keyword searches.

Table 1: Examples from recent checking of "AJET's Google profile"
(at <http://www.google.com/> using 'Advanced search')

Date	Search words	Specify	Result
<i>Testing for recognition of AJET</i>			
17 Sep 2002	journal educational technology	all of the words	AJET 2nd in about 930,000. ('Search took 0.30 seconds.')
17 Sep 2002	journal of educational technology	exact phrase	AJET (old URL) 1st and 10th (new URL) in about 11,800. ('Search took 0.43 seconds.')
17 Sep 2002	web online journal technology educational	all of the words	AJET 8th in about 449,000. ('Search took 0.47 seconds.')
<i>Examples of looking for specific articles</i>			
17 Sep 2002	web journal malaysian learning	all of the words	Expecting to find Hong et al (2001). Found 3rd in about 5,940.
17 Sep 2002	online toolbox flexible journal	all of the words	Expecting to find Oliver (2001). Found 13th in about 4,650.
<i>Testing for appearance of AJET 18(2) articles in Google results</i> (files mounted 16 Aug 2002)			
16 Sep 2002	ajet bain	all of the words	Expecting to find Editorial (Bain 2002) for AJET 18(2). Found 1st in about 35.
16 Sep 2002	ajet ocean classroom	all of the words	Expecting to find O'Reilly (2002). Found 1st in about 31 (in 18(2) table of contents*)
16 Sep 2002	ajet learning to evaluate	all of the words	Expecting to find Lyons and Milton (2002). Found 1st in about 339 (in 18(2) table of contents*) ('Search took 0.17 seconds')
* At the date of testing, AJET 18(2) articles were subject to their 3 month period of password controlled access and thus were inaccessible to Google. However, titles for all articles were accessible unrestricted, via the table of contents for Vol 18.			

The last three examples in Table 1 illustrate how readers may use AJET specific Google searches, by including "ajet" (case insensitive) in an advanced, "all of the words" search. That produces good results because all articles on AJET's website have AJET as the first word in the title element, and because the number of other organisations also using the acronym "AJET" is small [6]. As the usefulness of Internet search engines for edtech researchers depends to a large extent on the words in the title element (Homer, Ullman and Wright, 1997) for HTML files, we try hard to select the most informative and most "findable" words, and also seek best use of the meta elements for "keywords" and "description".

Selecting a title to suit both human readers and search engines is an intriguing challenge. For example, the article by Carbonaro, Bainbridge and Wolodko (2002) in this issue contains the subtitle "Trials and tribulations" - effective for gaining attention from human readers, but ineffective for search engine purposes.

The two kinds of searching (or dissemination, if thinking as a publisher rather than as a researcher) complement one another. The well known, long established database approach as exemplified by ERIC, and the newer Internet search engine approach as exemplified by Google, are especially important for publications like AJET. We do not have access to the corporate marketing strategies and budgets available to journals in the "stables" of the large scale commercial publishers, so we have to optimise and maximise our profiles in the ERIC and Google kinds of avenues for dissemination.

However, if we succeed in these avenues, we will not need advertising budgets, thereby supporting the goals of containing the cost per article (Atkinson, 2001) at affordable levels and emphasising the scholarly perspective on publishing, in contrast to the commercial perspective.

AJET website development

The transfer of AJET from our old website at cleo.murdoch.edu.au, as announced in 18(1) (Atkinson and McLoughlin, 2002), was completed on 26 September 2002, with one variation from plan. As ASET had not made any arrangements to activate and host the domain www.aset.org.au prior to the scheduled retirement of the old host cleo, all AJET files have been placed under www.ascilite.org.au/ajet/ (including Vols 1-12), to avoid a break in AJET's well established record of full online availability for all archival issues.

AJET's website has a recently commissioned search facility [7] using [ht://Dig](http://Dig) software [8], a new page access counter [9], queried via the "Access counts" link at the foot of each table of contents page for AJET Vols 15-18, and a re-establishment of controlled access applicable to the first three months of availability of each new issue. We acknowledge with gratitude the support from NetSpot [10] and much appreciated technical input by NetSpot staffer Marshall Cowan.

AJET's printed version

Table 2 summarises the expansion of AJET's printed version in recent years. The number of pages and number of articles per volume have increased steadily. The number of subscriptions (including legal deposit and complimentary copies) is increasing slowly, after being static for some years. However, the average number of copies printed for each volume is decreasing, due to decreasing requisitions for

AJET, and smaller provisions for sales of back issues, spares and promotional copies. The average print cost per copy (Au\$4.30 for Vol 18, compared with Au\$3.63 for Vol 17) is rising in accord with inflation, the increasing average number of pages per issue, and to a small extent, the decreasing number of copies being printed. Whilst subscription rates [11] have remained unchanged for Volumes 13-18, notwithstanding the 250% increase in number of pages per volume in size, a review of rates will soon become inevitable.

Table 2: AJET's printed version, Volumes 13-18, 1997-2002

Vol, year	Number issues	Number pages	Number articles	Average No. copies printed	Number of subscriptions
18, 2002	3	xxii+410	23	742	66
17, 2001	3	xviii+350	20	817	58
16, 2000	3	xii+314	18	773	47
15, 1999	3	xiv+272	15	850	47
14, 1998	2	viii+140	10	815	48
13, 1997	2	viii+164	10	700	48

Roger Atkinson
AJET Production Editor


URLs

1. ERIC Clearinghouse on Information and Technology. <http://www.ericit.org/>
2. Journals Currently Covered by *Current Index to Journals in Education* (CIJE). <http://www.ericfacility.org/rr17b.html>
3. Search CIJE Source Journal Index. <http://www.ericfacility.net/extra/pub/sjsearch.cfm>
4. AusWeb Conference Series. <http://ausweb.scu.edu.au/>
5. Google. <http://www.google.com/>
6. Others sharing the AJET acronym include *Advanced Joint English Teaching* at Taiwan's National Sun Yat-sen University, <http://ajet.nsysu.edu.tw/>; *Association for Japan Exchange and Teaching*, <http://www.ajetonline.org/>; and the American Society of Electroneurodiagnostic Technologists' journal, *American Journal of Electroneurodiagnostic Technology*, <http://www.aset.org/pubs.html#AJET>
7. AJET Keyword Search. <http://www.ascilite.org.au/ajet/about/ajetsearch.html>
8. ht://Dig WWW Search Engine Software. <http://www.htdig.org/>
9. WWW Homepage Access Counter and Clock. <http://www.muquit.com/muquit/software/Count/Count.html>
10. NetSpot. <http://www.netspot.com.au/>
11. For subscription details, see <http://www.ascilite.org.au/ajet/about/about.html>

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<http://www.ascilite.org.au/ajet/ajet18/oreillyr.html>



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