‘Co-research’

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The future of the General Teaching Council for England (GTCE) is currently under review, but it has just published *Professionalism and pedagogy: a contemporary opportunity* in partnership with the Teaching and Learning Research Programme (TLRP) of the UK’s Economic and Social Research Council (ESRC). Its seeks to provide a conceptual framework for representing teacher expertise, which is an immensely challenging task, and a review of its effectiveness in the context of design and technology education would be wholly worthwhile, although clearly beyond the scope of an editorial. However, it is possible here to note its purpose, as illustrated by this passage from its introduction.

> In a world-class educational workforce – Finland might be used as an example – teachers are the ones who initiate discussions about pedagogy, and then evaluate and critique the ideas they develop. This ‘pedagogic discourse’ aspires to be explicitly grounded in the scrutiny of idea, theories, ethical values and empirical evidence. It goes well beyond simplified prescription, for instance of ‘what works’ and supersedes reliance on centrally-imposed performance targets. In their place is greater trust in teachers’ capacity for self-improvement as an inherent element of their professional identity. However, this trust has to be earned – hence the focus in the Commentary on the nature of pedagogic expertise.
>
> (Pollard, 2010:4)

This agenda relates closely to the initiatives that have been taken to develop the research infrastructure for design and technology education, and, it is timely for these to be reconsidered in this light.

It was some years ago now that, following their review of published research in design and technology education, Marlene Harris and Valerie Wilson asked:

- Can a model of research for D&T, which includes users, be developed? (2003)

Efforts to date to address this question within design and technology education have focused essentially on outputs from two research models: ‘traditional academic research’ and ‘teachers as researchers’. From 2002 onwards the Design and Technology Association’s Education and International Research Conference has brought together research outputs from both these groups in the context of practice provided by its annual education conference. In order to support this approach and the wider development of an M-level profession in England, a number of initiatives have been undertaken with support from the Teacher Development Agency, amongst which have been:

- the development of an open access online journal, conference and research archives, accessible via an online hub (www.dater.org.uk);
- downloadable research publications and online research resources for Initial Teacher Education (ITE) lecturers (www.data.org.uk);
- an ‘action research’ poster distributed to schools;
- conferences/workshops for ITE tutors.

A preliminary evaluation of the effectiveness of these can be found in Norman et al (2009). The online journal has been taken up widely, by 112 countries in 2008-9 and 146 by 2009-10. It has now reached something of a steady state of visits by around 1000 people per month as can be seen in Figure 1.

There are fewer visitors to the online hub, about 250 visitors each month as can be seen in Figure 2, and coming from about 60 countries. The online conference has been much less successful. Although it had sufficient visitors (around 50 per month), poor design of the interface led to a high bounce rate and it has had to be

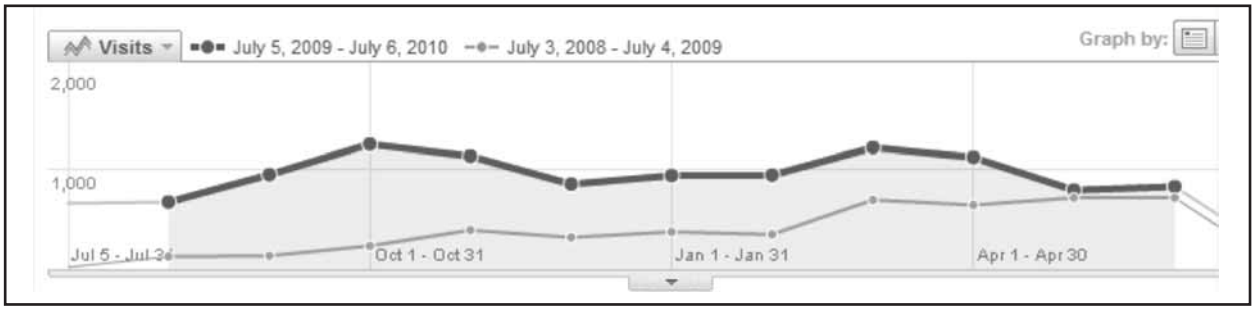

Figure 1. Numbers per month visiting Design and Technology Education: an international journal, 2008-2010 (from Google Analytics)

‘Co-research’

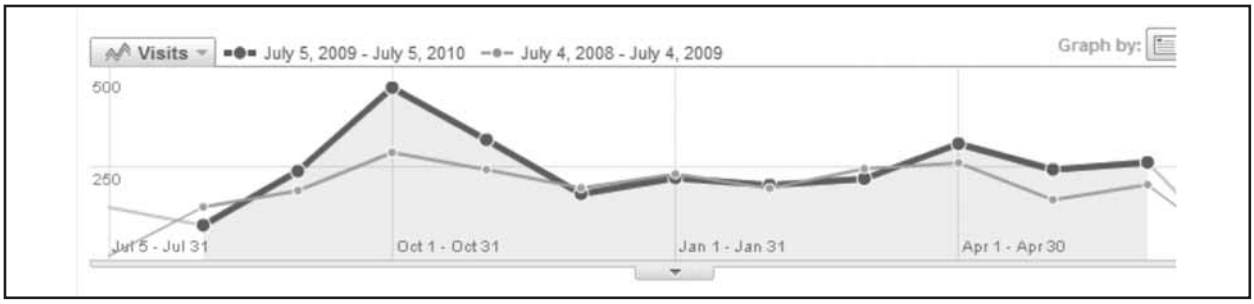

Figure 2. Numbers per month visiting DATER (www.dater.org.uk) 2008-2010 (from Google Analytics)

redeveloped. It will be relaunched soon at http://idater.lboro.ac.uk/.

Teachers as researchers

Of course, these initiatives were taken in order to support ‘academic researchers’, but also in order to develop a supportive environment for teachers wishing to engage in research. There is insufficient evidence to reach any conclusion about the effectiveness of any of these initiatives in supporting ‘teachers as researchers’, but the submissions to the D&T Association’s annual conferences provide a starting point for describing the current situation. These are shown in Table 1, where the numbers in brackets show authors with school or college affiliations, which could be taken as a measure of ‘teachers as researchers’. Whilst this might suggest, more activity in recent years, it cannot yet be described as having significant impact. So perhaps it is time to consider a different approach…co-research?

Co-research

A discussion of co-research was one aspect of the research workshop held in the afternoon preceding the start of the 2010 Design and Technology Association Education and International Research Conference. Action research has long well-established traditions within design and technology education and there are many examples of collaborative and participative research between academic researchers and teachers. Jean Hartley and John Bennington (2000) presented an analysis of co-research as a ‘a new methodology for new times’, as demonstrated by their

Year	Theme	Venues	Research papers	Posters and PowerPoints
2002	…	The Royal Court Hotel, Coventry	21	5
2003	*Design Matters*	The Royal Court Hotel, Coventry	15 (1)	1
2004	*Creativity and Innovation*	Sheffield Hallam University	30 (1)	0
2005	*Inspire and Educate*	Sheffield Hallam University	17	9
2006	*Designing the Future*	The University of Wolverhampton	21 (3)	7 (4)
2007	*Linking Learning*	The University of Wolverhampton	13 (1)	4
2008	*Designing the Curriculum*	Loughborough University	15	6 (1)
2009	*D&T – A Platform for Success*	Loughborough University	9	19 (3)
2010	*D&T - Ideas Worth Sharing*	Keele University	14 (1)	9 (2)

Figure 2. Numbers of research papers, posters and PowerPoints delivered at the Design and Technology Association annual conferences 2002-2010

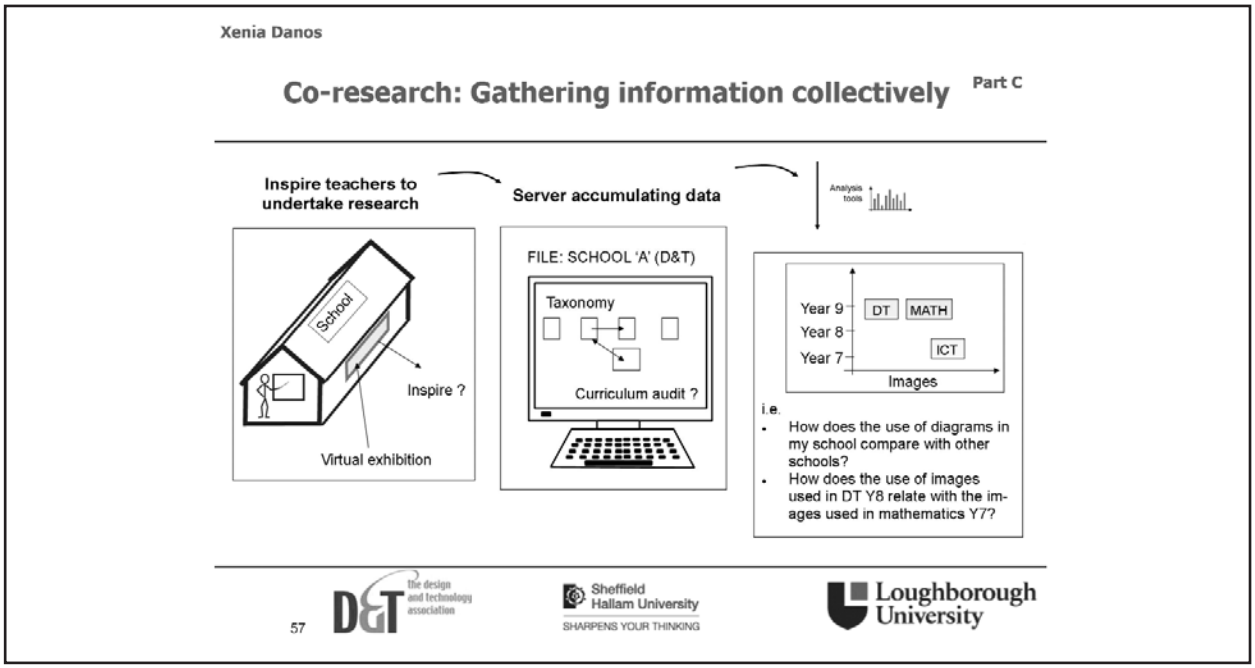

Figure 3. Co-research as a strategy for graphicacy research and audits (Danos, 2010)

research concerning local government organisations, which collaborated in a research consortium. In essence, this is an analysis of a research model based on teams comprising an academic researcher, an ‘insider’ from the organisation being researched and a co-researcher from a different organisation. It is not hard to envisage schools forming such research consortia.

It is equally easy to imagine research co-operation at a national level. Figure 3 shows a PowerPoint slide prepared by Xenia Danos for the 2010 conference research workshop to illustrate how co-research could be organised both to gather data on graphicacy within school curricula and to facilitate graphicacy audits by particular schools.

This could be the time for the traditional research models of ‘academic researchers’ and ‘teachers as researchers’ to be supplemented, or indeed superseded, by more collaborative approaches. The power of the Internet in facilitating change, whether through online video conferencing or the construction of major databases should not be underestimated.

This Issue

Ken Baynes’ paper is the published version of the 2010 John Eggleston Memorial Lecture, which was presented at the opening of the Design and Technology Association’s Education and International Research Conference. It presents an overview of the key issues concerning the effective delivery of design education founded on a lifetime’s experience as a leading design educator. It reinforces the importance of design education and discusses ‘designerly thinking’ as an aspect of cognitive modelling. The paper then sets out with sharp clarity the importance of seven themes: the aims of design education; the significance of practical education; encouraging the imagination; the creative value of aesthetic awareness; the value of learning through making; the creative relationships between designing and making; the educational purpose of doing design projects. It is essential when the curriculum is under review, as it surely is in England at the moment, as well as internationally, to have a clear focus on what matters. This is the essential contribution that Ken’s paper makes.

Richard Kimbell’s paper is the published version of the Keynote Address with which he closed this year’s Design and Technology Association Education and International Conference. It also marked a formal endpoint for a distinguished academic career on which this paper is a reflection (although it is hoped that Richard will continue writing the ‘Reflection’ pieces for this journal). It is thus both an important and unusual contribution. It charts something of the evolution of design and technology education since the 1970s, and, in particular, policies and practices concerning assessment. The role and importance of teacher judgements lie at the heart of these issues and the e-scape project is shedding light on how such judgements can provide an effective and reliable mechanism for the assessment of student work on a national scale. If it comes

to fruition, the restoration of a central position for teachers’ professional judgements could be regarded as Richard’s most significant contribution amongst the many he has made to design and technology education.

As Richard Kimbell has contributed a more substantial reflective paper for this Issue, Kay Stables has written the Reflection piece in its usual shorter format. In this, Kay considers what makes an idea worth sharing, or shredding, which is partly a response to the theme of the 2010 Design and Technology Association Education and Research Conference.

Helen Charman’s paper reporting research concerning the pedagogy used in running workshops for schools at London’s Design Museum is a particularly welcome contribution, because such educational activities rarely receive the detailed analysis that their importance merits. The documentary analysis of the vision paper for the schools workshops and the interviews with those who devise them is presented against the key theoretical contexts. In so doing it presents the role of the workshops within contemporary design culture and proposes a related model of designerly learning.

Onder Erkarslan and Beril Imamogullari’s paper concerns a comparative study of industrial design education at masters level in Turkey. The programmes at seven universities are reviewed in terms of the institutional structures, visions, curricula and teaching staff, as well as the strengths and weaknesses of the current approaches. There is substantially less published research concerning design and technology programmes in higher education in comparison to general education, so this is a welcome contribution to the literature.

Pål Kirkeby Hansen’s paper considers the issues surrounding the effective introduction of technology and design into the primary curriculum in Norway. This is a new subject for Norwegian schools, and, although many countries have introduced curricula related to ‘design’ and ‘technology’, there are always lessons to be learnt from a new context. There has been progress towards more general perspectives on curricula in this area of the curriculum, but key aspects remain contested eg the nature of designing and the role it plays within the development of technological literacy. It is interesting to read about the emerging Norwegian perspective, and the initial research concerning its implementation.

The paper by Diarmaid Lane, Niall Seery and Seamus Gordon describes the development of a very effective pedagogy for the development of capability in freehand sketching. A literature review leads to a proposed paradigm, which has then been explored through carefully designed exercises undertaken by a group of 124 pre-service teachers. The results strongly support the proposed strategy. Again this is an under-researched area, and although the importance of freehand sketching for the creative aspects of designing is commonly acknowledged, there has been insufficient analysis and development of pedagogical strategies that support students in achieving such capability.

Donna Trebell’s paper reports a study of the iterative development of an Academy for 11-18 year olds. Its focus is on the interactions during designing and the associated modelling methods that lead to the development of an Academy proposal to meet its education brief. It is thus a case study of modelling and designing, which is situated at the heart of the education context and explores the concept of ‘Learning Led Design’. Its particular contribution is in the exploration of the way in which the educational ideas of the stakeholders are translated from their expression in natural language to detailed design proposals for learning spaces. There are a few other reported case studies of this general process, but none with the same proximity to the education.

This Issue also contains review by Kay Stables of Design Pedagogy Research: Leeds 2007, which was edited by Kate Hatton.

References

Harris M and Wilson V (2003) ‘Designs on the Curriculum? A review of literature on the impact of Design and Technology in Schools in England’, *DfES research brief no 401*
http://www.education.gov.uk/research/data/uploadfiles/RR401.pdf

Hartley, J and Bennington J (2000) ‘Co-research: A new methodology for new times’, *European Journal of Work and Organizational Psychology*, 9(4), 463-476

Norman E, Mitchell A, Zanker N and Paterson A (2009) ‘Developing the research infrastructure for design and technology education in England (and beyond)’, PATT22, TUDelft
http://www.iteaconnect.org/Conference/PATT/PATT22/Norman.pdf

Pollard A (ed) (2010) *Professionalism and pedagogy: a contemporary opportunity*, A Commentary by TLRP and GTCE, London:TLRP

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