

Chapter 7

CONTINUING FUNDAMENTAL RESEARCH

Why you might find these projects interesting

*Before 1985 design & technology was virtually a research-free zone and, using the **APU** project we had, by 1991, kicked open a few doors. But there had been serious limits to what we could do with **APU**, partly because it had been focused simply on learners at age 15, and partly because it was essentially one-time testing rather than longitudinal. Both of these limitations conspired to make it very difficult for us to say much about the **growth** or **evolution** of learners' capability over time.*

*We were determined to tackle this problem and secured funding for a 2-year project to explore (mainly through observation and interview) the nature of design & technology at every year-group in the national curriculum; from age 5 to 16 (Years 1 –11). We mapped for the first time the totality of the design & technology experience in compulsory schooling in England, and using properly grounded research data we could therefore begin to talk about **progression**. We highlighted some of the glaring discontinuities that only become visible from such a wide field of vision.*

The other project in this chapter illustrates our first cross-disciplinary project; with colleagues in Psychology. Their interest in object recognition (do we see bits and gradually assemble a whole view or vice versa) related to our interest in mechanisms of designing (do we design whole things and then detail the parts or vice versa). The parallels were obvious and compelling, so we explored the territory together ... with unexpected results.

1. THE NEED FOR FURTHER RESEARCH

As we have identified earlier, one of the things about which writers in this field are agreed, is that there has always been a desperate lack of research to inform the evolution of design & technology as a teaching and learning activity in the curriculum. This was very much the case in the years leading up to the introduction of the National Curriculum. (DES, 1988b; Penfold, 1988)

Twenty five years earlier, design & technology did not exist in anything like the form that emerged in the 1990 Order. And twenty five years is an astonishingly short germination period for a new curriculum subject, especially given the timeless durability of the vast majority of them. As Williams observed:

The fact about our present curriculum is that it was essentially created by the 19th century, following some 18th century models and retaining elements of the mediaeval curriculum near its centre. (Williams, 1965, p. 172)

Given this meteoric rise, it is perhaps not surprising that research had little opportunity to shape things. Indeed, design & technology in the school curriculum grew from **practice** rather than from theory; from teachers in the classroom trying out innovative and often idiosyncratic activities and programmes – rather than from an intellectual analysis of a field of knowledge. It has been hugely successful. Learners voted with their feet; courses expanded and proliferated; competitions and prizes led to high profile public exposure where politicians and others were delighted to shake a few hands for the camera. Even universities caught up with the fact that there was some quite exceptional young talent coming through this route to higher education.

As we discussed in Chapter 1, different arguments have been used to justify studying design & technology, from liberal/educational arguments, to vocational arguments to economic policy arguments. But as we explored design & technology through *APU Design & Technology*, these arguments did not seem to us to get to the heart of the matter. Design & technology is neither a liberal arts ‘awareness-raising’ study, nor a vocational training, nor a tool for macroeconomic planning. It might contribute to these things – but none is its driving purpose. We believe the core case is centred on the challenging and empowering notion that learners can identify aspects of the made world that demand attention, and can intervene creatively to improve it. This argument rests on the idea that design & technology presents learners with opportunities for exercising unique ways of thinking about the world and for intervening constructively to change it. It presents design & technology as a kind of concrete thinking process and an entitlement for all learners.