

## English Technical and Vocational Education in Historical and Comparative Perspective

### Considerations for University Technical Colleges

#### A REPORT FOR THE BAKER-DEARING EDUCATIONAL TRUST

William Richardson (University of Exeter) and  
Susanne Wiborg (Institute of Education)

February 2010

#### Report Summary

##### Scope and purpose of the report

- The report reviews trends in technical and vocational education in seven developed countries since 1945, with a particular focus on the UK, the USA, Germany and Sweden.
- From the evidence and arguments presented, seven specific conclusions are drawn relevant to those pioneering University Technical Colleges in England.

##### School-based technical education in the UK, 1945 to the mid-1980s

- After much debate during 1940-41, the age of transfer from primary to secondary education in England and Wales after the war was set at 11 (rather than 13).
- Some selective secondary technical schools were established from 1945 but provision remained small and peaked in 1958 (at 6.4% of the cohort) as politicians, local authorities, employers and parents failed to back this innovation. Scotland and Northern Ireland had not established secondary technical education.
- From the late 1960s, as comprehensive schools became the norm, technical education sat uneasily between two traditions: 'academic' grammar school science and 'vocational' modern school technology and crafts. Strong technical qualifications failed to develop in the context of growing parental demand for school-leaving certificates.
- As the economy and youth employment prospects deteriorated through the 1970s, the government intervened increasingly in the comprehensive school curriculum, culminating in the Technical and Vocational Education Initiative (TVEI), from 1983.
- Rather than heralding the 'rebirth of technical education', some critics saw in TVEI a 'colonisation' of the comprehensive school curriculum in favour of progressive, active-learning methods. More widely, TVEI was seen as failing to secure the coherent, skills-related curriculum, 14-19, that had been intended.

##### School-based technical education in other countries, 1945 to the mid-1980s

- As in Britain after 1945, other industrialised countries set about expanding small-scale provision of secondary education. Also as in Britain, in most places this entailed dismantling senior elementary education (beyond the age of 10/11), setting an age of transfer to secondary schools and determining how technical education should be provided at secondary level. Significant in these countries – and highly varied among them – was the organisation of 'lower' and 'upper' secondary education beyond a broadly similar primary phase.
- Exceptions to this pattern included Sweden and Denmark where, from 1962 and 1975 respectively, a wholesale commitment to the community comprehensive school led young people to attend the same institution from ages 7-16, eliminating the concept of transfer to secondary education. At upper-secondary level almost all students then moved to a different comprehensive school offering vocational options within a common three-year curriculum.
- In the USA throughout most of the twentieth century, near-universal participation in common schooling to the age of 14+ or 15+ was differentiated, thereafter, for a small minority who accessed specialist upper-secondary technical schools.
- A similar pattern developed elsewhere. In Japan, where common elementary and middle schools attended between the ages of 6 and 15 were imposed in 1947 by the USA as occupying power, a specialist technical stream from 15+ expanded rapidly during the 1960s as part of cohort-wide transfer to upper-secondary provision. In

France secondary education was expanded and reorganised during 1959-75, also resulting in transfer from common schools to specialist upper-secondary schools at 15+.

- In West Germany, by contrast, the expansion and reorganisation of secondary education from 1964 retained selection by ability at 10+ while introducing a tripartite hierarchy of lower-secondary institutions from which a majority of the age group entered apprenticeship training at age 16.

### Comparative developments since the mid-1980s

- In each of these countries participation beyond the school leaving age (now typically increased to age 16) grew rapidly from the 1980s, as did higher education provision.
- The trend in Germany since 2002 has been toward a more common, subject-based curriculum in lower-secondary education (ages 10-16), with some increase in comprehensive organisation at this level. The German apprenticeship system from 16+ remains very large by international standards.
- Against the general pattern, both the USA and England (alone within the UK) have reintroduced elements of selection to specialist schools – at 14+ in the USA (from the 1960s) and at 11+ in England (from 1988).

### Conclusions and implications for University Technical Colleges (UTCs)

- Specialist upper-secondary technical schools exist outside the UK but none reviewed here are similar in most key aspects to UTCs. The nearest equivalents are the French *lycées professionnels* (age 15-19), one of the two types of *lycée* to which almost all students transfer, post-15, and in which full-time and apprenticeship streams run in parallel.
- UTCs are forging a new path on the international stage. Their success will depend ultimately on legitimacy secured within the English educational system – on the part of parents, especially, but also among politicians and sponsors from higher and further education, and in terms of respected qualifications attained by students.
- In conclusion, this review offers seven specific conclusions relevant to those pioneering UTCs in England.

**Age range.** The creation of UTCs for the 14-19 age group is a bold and significant innovation in English – and UK – education. It recreates the age of recruitment to specialist technical institutions on which Junior Technical Schools were based in England and Wales from 1905 to 1944, and which technical education specialists argued unsuccessfully in 1940-41 should be the basis of post-war planning.

**Selection at 13.** City Technology Colleges (from 1988), Specialist Schools (from 1998) and Academies (from 2002) have reintroduced partial selection by aptitude at the age of 10 to English secondary school education. This is counter to broad trends in European school organisation since the 1980s. UTCs are distinctive internationally in inviting self-selection by pupils for specialised technical education from the age of 14, based on motivation (rather than on ability, as in leading ‘career academy’ magnet schools in the USA).

**Curriculum coherence.** UTCs mark a recommitment, provided through a specialist institution, to the coherent, applied and progression-based 14-19 curriculum which was a largely unrealised goal of the Technical and Vocational Education Initiative (TVEI) during 1983-1998.

**The role of qualifications.** Qualifications have exerted an ever-stronger influence over English secondary education since the 1920s. Within this pattern, technical and vocational qualifications embracing elements of general education in the lower-secondary phase have struggled to attract enduring support or respect. The fortunes of UTCs in their early years will be tied closely to the success of Diplomas, especially at the 14-16 stage.

**The basis of specialisation.** Staff development for those teaching in specialist technical schools in England was hampered in the past by their low status within the profession and the lack of a convincing overall rationale for the work of their institutions. A strong focus on the ‘technical’ Diplomas should allow UTCs to develop particular expertise and patterns of attainment of a kind not found in many of the secondary schools in England which currently carry the label ‘specialist school’.

**Appeal to parents and other supporters.** The experience of City Technology Colleges, and Secondary Technical Schools before them, suggests that UTCs will appeal strongly to certain students and families, notably skilled-worker households. Moreover, employer support, a specific difficulty for STSs in the 1950s, is unlikely to be a problem today, although continued endorsement by employers (and others) of Diplomas will be important.

**The UTC school leaver and the role of higher education.** The public link of UTCs to sponsors from higher (and further) education is significant. Across Europe, all countries have expanded dramatically their higher education provision in recent decades and an ‘applied’ technical curriculum, 14-19, leading to worthwhile further and higher education, is the realistic contemporary context of UTC provision. UTCs offer an environment in which students can be expected to benefit from an ethos of hands-on learning, with clear opportunities for progression, either within a school already strongly attuned to their interests and capabilities, or in further education.