Emerging skills requirements in Digital Inclusion for Persons with Disabilities

Session 7: Developing Skills and Knowledge for an Inclusive Digital Society

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Tuesday, 19 June, 16:00 – 17:30
Aim of presentation:
- To discuss the emerging skills required to enable digital inclusion for persons with disabilities, or others.
- Provide an overview of some of the leading practices and examples of capacity building, and online training and education on ICT accessibility.

Topics:

1. Emerging Skills requirements
   - Who needs to know what about accessible ICTs

2. Supports available
   - Organizations, resources and courses
“The only important thing about design is how it relates to people”

Victor Papanek (1970)
Accessible ICT ecosystem – 3 emerging characteristics

Convergence

Changing markets

Consumer choice – mainstream ICTs
Identifying skills and knowledge requirements for ICT professionals:

Curriculum for training professionals in ICT Accessibility

- (CEN WS/UD-Prof-Curriculum)
- Chaired by the Centre for Excellence in Universal Design
  - Proposed to be transformed into an European Standard (EN)
Recommendations for developing curriculum for ICT professionals in ICT accessibility

### Specification

Goals, Outcome: (knowledge/skills/competences)
Content, Methods, Duration

### Level of Granularity

Overview
Details
Introduction

### 10 Topics:

- Target user groups of UD
- User interfaces and UD
- User-centred design and UD
- UD for Web applications
- UD for Games and consumer electronics
- Software architecture and UD
- Assistive technology
- Evaluation of UD
- Business cases for UD
- UD Policy and Legislation
Who needs to know what?

– **Introduction** : (S) The topic is introduced and the most important facts are given (15-30 mins)

– **Major Aspects** : (O) All major aspects of the topic are covered but full details are avoided (4-12 hours)

– **Details** : (D) The topic is covered in sufficient detail as necessary to apply the knowledge and skills on the job (16 – 30 hours)
## Typical training requirements of ICT professionals

<table>
<thead>
<tr>
<th>Professional roles</th>
<th>Manager</th>
<th>Software &amp; Hardware Developer</th>
<th>Designer</th>
<th>Reviewer &amp; Tester (QA)</th>
<th>Marketing &amp; Communication</th>
<th>HR</th>
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<td>Topics</td>
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<td>Web Applications</td>
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<td>Consumer electronics, games</td>
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<td>User-centred design process</td>
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<td>Business Case</td>
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<td>Policy and Legislation</td>
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Policy makers – skills and knowledge

Examples of policy makers
• Legislators
• Policy analysts / researchers
• Procurement officers
• Regulators

Key areas of knowledge
• ICT accessibility for different policy areas
  • Telecommunications
  • Web
  • Broadcasting
  • Access to emergency services
• Potential / business case for accessible ICTs
• Human rights and equality legislation for ICT
• How to “Buy accessible” - Public procurement
• Making government information and services accessible
• Accessibility Standards
ICT intermediaries – skills and knowledge

Examples of ICT intermediaries
• Occupation therapists
• Rehabilitation engineers
• Educators
• Disability support services
• Disability service providers

Key areas of knowledge
• ICT accessibility features in mainstream technologies – Universal Design
  • Telecommunications
  • Consumer products, e.g. mobile devices, TVs, PCs
  • Apps for disability e.g.
    • Dyslexia
    • Vision impairment
  • Educational software
    • LMS
    • Authoring software – eg PowerPoint
• Making information, in particular educational materials, accessible
• Accessibility Standards for ICT
End users - skills and knowledge

Example of end users
• Persons with disabilities
• Older people
• Anyone who benefits for an accessibility feature
  • Over 50% of the population?

Areas of knowledge
• Universal Design of mainstream technologies
• Availability of accessible ICTs
  • Localization
• Affordability of ICTs – where to get the best deal
Challenges and opportunities in developing skills

• ICT accessibility not taught in higher education courses:
  • Curriculum needed for engineering, computer science, digital media, web development courses
  • Industry calling for T-shaped graduates

• Continuous professional development of ICT professionals – Still designing for the ‘norm’.
  • Insufficient training on ICT accessibility for IT professionals, policy makers etc
  • Increased regulation (e.g. Europe, Australia) requires a focus on ICT accessibility
  • Ageing population
  • Professional bodies need to offer training / accreditation

https://www.youtube.com/watch?v=A88E4DH2asQ
Promoting skills development – role of various actors

- Government
  - Fund R&D
  - Educational policy
  - Disability policy
- Higher education
  - ICT accessibility and Universal Design as a core competence in all relevant courses of education
- ICT professional bodies
  - Accreditation, interest groups and other fora on ICT accessibility
- ICT intermediaries
  - Upskill staff in latest Assistive Technology and accessible ICTs available
  - Universal Design
Organisations and courses accessibility

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<th>Organisations</th>
<th>Courses</th>
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<tr>
<td>IAAP</td>
<td>• “Information and Communication Technology (ICT) Accessibility”</td>
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<tr>
<td>G3ict</td>
<td>• Digital Accessibility: Enabling Participation in the Information Society</td>
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![IAAP logo]![G3ict logo]
ITU courses and resources

- “Public Procurement of accessible ICT products and services”
- Upcoming ITU course: “ICT Accessibility as an enabler of Digital Inclusion”

Guidelines in ICT Accessibility

- Guidelines and regulatory frameworks on ICT accessibility for Persons with Disabilities