Working Internationally to Meet the Academic Needs of Accessibility Professionals

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Abstract. Middlesex University has recently launched a new qualification, the Post Graduate Certificate, Professional Practice in Design for Diversity in Information and Communication Technology. This programme replaces the MSc Digital Inclusion which was launched four years ago and has been withdrawn due to lack of interest from potential students. The aim of this paper is to address the design and management decisions which went into the creation of this new programme and the way in which the academic community can support students who wish to learn about accessibility whilst holding down difficult jobs and working as figureheads in the accessibility field. Both the MSc Digital Inclusion and the Post Graduate Certificate Professional Practice in Design for Diversity in Information and Communication Technology were based on content created from within the EDeAN: European Design for all eAccessibility Network. This on-going collaboration should enable the material to be of a suitable quality, suitable depth and fit for purpose to enable the graduates to practice as accessibility professionals in both Europe and the USA. It will enable the students to understand both the technical and user benefits of solutions such as ambient assisted living as well as the relevant ethical and business case.

Keywords. Design for Diversity, Work Based Learning

Introduction

The MSc Digital Inclusion was created with the help of EDeAN at the behest of the EU e-inclusion unit, EDF - European Disability Forum and Digital Europe (the European Information & Communications Technology Industry Association). It was designed to meet the perceived need for experts in accessible technology. Unfortunately in spite of being highly praised (amongst other things it was nominated by the British Standards Institute for the 2011 ISO (International Standard Organisation) Award for Higher Education in Standardization) [1] it did not recruit sufficient students to remain financially viable..

One reason for the lack of students was the difficulty that potential students who were working as accessibility champions had in working on a part time MSc and a full time job whilst acting as experts in their chosen field. Changing the course to a work based learning one appears to therefore make sense to our prospective students.

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1. Work Based Learning

In 1996 Middlesex University won a Queen's Anniversary Prize for Higher and Further Education for its development in Work Based Learning Studies, and in 2005 the Higher Education Funding Council for England designated Middlesex University as a Centre for Excellence in Teaching and Learning in Work Based Learning. Work Based Learning (WBL) is defined as "a student learning for credit designed to occur in the work place or in on-campus settings that emulate key aspects of the work place" [2]. The topic of Design for All or Design for Diversity is an obvious one for a WBL approach as both the potential students and the staff (in their consultancy and research) are working on new developments within the field and are committed to the changing the way technology is designed to benefit older and disabled people. WBL is based at Middlesex University in the Institute for Work Based Learning [3]. The new Programme in Design for Diversity is designed to meet the needs of students who wish to gain knowledge to support them in their work. It is assumed that the students will be working in fields such as Web Accessibility, Ambient Assisted Living or Mainstream Design. Professional Practice and Work Based Learning Studies qualifications are especially designed for those that want to develop their expertise within their current profession. The Design for Diversity in ICT course is intended to meet the needs of all ICT professionals and accessibility experts who wish to broaden their experience and gain recognition for their skills and expertise. The WBL Institute will provide the structure and administration of the course whilst the Design for All Research Group in the School of Science and Technology will provide the course content and curriculum. The networking links of the research group will enable access for the students to the wider field of professional researchers and professionals.

The WBL model has benefits for the students and for the employer. All academic work is linked directly to a student's employment with examples and case studies provided by their work, they should therefore find it easier to complete their studies and to cope with the time pressures of studying and working. The financial cost to the student can also be less. The employer can also benefit from the adoption of an academic thoroughness and new insights into work procedures, although these approaches are not always welcomed by the employer [4], it is thought that the developing field of accessibility and Design for All should be able to benefit from employer and academic partnerships.

2. Post Graduate Certificate Professional Practice in Design for Diversity in Information and Communication Technology

The modules of the new WBL Post Graduate Certificate Professional Practice in Design for Diversity in Information and Communication Technology are based on the requirement for the students to understand the needs of end users of technology and the context of this work (both mainstream and assisted living). The modules will refer to the gap between people with effective access to digital and information technology, and those with very limited or no access at all. They include reference to the imbalance in physical access to technology, the resources to access it and the skills needed to effectively participate as a digital citizen. Students will study three modules:

- Design for All Context - Human Rights

- Design For All Research Principles and Best Practice
- A Negotiated Work Based Project.

All modules are taken using an on-line virtual learning environment. The modules enable the students to identify and practice high quality methods for designing ICT systems and products that meet the needs of all digital citizens.

The programme aims to enable students to have the relevant knowledge, personal and professional skills & competencies to design, understand, evaluate and manage a wide range of ICT systems products and services that adhere to the principles of social inclusion and to understand the ethical and political underpinnings for this work. In the current climate of sustainability there is an increasing need for experts who can insure that system products are accessible and usable. This course will be relevant for all ICT professionals, designers of ICT and policy and strategy leaders in larger company's, corporations and charities.

3. Teaching Approach

The teaching and curriculum design for this course will be supported by the networking, consultancy and research activities of the Design for All Research Group. The links to the wider Design for All environment (and especially to EDeAN (European Design for eAccessibility Network) will enable the students to address the full range of Design for All and Design for Diversity issues in their work. By the use of expert networks the academics teaching on this programme can keep abreast of developments in the ambient assisted living field and provide a more useful and higher quality teaching experience for the students. The students academic work will start from their particular application environment and will cover user issues as well as issues such as sustainability and technical infrastructure.

The learning, teaching and assessment strategies employed in this module constitute'distance learning' including:

- Tutor-led individual and group workshops, presentations, discussions, action learning groups delivered through distance learning.
- One to one academic support and guidance delivered through accessible distance learning technologies.
- Tutor supported peer to peer interactions mediated by accessible distance learning technologies.
- The use of module handbooks and other learning resources available through the University's virtual learning environment and/or Learning Resource Centre online Subject Guides.

4. Design for All and Ambient Assisted Living

The change in teaching method at Middlesex has been accompanied by a change in title from `Digital Inclusion' to `Design for Diversity' this name change is intended to

emphasis the complete range of end users and to facilitate greater links to professionals working in supported environments as well as those who address the design needs of mainstream products and services. It is to be assumed that the students graduating with their qualifications will understand the possible impact of design for all in producing valuable solutions for inclusion and independent living and the possibilities of mainstreaming these solutions. The students will also be aware of the impact of the important developments of networking in the society and particularly the new technological possibilities. It is to be hoped that the links within the course to both the Ambient Assisted Living field and to mainstream design will enable the students to understand the benefits and drawbacks of different systems. They will also understand the impact that Design for All could have as a design methodology on mainstream products and services.

5. Conclusion

After taking the course the students will have up to date knowledge and skills to enable them to;

- Critically apply the basic principles of Design for All regarding ICT products and services and reflect on the importance of Design for All as enabler of inclusion (social, socio-political, socio- economic, economic aspects).
- Demonstrate a critical understanding of the ethical context, issues and considerations with respect to access to the information society.
- Select and critically evaluate current theoretical perspectives and other knowledge that supports Design for All regarding ICT products and services.
- Work with and for people with disabilities
- Demonstrate how the development of projects/inquiries and/or other work-based activities are designed to make changes to your work/practice, and persuasively communicate outcomes to work/ practice and academic audiences.
- Analyse and utilise relevant national, European and International legislation, standards and guidelines in the specification, design, implementation and maintenance of ICT goods and services.

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