

An enquiry into whether or not Design and Technology should remain as part of the National Curriculum

To D&T or not to D&T?

That was the question that was recently put to a number of colleagues and associates as to whether Design & Technology should remain a part of the National Curriculum. Their responses are varied, but essentially the conclusion is a resounding No...

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Response 1

“For many years now have I cowered in shame when I hear young adults talk about their D&T experiences over the past 20 years, but the good news is that not all schools are like that. Where it is good it is excellent, but I think that the sad truth is that this is in schools where D&T is treated as engineering and there is little use of hand tools and great use of CAD/CAM.

In textiles I have seen marvelous work with CAD/CAM embroidery and sewing machines, overlockers and heat presses, etc., and I then have seen cushions based on sea creatures - every year for the past 20 years.

I have seen rooms full of shelves of toy trains, mainly unfinished, but lovingly stored by someone who doesn't realise why kids do not want to take them home.

Food needs to be desegregated. It is too important to be in with D&T, but so many Faculties are run by wonderfully organised Food Teachers that this cannot happen as the rest of the department would all fall apart (like much of what is made there).

So, advice - don't tell people that you used to be a D&T teacher.....or you could explain why you aren't any more. I remember that 20 years ago I wanted to change the world of D&T but, as a career goal, this has been a failure. Too many people of my generation were contaminated and continue to contaminate new entrants to the profession.”

Response 2

“I agree that D&T often does itself no favours in schools but unfortunately I do not think that whether it stays in or out of the NC core will have much impact on its future success. Since it was made a non-compulsory KS4 subject it has been dropping by a regular 30k candidates per year, and any incentive to teach it well at KS3 has dropped alongside it.

So currently the schools that are doing it well are doing so for reasons other than its position in the NC - because they have good staff and/or a strong dept, because of good links to local industries, because (and I guess this is most important) of a strong demand for or recognition of the subject amongst their catchment area. I would hope that those schools will do it whatever happens to the NC. There are many compulsory things in the NC that many schools do not follow: a daily act of worship for example.

What would help therefore is a focus from subject associations on helping committed D&T centres to help each other, rather than trying to develop high order design and making skills on a very grand scale.

I am not going to sign up to a campaign to keep it in the NC on the grounds that D&T-ers should save their energy for boosting the subject where it is already popular.”

Response 3

“The most important ingredient that should be supported is the training and development of design teachers. A National Curriculum can reinforce the importance of a subject within a school curriculum. The problem is that a National Curriculum can become a constraint and is followed slavishly, and for a subject that has the potential to stir the imagination of a student in an extremely wide range of contexts, a detailed National Curriculum is an impossibility and would consequently become restrictive.

However, my experience has been that good Design Education does not need a National Curriculum to drive it forward. My main concern is from where will schools be recruiting good design teachers.

I want teachers to look forward to turning up at school, working environments that are inspirational to teachers and students and a freedom for teachers to explore and take risks with a wider range of learning opportunities/technologies that a National Curriculum may restrain.

I know of three schools that no longer deliver D&T. The reasons why were simple - the teaching was poor, kids were not motivated and the school had not invested in support, training or equipment. The easy answer was to close D&T. “

Response 4

“Certainly making DVD racks and a term spent designing a sandwich don't cut the mustard. The Government preach about Engineering as the future for the UK. Engineering, Engineering, Engineering, seemed to be the message. I know the term 'Engineering' doesn't encompass everything you and I might think of within D&T, but is it all a question of semantics and maybe the whole thing needs repackaging? Has not the subject and terminology of D&T accidentally become confused with Woodwork meets Technical Drawing meets Marketing (packaging), with computers thrown in to justify the 'Technology' bit?

Does teaching/learning D&T do what it says on the tin? Is the NC idea of delivering D&T so screwed up it's become pointless and nothing more than theorising about making things and/or considered as the only point where kids get to do stuff with their hands as opposed to with their brains as well?

I've been doing lots of DIY this week and it's nice to be manipulating real objects, materials and tools once again. Problem solving, making do with what's available, what's needed, what can be done with some time, thought and elbow-grease. I've been reminded of that article we saw last week about the lack of senses and motor-skills in touch-interfaces. It talked about the skills and tasks we do with our whole hands and bodies, the automatic process we go through to manipulate real objects in real time. To effect and fashion materials and objects as desired brings into play many overall skills that seem to be missing in education. I wonder where children will get to experience those things and should parents be teaching those things at home?

When I think about all the skills and techniques I've been using this week, and indeed with any DIY tasks, I think I can say that very little of it came from school education. But certainly school (and college) provided some of the building blocks on which I've learnt more. At school Physics (and Electronics) helped me with the electrical work, Woodwork helped with tools and materials use as did Metalwork, Art, and Technical Drawing which certainly provided me with the skills to plan and draw as did Maths to ensure accuracy and calculate. English study helps me interpret and understand information on all levels, and History and Geography come into play as I contemplate local materials and the historical nature of a house built in 1875. Knowledge of Chemistry and Pottery come into play with mortar mixes and plasterwork. As my great mum always told me, "all subjects are connected and it doesn't matter what the careers teacher says or what other people think, if you are interested in something, a path will be found.", ... or something like that.

As to your question, DT or not DT, it's all a bit beyond me. The whole NC things seems to be completely screwed anyway so why bother if the D&T curriculum is so flawed anyway. Just call it Design, the Technology bit is misleading, there's technology in everything so it's superfluous. Design is what's it about, Engineering is what the government says what we are lacking in terms of suitable employees. Engineering is what learners describe as "doing and making stuff". Engineering is

the new 'Technology' and Design is the skilled application of that engineering.
Design & Engineering is what it's really about, just ask Steve Jobs.

'Engineering' is an interesting term is, presumably popularised during the Industrial Revolution and the original people that worked on creating 'Engines', thus 'Engineers'? Now of course the term can be used in all sorts of manners, from Cameron's UK bred Hi-Tech Engineers to Car Mechanics to Social Engineering (advertising, marketing, spam and grooming!), it's all in there. Rather than call it D&E, call it DE (Designed Engineering) or ED (Engineered Design) or maybe DE for Design Education, or DEE, or EDE.... or DEAD (Designing Engineered Advantages Direct) ?

Response 5

“A number of memories come to mind:

1. When the NC came in, around 1990, being aghast at the solution my new Head (of Art, Craft, Design, Technology, Textiles, Food and a few other things I've forgotten) had come up with, in tracking attainment - 3x A3 sheets per pupil, with loads and loads of tick boxes. Art (as it was then) had nothing more to do with the enterprise.
2. 2008, spending another ghastly time (a whole weekend of my life), with D&T examiners, mostly engaged in contriving 'spoiler' questions for multiple choice GCSE. So - inappropriate assessment wagging the D&T dog. Far too much effort seems to go on assessing some pretty superficial knowledge.
3. More positive - doing a D&T cover lesson around 1998, where some pupils were really skilled and knowledgeable in what seemed to me to be D&T, but didn't have much opportunity to have these acknowledged in the projects they were doing.

Art & Design education hasn't ever been compulsory at KS4 and while far from perfect, does have quite a lot of teachers who will argue the case for it. It has been successful in acting as a step to producing artists and designers and an educated audience for it. And I'd argue GCSE was generally good for it, because it was about portfolio building and skills linked to knowledge, at its best. Is it that any subject the government deems important, the worse it is taught?”

Response 6

“As we keep saying I think that education needs a great big firework shoved up its rear end. There needs to be a seismic shift to wash out all the stupid rituals, and centralised nonsense that passes for current policy and practice. In truth what ever happens with D&T is going to make very little difference as there are far bigger issues to sort out.

I would much rather it was done with passion and purpose in a few places, than done badly and reluctantly everywhere. I have long thought the same about ICT, computers should be removed from all classrooms and teaching labs one night, and hidden in very difficult place to get to, only those that make the effort to find or to replace them should be allowed to use them...

As for the effect on the economy I do not think there is any correlation at all between school subjects and future employment (other than imposed negative ones like you can't be a doctor if you don't have 3 sciences and maths or you cant teach because you don't have an upper second degree). Someone asked how many 60s music icons had studied music at school? I think the key relationship is always with the teacher, I think lots of what we would recognise as good D&T goes on in other subjects, English, drama, geography, PSHE, art etc, no thanks to the NC but despite it and because good teachers see the need to engage with real activities and build young peoples confidence through their engagement in doing something concrete and meaningful.

Let Gove's academic elite get on with the academic stuff if they want to and provide just enough cash for books, paper and perhaps an internet connection, and then let the rest of us have the main bit of the budget to do more exciting, engaging agile teaching and learning. I think the same is true of the NC, let's try to pack it into 2 or 3 hours a day, or a couple of days a week, and leave the rest of the time open for more integrated, purposeful activities.

I think the curriculum is screaming out for an "open" subject slot. Like open meetings, where there are no rules - just people, time, space and a facilitator.

Meanwhile I fundamentally disagree with organising the whole curriculum around random blocks of subject knowledge. Given that I have always been forced to define learning through subjects I have tried to fit my need for an active approach into Art or D&T and then ICT, not because of the subject itself but because they seemed to afford the best opportunity to do exciting and purposeful projects. I think lots of what we would recognise as good D&T goes on in other subjects, including English, drama, geography, PSHE... even science, no thanks to the NC but despite it, and because good teachers see the need to engage with real activities and build young people's confidence through their engagement in doing something concrete and meaningful. I could probably manage to teach in an active, project based way in more or less any area of the curriculum.

So I am not a fan of tightly specified curriculum content documents which I think are just panaceas for poor teaching and learning. The people who manage to work creatively in schools are generally great teachers who could do great stuff with paper bags and string if these were the only resources available. Trouble is I think these people have been progressively undervalued, demoralised and disconnected to one another. I am still hopeful that at some stage it will be possible to coalesce various groups through the technology but I'm still no clearer how we might do it.

I would much rather active, purposeful learning was done with passion and purpose in a few places, than done badly and reluctantly everywhere.

Some of the critical building blocks, which I think definitely bridge the key stages (Bruner-esque) and are missing throughout the existing subject based curriculum and should be at the heart of D&T, or art or ICT or "being creative" or whatever we call it, are:

- **openness** (permission to negotiate what we need to do at all levels of teaching and learning: schools-executive, teachers-schools, pupils - teachers, pupils-pupils)
- **agility** (as in "agile development", no random "one-size fits no-one", externally set targets or pathways but a clear procedural framework of small, progressive, incremental steps with reviews - at all levels)
- **active engagement** (project based teaching and learning that involves confronting and doing "real" stuff)
- **purposeful/caring** (exploring values and intentions and the practical, social, economic and sustainable consequences of making something actually happen)
- **creative** (nurturing creative teaching as well as learning to be creative, that is risky, unexpected, unusual, surprising, random, beautiful, elegant, chaotic etc etc) ...
- **exciting** (something both teachers and learners really really look forward to)
- **collaborative** (everyone - executive/teachers/pupils/employers - working together in planning, executing, assessing and reviewing)
- **status and public perception** (not just for 11F boys, but an inclusive, valued part of everyone's learning experience, at the heart of the curriculum, that pupils, parents, employers, academics and the media value - because we have helped them to see why this is so important)

I think this really scares the horses and needs subverting to a more "on message" package - trouble is that the more it's watered down the more the wrong teachers are lumbered with it and the less chance it has to gain traction... "

Response 7

“The sense I get from everything I hear from Gove is that there is no place for D&T in the NC - or for that matter many other so-called 'soft' subjects. He keeps talking about the need for 'freedom', and the importance of the EBacc subjects. I can't see him agreeing to Computer Science being part of the NC, mainly because of the cost/recruitment implications.

If I were a D&T-related organisation, I wouldn't bother sifting over the wreckage of D&T as they appear to be doing and trying to make a case for it. I think the interesting question is what is the future for D&T in a Post-National Curriculum Society? How can it be re-configured to keep it alive at all? I'd be looking at some completely new (optional) initiative/approach that might move things forward a bit for schools where there is already a good department. Some sort of much more vocational/business/enterprise/IT/creative approach maybe? So the good gets better, and the bad gets deleted!

Somewhere - and I'm not sure from where - I'm getting a feeling of the start of a long-term move towards a two-tier approach. First an old-fashioned academic experience, formally taught in schools as before. And then an alternative non NC/ GCSE vocational/creative experience delivered outside the formal school day - maybe through clubs, specialist centres or 'hubs' and through on-line and self-taught learning. I was reading this morning about a school in the US where children go to school part-time (ie so many days a week), and are 'home-taught' on the other days. Interesting!

So I think it's time to talk about setting up school/community 'FAB' labs and Design workshops/studios where children and adults can learn about D&T from each other.

But as usual I suspect the D&T community will fail to turn a threat into an opportunity...

The only way to realistically change the NC D&T would be in very minor ways, ideally in terms of simplification. It's no good coming up with some grand new 21st century vision for all, because the teaching workforce are just not there to deliver it - as they discovered in 1990.

And let's not forget that the one key factor driving the whole review is not so much the need to improve education, but more to save money on education...”

And finally, there was one respondent who was inspired to extend the corruption of the words of the immortal bard:

To D&T, or not to D&T, that is the big question:
Whether 'tis nobler in the class to suffer
The designs and arrows of outrageous annotation,
Or to take notes against a sea of bureaucracy,
And by opposing end them: to design, to assess
No more; and by a mark, to say we end
The head-ache, and the thousand examinations
That Gove is heir to? 'Tis a cock-up
Deviously to be wished. To design to assess,
To assess, perchance to design; Ay, there's the rub,
For in that grade of design, what attainment may come,
When we have shuffled off this National Curriculum,
Must give us pause. There's the respect
That makes calamity of so long testing:
For who would bear the targets and attainment levels of time,
The oppressor's wrong, the proud teacher's humiliation,
When he himself might his resignation make
With a bare bodkin made in Textiles?
Who would these Resistant materials bear,
To grunt and sweat under a weary lamp,
But that the dread of something after D&T,
The undiscovered country, from whose limit
No designer returns.
Soft you now,
The fair Gove? Nincompoop, in thy Government
Be all thy students remember'd.

(Hamlet, Act 3, Scene 1)