Review

E-learning in Science and Design and Technology: Proceedings of IDATER on-line conference 2005 – 2006

Title:	E-learning in Science and Design and Technology: Proceedings of IDATER on-line conference 2005 – 2006
Author/Editor:	Howard Denton, Gren Ireson and John Twidle
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Reviewed by:	Dr David Barlex

On line conferences are an intriguing means of enabling members of the research community who do not have the time or the funding to attend traditional conferences the opportunity to explore an area of research interest and report this to a wider audiences. The IDATER conferences included a research seminar to discuss international research collaboration and extend the conference beyond a specific annual gathering. The IDATER on-line conferences build on this research seminar concept. The first of these conferences took place in 2005-2006 on the theme E-learning in Science and Design and Technology. The proceedings are available free of charge at http://idater.lboro.ac.uk or can be purchased as hard copy from the Department of Design and Technology, Loughborough University, Leicestershire, LE11 3TU for £25.00. Currently there is an action research conference with publication of proceedings sometime in the summer of 2008.

The proceedings for E-learning in Science and Design and Technology are an intriguing mix. They include the following:

Three lead papers

BA (Google): Graduating to information literacy by Tara Brabazon, School of Media, Communication and Culture, Murdoch University, Western Australia.

e-learning as technology, e-learning as learning by Torben Steeg, University of Manchester.

Classroom and chatroom: why school science pupils should discuss practical science work on-line by Partick Fullick, School of Education, Southampton University.

There are six refereed papers

A review of the literature concerning website effectiveness: before, during and after use by Peter C Simmons and Kevin Badni, both of Loughborough University

A discussion of constructivist learning in relation to the development of ideation using a Virtual Reality Learning Environment for Innovation in Iceland by Gisli Thorstensson of Iceland University of Education and Howard Denton of Loughborough University.

Internet Safety Issues in English Schools by Jocelyn Wishart, University of Bristol.

Engagement as the Key Feature of the Successful Use of the Internet for Information, Alan Pritchard, Centre for New Technologies Research and Education (CeNTRE), University of Warwick.

Using ICT to enhance student understanding of classification, Mark Chapple and Gary Simpson, Woodleigh School, Australia.

The development of a virtual learning environment site to support year one industrial design undergraduates: A case study, Howard Denton, Loughborough University.

There are eight curriculum development papers:

ICT – a modern solution to science teaching.

Recreating ecosystems in micro worlds.

A new dimension to Science teaching in the 21st Century Teaching science online.

The use of search engines in teaching classification in Key Stage 3 science.

The Internet supporting an aspect of designing and making: a case study.

HTML for beginners.

The catalytic oxidation of ammonia: An interactive web-based virtual experiment and teaching and learning resource.

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What is one to make of this mix?

Writing in 2008 some of the articles seem to have been overtaken by recent developments. Brabazon's outrage at the unthinking use of Google by her students does not consider directing them to use of Google Scholar. The setting up by teachers of on line discussion groups to support student learning is now commonplace. The arguments for caution in adopting technology driven e-learning (how pupils learn) are well made as is the case for introducing new technologies as the substance of e-learning (what pupils learn). Such is the pace of change in design and technology education that the new technologies discussed – simulation software and microcontrollers – are now becoming requirements in the curriculum.

Some of the refereed papers leave one hanging – what will Gisli Thorstensson and Howard Denton do with their VLEs – perhaps a case for using Google Scholar to find out if they have published further work. There is resonance between two of the papers – Brabazon and Pritchard – although considering students of different ages. The notion of 'engagement' and mechanisms for engagement that allow and encourage knowledge transformation as opposed to information transfer are relevant to each. This is still an important issue with the increased use of the Internet for research activity in a wide range of school subjects.

The curriculum development papers are to be welcomed as those written by teachers provide an opportunity to develop reflection and begin the journey towards publication of more developed pieces in more conventional proceedings and journals. The reflection apparent indicates that the work carried out could be considered as suitable for Teacher Learning Academy accreditation.

So it is well worth dipping into this mix if you are interested in the use of e-learning in science and design and technology. They provide an intriguing snapshot in time which will stimulate reflection to inform current research.