

Design and Technology and Social Responsibility

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Dear Teacher,

I am a survivor of a concentration camp.
My eyes saw what no man should witness:

Gas chambers built by learned engineers.

Children poisoned by educated physicians.

Infants killed by trained nurses.

Women and babies shot and burned by
high school and college graduates.

So I am suspicious of education.

My request is:

Help your students become human. Your
efforts must never produce learned
monsters, skilled psychopaths, educated
Elchmanns.

Reading, writing, arithmetic are important
only if they serve to make our children
more human.

—Discovered on the noticeboard in a
headteacher's study in a Bradford
secondary school.

How can one integrate the discussion of values into Design and Technology teaching? Is this something which could — or should — be an integral part of the way we approach the D & T curriculum? Or have the Programmes of Study and GCSE criteria been structured so as to separate ethics from design, moral responsibility from technology?

In March this year Technology teachers in eight Quaker schools responded to SEAC's draft GCSE criteria for Technology. Considering the SEAC draft to be one-sided and lacking in concern for the poor, we called for a greater sense of social responsibility to be injected in order to redress the balance.

As published, SEAC's proposals would not encourage any pupil to take the needs of the poor seriously, let alone recognise the impressive technical achievements of the third world. There would be no incentive to consider such issues as the supply of fresh water or the unnecessary promotion of baby food mixes in developing countries. Intermediate or appropriate technology were not mentioned. Nor were alternative modes of production. The document seemed to

take for granted a whole bundle of assumptions concerning the nature and purpose of design and technological activity... that it should be high tech, profit orientated, capitalist in inspiration. For example, in proposing that 'syllabuses should reflect the variety of roles relevant to technology...' SEAC specified client, designer, maker and manager. There was no mention of the consumer, nor the many thousands of people who might be affected indirectly through associated pollution, mining, demographic disruption. There was little encouragement to consider those whose livelihood is destroyed through 'improved' technology. Most teachers and pupils are aware of (for example) the dangers to rain forests and the destruction of habitat, but how often do we deliberately seek to evaluate a design proposal or technological outcome in terms of human rights? As the quotation from Belsen shows, our history is full of awful warnings of the consequences of divorcing technological education from the discussion of values.

This was the background to our submission to SEAC when we proposed as an extra general aim that all Technology courses should

'enable students to develop a practical concern for the oppressed and marginalised of the world, and to understand how design and technological activity affects different people across the world in different ways'.

What is good design?

Behind this proposal lies a simple philosophical assumption — *that there is no such thing as good design!* Attempts to define areas of need and opportunity (AT1) or appraise processes, outcomes and effects (AT4) require evaluation of designs. This must, we felt, raise the question *good for whom?* The philosophical difficulties inherent in all design appreciation are brought out nicely by Tom Stoppard in his play 'Jumpers', using (incidentally) an example from Home Economics. The

professor of philosophy looks at his sandwich and asks, 'What is a good bacon sandwich?' Clearly what is good for the sandwich bar owner and consumer is not good for the pig. Does the sandwich owner have the same interests in bacon sandwiches as the sandwich bar employee, whose health might be damaged by too much frying? And what is good for the consumer? One which is packed with meat and dripping with butter in a pappy white bap? Recently there have been reports of acts of violence over fashionable trainers. Are designer trainers for which unemployed kids steal or even stab 'better designed' than my old Dunlop Green Flash tennis shoes which only make my teenage son squirm with embarrassment if I wear them in his company. What is a good atomic bomb? One which goes off or one which does not? Does it depend on whether you are dropping it or having it dropped upon you? Can it make sense to say 'This is a well designed bomb: it would have been better if it was badly designed.'? We feel that we ignore such issues at our peril. But how can we get them discussed in schools as a natural part of the D&T curriculum? It is on this question which we seek advice, criticism and an exchange of ideas.

Using a vision statement

At The Mount School in York we are attempting to deal with this through two broad approaches. First, we have set ourselves a rather imposing set of AIMS:

Aims of Design and Technology at The Mount School, York

1. The overall aim is, in conjunction with other departments, to equip pupils to become active collaborators in the creation of a more peaceful, just and sustainable society through developing their capability:

to identify areas of human need and opportunities for design and technological activity,

to generate a design proposal that is realistic, appropriate and achievable to meet that need,

to plan how to make, and make, an artefact, system or environment according to the previously developed design, to appraise the processes, outcomes and effects of design and technological activity.

2. In doing this pupils should be enabled and encouraged

to deepen their concern for the poor and those at the margins of society (both locally and internationally), to deepen their awareness of the need to look after the earth's resources and ecosystem, to challenge racial and gender stereotyping, and to work for genuine equality of opportunity, to develop respect for others, and the skills necessary to work in groups (including the ability to be self-critical and to accept criticism from others).

3. Through designing, making and evaluating in response to need, the pupils should be enabled to grow in self-confidence, to discover (or affirm) the joys of creating something that works, a pride in the quality of design and finish, a willingness to be open, searching and creative, as well as to plan and work methodically.
4. To achieve the above the pupils should be given the opportunity to develop a range of cognitive and manipulative skills, a body of technological knowledge, and the ability to choose the appropriate strategy for a particular task.

The main use of this is as a check list or reminder when we are choosing contexts or developing specific projects. Some excellent projects are available off the peg, such as those developed by Intermediate Technology Development Group². Others are home grown. For example we are asking our Y9 pupils to spend ten weeks considering the needs of women at work, and designing, making and appraising some artefact/system/environment to meet some of these needs. This immediately raises the question of

what is meant by 'work', and, more fundamentally, by 'needs'. Specifically it raises issues of 'women's work'. In answering such questions a whole range of sub-questions arises which will (we hope!) provide a natural opportunity for discussion of values³. Alternatively, projects can be tweaked to inject an explicit social dimension. Last year we decided to spend six weeks with the Y7 year group in planning and running a Christmas party, a project successful in developing team work and social skills in particular and ATs 2 & 3 in general. What gave it the social edge was organising it in conjunction with Age Concern. The whole experience was very instructive for everyone.

The advantage of having a written set of agreed aims is that it sets a framework for decision making on both the content of projects and ways of approaching them.

Criteria for evaluating design

The second framework for the raising of ethical issues is basically a list of questions that might be asked of any design, an attempt to establish criteria for Design Appreciation. Note that all the questions apply equally to process and the product.

Towards Some Criteria for Design Appreciation

1. How does it (both process and product) serve to satisfy the real needs (c.f. Maslow) of those at the bottom of society, immediately and in the long term, locally and globally?
2. What is the ecological impact?
3. Is it enabling in its *process* as well as its *product*? Or are people alienated, bored, stupefied?
4. Does it (both process and product) serve to hide or highlight relationships of domination and oppression within society? In particular does it challenge sexist and consumerist assumptions?
5. How does it allow for or encourage participation among consumers and others affected?
6. How does it contribute towards the development of a just and sustainable society?

7. Is it durable and easily repairable?
8. Is it comprehensible to the non-specialist?
9. Is it reversible or modifiable if it is seen to be in need of improvement?
10. Is it necessary at all?
11. Is it as simple as possible?
12. Is it appropriate for the society in which it will be used?
13. Can its beauty be enjoyed by someone who does not subscribe to the fashions and mores of the moment of the culture in which it is produced? (Very hard to assess!)
14. Does it work according to criteria that people at the margins of society would consider reasonable?

This list has been bred from the same ethical stable as the aims laid out above. It is inspired by a spiritual commitment — a central dimension of the Judaeo-Christian tradition is peace based on justice for the oppressed and concern for the integrity of creation — and by observations from thinkers about design in the third world⁴.

Obviously it is not new to try to meet needs of people who are in some way disadvantaged; most HE and CDT courses include a solid element of projects designing for (and with?) physically handicapped people, developing diets for diabetics, or doing something useful for the community. Our long term goal, which we are only starting to realise, is to ensure that the human rights element is made explicit in *every* project, because we believe that no action is morally neutral. The difficulties at present seem to be how to bring out the political dimensions, how not to be one-sided when doing so, and how to avoid a well meant charitable approach which actually reinforces a patronising 'them and us' attitude.

A socially orientated projects exchange?

Is there a need for some sort of projects exchange for teachers working along such lines? We would welcome an address to which people could send examples of projects, lists of questions,

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examples of good practice, which naturally raise discussion of values. A list or summary could be published in 'Design Technology Teaching', and material could be photocopied on request. If enough readers were interested, we would be happy to run such a scheme. If you are interested, please reply to James Pitt, The Mount School, Dalton Terrace, York, YO2 4DD (0904- 622275).

References

1. From *Human Rights. An Activity File* by Graham Pike and David Selby (Mary Glasgow 1988). Available from: Centre for Global Education, University of York, York YO1 5DD, Price £19.49.
2. Intermediate Technology have developed materials for use in schools based around such contexts as deforestation in Sri Lanka and the need for a fuel efficient stove, or the problems encountered by travelling vets in India. These projects have been tried in schools and come with supporting resource material. For a flavour of their work see *Cross Cultural Design* by Colin Mulberg in 'Designing' (Summer 1991). (Contact The Education Department, Intermediate Technology, Myson House, Railway Terrace, Rugby CV21 3HT Telephone 0788 60631).
3. This approach is derived from the methods of Paulo Friere: see *The Pedagogy of the Oppressed* (Penguin, 1973).
4. See, for example, Morales, LM *Whose Needs Does Design Solve?* and Idris, SMM *A Framework for Design Policies in Third World Development*, both in Langdon, R and Cross, N (ed.) *Design Policy 1 — Design and Society* (The Design Council 1984).

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