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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Presentation overview:

- **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.
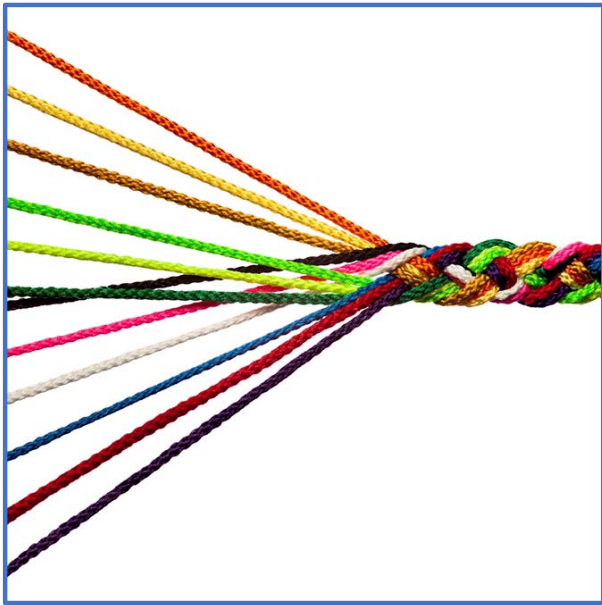-

Topics:

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

- **2. Supports available**
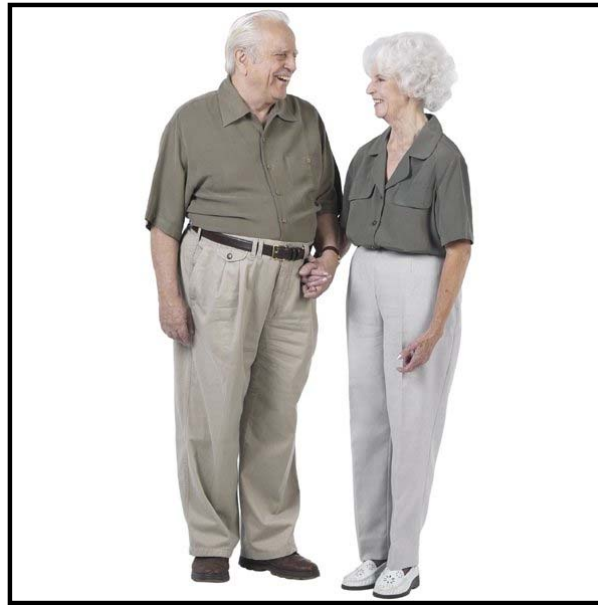- Organizations, resources and courses

"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 a European Standard (EN)**

Recommendations for developing curriculum for ICT professionals in ICT accessibility
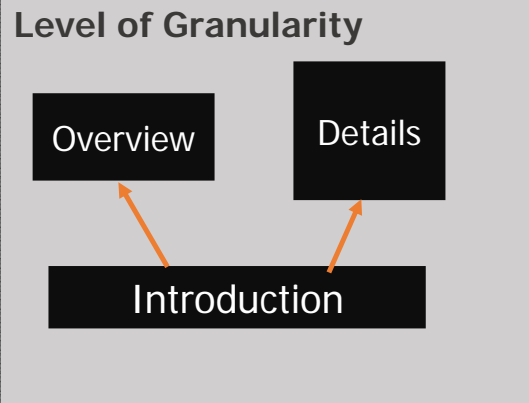
Specification
Goals, Outcome:
(knowledge/skills/
competences)
Content, Methods,
Duration

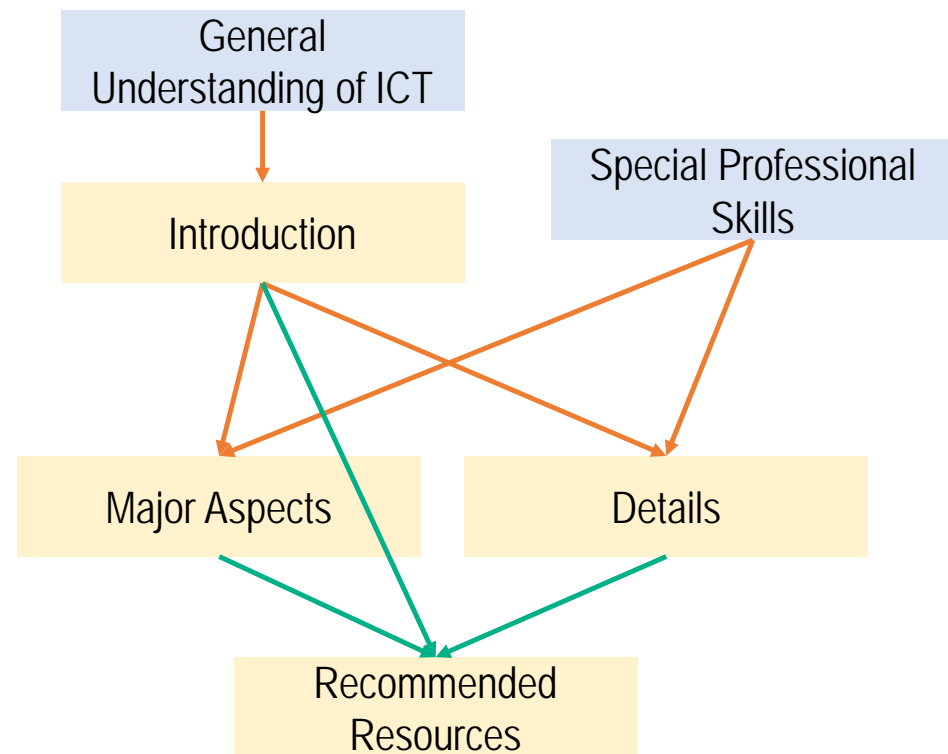**Level of Granularity**

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)

General Understanding of ICT

Special Professional Skills

Introduction

Major Aspects

Details

Recommended Resources

Typical training requirements of ICT professionals

Professional roles → Topics ↓	Manager	Software & Hardware Developer	Designer	Reviewer & Tester (QA)	Marketing & Commu-nication	HR
Target User groups	S-O	D	D	D	O	S
User Interfaces	S	D	O	O	S	S
Software Architecture	S	D	D	D	S	S
Web Applicatons	S	D	D	D	S	S
Consumer electronics, games	S	D	D	D	S	S
User-centred design process	S-O	D	D	D	O	S
Evaluation	S	D	D	D	S	N/A
AssistiveTechnology	S	O	D	D	S	S
Business Case	O-D	S	S	S	D	N/A
Policy andLegislation	O	S	S	D	O	D

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
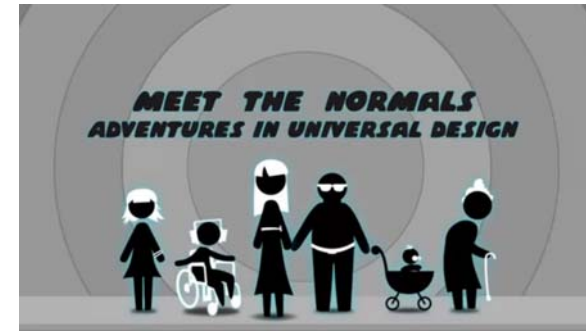
Example of end users

- 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

MEET THE NORMALS
ADVENTURES IN UNIVERSAL DESIGN

https://www.youtube.com/watch?v=A88E4DH2asQ

CERTIFIED
WEBACCESSIBILITY
EXPERT

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

| Organisations	Courses
IAAP International Association of Accessibility Professionals G3ict	• "Information and Communication Technology (ICT) Accessibility" AMAC Accessibility Solutions and Research Center G3ict Georgia Tech • Digital Accessibility: Enabling Participation in the Information Society University of Southampton Erasmus+ MOOC

ITU courses and resources

ITU Academy
empowering minds

- "Public Procurement of accessible ICT products and services"

- Upcoming ITU course: "ICT Accessibility as an enabler of Digital Inclusion"
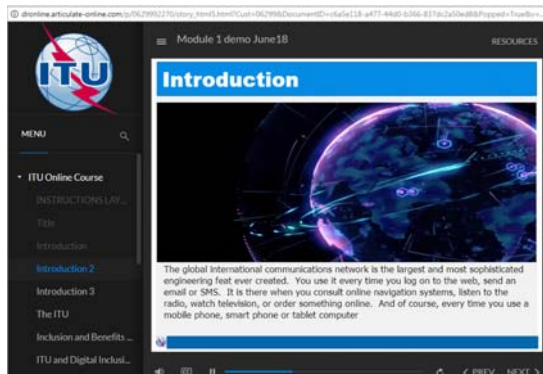
Guidelines in ICT Accessibility

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