How did the expert panel conclude that D&T should be moved to a basic curriculum?

The dramatic decline of D&T as a core component of the English National Curriculum is well documented with some reasons for the decline suggested, including its non-inclusion from school performance measures and its disapplication as a compulsory qualification for all 16 year olds (Bell, et al. 2017, Design and Technology Association 2015, Hardy 2015). Yet it was the Expert Panel's (Department for Education 2011) report that focussed the D&T community's mind on the subject's epistemology and knowledge-base, matters that have often not been at the forefront of either D&T research or debate. The report asserted that D&T had insufficient disciplinary coherence to warrant its continued inclusion in the National Curriculum. Rather than discussing whether D&T has disciplinary coherence or not, or whether it should be part of a core or basic curriculum, this chapter explores why the Panel may have come to that conclusion. It begins with the report's political origins and the prevailing ideology of the purpose of education. Once this is understood it becomes easier to understand the Panel's opinion, which is born out from interviews with D&T teachers about D&T's contribution to a general education. Finally, a way forward is suggested.

The Expert Panel report was commissioned early in 2011 by Michael Gove, the then Secretary of State for Education and a Conservative MP in the Coalition government. Conservatives have long extoled the centrality of knowledge to education and equality (see Lord Baker's comments in the 2010 House of Commons report). And when, after the 2010 general election, Michael Gove became Secretary of State and Nick Gibb Schools Minister there was an opportunity to 'slimdown' the National Curriculum to one that taught young people the 'best that has been said and thought' (Gibbs 2016). It needs to be recognised where Gove and Gibb were gaining their ideas. Gibb and Gove had publically lauded the work of Hirsch (2006) and Willingham (2009) who focus on the value of learning knowledge and facts, specifically 'general, all-purpose knowledge' (Hirsch 2006, p.12), knowledge that forms part of a general education (Willingham 2009). In drawing on Hirsch and Willingham they had found 'evidence' to support their views:

> The work of cognitive scientists, most helpfully analysed by the University of Virginia's Daniel T Willingham and buttressed by the research of educationists like ED Hirsch, has shown that the best way to develop critical thinking skills is to ensure all children have a firm grounding in a traditional knowledge-based curriculum. (Department for Education and Gove 2014)

By placing thinking skills as a subordinate of knowledge, Gove and Gibb shifted away from the 2007 National Curriculum that some thought had placed emphasised skills to the detriment of knowledge. Consequently, the Panel was commissioned to

> Develop a National Curriculum that provides young people with the knowledge they need to move confidently and successfully through their education.

Underpinned by a belief that the National Curriculum should 'ensure that all children have the opportunity to acquire a core of essential knowledge in the key subject disciplines'. In the Expert Panel report, knowledge is defined as 'subject knowledge', that constitutes the concepts, facts, processes, language, narratives and conventions, and is regarded as 'powerful'. Here the report references Young (2008) as its source for 'powerful'. Therefore, to understand the Expert Panel's stance on knowledge, it is necessary to understand Young's 'powerful knowledge'.

Professor Michael Young has written extensively on knowledge and social justice through education. His opinion is that the purpose of schooling is to 'enable young people to acquire the knowledge that for most of them cannot be acquired at home or in the community' (Young 2011, p.150); he defines this knowledge as theoretical not everyday knowledge, and specialised in how it is produced and transmitted (Young 2013). He argues that powerful knowledge originates in specialist institutions (e.g. universities), which is transmitted in other specialist institutions (i.e. schools). His argument for the importance of powerful knowledge is underpinned by the principle of social justice and entitlement - for young people to gain access to universities they need to learn the powerful knowledge that originates there, which can only be done in schools (Young and Muller 2013). Furthermore, powerful knowledge 'is embodied in different domains' (Young 2011, p.151), and therefore is discipline-based (Young and Muller 2013). Strong, disciplinary coherent school subjects have a clear form of knowledge, which originates in universities and research centres. Disciplinary coherence is a subject that has a strongly defined boundary between itself and other subjects (Bernstein 2000).

Therefore, it could be concluded the Expert Panel decided a coherent National Curriculum should only consist of subjects that teach 'powerful knowledge' whose knowledge originates in universities and research institutions. And it is at this point the argument for including D&T in the National Curriculum unravels. As an educational construct (Bell, et al. 2017), D&T's knowledge is not derived from a single discipline; instead it draws on several disciplines, such as art, anthropology, and physics. Unfortunately, this perception of D&T's incoherence as a discipline is corroborated by my research (for example Hardy 2016).

In 2014, I interviewed D&T teachers and students from two schools, and asked for their perception of the contribution D&T made to an individual's education. Their responses were grouped into three themes:

1. Responses relating to the uniqueness of D&T, which could suggest some coherence about the subject which makes it distinct from other subjects;
2. Responses about competency or skills that are not limited by specialist knowledge curriculum;
3. Responses that relate to other subjects and their content, which would indicate a disciplinary incoherence as the participants would be suggesting that D&T exists because of other subjects.

In the first theme, the predominant view was that children were taught to critique products and their impact on the environment. A lesser view was that D&T's unique contribution was to teach vocational skills, an argument which disqualifies it as an essential subject in the National Curriculum taught to all children. If the perception is that D&T is a subject which prepares children for D&T related professions then all children do not need access to it – only those who have an aptitude or inclination to progress into a D&T-related career. The value of learning how to design and make products was rarely mentioned. In the second theme, participants talked about individuals learning skills to look after themselves that meant they could do DIY, cook and sew; skills that rely on everyday knowledge and do not necessarily require a specialist institution. Other responses mentioned learning generic, transferrable skills such as team working, and problem-solving. Neither learning generic skills or 'domestic' skills are forms of knowledge deemed essential to the National Curriculum by the Expert Panel. The fewest responses were grouped into the final theme; here the teachers and students mentioned learning about materials, using maths and drawing, which would 'help them in art'. This analysis suggests these teachers and students held a narrow perspective of D&T's knowledge, and instead emphasised how students learnt to become competent in skills useful for domestic life and future employment.

Although a small study it does have implications for D&T, how it is understood by those within its community and how it is understood by outsiders. It would be interesting to conduct further research asking D&T teachers what discipline they see as the origins of D&T's knowledge, to determine their understanding of D&T's specialist knowledge. I would suspect many would find it challenging question, and others would dispute its value as a research question. However, as the current education ideology emphasises the importance of knowledge it is timely to encourage the D&T community to engage in answering the questions - What powerful knowledge is taught in D&T? and from where does it originate?

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