Inspiring inclusion – How RSA Design Directions encourage students to create universally accessible products

In the UK, we are currently producing in the region of 140,000 designers a year[1]. Many of these graduates will become design professionals, but many will take up ancillary positions: management, procurement, account holding among other key roles. Many will also become teachers, with the opportunity to influence curricula. There has been much debate over this comparatively recent increase in student numbers and graduates but viewed from the Inclusive Design perspective, this represents a welcome opportunity.

It is clear from much of the work that the RSA (Royal Society for the Encouragement of Arts, Manufactures and Commerce) *www.thersa.org* has undertaken over the last twenty years, that the incorporation of Inclusive Design in a curriculum, whether as a discrete module or as part of the methodology applied within other projects, has a powerful influence on the future practice of students beyond graduation. Therefore, the more students who encounter Inclusive Design, the more beneficial changes we can expect to see in our products, systems, services and environments.

COMPETITIONS

Non-academic institutions, such as the RSA, can play a very useful role in promulgating ideas and practices to education – for example, by using competitions to pilot projects that encourage exploration in new areas. The RSA launched its first project on Inclusive (Universal or Design for All) Design in 1986. 'New Design for Old' was to become hugely influential in encouraging and raising the profile of issues around designing first for older people and

then, as the project developed over the years, for the broadest range of users. It was the first national project that asked students to examine the needs and aspirations of older people instead of concentrating on ergonomic and medical factors. At the beginning the project faced the huge task of engaging tutors with issues around ageing and the ageing process. Once engaged though, it was then relatively easy for them[2] to involve and enthuse their students. As the scheme depends on external sponsorship, support from business and industry has been necessary but often difficult to find. In those early years, the commercial case for Inclusive Design was more elusive than today when we now have many excellent examples of products, systems and services in manufacture and use. For students today however, there still remains the struggle to get their winning designs, identified via the competition, into production.

TEACHING MATERIALS

As well as the competition, the RSA has also addressed the principles of Inclusive Design through workshops, seminars and conferences[3] and, in 2004, through the launch of the RSA Inclusive Design Resource, an online, accessible and user-friendly tool for students, tutors and business (*www.inclusivedesign.org.uk*). In 2003, a handbook to guide students – and tutors – on applying Inclusive Design practice was also produced providing useful background material for those tackling the project for the first time[4].

There has also been the valuable support given by Professor Roger Coleman,

Co-Director, Helen Hamlyn Research Centre, who has chaired the RSA's judging panel and ensured that the students benefit from the resources and contacts of the centre[5].

In 2003, a new student project called 'Inclusive Worlds' replaced 'New Design for Old', comprising five key challenges all requiring effective research, interaction with older users and liaison with other disciplines. Three years and nearly three hundred entries later, the project has attracted entries from Greece to Glasgow with several students having patented or registered their designs and a number of others having progressed onto related post-graduate study. In a recent survey with tutors whose students had participated in this project, all were unequivocal in their enthusiasm about the challenges and opportunities that the project offered them. They valued the introduction to the Inclusive Design approach to problem solving and they found that this led to more original and appropriate results among their students. The following are two winning examples from the scheme:

Microwaveable packaging

'Healthy choice easy vent pourable pack' is microwave packaging developed by Northumbria University student Richard Telford in 2003, focusing on the capabilities and needs of elderly people in the home (*Figure 1*). User groups highlighted the fact that microwave ovens and ready meals were ideal for older users' needs, but that packs were becoming increasingly difficult to use for various reasons. User consultation and ideation led to five improvements. The pack has larger print instructions and stay cool handles. No puncturing is required – vent holes have an easily removed cover, aided by an indentation. A ring pull and recessed lip aids film peeling. The thermoformed polypropylene tray has a V-shaped front

Figure 1: 'Healthy choice easy vent, pourable pack', Winning project 2003/04, Richard Telford

for easier pouring. The pack was designed to benefit any user, regardless of capability. An excellent example of Inclusive Design.

Touch by date

'Use by' dates on food and drink packaging do not currently cater for the blind or partially sighted consumer. They rely on graphics and assumed knowledge of today's date. This project, submitted for the 2005/06 competition, by three graphic design students from Kingston University, aimed to redesign the physical means by which 'use by dates' are confusing. Alice Boardman, Françoise Doffay Smith and Kirsten Elliott undertook extensive research with users, young and old, polymer scientists, microbiologists and the food industry itself. Their proposal 'Touch by date' (*Figure 2*) enables consumers to touch a petal-shaped detector, which, by being based on natural gases, allows chemical compounds to expand by up to 300% as the food deteriorates, mak-

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Figure 2. 'Touch by Date', Winning pro-ject 2005/06, Alice Boardman, Françoise Doffay Smith, Kirsten Elliott

ing it simple to detect whether or not the product is fit to consume. This solution aimed to lead to an improved diet, greater independence and a reduced risk of food poisoning for older consumers and those with impairments or disabilities. The solution was also exemplary in the way in which this team worked together and with other, non-design disciplines. The team are now seeking to patent their design.

MAKING THE CHANGE
Design Directions, the RSA's current student award scheme of which 'Inclusive Worlds' is a part, develops projects that enable young designers to link their skills and creativity directly to the forces of social, technological and economic change. The scheme takes up the challenge to comment on the broader debate in the design profession about the meaning and purpose of design. It provides tomorrow's creative leaders with a voice and judging from the results there is a determination to apply in-

novation and creativity where it really matters – in the creation of sustainable and resilient communities.

CONCLUSION
Key features of this competition that could be duplicated elsewhere are: (i) students become familiar with Inclusive Design methodology and relevant legislation – maximising creativity within fixed parameters; (ii) requirements to work with users, action-research and, where possible, to undertake work with other disciplines, can lead to rapid development and improvement in undergraduate work and a significant number of products being registered, patented or prototyped; (iii) sharing knowledge through workshops, seminars and websites is critical for the encouragement of Inclusive Design.

References
1. Design Skills Advisory Panel. Design a New Design Industry: Design Skills Consultation. KeepBritishDesignAlive.com; May 2006; p 30; www.keepbritishdesignalive.com/pdf/DESIGN_A_NEW_DESIGN_INDUSTRY.pdf; retrieved August 14, 2006
2. Hewer S, Kingsland C. Inspiring the Young. In: Graafmans J, Taipale V, Charness N, editors, Gerontechnology. A sustainable investment in the future. Amsterdam: IOS; 1998; pp 428-431
3. Hewer S, editor; Interface I User and Machine, Report of RSA Conference Chaired by HRH Duke of Edinburgh. London: Royal Society of Arts; 2003
4. Hewer S, editor. Inclusive Worlds 'How to' Handbook. London: Royal Society of Arts; 2003
5. Coleman R, Myerson J. Improving Life Quality by Countering Design Exclusion. Gerontechnology 2001;1(2):88-102

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