National 'Vocational' Curriculum? The dichotomy between technological capability and the acquisition of skill in secondary education

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Michael Lawrance looks at GNVQs and their effect on the technology curriculum.

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There are strong indications that the next decade is set to continue the trend of change in Design and Technology teaching. This may possibly effect modifications and additions to the curriculum which could surpass even those of the 1988 Act. One of the aspects of the Dearing report was to reintroduce the more radical prospect of considering vocational courses and their certification in the form of General National Qualifications (GNVQs) in secondary education. Although many of the considerations being undertaken could have an effect across the whole curriculum of foundation and core subjects in secondary education there is growing evidence that perhaps the greatest impact could be felt in the newly-established National Curriculum foundation subject Technology in both its profile components: Design & Technology Capability and Information Technology Capability.

The word capability is closely allied with skill, and skill is a word which is continually invoked by those involved in teaching, industry, commerce and perhaps, above all, politics, especially when invoked in a vocational context. Vocational education has embroiled 'skill' as a term, as a notion even, ever more closely aligned with the country's economic performance, and the term 'skills-deficit' has been frequently used when evaluating Britain's potential economic prosperity and competitiveness. The National Curriculum, the Dearing report, the sweeping changes of new technologies, and rising youth unemployment have rekindled the 'Great Debate', and could herald the advent of a new vocationalism in secondary education by the dawn of the new millennium and consequently confront teachers and pupils with major changes in both curriculum and assessment. Design & Technology Capability's redefined status as a foundation subject in the National Curriculum not only fulfils an overdue recognition of the value of technological and practical skills but also gives an indication of the high expectations the Government has of its future potential to satisfy the skills-deficit and lead the way in a new era of personal development and qualifications.

Technological capability and its transmission has unique links with the acquisition, development and application of practical skills. 'Skill' in the vocational vogue might now be seen as the head of a family of vocational vocabulary whose marriage in GNVQs to the newly commandeered term 'competence' displaces capability. Its close relatives include core and foundation, its new in-laws comprise training, performance, option and outcome. The age-old vocational and general education debate is back on the agenda and the question now is whether the 'family' feud can be settled once and for all and whether a relevant education can be provided 'for the mass of children in an age where there are fewer and fewer jobs for the unskilled'.[1]

Today's GNVQs have been developed on behalf of the National Council for Vocational Qualifications (NCVQ) by three Awarding Bodies historically closely associated with vocational courses for progression in education or employment: The Royal Society of Arts, City & Guilds and the Business Technician Education Council. The proponents of vocational programmes advocate an expansion of the workplace education (and training) programmes with accreditation via National Vocational Qualifications (NVQs) to integrate with Key Stage 4, and special emphasis is being placed on Technology and Information Technology. Pilot schemes are being run at present and, if successful, could not only create a revolutionary pathway in education, but more importantly cut cross the shameful academic divide and avoid the snobbery and isolation that has historically alienated vocational education and its target group to correct a system which Dearing claims serves 'least well those pupils who are less academically gifted'.[2]

Moreover, the content of the curriculum might develop an appeal for students who wish to choose either employment as the next stage of their personal development or further education as opposed to either dropping out or feeling obliged to pursue a post-16 curriculum content largely determined by institutions committed to traditional academic emphases. The connection between practicality, relevance and motivation seems to be receiving more publicity and reaching 'academics' as well as the general public. If integration of vocational content into the national curriculum proves relevant and viable, the implications for 14 to 16-year-olds could be considerable.

However, just as traditional 'craft' skills coupled with 'awareness' and 'process' skills among others are at last being valued and finally accorded a respected place in the school curriculum, contemporary persuasion is set to

move towards emphasising core, generic and transferable skills. Some of these terms are already becoming familiar in the lexicon of current GCSE syllabi. The pull away from purely practical work, together with its inherent skill-development and appealing advantages for pupil motivation, is at risk of increasing. If integration of GNVQs should aim to satisfy the needs of industry and commerce society demands, can we expect to see a curriculum becoming industry-led? If so, what of the nature and function of skills-definition then? Depending on one's point of view the transmission of Design & Technology Capability could very likely become one of the main testing grounds for potentially opposing approaches in the near future.

The entire concept of skills is being revised, requiring analysis of the new pedagogy of a skills-based approach to education and training compared with that of a fundamentally general education. Mindful of recent historical criticisms of not involving business and industry enough when reviewing curriculum requirements, the NCVQ developed GNVQs 'in consultation with employers, professional bodies, industry lead bodies and the education section'.[3] The GNVQ format describes a framework of core skills giving priority to the areas of literacy, numeracy and notably information technology as well as creating mandatory units of study in a desired vocationally-specific area such as manufacturing for instance. A detailed analysis of the language, manner and style in which the units of GNVQ Manufacturing at Foundation Level are described reveals a greater emphasis on generic abilities than on 'traditional' craft and practical skills: skills of communication — oral, written and electronic; skills relating to teamwork; problem-solving; discerning opportunities; decision-making; awareness of personal skills, occupational skills and social needs — all these and more are described.

Apart from the potentially enormous implications vocationally-orientated courses might have on curriculum content and preparation, if GNVQs were ever seriously imported into secondary education it would be the area of assessment which would indubitably cause the greatest contention. The concept of competencies although simply defined raises serious questions and objections about the scope of a skills-based approach to education. In the past craft skills were often confined by their denomination in a trade or guild. Due to a certain secretive, protectionist attitude (even if necessary in the face of competition) they were prone to becoming restricted, narrow and specifically-stated. None the less, such skills as practised were signs of profound expertise and exemplary standards in their subjects. There is concern that the assessment of performance and outcomes based on narrowly specified modules and tasks could lead to the adoption of assessment procedures similar to Attainment Targets so abhorred by teachers and similar to those in NVQs so widely criticised in the press. The industry-led demand for a 'skills-revolution'[4], by accentuating the development of generic and transferable skills as acquisition of competence, is held to be dangerously close to allowing education to degenerate into mere training.

A major criticism of the pre-Dearing GCSE, the Design & Technology + Specialism version, was that for a subject classified historically as 'practical', assessment of coursework allowed just 10% for 'making' while 90% was for designing, evaluating etc. The breadth-versus-depth debate revived by bodies such as the Engineering Council and its supporters has been duly noted in the revision of Orders coming into effect in 1995 with a greater stress on combining mental activity with psychomotor skills such as enhanced by projects in manufacturing. However, my preliminary analysis of the core skill, mandatory and optional units in GNVQ Manufacturing at Foundation level, for example, leads me to believe that content and consequently assessment may not alter significantly from this previous bias. Out of nine 'elements' (modules) in the three mandatory units (courses) specialising in Manufacturing there are listed a total of 48 obligatory requirements of students to 'perform in a range of activities'.[5] Of these 17 begin with the verb *identify*, 14 with the verb *describe* and only 3 use *produce* or *process* with a meaning couched in practical terms. This represents a staggering 62% emphasis on analytical and communication 'skills' and only 6% on achieving a practical 'outcome'. *Manufacture* as a verb appears not even once. To cap it all, this data is gathered from those three out of nine units which are supposed to *specialise* in manufacturing.

If the *raison-d'être* of GNVQs is to appeal to 'non-academic' students, the scenario for that section of the population, defined by Newsom in 1963 as *Half our Future*[6], is worsened by several other factors: first, the Foundation level is equated with GCSE grades D to F only; second, the value of motivation in practical work would be gravely undermined; third, the curriculum time estimated to achieve a GNVQ at Intermediate Level (corresponding to grades A to C) is equivalent to 40% of the timetable; fourth, the style of Technology teaching is gravitating towards delivering a more hard-edged technology which girls will find less accessible than boys. Thus, the GNVQ pedagogical style could be set to create a new tension in the breadth-depth debate which would further complicate the academic-vocational dichotomy in Design and Technology Capability.

General and vocational education do not necessarily have to oppose each other and ought to be able to co-exist compatibly as long as each avoids becoming too autocratic a system. There *is* a case for further reviewing the curriculum with an opportunity to finally redress the balance and steer away from an elitist academic tradition towards a system which provides a vocational framework for the whole ability range while maintaining rigorous and high standards true to the subject's origins. Whichever regime, political or educational, plans the final outcome, consultation with the teaching profession is essential not simply to avoid a reactionary argument but to ensure that hands-on practical content is precisely defined as a *percentage* of the Design and Technology curriculum. As a subject, it continues to be *subject* to the pace of technological change and its inherent influence: it is both the instrument and the result of change. In this unique position to influence future results for the nation and the nation's economy it is therefore also beholden to the principle of developing critical technological awareness and judgements.

References

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