

## Valuing our Future

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Glenda Prime speaks persuasively about the need to incorporate value perspectives into technology education but we must make sure that the important debate is grounded in practical and technological activity, through which values become explicit. It should not be relegated to an interesting theoretical and philosophical debate.

There is an overwhelming need for technology educators to be responsible about how and what they teach under the technology umbrella. That means taking into account the environmental and human implications of the outcomes of the technological activities that take place.

If we are to have a future that works for the current generation, and for generations to come, then we must all do some hard thinking about the sorts of technologies with which we surround ourselves. A statement by Schiller that 'Technology...lends itself admirably to the claim that it is neutral, value free and employable under any social order...', needs to be challenged. Much of the global environmental mess is a product of inappropriate technological innovation, where short-term economic gain has been 'valued'

over long-term environmental soundness. Technology and economics are inextricably linked — as Schumacher, the founder of Intermediate Technology and author of *Small is Beautiful*, said: 'the main content of politics is economics, and the main content of economics is technology'. The world is driven by an economic system that benefits the rich at the expense of the poor, whether in the UK, Zimbabwe or Bangladesh.

The concept of an appropriate technology has a contribution to make to this debate. A full explanation of the approach is given in *Make the Future Work*, a collection of essays by a range of educationalists. However, it is appropriate to summarise the approach as one which holds the needs of people and the environment at its centre. Therefore, the focus is on local resources, both human and material, and on emerging with technological solutions that are environmentally sound, both in manufacture and use.

Below: pupils from Ashlawn Secondary High School, testing stoves they have made out of recycled steel.







Above: pupils from the Mount School, York, testing stoves they had made in clay.

Glenda Prime refers to the potential difficulties of examining technologies from different cultures — because of the danger of the assumption that technologies from the Third World (or as we in Intermediate Technology prefer to call it, the Majority World) are in some way third rate and inadequate. It is quite understandable, bearing in mind the bombarding of our television screens of negative images from the Majority World, to think that most people in the Majority World are starving, stupid and dependent on the Minority World for survival. An article in the *Independent* (May 18th 1993) by Peter Adamson of UNICEF picks up some of these misconceptions: when he gives a talk in a school, he starts by handing out a questionnaire asking what percentage of the world's children

are starving (defined as visibly malnourished). The answers give anything between 50 and 75%: the real answer is 1 and 2%. Unlike news about matters closer to home, most of us are not able to distinguish between impressions and facts, because of lack of knowledge, and perhaps an unconscious tendency to think negatively about the Majority World.

So using case material from other parts of the world needs a high level of sensitivity, awareness and genuine concern about the truth, when attempting to teach about other cultures. However, there is a real wealth of information about indigenous technological innovation and knowledge. Examining and studying such material, and undertaking practical activities which enable some level of empathy and understanding by both pupils and their teachers to be achieved, might lead to a more balanced view of the world. Giving them considered information through engaging in investigation and practical activities will not only broaden their experience but perhaps increase their curiosity about the world in which we live — after all that is what real **education** is about. Some of those pupils will go on to have responsible jobs: opening up their minds to the wider world should help them to make the world a fairer and more just place in which to live.

So what are these activities which might lead to a better world? There are a whole range of topics which lend themselves to a global examination, with parallels being drawn between the Majority and Minority worlds. For example, how we use **energy** is a very fertile area for investigation by the technologist. Contrasts between actual consumption of energy in different parts of the world, the possible implications of global warming for both rich and poor countries, energy conservation and renewable energy technologies, the relationship between energy and economics — how increasing consumption, and economic growth drive us to consume ever more energy, regardless of the environmental consequences.

Some of the energy technologies that have been developed in the Majority World provide us with helpful examples: electricity generated by small-scale hydro (micro-hydro) generated from fast flowing streams anywhere in the world where a suitable stream exists — in Wales, Scotland, Peru, Zimbabwe, Sri Lanka and Nepal, to name just six countries where





Above: pupils from Chiswick Community High School block printing textiles inspired by designs from Bangladesh.

micro-hydro is an appropriate technology. Similarly, energy efficiency in cooking is another area which can prompt some useful questioning and research.

Another topic which lends itself to a global approach is **transport**. How and why goods and people are moved, all over the world, should open the door to looking at not only the technologies of transport but also the whys and wherefores of trade. The received wisdom is that trade is **good**: such an assertion might be challenged by people who have their livelihoods seriously damaged by terms of trade and quotas introduced to protect businesses in the Minority World.

Glenda Prime's assertion that the proposal reduction of four attainment targets to two is an indication of a move back towards convergent thinking is correct: the explicit need to identify needs and opportunities and to evaluate one's own work and that of others made possible an imaginative educational experience. The 'problems of implementation' arose from the unfortunate tendency to throw the baby out with the bath water, rejecting much of the existing good practice, without coming to grips with the more intellectual and imaginative content of the Technology Order.

It is essential that we do not lose sight of the values in technology education debate: technology is **not** value free — as Glenda Prime says elsewhere, we need to consider 'the way in which technology both shapes and is shaped by its society'. In an interview for the D and T Times (summer 1993) she says that 'school technology is not so much about

creating technology as about developing people'. The appropriate technology approach which takes account of skills and processes, and which places technological activity in its cultural and environmental context, can make a significant contribution to this debate.

Because this article has made a case for practical activities being a passport to understanding value dimensions, we think it appropriate to draw attention to the resources that exist.

## Resources

Budgett-Makin, C. (Editor) (1992) *Make the Future Work — Technology, A Teacher's Guide*, Longman.

*Design and Technology from an Islamic Perspective*, Commonwealth Institute.

*Stove Maker, Stove User*, — a KS 3 resource pack with slides, a case study and teacher's notes, Val Rea and Mike Martin, IT Publications, 1991.

*Rural Blacksmith, Rural Businessman*, as above.

*Creating Art, Creating Income*, suitable for KS 3/4, as above, to be published in autumn 1993.

*Animal Healthcare in Kenya: Packaging and Labelling Medicines*, KS 2, Education Office, Intermediate Technology.

*Micro Technology Work — Five Case Studies*, Intermediate Technology.

*Making Technology Work — Five Case Studies*, Intermediate Technology.

For a full list of resources and INSET services, please contact the Education Office, Intermediate Technology, Myson House, Railway Terrace, Rugby CV21 3HT.