

Reflections on the Design and Technology International Millennium Conference

The Design and Technology International Millennium Conference, 'learning from experience; modelling new futures' was held in London in April. It was a terrific event. In the course of three hectic days, we heard 38 papers (12 primary, 15 secondary, and 11 cross phase) addressing, from various perspectives, the four strands of the conference: International Design and Technology; Teaching Learning and Assessment; Resources for Design and Technology; and School Improvement. The presenters were from Australia, Israel, the Netherlands, New Zealand, Spain, Taiwan, the UK and the USA. We also heard some excellent keynote presenters. There is not space to discuss them all here, but we saw some stunning images of the development of the London Eye, and we heard a brilliant 'straight from the heart' presentation from James Dyson. The whole event was opened by Jacqui Smith, Parliamentary Under Secretary of State for Schools who made a down to earth and very supportive contribution to the continuing importance of design and technology. All these keynote presentations have been summarised in the article 'Millennium Conference: A Once in a Lifetime Experience', edited by Natalia Link.

As always on occasions like this, it is the behind-the-scenes team that contributes so much to the success of the event, and it is fitting that we should recognise, in particular, the contribution of Jenny Jupe, Natalia Link, and Brenda van Beijnum. Not only did they manage to produce the 240 page volume of research papers on time so that all delegates could have their copy at registration, but they also stage managed the event with calm authority.

The single presentation that rang most bells for me was given by Lord Sainsbury, Parliamentary Under Secretary of State for Science, and long-term benefactor of design and technology through the Gatsby charitable trust. The essence of his presentation was about the importance of creativity to the knowledge-driven economy of the UK. If he mentioned 'creativity' and 'innovation' once, he must have mentioned them 100 times, and he extolled the virtue of risk-taking. All of this was great to hear, and I am quite sure that his analysis was correct.

However, it was in his answers to questions that an interesting and alternative view of the world emerged. It came up through a question – originally from Andy Breckon – about research funding for curriculum development in design and technology. This question followed closely on the heels of a well constructed comment from David Barlex

about how Nuffield perceived the process of designing, and – more broadly – how Nuffield was seeking to support the process of curriculum development. Perhaps the juxtaposition of these two questions triggered Lord Sainsbury's response, which was – broadly – as follows.

"It has always been the way in the UK that research and development in education has been led by the charities (presumably meaning Nuffield, Gatsby, Leverhulme etc.)"

Well actually no Minister, that was *not* how design and technology was developed.

The development of design and technology must count as one of the most significant pieces of curriculum development in the UK during the last century. In the final decade of the century, the maths curriculum, or the English, geography, music, PE, and most other curricula subjects would not have looked too dissimilar from how they appeared 50 years earlier – immediately after the war. But the design and technology curriculum would be entirely unrecognisable as anything existing prior to the 1960s. Truly this has been an astonishing development – completely transforming both the practices of teachers and the principles that underpin those practices.

So how did design and technology develop?

Any account of the participants in this evolution will testify to the patchwork of contributors that blended – and sometimes clashed – in the evolutionary battle. A few of the major ones might be thought to be as follows:

The Schools Council, a centrally funded research and development body, commissioned two projects in the design and technology domain. Design and Craft Education, directed from Keele by John Eggleston, and School Technology, directed from Nottingham Trent by Geoffrey Harrison. Together these two complementary projects challenged teachers (of craft/science/art/design) to think about *why* they were doing what they were doing; and *how* they might do something more interesting and valuable for youngsters. Their critical contribution was to create a rationale for the new emerging subject.

The LEAs made a major contribution. Their teams of specialist advisers were famous for trawling schools looking for likely young teachers with interesting ideas and approaches. They set up courses (often evening and weekend courses) so that these teachers could share their ideas with wider

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groups of teachers. Throughout the 1970s and 80s, the LEA contribution was principally as disseminator, as residential centres throughout the country resounded to the crashes and bangs (and the laughter) of teachers creating a new subject.

The colleges of education made their contribution. Not only were they responsible for the emerging recruits into the profession, but – more importantly – they provided centres of excellence (and centres of resources) that LEA courses could draw upon. The colleges' most critical contribution was in terms of the development of an appropriate pedagogy for the newly emerging subject.

The exam boards made their contribution in several ways. At O' and A' level, George Hicks subverted the GCE examination system in London, creating the first ever 'design and technology' examinations. And at CSE level, the 'mode 3' option, in which schools could create their own examination course, provided a route for teachers to validate the work of the youngsters emerging from these pioneering courses.

HMI provided at the national level what LEAs provided at the local level. They trawled the LEAs and picked out the likely 'young things' (either LEA advisory staff or the teachers they worked with) that were breaking new territory. HMI regional courses were the normal venue for dissemination, but the ultimate accolade was to be invited to contribute to the HMI summer school in Loughborough. Nobody who attended those weeks was ever the same again.

Moreover it is teachers themselves that should take pride of place in this catalogue. Whilst the national infrastructure (represented in the categories above) was very supportive, most of the generation of new ideas and new approaches emerged from imaginative and exciting teachers who were prepared to try things out. Design and technology was essentially a grass-roots initiative.

Throughout the 1970s and early 1980s it was all development and experimentation, but progressively through the 1980s the emphasis shifted towards consolidation. GCSE was part of this, bringing together the GCE and CSE examination systems. And some furious battles were waged over the title of the subject. And by 1988 the subject team was assembled that would write the first draft of the National Curriculum for technology.

Design and technology had achieved enough development, and become sufficiently established, to creep under the wire. We were in the National Curriculum. Moreover, we

were regarded as part of the 'extended core' of the National Curriculum (English, maths, science and design and technology). Between (say) 1965 and 1990 – just 25 years – we had created a new subject. What a phenomenal pace of development. **And it was all achieved through the activities of people and institutions that were part of the state education infrastructure. It was not dependent upon – nor led by – the charities.**

We are now 10 years on and well into the next phase of the game. And it is arguably true that throughout the 1990s, in the brave new world of the National Curriculum, the charitable bodies (Nuffield, Gatsby [TEP] etc.), backed up by an increasingly energetic professional association (DATA), have provided the only significant curriculum development. It is almost as though, having established the National Curriculum, the state deliberately disconnected its own agencies of curriculum development.

Throughout history (and not just in education), periods of ground-breaking innovation have been followed by periods of consolidation, which typically become periods of stagnation, before being revitalised by further innovation. The burning question for all of us in the next few years is whether we can avoid, or short-cut, the stagnation sector of the cycle. The furious innovation of the 1970s and 1980s has been consolidated through the 1990s. Do we now stagnate for 10 years, or do we drive forward with new innovation? And what is the role of the state – and the charities – in this process?