

Chapter 2

LEARNING AND TEACHING

A philosophical position

Why you might find this chapter interesting

*Our position on **capability** as the key goal of education, which we described in Chapter 1, carries with it some inevitable consequences for learning and teaching, and we examine these in this chapter. We describe the need for learning to be active and task-centred, recognising the individuality of learners. One of the more tricky issues to emerge from these priorities concerns the role of knowledge. If learning is task-focused and individualised, how is this to be reconciled with notions of pre-existing high-status bodies of knowledge? What is technological knowledge and how does it operate as learners undertake tasks? We explore the concept of learners' 'need-to-know' and the pedagogic imperatives that are entailed for teachers seeking to manage it. And this inevitably raises the issue of progression and what it means to become progressively more capable.*

In the same way that – at the start of *APU Design & Technology* in 1985 – we held implicit views about capability in design & technology, we also held views about learning and teaching. And central to this was our belief in a view of learning as active.

1. LEARNING THROUGH ACTIVITIES

The first manifestations of what was to become design & technology was beginning to emerge in the curriculum in the early 1960s and at that time it

was not usual to think about curriculum subjects in terms of activity. Typically, ‘subjects’ were seen more as bodies of knowledge with discrete associated procedures. But equally in the early 1960s there were rustlings of discontent in the undergrowth. Crowther (1959) had castigated teachers and schools for the barren-ness of the learning landscape, and warned of the waste that resulted. His report was even more pointed since his brief had been to report on the education of 15–18-year-olds; i.e. sixth form students in (predominantly) Grammar (academically selective) schools. Why, he asked, is it that so many of our intelligent youngsters lose their intellectual curiosity before they have exhausted their capacity to learn? (Crowther, 1959)

Crowther was convinced that it was more to do with the diet of force-fed-facts, mindless-memorising and dull-drill than with anything to do with the capacities and potentialities of young people. Crowther’s report required us to consider an ‘alternative road’ to learning that was premised on **activities** and **problem solving**. His contribution has been widely acknowledged as one of the levers that began to move the curriculum towards a view of active learning. Specifically in our story, his work inspired a Schools’ Council (the main 1970s UK Government-funded curriculum development agency) research and development project that began to move one branch of science education towards **science and technology**, which in turn became absorbed into the wider concept of design & technology. With Crowther’s influence operating at one end of the schooling continuum, Plowden (1967) chipped in at the other end. Her report on ‘play’ as a vehicle for learning in the early years of schooling had profound effects on primary education for decades. And we do well to recall that designing has been described by Papanek as ‘goal directed play’ (Papanek, 1995, p. 7)

Through a combination of these influences – and a lot of outstanding development projects from the School’s Council (established in 1970) – the mood music in schools was shifting in dramatic ways in the decade from the mid-1960s to the mid-1970s. In design & technology it became commonplace to talk about ‘projects’ or ‘activities’. The purpose behind the activity, however, was frequently disputed, and particularly in the context of whether its focus was to be educational or instrumental.

2. INTRINSIC AND/OR INSTRUMENTAL?

In Chapter 1, we drew attention to the way in which the concept of capability had been caught up in this debate. Extreme concepts of a liberal education (focusing on intrinsic values) can readily be characterised as having a concern with academic scholarship disassociated from any real-world