

DATA Annual Conference 1995 'Design & Technology: the future'

Held at Nuclear Electric, Barnwood, Gloucester on 6th and 7th July 1995

**An Address by The Secretary of State for Education
Rt Hon. Gillian Shephard MP**

Sadly, Gillian Shephard was unable to attend the Conference, owing to other pressures — John Major was re-elected as Leader of the Conservative Party only days before. Mrs Shephard had prepared her speech, however, which was delivered by Peter Owen of the DFE.

■ Introduction

The Secretary of State is *very* disappointed that she cannot be with you. It was an invitation she very much wanted to accept. This is an important time for Design and Technology. We all know that. Unfortunately — as I am sure you will understand — it was just not possible for her to leave London today; but I will try to give you some of the flavour of what she might have said if she had been able to be present.

■ We are for D&T

First, I should like to make one point clear. The Government is emphatically *for* D&T. When the Department consulted last year on SCAA's draft curriculum we asked a number of questions *about* D&T. We did not ask whether it should be in the curriculum from 5-16. The Secretary of State had already decided that it should, despite the fact that a number of people had argued to the contrary. We were the first country in the European Union to introduce the subject into a National Curriculum for the whole of the statutory school age. We were certainly not going to be the first to remove it. So that debate it is over.

■ D&T and UK Competitiveness

Why are we for D&T? I will explain. First, because it is vital that for Britain's competitiveness in the modern world that we are confident in our understanding and use of technology. You do not learn about technology just by reading books — you learn by doing something yourself, designing and making. Now *all* our children have the right not only to be taught about the theory of design and technology but about how to *do* it.

The Government's commitment to technology is very clear. The first specialist schools that were set up were for technology — CTCs. Following on from them, existing secondary schools have been invited and encouraged to specialise in technology. The response has been tremendous. At the end of last month we announced a new group of Technology Colleges, bringing the total number to 85, and expect to announce a further group at the end of this month. Established schools have been invited and encouraged to specialise in technology. The specialist schools programme has now been extended to modern foreign languages but technology came first.



■ D&T is Good Education

Another reason why we are *for* D&T is that it can be great education. Quality D&T often appears in schools in deprived areas, sometimes surpassing work in other subjects. And the skills and attitudes that are learnt in design and technology are entirely transferable. The need to find solutions when there are conflicting requirements — aesthetic, cost, strength, and so on are key issues for everyday life.

The D&T curriculum emphasises the value of the skills, knowledge and understanding from other subjects. So it should. But there is another side of the coin. Enthusiastic D&T pupils have to design their work, annotate their drawings, explain in writing and verbally what they are doing. The spin-off that creates for the basics — basics that are vital for the development of the pupil — can be enormous.

We believe that SCAA has produced a new D&T curriculum that teachers can work with and that can foster the enthusiasm of pupils. SCAA's success with the new curriculum had a great deal to do with the quality of the comments they received from the consultation and their willingness to take these on board.

I mentioned other subjects. Let me say that I very much welcome the fact the Ray Peacock, the chairman of DATA, is a scientist. His experience of science, and its practical application, gives him a valuable wider perspective. D&T has much to contribute to the wider world. It is important that it is not parochial.

Another very important point to register is that D&T can produce just as high quality work as other subjects. I choose my words carefully — ‘other subjects’, not ‘more academic’ subjects. There is absolutely no reason why D&T cannot be as rigorous and academic as other subjects as long as we do not take the fun and enthusiasm out of it. The interest in the subject from schools of all kinds, including the independent sector where they have their own D&T association, suggests that they agree.

■ The D&T Partnership

This common sense of value means that we can promote the subject as a *partnership* of interests. And DATA is ideally placed to bring all the partners together.

We have worked very closely with DATA in recent years but no one organisation has been more important to them than the Gatsby Charitable Foundation. The support that Gatsby and other foundations have given to technology has been immensely helpful. Not just in the support of organisations such as DATA and the Engineering Council but also in the production of curriculum materials. Gatsby’s support for the Engineering Council’s Technology Enhancement Programme, the Nuffield Foundation’s own Technology Project and the Esmée Fairbairn Foundation’s support for the RCA’s Schools Technology, are all superb examples of foundations working in a focused way to develop quality and support for technology teaching.

Our new curriculum offers an ideal structure to bring together all the organisations wishing to play a role, including of course those from *industry*. Ray Peacock, your Chairman, works for Philips Electronics. I have to say that I do not know when he finds time to do so with his extensive support for DATA and his other educational commitments. The value of that kind of support — allowing employees to take time from their duties to support work in schools, either as governors or simply to pass expertise based on real world experience — cannot be overstated.

And then of course there are the teachers. I am glad that so many teachers are here today. I know that Ray would agree with me that you are the most important members of the partnership. And it is you, and those who advise you, that form the bulk of DATA’s membership.

I am convinced that DATA offers solid value for teachers.

The curriculum guidance materials we in the DFE commissioned from DATA are exactly what teachers need to complement the new D&T curriculum and SCAA’s guidance on it. We know that because the teachers themselves have told us. We are so pleased with the material that we have been working with DATA to target several LEAs to offer it to schools on a month’s free loan.

You will each have seen a copy of the leaflet ‘Design and Technology’. The leaflet is an example of a number of organisations — DATA, the Nuffield Foundation, OFSTED, the National Association of Advisers and Inspectors in D&T, and the DFE — coming together to push forward a single idea: how to explain quickly and effectively to parents, governors, business and industry (and even some headteachers) what a pupil should learn from 11 years of work in D&T. We commissioned DATA to produce the leaflet. As with most of the material produced to help D&T, we see it not just to advise and help, but to challenge and extend.

Before I leave the partners involved in D&T, let me say just a word about government. In Government we see ourselves as working together in a common cause. I know that it does not always appear like that. DATA would say that their contact with a number of Government Departments has given them a unique insight into the workings of Government. That insight can be helpful to us all and I am delighted that one of your speakers today is Leslie Jones, Chairman of Biwater and Chairman of Task Force 1 of the DTI’s ‘Action for Engineering’ initiative. Both DATA and my department are represented on that Task Force.

Where will all this goodwill take us in the future? Frankly, we have never had a better opportunity for D&T in education. We have a D&T curriculum that is welcomed by organisations from the Engineering Council to the National Association of Teachers of Home Economics. We have some high quality curriculum materials and the back-up support for them. We have a slimmer National Curriculum which should allow the more able pupils to do enhanced work, and the less able to spend a little more time.

■ KEY ISSUES

Nevertheless, there are still some key issues to face. Some are to do with the whole of the curriculum. Others are special to D&T.

■ D&T in Primary Schools

The curriculum materials produced by the Engineering Council, the Nuffield Technology Project and the RCA Schools Technology Project are all targeted at Key Stage 3 or Key Stage 4. There is no similar initiative for the primary sector. Yet OFSTED's evidence suggests that our teachers at primary level need more support, particularly in D&T. That is why we have encouraged primary schools to look at DATA's guidance materials. My point is that we, the partnership, need to look at the primary sector. We have discussed with DATA a strategy for bringing the partners together on this issue and we will work with them.

We all know only too well that the enthusiasm built in primary schools can be lost in the transfer to the secondary school. Those of you who have been working on curriculum materials for Key Stage 3 are ideally placed to work with the Key Stage 1 and Key Stage 2 professionals to ensure that that need not be a problem with D&T.

■ Teacher Training

Of course, making available excellent curriculum materials is certainly not all that is required to develop the expertise of teachers. Anthea Millett's presence here today is an indication of the importance she places on the training needs of D&T teachers and I greatly welcome the initiatives I know she will be exploring with DATA.

We in the DFE are using our experience with CTCs and Technology Colleges to collaborate with the Open University and other higher education institutions to provide training courses specifically for secondary D&T teachers. We are using the evidence from a number of sources, including a survey of D&T teachers by the Nuffield Foundation, to target the training.

The other important player in teacher training is of course OFSTED. The information their inspections are providing to schools individually and that we are receiving in particular subjects is extremely valuable.

■ Testing/Inspection

Let me digress for one moment and say that many people, including those intimately involved in education have either under-estimated or misunderstood the effect of the regular testing of children and the regular inspection of schools. The effects of both are profound. They will do more to underpin the quality of teaching and the achievement of pupils in all subjects, including D&T, than any individual initiative.

■ GCSEs

Back to another specific issue for D&T — GCSEs. I know that some of you will have concerns about the short-course option at Key Stage 4. You might feel that it will lead to a poor quality offer — squeezed into the timetable and limited resources. I understand those concerns and I would like to respond to them. A short course in D&T — and MFL — is consistent with the overwhelming demand from teachers for a slimmer, more flexible, curriculum. It retains D&T as a compulsory subject, but allows space for pupils to study a range of subjects. They can also develop their interests. Not just in the arts or languages but in D&T related subjects such as business studies. Pupils, parents, and OFSTED will not be fobbed off with a poor quality offer.

I have also heard that some of you are worried about the potential proliferation of GCSEs in D&T. To an extent this is inevitable. SCAA attempted to offer flexibility at Key Stage 4 in their draft curriculum. This need for flexibility was reinforced in the responses to the consultation exercise. I am sure that its flexibility and adaptability is one reason why the revised D&T curriculum has been so readily accepted. There is no way we would want to undo that work by being over-prescriptive in the GCSEs that are on offer.

To do so would anyway be inconsistent with Sir Ron Dearing's recommendations on exploring further the development of GNVQs.

■ GNVQs

GNVQs are proving to be one of the most exciting curriculum innovations of recent years. A number of the GNVQs already available or planned will offer ample opportunities for students to develop skills, knowledge and understanding in key areas of design and technology. The take-up of GNVQs

has been quite remarkable. A quarter of a million students have registered for GNVQs since the initial pilot in 1993, including more than 160,000 in 1994/5 alone.

Eight GNVQ titles are now widely available including engineering, which came on stream this year.

These developments should help to make the D&T taught in our schools even more relevant to the world of work. I suspect that many of those in business and industry would be surprised at the degree to which the National Curriculum takes on issues to do with industry and manufacturing.

We do not just ask our pupils to distinguish between the quality of design and the quality of manufacture — an interesting concept in itself. The involvement is deeper. For example, they have to stimulate production and assembly lines, and they are taught how computer-aided manufacture is used in manufacturing in quantity, single items and small batches. The new D&T curriculum should be required reading for everyone in business and industry. Failing that, our leaflet should help!

■ Quality of Teaching

I mentioned the vital role of OFSTED in helping to improve the quality of teaching in D&T. There are no short-cuts in achieving quality but there are ways of helping. Last year we commissioned OFSTED to produce a publication that would be examples of good practice in D&T, examples from a range of secondary schools including those serving inner-city areas. HMSO have published it, and we bought sufficient copies for each of our secondary schools. We have received very good feedback from schools and advisers. The OFSTED team have good cause to be pleased with the outcome. We even got a call from Bermuda saying that they were buying it for all their D&T teachers !

■ International Dimension

We welcome the interest of other countries in our work in technology. The Technology Enhancement Programme is developing links with schools in a number of other European countries. The Nuffield Technology Project has interested other countries — notably South Africa. Last month we had visitors to the Department from Japan and Korea. Our experience and expertise is bound to be of

interest to other countries. We must ensure that, in future, we receive the benefits from this.

■ THE FUTURE

■ National Targets

So what can we look ahead to? In the recently published second Competitiveness White Paper, 'Forging Ahead', the Government announced and endorsed revised National Targets for Education and Training. These include two new targets — for young people to attain the core skills of communication, numeracy and IT, and for the work force to achieve higher levels of vocational, professional and managerial qualifications. I have already discussed the contribution D&T can make to both these areas.

■ Stability

D&T can at last look forward to a period of stability and consolidation. The curriculum is in place for five years. That provides a solid basis for teachers to accept a place on training courses knowing that the training will be of use for the future. The publishers of educational texts know that books, disks or CD-ROMs should have a reasonable shelf-life. Those D&T teachers and co-ordinators who have not worked on cross-curricular themes because of the uncertainty over D&T can now invest time knowing that it will be worthwhile.

To those of you who ask whether a curriculum in such a fast-moving field can plausibly last for five years, I would say that both SCAA and we in the DFE were only too aware of the issue of future-proofing. That is why we built in flexibility so that there is room for sensible adaptations without disruption.

We have a new curriculum. And now the partners must make it work. We believe that it will serve children and teachers well into the next century and that you here today, and others who cannot be here, will ensure that it does so.