

Design at King Edward VII Community College, Leicestershire

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King Edward VII is a 14-18 Upper School in the Leicestershire Plan with approximately 950 14-16 year old students. Design is part of the core curriculum and is taught to mixed ability groups. The Faculty is organised departmentally into 3D, 2D, and Home Economics and offers the following curriculum options to incoming 4th years: 3D Studies; 2D Studies (including Ceramics); Technical Graphics; Fabrics and Home Economics. Technology is taught as an option and jointly staffed by Science and Design. There are no traditional craft options, and the entire Faculty uses the MEG Jointly Certificated Design Syllabus as the basis of its courses.

In 1986 I was invited to speak at a conference: the venue a well known University; the occasion Industry Year, and the audience primarily drawn from Industry. I would like to feel my services were sought as a result of work undertaken by young people in the

Design Faculty at King Edward VII. I feel the quality and optimism expressed in that work to reflect educational good practice; good practice which highlights the potential of offering young people a Design Experience.

I am confident my audience were expecting a 'rosy' presentation; unfortunately several factors conspired to deny them such. Perhaps I painted too black a picture, but then again the Spring Term of 1986 with its attendant industrial problems was hardly a high time for optimism.

When confronted with an audience of Industrialists, what do you do? You can tell them how well you are doing and how wonderful the work of your student is, or you can attempt to provide an insight into the mismatch between expectations and reality. It is no coincidence that King Edward VII runs an in-service course for parents called Understanding Education. This I took

as my starting point and the following is an approximate transcript of what was said.

The Perceptual Mis-Match

I asked 3 Questions

1. What does Education think itself to be?
 2. What do educationalists believe Industries views of education to be?
 3. What role does Government see for education, especially CDT?
- And offered some views.

1. Present trends in education would suggest that teaching is becoming less content dominated. There is a move towards the development of the individual. Learning how to learn and how to make use of the information you acquire. Notions of experiential and participatory learning, critical appraisal and self-evaluation. The hope is that we can help young people take their place in a society where diverse employment and/or unemployment are the norm.

The project depicted was a problem solving brief based upon the design of a simple thermo-plastic product to 'help' an individual fulfil a task. As such it was an 'active' product. Students (pupils) used their personal interest or the needs of others as stimuli and references from which to devise their own design criteria. The product illustrated is a tap opener for an arthritic person.



I posed another question one I heard a good few years ago. 'Is the educated person the one who can remember all the answers or the one who knows where to find them? I left them to draw their own conclusions.

2. Educationalists believe industrialists to be unaware of the function outlined above. Perhaps their belief is in constancy, the management of industry perceiving education to be as it was when they were passing through

the system. Certainly the currency by which Industry would seem to measure Education is Maths, Physics and Chemistry born of traditional external examinations. This poses a problem. Surveys would indicate that Industry would like a future workforce to be adaptable; creative; capable of problem solving; practical and with an ability to communicate. Such qualities are not fostered within traditional and convergent subject boundaries. There is

yet another problem. When shown a list of syllabus titles, the majority of those surveyed from Industry chose Physics. When the same people were asked to express a preference for content, the majority selected what we teach as Technology, but thought it to be Physics.

It would appear that the personnel of industry, who are none other than the communities we serve and often parents of those we teach, are unaware of the present role of Education in society and the mechanisms it employs to achieve its ends.

3. As to the 'Government'. Initiative after initiative, SCIP, TVEI, TRIST, a commitment to Design Education, an assault on the male domination of engineer etc, etc. I criticise none of this. However the quantum leap from policy to realisation falls outside the scope of politicians, and rests with the classroom teacher.

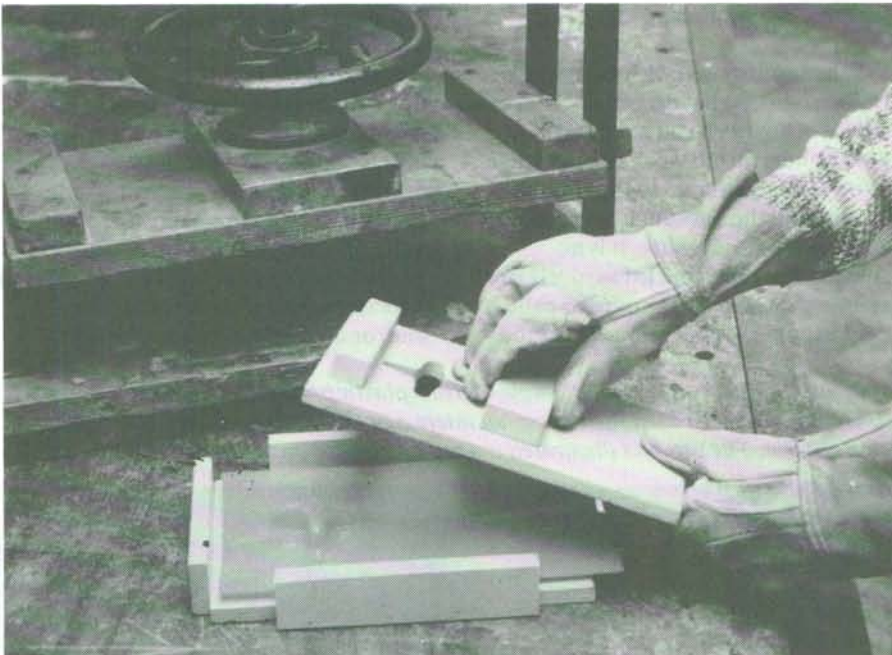
Teachers are being assaulted by initiatives which significantly outnumber the resources at their disposal. The expectations of Government on the role Education will play in the re-vitalisation of our industry is not matched by the funding provided to carry out the tasks. But there is hope. Hope in the form of a new examination which matches the requirements of industry as expressed earlier in this article. An examination based on knowledge, objectively assessed, with its roots firmly in yesteryear all set to lead Britain back into the mid-20th Century! Please forgive the passion, but some of the new examinations now gaining approval are a retrograde step and will do more damage to CDT than we ever dreamt about.

The Worked Example

Having concluded my 'sermon' I felt it best to provide a worked example to illustrate our dilemma. Assuming King Edward VII to be a school of 1000 14-16 year olds, 500 in year 4 and 500 in year 5, out of this 1000 only 120 students in each year group undertake a course in CDT Design and Realisation (3D Studies as we call it).

Our timetable is such that we have nominally 3 hours per week, and we seek to teach five project modules of 10 weeks duration.

Of the 10 weeks devoted to a single module, 3 to 4 weeks would be spent on



practical, the rest devoted to preparatory and evaluatory study.

In any given academic year we see a student for 40 weeks at 3 hours a week i.e. 120 hours, of that 120 hours we would expect to teach between 36 to 40 hours practical. Why so little? Syllabus, and perceived function, as expressed earlier, provide most of the answers to this question.

One more statistic, our capitation allowance. 3D studies teaches 240 students a year who are all engaged in examination work. For each student 120 hours per annum we receive approx. £3. Over and above the costs of staff and facilities each child undertakes all their examination work on £6 worth of paper, pencils, book etc, across 2 years of education. This figure almost matches that of the examination entry fee. Yet the students taught by the groups of staff I am fortunate enough to represent return 40% 'O' level and 'O' level equivalent in their external examinations. In the face of such adversity is it not understandable that educationalists find it difficult to meet the expectations placed upon them.

There are other constraints. These are not excuses they are the reality of day to day working in education.

1. Timetable (a) short periods of time sprinkled across the week undermine motivation and continuity. (b) The requirements of other subject areas, and the cost and complexity of taking young people 'out' on Industrial visits.

2. Lack of support staff. Few technicians to maintain, set and run 'industrial' equipment which undermines opportunities to demonstrate or make use of industrial processes.

3. The craft tradition as exemplified by the value placed on traditional skills and the beauty of hand made pieces.

4. The perceptions of young people as to what they will do in workshop situations. Many still come to make coffee tables or poker. Such expectations are fostered in the home and based upon the experience and expectations of their families.

5. The perceptions of parents and industry (perhaps one and the same) which still expect education to provide craft biased single subject courses such as woodwork and metalwork.

Without the time, and resourcing and suppressed by the expectations of society how does one go about maintaining ones educational integrity, meeting syllabus requirements and overcoming irrational and subjective prejudice? How does one attempt to teach in a manner which will prepare young people for a role in contemporary society? A society of consumers, expending the wealth generated by service industry on the expertly marketed mass produced products of industry.

I suggested that to stay with the products of yesteryear, in terms of education, would be as inappropriate as it proved to be for British Industry.

So How Can Industry Help?

By understanding what education might mean.

By being aware of our constraints.

By charging us to educate not merely train the nations workforce.

N.B. 'Training is for redundancy, Education is for life!'

Thus Industry could help us to overcome societies outdated perceptions and expectations relating to Education.

By being aware of the logistics which make escape from the timetable a difficult manoeuvre and countering it by sending resources into schools. If the education of the workforce is important then Industry should put some store upon it.

By sponsoring projects which help educationalists understand industry.

By sending Designers and Engineers into schools to talk to children about their work.

By providing video information about industrial processes which will allow us to raise the awareness of young people without encountering the problems of going offsite.

The list goes on.

Still coffee time was approaching and there was one question to answer from the floor. Well it was more of a statement actually.

'It seems wrong to me that you spend too much time teaching people how to learn when you could be teaching them skills!'

Perhaps I should have gone along to tell then what a jolly good chap I was after all!

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We do have a specific approach to the teaching of values, but it is closely related to the views set out above.

Theoretical Purists v Practicality

If we want to be purists, we can call any design skill the ability to operate a concept, e.g. time ordering is ability to operate the concept of a flowchart, and conversely most teachers would say a pupil has not grasped a concept until s/he is operating it: a skill. Many teachers similarly feel they have not grasped new education theory until they can use it for improving their teaching. Concepts and skills are therefore basically the same, except maybe most design skills have very wide applications. So academic purism does not help us. We must work out classifications on a basis not of academic purism, but of helpfulness to any current task, and we must modify our classifications if the modifications make the task of curriculum developments easier. I hope the suggestions above can be accepted by some teachers as a contribution to this effort.

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