Design and Technology Education: An International Journal

23.2

Cycles

Richard Kimbell, Goldsmiths, University of London

The social history of the world is written in cycles. The Roman empire began with Cicero and the Republic before 50 BC, grew to the height of its power in the 2nd and 3rd centuries AD and was pretty much finished by 450 AD. The Viking raids on the English coast began about 790 AD. At the height of their power, two of their leaders claimed the English throne (one being Cnut of tidal fame) about 1020, but by 1100 their raiding days were over, they settled and intermarried to become just another part of our DNA tapestry.

The technological world demonstrates the same cyclical trend. The battle of Crecy (1346) heralded the rise of the English longbow, and by Agincourt (1415) it was such a dominant weapon that Henry Vs 6000 men largely obliterated a French army of 25,000. It is estimated that 10,000 died in half an hour. But by 1650 the weapon was largely out of use, having been supplanted by muskets and cannons. And these in their turn were on a cyclical path of evolution. By Trafalgar (1815) British naval strategy had evolved around the destructive power of the muzzle-loading cannon, but a hundred years later they were all gone, being replaced on the 1st World War battlefields by howitzers and 'superguns'. In more peaceful mode, the first recorded example of a windmill (on the Nile) is from about 5000 BC, but they emerged in Europe in about 1200, and by 1850 there were thousands of them, but they in their turn were progressively supplanted by other technologies – notably the steam engine.

If I was tempted to develop a theory of progress, it would start from something like 'there is no such thing as permanence' … or perhaps … 'the only permanence is change'.

It is – we might think - all very well for historians to take such a cool and dispassionate view of things, but it feels very different when one is enmeshed in the midst of one of those cycles. When long-bowmen saw the power of firearms they must have been in despair. Their world was falling apart. And whole libraries of despair have been filled by the passing of civilisations, notable among which is Gibbon's 'Decline and Fall of the Roman Empire'. We all live within a moment in time – we are on the inside - and as the wheel of fortune rolls around, it is (I think) quite normal to feel progressively displaced and discarded by later evolutions. And, of course, we curse the circumstances (including the politics) that have brought us to this sorry state.

It is time to come clean and declare that this particular set of musings has been prompted by the recent publication by the UK Office of Qualifications and Examinations Regulation (Ofqual, 2018) of data concerning GCSE examination [i] entries for England 2018, for there is another cycle at work here.

In the 1980s and 1990s Design & Technology was in a growth phase but the latest figures now appear to confirm a trend of decline.

On page 4 of the report, we read that the examination entries for Design & Technology have fallen from 127,000 in 2017 to 117,000 in 2018. Colleagues at the Design and Technology Association and elsewhere have been keeping an eye on these figures for a long time. They are in fact quite hard to compute as the examinations keep changing and of course the cohort size also keeps changing. So perhaps the best way to represent these data is as percentages of the population that might/could take it. I could not swear to the accuracy of the minutiae of these data – but the trend is revealing, and one way to demonstrate it is to look at a sequence of decades.

1988 = 36%

1998 = 53%

2008 = 43%

2018 = 22%

The millennium year of 2000 was a high point, where the figure was 58%. In that year, the Design & Technology International Millennium Conference in London was reported in a conference volume that I edited. There were 38 papers with authors from Australia, Canada, Israel, Netherlands, New Zealand, Spain, Taiwan, UK and USA attesting to the influence of design & technology worldwide. But if that was a high point, there is little room for doubt that the current year represents the lowest figure, and of course there are many reasons for it, primarily the emergence of Gove's Ebacc[ii] that excludes not just Design & Technology but all creative disciplines. Added to that is the widespread deconstruction of the National Curriculum, and of teacher education establishments, and of Local Education Authorities; and the gradual replacement of the idea of a national education service with one of a de-centralised (fragmented) service increasingly dominated by independent Multi-Academy Trusts (MATs). In a few decades time, someone will write the history of this period – and it might look a bit like Gibbon's, where a combination of ideology and incompetence brought a whole civilisation to its knees.

There are of course many ways to respond to this set of circumstances. But despair is such a wasteful emotion that there must be a better response than that. So, I was pondering a few questions that – to me – appeared interesting and likely to lead to a more profitable outcome. What did the Romans do after Rome had 'fallen'? What did the Vikings do after they had exhausted their rounds of rape and pillage? The Romans in Britain did not just cease to exist. They evolved and, in the process, helped to shape the British nation. Similarly, when King Harold defeated the Vikings at Stamford Bridge in 1066, they didn't just disappear. They settled, intermarried, and gradually morphed into Danes, Swedes,

Norwegians, Icelanders, Greenlanders – and of course Brits. And surely their greatest influence on Britain was through their prowess as international travellers and traders. It is easy to see this as the roots of our distinctly British sea-faring tradition. Shoal, gale, keg, keel, wake, oar, rudder and bilge are all Viking words.

So rather than fret about what might be in decline, lets rather think about what comes next. We would do well to recall the sub-title of the Millennium Conference: "Learning from experience … modelling new futures". It has never been a more important time to evolve and model some new futures, for there is no room any more for assumptions about our right to exist. If Design & Technology is to continue to exist in your school, it won't be because of national policy – it will be because the Head, the Governors, the senior team of managers, and parent representatives are persuaded that it makes a valuable and important contribution to the youngsters in your school. It comes down to every individual Design & Technology teacher. We are all now the bottom-line advocates for what we believe in. We must persuade and perform at the local level, because that is where the decisions are now being taken. We know that where departments' practice is strong the subject sells itself. Head-teachers are not daft and would not choose to close a department that has a strong public profile, a record of engaging events and hoards of excited youngsters talking about the fabulous things they are doing in the D&T workshops and studios.

And we do now hold one trump card that did not exist when Design & Technology was struggling into existence. The public awareness of design has never been higher than it currently is. Whole supplements of the Sundays are devoted to it and our television/media choices are rich in design options – not least Grand Designs. To understand and be empowered within our culture even head-teachers have to recognise the centrality of design. This is a valuable lever that we can use to enrich our arguments and our practice.

More than 32 years ago I was asked to write the national teachers' guide for the introduction of GCSE Craft Design & Technology (CDT) and I was very aware that we had just been through a frenetic period of curriculum evolution, and I argued that the emergence of Design and Technology reflected an interesting blend of chaotic individualism and centralised conformism.

Since that time – just prior to the National Curriculum – there has been a massive oversupply of centralised conformism. But that has now been eroded by national policy and the time has therefore come for another big dose of chaotic individualism. Some might see this as a problem, or even a crisis in Design & Technology. I do not. I see it as another moment for the creative body of teachers to stand up and be counted. Schools should feel free to evolve their Design & Technology curricula in whatever way they believe will work best in their school and in their community. And if Design and Technology ends up looking a bit different here and there – so be it. Just as Design & Technology was different from the Craft, Design & Technology (CDT) it replaced.

> ... if the steady growth and development of CDT over the last twenty years has taught us anything at all, it is that to advance our thinking we must rely on the innovation and creative endeavour of teachers in the classroom ... without this possibility of innovation CDT will wither and die ... (p.42)

It didn't die, but – like the Romans and the Vikings - it morphed into another form that was more suited to its time. And now we find ourselves at another of those hinge moments when individual teachers and schools can make a serious difference to the future of Design & Technology. I concluded that 1986 guide with the following words.

> The issue here is the extent to which teachers regard the curriculum as fixed by others and given to them merely to implement; or conversely the extent to which they see their professional responsibility as including the continuous development of that curriculum.

I really hope that there are enough confident, cavalier, creative teachers out there who can grasp this opportunity and take us forward.

References

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[i] GCSEs are General Certificate of Secondary Education public external examinations, taken typically by 16 year olds

[ii] Michael Gove, the UK Government's Secretary of State for Education (2010-2014) introduced a new performance indicator in 2012, called the English Baccalaureate (Ebacc). This indicator measures the percentage of students in a school who achieve one of the top 4 grades (out of 9) in five or more GCSEs in English, mathematics, two sciences, a foreign language and history or geography. This performance measure (of schools and students) controversially excludes all creative and performing arts and design subjects.