

The Whole is Greater (and more important) than the parts

Two pieces of reading have recently crystallised for me a concern that has been growing for some years.

Over recent months we have been awaiting the follow-up to the 14-19 Report 'Extending opportunities, raising standards' from the Department for Education and Skills (DfES). You will recall that – from our design and technology point of view – this report is centrally about removing statutory support for design and technology at GCSE level and (simultaneously) rehabilitating vocational activity in the curriculum. I am reliably informed that the report will hit the streets sometime before the publication of this edition of the Journal.

In the summer edition of 2002, I outlined a couple of the issues that are raised by this 14-19 Report, including the issue of what kind of future design and technology has at GCSE level. I commented as follows...

There are two things to say about this, for the proposal is more interesting (and complicated) than I had first thought it would be. It proposes that there should be a new 'statutory entitlement' for all young people to access design and technology during Key Stage 4. What this means (I think) is that if a student wants to study it, the school has to provide a way of making it accessible for that student. The Green Paper is (not surprisingly) a little vague about how this might be done, and indeed the conditions under which it must be done. For example, if 10 students in a school opt to do design and technology, and the school decides this is a non-viable option, they nevertheless have to make it 'accessible' by another means (bussing to another school perhaps?). But what if the 10 students want to study 'food', and the school only offers a design and technology group in resistant materials? Is there still an entitlement to access to the chosen course of study, or merely to the subject of design and technology? The devil is in the detail; and the Green Paper has no detail. Watch this space.

I understand that the notion of 'entitlement' has remained in the final version of the Report, and that QCA are currently in the process of trying to work out the logistics of how this might be made to work for schools. There are, I understand, plans to create curriculum blocks in which the various current GCSE courses (for example, graphic products, food, resistant materials, systems and control etc.) are matched up with equivalent vocational GCSEs (Engineering, Catering and Hospitality, Manufacturing). By this and other means, the various strands of design and technology will be given some kind of 'presence' in the Key Stage 4 curriculum.

In the process of course, these proposals would cement design and technology firmly into the 'vocational' arena of the curriculum – where some have been trying to pidgeon-hole it for years.

The second bit of reading was done over Christmas, when I was examining an Ed D thesis that explored the attitudes of students to design and technology. Amongst the many interesting findings that emerged in one large comprehensive school at GCSE level, was that the students did not appear to realise that they were studying design and technology. They knew that they were studying 'food' or 'resistant materials' or 'graphics' – but seemed far less aware that these 'subjects' were part of the bigger picture of design and technology.

Taken separately these two bits of reading are worrying enough, but taken together they almost put me off my Christmas pudding.

It is clearly true that over the last 30 years, design and technology has been formed from the progressive amalgamation of many different former subjects in the curriculum. Depending on how far back you go, the list includes technical drawing, needlework and all sorts, but even if we only go back to the launch of GCSE in 1985 there were many constituent parts. The craft design and technology (CDT) strand had three elements and the equivalent home economics (HE) strand had four. Taken together these seven areas more or less covered the material disciplines that currently inform design and technology. The amalgamation process was premised on the idea that there are overriding concerns across these areas, which persuaded Layton in 1988 (in the Interim Report of the National Curriculum for England Design and Technology Working Group) to describe design and technology as a unitary concept, a single idea. This single idea was embedded in the notion of designing, and was explicitly articulated in the 2000 National Curriculum document, not least through the 'distinctive contribution' statement.

...in design and technology ... pupils learn to think and intervene creatively to improve quality of life. The subject calls for pupils to ... look for needs, wants and opportunities and respond to them by developing a range of ideas and making products and systems.

...Through design and technology, all pupils can become discriminating and informed users of products, and become innovators.

But my reading of the current state of affairs is that the amalgamation around this unitary concept appears to be coming apart at the

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seams with some very alarming consequences. I can understand how the difficulty of managing design and technology at GCSE has led to the creation of the separate sub-sets, but the cost of this carve-up (I mean the intellectual cost – as well as the practical cost) is now, in my opinion, at risk of destroying the central idea that is design and technology.

As one example of the damaging consequences of the GCSE carve-up, it is impossible to be unaware of the effects it has on the Key Stage 3 curriculum. Schools commonly argue (not unreasonably) that in order for students to make an informed choice of their GCSE design and technology option, all students need to have a solid experience of all the specialist sub-sets throughout Key Stage 3. This results in the Key Stage 3 curriculum becoming a circus of one-term projects (textiles followed by resistant materials and food and graphics). The students go round and round – developing (as they go) the idea of design and technology being nothing more than a timetable ‘basket’ into which we dump all the teaching of material specialisms. The irony of this position is that having segmented the Key Stage 3 curriculum for reasons of the Key Stage 4 GCSE courses, we have now (largely) lost the argument for design and technology at Key Stage 4. There remains the residual ‘entitlement’ argument that clusters the existing GCSE courses with ‘equivalent’ vocational offerings. But it is – at best – a poor outcome, not least because the real strength of design and technology has nothing to do with vocationalism.

The carve-up of design and technology at Key Stage 4 that we see backwashing down into Key Stage 3 seems to me to be a denial of the unitary concept that Layton argued for and in which I whole-heartedly believe. I think it is time for a radical change of plan. I would abolish the sub-sets and concentrate instead on unified design and technology courses.

In the late '70s, when CDT was being created, I made the same argument about the specialist roundabouts of wood, plastics and metal projects that were then commonplace, arguing that we should not allow our teaching of the new concept to be dominated by these historic subdivisions, but concentrate rather on building capability of a wider kind. In the 1980s I was an examiner for the Oxford A' Level in Design, and experienced there the rich diversity of design challenges that youngsters were prepared to tackle – and that teachers were prepared to support – under the banner of ‘design’; from the bivouac tent to third world housing; from personal costume to the intelligent lobster pot; from Brighton

beach huts to the self-bailing dinghy. This rich diversity was all centred on designing for clients and encouraged students into exactly the kinds of activity that we have described in the design and technology distinctive contribution statement.

‘Product design’ is perhaps the closest we have come to this in design and technology, assuming that all kinds of products can be subsumed within it (textile products, ceramic products, graphic products, plastic products, food products and electronic products). But why invent another name when we have design and technology? Why not just do design and technology – in whatever materials seem appropriate to the task in hand?

If the whole of mathematics, and the whole of English language can be subsumed (for GCSE purposes) into single entities, why on earth can't we do the same for design and technology?

If the curriculum was centred on this single idea, we could stop worrying about the differences between the supposed strands of design and technology and concentrate instead on the common ground that is designing. And if this means that all children do not get exactly the same material experiences – then that is less important than that they ARE all getting the same progressive entitlement to the key skills of design and technology; learning to think and intervene creatively to improve the quality of life, becoming discriminating and informed users of products, and becoming innovators. I have always believed and argued that in design and technology, holistic assessment is more reliable, more valid, more manageable and therefore more appropriate than atomised assessment. I also believe, and will now argue, that a holistic view of design and technology curriculum is more valid, more manageable, and far more appropriate than the current atomised view.

I should make it clear that this is a personal view and is not written to represent DATA's position. I also expect that there will be some disagreement with this view. If you would like to write a counter-editorial, please send it (1,500 words) to me (r.kimbell@gold.ac.uk) or to Willy Adam at DATA (willy@data.org.uk).