



Contents

Editorial 26(4): Preface to the Special issue – Interactive whiteboards: An Australasian perspective	iii-vi
<i>Michael Thomas and Anthony Jones</i>	
Talking about science in interactive whiteboard classrooms	417-431
<i>Karen Murcia and Rachel Sheffield</i>	
Project ACTIVate: Innovations from New Zealand	432-446
<i>Janet Yelas and Paul Engles</i>	
Using interactive whiteboards in pre-service teacher education: Examples from two Australian universities	447-463
<i>Chris Campbell and Peter Kent</i>	
Connecting classrooms in rural communities through interactive whiteboards	464-476
<i>Jane Mitchell, Jane Hunter and Nicole Mockler</i>	
Collegial mentoring for effective whole school professional development in the use of IWB technologies	477-493
<i>Anthony Jones and John Vincent</i>	
Interactive whiteboards: Interactive or just whiteboards?	494-510
<i>Maria Northcote, Paula Mildenhall, Linda Marshall and Paul Swan</i>	
Secondary school teachers' perceptions of interactive whiteboard training workshops: A case study from Taiwan	511-522
<i>Horng-Ji Lai</i>	
Networked interactive whiteboards: Rationale, affordances and new pedagogies for regional Australian higher education	523-533
<i>Phillip Dawson</i>	
The interactive whiteboard: A transitional technology supporting diverse teaching practices	534-552
<i>Arthur Winzenried, Barney Dalgarno and Jacqueline Tinkler</i>	
Learning as students to become better teachers: Pre-service teachers' IWB learning experience	553-570
<i>Shanti Divaharan and Joyce Hwee Ling Koh</i>	

The *Australasian Journal of Educational Technology* (AJET) is a refereed research journal published 6 times per year by the Australasian Society for Computers in Learning in Tertiary Education (ascilite). AJET retired its printed version (ISSN

1449-3098) at the end of Volume 23, 2007, and from Volume 24, 2008, the journal is open access, online only (ISSN 1449-5554), and does not have paid subscriptions. © 2010 Authors retain copyright in their individual articles, whilst copyright in AJET as a compilation is retained by the publisher. Except for authors reproducing their own articles, no part of this journal may be reprinted or reproduced without permission. For further details, and for details on submission of manuscripts and open access to all issues of AJET published since the journal's foundation in 1985, please see <http://www.ascilite.org.au/ajet/>

For editorial inquiries, contact the Editor, Associate Professor Catherine McLoughlin, School of Education (ACT), Australian Catholic University, PO Box 256, Dickson ACT 2602, Australia. Email: Catherine.McLoughlin@acu.edu.au, Tel: +61 2 6209 1100 Fax +61 2 6209 1185.

For review process, production, website and business matters, contact the Production Editor, Dr Roger Atkinson, 5/202 Coode Street, Como WA 6152, Australia. Email: rjatkenson@bigpond.com, Tel: +61 8 9367 1133. Desktop publishing (PDF versions) and HTML by Roger Atkinson.

AJET is managed by a Committee comprising ASCILITE Executive nominees, the convenors or nominees from previous ascilite Conferences, and AJET's previous editors and current senior editorial staff. The 2009 Management Committee members are:

Professor Mike Keppell, Charles Sturt University, ASCILITE President
Dr Philippa Gerbic, Auckland University of Technology, ASCILITE Executive
Professor Geoffrey Crisp, University of Adelaide, ASCILITE 2003 Convenor
Dr Rob Phillips, Murdoch University, ASCILITE 2004 Convenor
Professor Peter Goodyear, University of Sydney, ASCILITE 2006 Convenor
Dr Dale Holt, Deakin University, ASCILITE 2008 Convenor
Professor Ron Oliver, Edith Cowan University, AJET Editor 1997-2001
Assoc Prof Catherine McLoughlin (Editor), Australian Catholic University
Dr Roger Atkinson (Production Editor)

AJET's Editorial Board (see <http://www.ascilite.org.au/ajet/about/editorial-board.html>) reflects the journal's commitment to academic excellence in educational technology and related areas of research and professional practice, our vision of an international journal with an Australasian regional emphasis, and our origins as a professional and learned society publication.



Australasian Society for Computers
in Learning in Tertiary Education
<http://www.ascilite.org.au/>

Editorial 26(4): Preface to the Special issue

Michael Thomas

University of Central Lancashire

Anthony Jones

The University of Melbourne

Editors, Special issue - Interactive whiteboards: An Australasian perspective

Interactive whiteboards (IWBs) have been one of the most visible signs of digital technologies in education over the last decade (Becta, 2003, 2004, 2006). Like many other technologies adapted for education in the past one hundred years, they have often been advanced as ushering in a 'transformation' or 'revolution' of pedagogy (Beetham & Sharpe, 2007; Betcher & Lee, 2009; Cuban, 1986, 2001). Perhaps like no other learning technology before, however, they have been supported by central governments with huge amounts of public investment as well as by private and corporate training providers around the world, particularly in the UK, but also latterly in Europe, the United States, South America, the Middle East as well as in Asia. Whereas in the early phase of IWB integration in the UK, research studies were concerned with whether the technology could enhance learning, latterly the question has been how best to use it as a teaching tool. As Rudd (2007) suggests, we ought now to turn to consider questions about "the optimum conditions for effective use; the factors that may support such use; the aspects that may influence future developments; as well as the types of evidence needed that will enable us to implement appropriate changes" (p. 1).

An increasing body of research has developed in response to the more widespread use of IWBs in the compulsory education sector over the last five years (Moss et al., 2007). Building on the case study research and practitioner perspectives which accompanied the early stages of their integration, in 2007 a special edition of the journal, *Learning, Media and Technology*, was devoted to the topic entitled, "The interactive whiteboard phenomenon: Reflections on teachers' and learners' responses to a novel classroom." A growing number of publications and research studies following this period resulted earlier this year in the publication of the first academic collection on the subject by leading researchers in the field (Thomas & Cutrim Schmid, 2010). Just as digital technologies are receiving greater acceptance,

ascilite 2010 sydney



curriculum, technology & transformation for an unknown future

Sydney, 5-8 December 2010. Website <http://www.ascilite.org.au/conferences/sydney10/>



<http://conference.hersa.org.au/2010/>

*Reshaping
Higher Education*

Melbourne, 6-9 July

their ability to enable improved opportunities for national and international collaboration between learners as well as between teachers, has led to an increasing concern with the way technologies and e-learning pedagogies are culturally mediated. It is a natural next step in interactive whiteboard research then, to consider how the technology is being used in different national traditions and to focus on the kinds of challenges and opportunities that are being presented by these contexts.

This special edition of the journal responds to these questions and was based on a call for contributors from the Australasian region. The resulting edition consists of ten papers from academics, teachers and researchers based in Australia, New Zealand, Taiwan and Singapore, thus reflecting the increasing appeal and importance of the technology in the region and in different national and pedagogical traditions.

The majority of contributions are from Australia, a sign of the increasing importance of digital technologies in that context, spurred on by the government's policy initiative, *Digital Education Revolution*. Established in 2008, the initiative is supported by Au\$2.2 billion on investment over a six-year period and aimed at two interrelated areas of technology integration: ICT infrastructure and professional development. Likewise in the case studies on New Zealand, Singapore and Taiwan in this edition, we can also see the investment by governments in ICT for providing access to the 21st century and digital literacy skills necessary for a new generation of teachers and learners in the knowledge economy (Castells, 2000; Lankshear & Knobel, 2007). The important place occupied by professional development in these policy documents reinforces the history of IWBs to date, namely, that while it is important to upgrade ICT equipment and provide new and established teachers with online curriculum tools and conferencing facilities, it is essential to offer them opportunities to explore the implications for pedagogy first and foremost.

In the ten articles collected in this special edition we can see the importance attached to pre- and in-service teacher training (Campbell & Kent; Divaharan & Koh; Jones & Vincent; Lai). In the others we can see research perspectives emerging on themes that have thus far framed early engagements with IWBs in the UK, such



MoodleMoot AU 2010, Melbourne, 11-14 July. <http://moodlemoot.org.au/>



WCC2010 Brisbane
20-23 Sept 2010
<http://www.wcc2010.com/>
International Federation for
Information Processing

as science education (Murcia & Sheffield), networked collaboration among educational providers (Dawson; Mitchell, Hunter & Mockler; Yelas & Engles), and appropriate pedagogical strategies (Northcote, Mildenhall, Marshall & Swan; Winzenried, Dalgarno & Tinkler).

All of the perspectives collected here reinforce Moss et al.'s (2007) assertion that, "the introduction of an IWB does not in and of itself transform existing pedagogies" (p. 5); only teachers can do that. By being only the second special edition of peer reviewed papers to focus on interactive whiteboards, and the first to consider the use of the technology specifically in the Australasian region, it is hoped that the research collected here will provide a unique perspective on this influential learning technology – an indication of where we are now as well as signposting future directions.

References

- Becta (2003). *What the research says about interactive whiteboards*. Coventry: Becta. [viewed 22 Feb 2009] http://partners.becta.org.uk/page_documents/research/wtrs_whiteboards.pdf
- Becta (2004). *Getting the most from your interactive whiteboard: A guide for secondary schools*. Coventry: Becta. [viewed 22 Feb 2009] http://foi.becta.org.uk/content_files/corporate/resources/foi/archived_publications/getting_most_whiteboard_secondary.pdf
- Becta (2006). *The Becta review 2006: Evidence on the progress of ICT in education*. Coventry: Becta. [viewed 22 Feb 2009] http://becta.org.uk/corporate/publications/documents/The_Becta_Review_2006.pdf
- Beetham, H. & Sharpe, R. (2007). *Rethinking pedagogy for a digital age: Designing and delivering e-learning*. London & New York: Routledge.
- Betcher, C. & Lee, M. (2009). *The interactive whiteboard revolution: Teaching with IWBs*. Victoria, Australia: ACER Press.
- Castells, M. (2000). *The rise of the network society. The information age: Economy, society and culture, Vol. 1*. Cambridge, MA; Oxford, UK: Blackwell.
- Cuban, L. (1986). *Teachers and machines: The classroom use of technology since 1920*. New York & London: Teachers College, Columbia University.



ePortfolios Australia
Conference 2010.
Melbourne, 3-4 November
[http://www.flexiblelearning.net.au/
content/e-portfolios-australia](http://www.flexiblelearning.net.au/content/e-portfolios-australia)



ATN Assessment 2010 Conference: *Sustainability, Diversity and Innovation*, 18-19 November 2010, University of Technology Sydney. <http://www.iml.uts.edu.au/atnassessment/>

Cuban, L. (2001). *Oversold and underused: Computers in the classroom*. Cambridge, MA & London: Harvard University Press.

Lankshear, C. & Knobel, M. (2007). *New literacies: Everyday practices and classroom learning*. Maidenhead: Open University Press.

Moss, G., Carrey, J., Levaic, R., Armstrong, V., Cardini, A. & Castle, F., (2007). *The interactive whiteboards pedagogy and pupil performance evaluation: An evaluation of the schools whiteboard expansion (SWE) project: London Challenge*. Institute of Education: University of London. [verified 6 Jun 2010] <http://www.dcsf.gov.uk/research/data/uploadfiles/rr816.pdf>

Rudd, T. (2007). *Interactive whiteboards in the classroom*. [viewed 22 Feb 2009] <http://www.futurelab.org.uk/events/listing/whiteboards/report>

Thomas, M. & Cutrim Schmid, E. (Eds) (2010). *Interactive whiteboards for education: Theory, research and practice*. Hershey, PA: Information Science Reference.

Dr Michael Thomas, School of Languages and International Studies, Faculty of Arts, Humanities and Social Sciences, University of Central Lancashire, UK.
Email: MThomas4@uclan.ac.uk

Dr Anthony Jones, Melbourne Graduate School of Education, The University of Melbourne, Australia. Email: a.jones@unimelb.edu.au
Web: http://www.edfac.unimelb.edu.au/cgi-bin/public/staff_profile.cgi?id=7001



Sixth Pan-Commonwealth
Forum on Open Learning

24-28 November 2010, Kochi, India
<http://www.pcf6.net/>

Commonwealth of Learning and
Indira Gandhi National Open University



*Education 2011 to 2021 -
Summit 2011*

Sydney, 14-18 February 2011

<http://www.dehub.edu.au/summit2011/>

DE Hub and ODLAA