Recommendations from IDCnet for promoting inclusive design in ICT curricula

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Abstract. This paper aims to provide a starting point for discussions on higher education and research policies and strategies to promote inclusive design in the curricula for information and communication products and technologies (ICT). It summarises the 10 recommendations made by the Inclusive Design Curriculum Network (IDCnet) project, under the EU Information Society Technologies (IST) Programme. Suggestions are invited in order to support the objectives of eEurope and the European Design for All e-Accessibility Network (EDeAN) with regard to the development of curriculum recommendations in this area.

1 Introduction

The aim of the IDCnet project (http://www.idcnet.info), which ran from August 2002 to May 2004, was to integrate information and identify core knowledge sets and skills for model curricula in Design for All (DfA) specifically for information and communication technologies (ICT) and services. As a thematic network, a major aim of the project was also to support the creation of a European network to promote these interests, following the e-Europe objectives (http://europa.eu.int/information_society/eeurope/index_en.htm) and to coordinate our efforts with the European Design for All e-Accessibility Network (EDeAN at http://www.e-accessibility.org).

The main contributions from the project were:
- Developing a taxonomy of core knowledge and skills for model curricula
- Conducting pilots and documenting experiences to assess the taxonomy
- Providing examples of teaching material, as well as recommended websites and other resources
- Suggesting thoughts on an 'optimal graduate profile' for Design for All in ICT

- Providing specific recommendations for higher education and research policy and strategy.

This paper will focus on the latter, but a summary of all the results can be found in Velasco, 2004.

Ten recommendations have been put forward for higher education and research policies and strategies to promote inclusive design in the curricula for ICT, and a number of specific suggestions were made as to how to implement these recommendations. Approaches could be distinguished as being bottom-up or top-down. Top-down requires collaboration with policy and strategy decision-making bodies, whereas a bottom-up approach would promote inclusive design from educators themselves, who through their teaching and research work would try to influence peers, future colleagues and research students.

2 Ten Recommendations

Initial recommendations towards implementing higher education and research policies and strategies to promote inclusive design were based on the results from the following sources: a desk survey on the state-of-the-art of Design for All related education and research strategies and policies; the experiences from the situation in the US; information gleaned from a questionnaire sent out to Design for All experts primarily in higher education, but also in the relevant ministries in the European Union member countries and experts at the EU level; and finally the expertise and experiences of the IDCnet members themselves. These recommendations are very briefly described below (Nicolle et al, 2005; Velasco 2004), and the project now welcomes further discussions and suggestions:

Recommendation 1: Be sensitive to diversity in cultures
Teaching across cultures is not interchangeable, and academic staff need to be able to communicate at the level of core knowledge and skills, following for example the taxonomy developed by IDCnet, as shown in Figure 1.
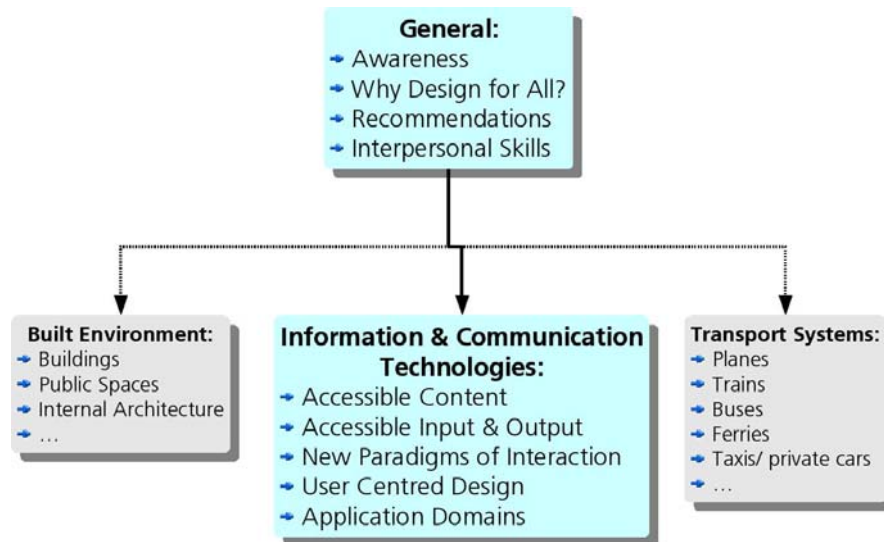
Figure 1: Taxonomy for core knowledge and skill sets for model curricula

Recommendation 2: Develop Design for All related legislation
Guidelines based upon the form of the taxonomy above might be used to recommend, and later mandate, that all higher education institutions provide instruction in the general areas of Design for All (e.g., Awareness, etc.), and that courses related to ICT include specific categories according to their interests.

Recommendation 3: Encourage knowledge transfer between industry and education
As identified in the UK Lambert Review (HM Treasury, 2003), Sector Skills Councils (SSCs) encourage employers to take action collectively to meet their skill needs at a sector level. Such SSCs could be encouraged on a pan-European basis. Policies and strategies need to be in place to ensure that SSCs have real influence over university courses and curricula, and government should facilitate this process.

Recommendation 4: Support individual champions
Champions should be supported through allocation of funding and using success in the Design for All approach as a quality criterion. This needs to be justified and seen by all to be not just "added value" but critical expenditure, perhaps on the basis of the legislation as in Recommendation 2.

Recommendation 5: Train the trainers
Higher education institutions are encouraged to deepen the Design for All knowledge base of their whole staff, not only teachers. The European Commission could support and promote "esteem" (as seen by the UK's Research Assessment Exercise) by in-

cluding another category, "Academic contribution to Design for All Curricula," in its Design for All and Assistive Technology Awards scheme (www.dfa-at-awards.org).

Recommendation 6: Strengthen Design for All research
Researchers and academics can push Design for All onto the agenda of conferences, as well as promote inclusive design with students through their research projects. Promotion of the EU Design for All awards should also be disseminated more widely and not just to the already "converted" audiences.

Recommendation 7: Use a cross-disciplinary approach
Topics in each of the categories of the taxonomy can help to provide concrete and practical examples to demonstrate the multi-disciplinarity of DfA. Examples of topics and teaching materials covered in different IDCnet pilots are just the tip of this iceberg (Darzentas, 2004; Velasco, 2004).

Recommendation 8: Make Design for All visible
Higher education institutions are encouraged to document their Design for All related developments, both to share the experiences with other actors and to support the long-term strategy development on DfA related education. Dissemination of these documents should be supported by the DfA related networks, e.g., the EDeAN Curriculum Special Interest Group.

Recommendation 9: Include Design for All in the quality criteria
The Design for All approach needs to be discussed as a holistic concept in higher education: it is not only related to the content of education, but also access to the built environment, communication and information.

Recommendation 10: Support interaction of top-down and bottom-up approaches
This essentially requires efficient networking and efficient knowledge transfer. A good example of support is, for example, the national network of EDeAN, composed of more than 100 organisations across 15 European countries, actively working with Design for All, e-Accessibility and Assistive Technology issues. The European Commission, via the DG on Information Society, retains an active advisory role in helping EDeAN fulfil the eEurope Action Plan.

3   The Way Ahead

More detail on each of the recommendations can be found in Part 5 of the Summary of Key Findings from IDCnet (Velasco, 2004). The infrastructure provided by the D4ALLnet project, within the EDeAN Curricula SIG (http://www.d4allnet.gr/), is continuing the work of IDCnet. Many individuals also have a dual (or even triple) role in EDeAN, IDCnet and IFIP WG13.3 on HCI and Disability (www.ifip-hci.org), so we are well placed to promulgate the work on Design for All curricula. The project invites further, concrete discussions and suggestions.

4   Acknowledgements

5   References

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