

# Ideas and Ideation

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There are two issues that I would like to deal with in this editorial. The first concerns some reorganising of the Journal and the second concerns a very interesting research finding about the notion of ideas and ideation in designing.

## Reconfiguring the Journal

It has become increasingly apparent over the last few years that DATA has been highly successful in growing its publications (such as *Modus* and *DATAnews*) to support design and technology in schools. But the success of these developments, along with the constantly changing demands in schools and universities both in the UK and internationally, was always likely to necessitate some re-positioning of the Journal. It was nine years ago that Andy Breckon, then Chief Executive of DATA, asked me to become Editor of the new form of the DATA Journal, the first edition of which appeared in January 1996. We created the idea of the three part journal (Research, Curriculum Development, Reviews) and it has stayed more-or-less true to that pattern since then.

The change to the Journal that we have now decided upon is driven partly by the growth of curriculum support material elsewhere; partly by the international leadership role that design and technology in the UK has always maintained; partly by the growth of higher education/research activity from many disciplines but all relating to and enriching our understanding of design and technology; and partly by the simple need to maintain the distinctiveness of the Journal. The discussion of these matters within the editorial group was also informed by my decision that it was about time we had a different Editor in Chief. Nine years is long enough (arguably too long) for any individual to be doing the job.

So in January 2005, the new Journal will be launched with the title *Design and Technology Education: An International Journal* and under the editorship of Dr Eddie Norman at Loughborough University, supported by two co-editors: Professor Clare Benson of the University of Central England and David Spendlove from University of Manchester. There will still be an Editorial Board reviewing papers and considering the content of each edition of the Journal, as well as debating its further development, and I will be pleased to continue to work within that Board. I will leave it to Eddie (in January) to declare the

distinctive thrust and direction of the new form of the Journal, but from my point of view it seems entirely the right move for DATA, for the future well-being of the Journal, and, perhaps most important, for the continuing health of design and technology.

## Ideas and ideation

The challenge of understanding ideas: where they come from and how they can be encouraged and expressed, has long been a matter of great interest to us in design and technology. More light has recently been thrown onto the subject through a PhD thesis recently submitted by one of my students at Goldsmiths. The particular focus of the candidate's work was on the consequences for design ideation of the growth of digital technologies. The issue is captured in the subtitle 'The Conceptual Sketch in a Digital Design Culture'. Interestingly, the finding to which I would like to draw attention here has nothing to do with digital technologies, but is rather a matter of the most universal applicability, not least in the four key stages of design and technology in schools.

As part of the data-gathering for the project, the student logged the processes and techniques that designers (and design students in higher education) used to express their ideas at the outset of design tasks, and amongst a range of possibilities, the incidence of sketching (i.e. pencil or pen conceptual jottings of a pictorial kind) and the incidence of word use (i.e. through discussion or in written notes) were logged. Having analysed the 'time-line' incidence of many modes of idea expression a very interesting finding emerged. From observation, the most frequent mode of expression in ideation; and from interview, the most critical mode of expression in ideation was through words.

The strength of verbalisation as a conceptual tool was unexpected and challenged the dominant view in the design literature of the primacy of sketching ... the findings showed how design ideation was essentially an interaction or dialogue between visualisation (non-verbal) and language (verbal). (Jonson, 2004: 282)

It is one thing however, to note such a finding, but quite another thing, and a much more difficult thing, to develop an adequate explanation that accounts for the observed

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phenomenon. The argument presented by the student runs (more or less) as follows:

Visualisation is the surface structure of ideas ... whereas the meaning of ideas is embedded in the deep structure of language ... Arguably then, what matters is not what tools are used (i.e. surface structure) but why they are used (deep structure) ... because the deep structures signify how tool usage is rooted in meaning - in our sense of self and mental and social faculties.

He goes on:

'Sketching about for ideas' is a sense-making activity that is not so much about mastering techniques (surface structure)... but rather signifies the underlying relationship between designers and conceptual tools. As deep structure, therefore, conceptualisation is contextualised in creativity as a construct of language.  
(Jonson, 2004:282)

Now, it is not necessary for readers to go along with this all the way. There are, I am sure, alternative ways of rationalising what happened in the case studies. I accept that these alternative rationalisations might lead to somewhat different views about the underlying mechanisms that inform the relationship between the visual and the verbal in ideation. But if the interpretation is arguable, the data themselves is not. It is a fact that professional designers and student designers relied very heavily indeed upon verbalisation to make sense of their starting points within their respective design tasks.

And what does this tell us about good practice in design and technology?

If we were convinced about the rightness (validity and reliability) of these data, then it seems to me that we could be either reactive or pro-active about it. At the minimum, being reactive, the least we might do is to acknowledge the importance of 'talk' and 'notes', wherever and whenever it occurs in the ideation processes that launch design projects. So we shouldn't discourage or penalise it. But this would be a very limited and grudging response to an important piece of research evidence, and I would like to think that we can be rather more proactive than that, deliberately setting up discussions and

interactions that support and enrich ideation:

- amongst students
- between students and teachers
- between students and users of the final design.

Because ideation is 'a sense-making activity', and it helps most of us to knock around our half-formed ideas in the search for greater sense.

I am reminded of the APU research from the late 1980s, one element of which was the 'modelling tests' that included a scheduled discussion session in the early stages of the activity. Each student in turn (in a group of six) had to explain to the others what they were doing, why, and what they proposed to do next. The group then had five minutes discussing it, asking questions or making suggestions before moving on to the next student. The whole thing took about 30 minutes for the six students. The activity administrators, for most of whom this was a new experience, all reacted positively.

This was a strategy that I had previously not put any emphasis on in my own teaching and I found it by far the most useful device for helping pupils extend their ideas. The pupils' response to each other's criticism was a major force in shaping the success or failure of the artefact in their eyes. Pupils saw this as a very rewarding activity and would frequently change the direction of their own thinking as a result.  
(Kimbell et al, 1991:124)

The proactive use of discussion as a tool to support ideation is now far more commonplace than it was fifteen years ago. But it is interesting and valuable now to have research to underpin the practice. Any readers who would like more details of the research can contact me at Goldsmiths.

## References

- Jonson, B (2004), *Design Ideation: The Conceptual Sketch in a Digital Design Culture* PhD Thesis, London University, London.
- Kimbell, R et al, (1991), *The Assessment of Performance in Design and Technology - final report*. SEAC. D/010/B/91 for HMSO