

The development of GNVQ courses – vocational GCSEs and 'A' levels – was given a great deal of exposure in the national press in the late summer of 1996, as the exams season revealed the number of students taking the courses and their success in gaining university places. The Times Higher Education Supplement (Aug 23rd 1996) revealed in a banner headline that "GNVQs gain elite favour", reporting that universities were apparently lapping up the successful products of GNVQ courses. It only took a week for this somewhat rosy impression to be tarnished – at least for those of us in technology – by two further bits of information: i) that of the 53,000 GNVQ entrants, only about 200 were in manufacturing and 500 in engineering; and ii) that there may (allegedly) have been some skulduggery involved in the analysis of the data "Ministers accused of getting spin doctors to work on GNVQ results" (TES 30th Aug). In universities we are even now in the midst of processing applications for next year's students, so the issue is once again live. In fact it has encouraged me to reflect on a couple of vocationally related matters.

### Specialists vs generalists

Vocational courses at school level mean very different things in different nations, and one of the major differences is the extent to which 'vocational' means a *specialist* training for a job or a generalist preparation for employment. In Taiwan one experiences the full measure of what a nation can do when it throws itself at specialist training. A majority of pupils in Taiwan attend Vocational High Schools (VHSs) and they are awe-inspiring institutions.

In the last 20 years, Taiwan has spent mega-billions of dollars on these 15-18 schools. As one indication of this, a single VHS in the city of Taipei – with 3000 students – has an annual budget of £12 million; and the city has another six of these schools. The government and the city education authorities spend far more money on these schools than they do on their academic Senior High Schools (SHSs) – by a factor of about 3:1. The 'brightest' students – in the SHSs – get far less money spent on them since it is felt that all they need is desks, chairs and some basic facilities. By contrast, the vocational schools

have to operate at an *industry* standard of equipment and training. The quality and scale of facilities is mind-boggling. Twenty of the latest industry-standard CNC machining centres (standing more than 2m high and wide) lined up in a row in an aircraft-hangar sized machining workshop so that each student can work at their own machine. The fact that students use this manufacturing cornucopia to produce identical widgets creates a few reservations about the prevailing pedagogy in such schools, but one has to admire the wholeheartedness that is driving the system. When students leave the VHS at 18, and assuming they don't go on to technical college (which most want to do), they are immediately employable in industry.

A quite opposite scenario exists in the USA and it was lucidly analysed in a US Dept of Labor publication (forgive the American spelling) "What Work Requires of Schools... for America 2000"

Here we have the generalist philosophy that describes ...

"... five competencies which in conjunction with a three-part foundation of skills and personal qualities, lie at the heart of job performance today. All eight must be an integral part of every young person's school life"

The competencies are described as

Resources:	identifying, organising, planning and allocating resources
Interpersonal:	working with others
Information:	acquires and uses information
Systems:	understands complex interrelationships
Technology:	works with a variety of technologies

And the foundation as

Basic skills	reading, writing, mathematics, listening, speaking
Thinking skills	creative thinking, decision making, problem solving, seeing things in the mind's eye, knowing how to learn, reasoning
Personal qualities	responsibility, self esteem, sociability, self management, integrity.

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On the face of it, our GNVQ arrangements in the UK are considerably closer to the US model than the Pacific Rim version. But an interesting policy position in the US Dept of Labor report (see my italics above) reveals my second issue, for in the USA the prescription is seen to address the curriculum for *every* young person, not just a vocational stream.

#### Parallel vs integrated systems

The difficulty here can best be illuminated by a trip down memory lane to the days when we had GCE 'O' levels and CSEs. The 'O' level system was developed over decades by universities seeking to establish some ground rules for university entrance. However, following the Crowther and Newsom Reports in the late 1950s and early 1960s it was increasingly recognised that the system was incomplete since it was designed for the top 20-30% of ability. What about the majority of us! So we invented CSEs in all their magnificent diversity, and mode 3 in particular proved a wonderful device for curriculum development in schools – not least in design and technology.

But the problem with it all was that it created a great divide. 'O' level courses were for the 'bright' students. The courses were theoretical and, at the end of them, students were measured by 'blind' examination systems (I use the term deliberately). Then there were CSE courses for what Newsom described as the 'average and below average youngster'. These were typically more interesting, active courses and were assessed by a greater variety of processes – including portfolio and project assessment.

Given this divide, what advice was one supposed to offer to the majority of youngsters that sit in the middle-ability band? I was constantly facing parents who typically wanted their offspring to do 'O' levels. They knew about them and respected their credibility. But I knew that the CSE course would certainly be more interesting and probably more appropriate. It was an impossible position to be put in and not infrequently we were forced into playing the 'double entry' card. The system appeared to be designed for the extremes – not for the norm – and we all breathed a

huge sigh of relief when the contradictions were eliminated by the abolition of both systems and the creation of GCSE.

When I read the newly envisioned blueprint for UK qualifications for 16-19 (*Review of Qualifications for 16-19 Year Olds* SCAA COM/96/459) I began to see the awful spectre of history repeating itself. For 'O' level and CSE, read 'A' level and GNVQ. We seem yet again to be inventing a system that is premised on the separate existence of two discrete kinds of students – the sheep and the goats: the 'academic' and the 'applied' – a system of bi-polar opposites, when in reality a majority of the school population sits uncomfortably between these poles. And the particular problem for us in design and technology is that we are – by definition – in a discipline that is indivisibly theoretical *and* practical. Making a decision between 'A' level and GNVQ is now a matter of uncomfortably splitting hairs between the theoretically practical or practically theoretical.

I would not like to be thought anti GNVQ – I am not. Despite my reservation about the GNVQ assessment regime, I am enthusiastic about the curriculum development potential. I can see GNVQ bringing the same breath of fresh air to the 16-19 curriculum that CSE brought to the 14-16 curriculum in the 1970s. But the lesson of history is that where two systems exist side by side – one with prestige and clout and the other with vocational connotations, then students (and their parents) who are undecided about their future will have impossibly difficult decisions to make. There will be a 20% percent cluster of students at opposite ends of the ability spectrum for whom this will not be a problem. But there will be 60% band in the middle for whom it will be very difficult indeed.

I wonder for how many years the parallel systems will last, before we decide that the tensions have become sufficiently unbearable to justify scrapping them both and creating a unified system of certification?