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Mechanisms of curriculum change at Key Stage 3

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Abstract
The paper will draw on findings from an on-going research project into the implementation of design and technology at Key Stage 3. Since the beginning of 1990 I have kept regular contact with one school in order to observe the issues that have arisen as the nature of Design and Technology has been revealed, and have tested the data thus obtained against the experience of Design and Technology teachers from a range of schools who have attended our Summer Schools.

The paper will begin with a brief review of the development of curriculum studies since the 1960s in order to establish the relevant features of the models that may apply and then consider the nature of Design and Technology teaching as it has initially emerged from such parent disciplines as Business Studies, CDT and Home Economics.

The final section of the paper will reflect on the particular strengths that teachers from the parent subjects appear to be bringing to the teaching of Design and Technology. It will then pose some questions about how well Design and Technology as articulated in the National Curriculum is representing design and technological activity in the world and necessary INSET requirement.

Introduction

Curriculum studies as an area of academic interest followed in the wake of the waves of curriculum development that crossed the U.S.A. and the U.K. in the 1960s. Rather like the current wave in the U.K., these earlier waves were generated mainly by political action in response to a dubious correlation of cause and effect that sought to remedy a perceived national lack of performance by shaking up the educational system. One purpose of developing models of change processes is to attempt to understand how desired implementations may best be achieved. One might expect that the lessons thus learned in the past (as in medical research, for example) will be brought to bear in the present. This paper sets out briefly to consider what is known about successful implementation, and how this relates to the present situation in design and technology (D&T) in the England and Wales national curriculum.

Some theories and models

In the 1960s, Taba (1962) argued for institution-based curriculum development, as opposed to top-down or localised initiatives. In the context of this paper, this means focusing on the school as the unit and context within which change will take place. The reason for encouraging the institution to be adopted as the unit within which change must be effected is to avoid on the one hand the clearly perceived difficulties of implementing a change required by people “up there” (or out there, or wherever is beyond the school), and on the other hand the continual re-invention of the wheel and dissipation of energy that can occur when individual teachers do innovative things in isolation. On the face of it, in these terms, the national curriculum is “top down” but also expects in D&T that teachers will work together at school level on its implementation. So it has some of the pitfalls of being top down, whilst appearing to offer some of the advantages of being institution-based.

Taba’s model of institution-based change requires both changing the goals and means of institutions and changing individual teachers both cognitively and emotionally. So, for a change requirement as thoroughgoing as D&T, it may be expected that there will be considerable pressures on management practices and structures at school level and on teachers’ personal professionalism. The former (management) aspect is one that is affected not only by departmental-level structures, but also by the kind of management style of the head, deputies and other involved senior staff. The latter (professionalism) aspect is one that has been investigated by workers such as Hoyle (1980) who identifies a difference between what he described as restricted and extended professionalism. A teacher operating in the former style tends to focus closely on the quality of the teacher-class interaction and not to worry too much about the educational world beyond (or “up there”). The latter style takes a broader view of the educational context for
classroom interactions, and is more inclined to recognise that there is an “up there” or an “out there” inhabited by people who are not totally unaware of classroom realities.

Chin and Benne (1969) recognised that different strategies for effecting change had within them different views of the nature of teachers. An empirical-rational strategy assumes rational, emotion-free and selfless on-going evaluation by teachers that will cause them to identify and attempt to teach that which they can accept as being best for their pupils. A normative-re-educative strategy acknowledges that teachers operate within social frameworks, having roles and personal agendas and feelings. A power-coercive strategy implies that teachers are given no option but to change. Some of the rhetoric of the national curriculum implies that teachers are being viewed as operating in a mode appropriate to the empirical-rational model. I do not think that recognises the nature of the work that teachers do and how they are enabled to do it. The reality is that there is a strong element of the power-coercive, which pushes through the changed curricular goals but pays little attention to how teachers will be enabled to effect the required changes. Out of the curriculum changes of the 1970s came such concepts as the “teacher as researcher” (following Stenhouse e.g. 1975) and the “reflective practitioner” (following Schon 1983) which value the teacher rather than cast the teacher as scapegoat. A subsequent generation of work on curriculum change has focused attention on the careers of individual teachers (e.g. Ball and Goodson, 1985). All of this points to the centrality of the teacher in achieving effective curriculum change. Curriculum development and professional development must, surely, go hand in hand. Unfortunately, the politicians have tended to view teachers as being in need of direction and constraint, rather than attempting to understand the nature of their job and the support they need in effecting change. And professional development is expensive.

Also studied has been the significance of subjects (in the secondary sector - e.g. Goodson 1988) which has demonstrated the powerful influence of the socially-constructed school subject in school organisation and teachers' careers. A government that creates a newly-amalgamated school subject by committee has set up the conditions for considerable anguish on the part of those teachers whose professional support has come largely through familiarity with one of the previously-existing contributing subjects.

The reality is that all of these contributions to understanding how the curriculum is formed and changed can be used to shed light on what has been happening. Applying the theory and models of change to the establishment of D&T leaves questions that are still to be addressed, and raises issues that seem in a world far removed from the rhetoric and bureaucracy of the National Curriculum.

Some realities

The July 1987 National Curriculum consultative document (DES/WO 1987) identified Technology and Art-Music-Drama-Design as two of eight foundation subjects for all 15-16 year olds, and made Home Economics and Business Studies optional. CDT as such was not mentioned. The effects of the revealed proposals were various. CDT teachers seemed to assume that they would be the ones who would teach technology. Some HE teachers began thinking of early retirement; others began an active lobbying campaign, not least through their national association. Some pressure groups started lobbying about the apparent divorce between technology and design. The point is that this document gave different messages to groups who would ultimately be required to work together - appearing to give the upper hand to CDT both nationally and at school level. So when the final report (DES/WO 1989) named the “subjects” that would be contributing to the teaching of D&T, teachers' responses were as likely to be about in-school politics as about how to generate teaching schemes. At the institution level, then, much depended at this stage on the previous history of relationships between the teachers of the various subjects, and on the management mechanisms that existed, or were instituted and supported, at the time when a D&T-providing “faculty” had to be set up.

Consider, for example, a comprehensive school whose Head decided in summer 1990 that its D&T faculty should be formed from its existing BS, CDT and HE departments (many schools included Art at this stage, but its exclusion here does not affect the nature of the issues I am discussing here). These departments were geographically separate and had worked independently and successfully on courses leading to relevant GCSE examinations. By working successfully, I mean offering a range of courses appropriate to the pupils, producing above-average examination results, enjoying the approval of Head and parents, and including staff who felt valued in the school. The senior management of the school had for many years tacitly supported a “restricted” professionalism by looking to individuals within small departments for successful teaching.

What was the staffing and curriculum history of these departments in the period up to the arrival of D&T? CDT contained some staff who had seen the
The theories suggest that, if teachers are effectively to teach a new curriculum, they need time and professional support of various kinds. The evidence thus far is that neither has been supplied in anything like the appropriate measure, and D&T teachers are working out their own and their pupils' salvation as effectively as they can. It was felt that no relevant help was available from outside at this stage. The advisory staff knew no more than the teachers, and the statutory Order was the bare bones. Personal concerns focused on the change from working with a small group of colleagues having shared understandings and frequent informal discussions to a large group with a formalised communication system and uncertainty about any shared understanding of the new curriculum. For some, a concern was that a subject assembled by a committee looked likely to have to be taught by a committee, and the further erosion of the long-term teacher-class relationship (much valued within the craft "apprenticeship" ethos) was felt to be undesirable. For CDT and HE an issue was how to reduce what would be taught to the year sevens. For BS an issue was the need to contribute to staffing year seven for the first time, and agenue feeling of being the outsiders who were different to CDT and HE in approach - i.e. still being skills-based, rather than being "design" centred.

Initial reactions differed across subjects. CDT operated from a position of implicit strength, feeling that the process and content were familiar. For some individuals this was based on familiarity with the Order, for others it was based at this stage on a cursory glance. This relative confidence tended to assume that BS and HE were "coming in" to the CDT fold. Some more traditional teachers saw the new proposals as yet another step in watering down a curriculum that had already been diluted when equal opportunities issues had been "solved" by adopting a "circus" approach. HE found themselves having to spend much time grappling with the Order to get the feeling that the current approach in HE teaching was in line with what was wanted. The concern was that only parts of HE would be represented (thus losing a coherent whole), and that the useful Child Development course would be lost. Thus there was concern about professional standing and a sense of being devalued and deskilled. BS tended to feel that their required involvement was the result of an arbitrary political decision (at national and school level). Responses to all of this had to be worked out at school level.

Reflection

The package of measures designed by the Head to facilitate the implementation of the national curriculum in the school included the establishment of faculties aligned with National Curriculum "subjects", along with a whole range of regularly-scheduled meetings for faculty members and for the heads of faculties. Almost overnight, the three groups forming the D&T faculty found themselves having to work together to plan the arrangements for the year sevens arriving in September. An early decision was that children needed sensibly to be in there working. HE had also seen the change from cookery/needlework/childcare to the three HEs, so had had to adopt an "investigative" approach rather than the previous "I demonstrate - you follow" model. HE also had its own staff cubby-hole which served as office, social base and store room. BS occupied two rooms, one with a computer network and one with electronic typewriters. There was quite a strong call for groups to provide courses in this area, and the teachers' main problem was that of keeping up with the changes brought about by rapidly-developing machinery and office techniques. All three departments were working well by their own lights, finding professional support mostly within department (with occasional county-wide subject-orientated meetings to help), and getting on with the job of teaching. The Head had sent any incoming information including the word "technology" to the head of CDT. Add to this the fact that CDT was the largest of the three, departments, with the head of CDT on a higher allowance than the others, and one has here a local reinforcement of the national feeling about the relationship between the three contributing subjects.

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change from woodwork/metalwork/technical drawing to the three CDTs, and others who had been trained more recently within the CDT ethos. The changes from a craft to a design approach had met with a mixture of approval and disapproval, but the group jollied along well enough because, between them, they had a large amount of expertise appropriate to effective teaching of CDT. They remained a fairly close social group, isolated in some ways from the rest of the staff through geographical location and through their presence in the workshops (rather than the staffroom) through most lunch times because children often wanted to be in there working. HE had also seen the change from cookery/needlework/childcare to the three HEs, so had had to adopt an "investigative" approach rather than the previous "I demonstrate - you follow" model. HE also had its own staff cubby-hole which served as office, social base and store room. BS occupied two rooms, one with a computer network and one with electronic typewriters. There was quite a strong call for groups to provide courses in this area, and the teachers' main problem was that of keeping up with the changes brought about by rapidly-developing machinery and office techniques. All three departments were working well by their own lights, finding professional support mostly within department (with occasional county-wide subject-orientated meetings to help), and getting on with the job of teaching. The Head had sent any incoming information including the word "technology" to the head of CDT. Add to this the fact that CDT was the largest of the three departments, with the head of CDT on a higher allowance than the others, and one has here a local reinforcement of the national feeling about the relationship between the three contributing subjects.

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working in such circumstances are unlikely to accept a new package in its entirety. They will need to be convinced that what is now required is better than what they are currently doing. Their response tends to be incremental and discriminating, a response that could be represented as subversive. What actually happens is that a response evolves as particular problems are faced - e.g. how to arrange teaching groups to ensure curriculum coverage, how to assess, how to agree on interpretations. Conversations about these raise profound issues of professionalism that only gradually get addressed. Some features of the new curriculum will be found by some to enhance their teaching - others will hinder a particular style. What becomes clear to me is a determination to retain what works educationally despite the pain caused by politicians who pay little heed to even the limited light shed by the theoreticians.

One cannot help wondering at this stage just how the national curriculum in D&T is helping teachers to raise standards. An imposed top-down change needs to convince teachers of its value. When it appears to some to marginalise them, and to devalue their existing contribution, there is bound to be an uphill struggle. Ignoring the realities of the importance in schools of subject-based professional support groups is a recipe for difficulty.

The change process has only just begun. The nature of the new GCSEs is about to be established, and pupils who have experienced several years of a particular kind of D&T in primary schools have yet to arrive at the doors of secondary comprehensives. My plea at this stage is that government should acknowledge the needs of teachers who are working professionally to implement the new curriculum. Raising standards is not, in the long term, about surrounding teachers with bits of paper that comprise attainment targets for children. It is about the professional development of a skilled workforce whose task is far more complex than politicians care (or dare) to imagine or to contemplate affording.

References