

# An introduction to ICT Accessibility and Inclusive Design

## Unit 5 - ICT Accessibility standards



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# Competencies

## Mada ICT-AID Competency Framework

- D2.3.1, D2.3.2, D2.3.4.

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## Objectives

- ⊕ Introduce accessibility barriers and features in ICTs
- ⊕ Describe the general standardization framework and benefits
- ⊕ Feature W3C Web Accessibility Initiative (WAI)
- ⊕ Explore major examples of ICT Accessibility Standards and standards making bodies

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## Learning Outcomes

- By the end of this unit, you should be able to:
- Identify ICT barriers for persons with disabilities
  - Identify accessibility features in ICT
  - Recognize standardization aims and benefits in ICT accessibility
  - Describe major examples of ICT Accessibility standards and standards making bodies
  - Describe the W3C Web Accessibility Initiative (WAI) standardization framework
  - Explain the guiding principles of web Accessibility

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## Content

1. Promoting digital inclusion of persons with disabilities
2. Accessibility features in ICT
3. ICT accessibility standards
4. Standardization aims and benefits

# Accessibility Features in ICT



## Learning outcomes (2)

- By the end of this section, you should be able to:
  - Recognize ICT challenges for persons with disabilities
  - Identify Benefits of ICT Accessibility
  - Explore accessibility features in ICT



## 1. ICT Challenges for Persons with Disability (1/3)

ICT challenges faced by individuals with disabilities pose significant barriers to their full participation and inclusion in the digital age. Some common ICT challenges for persons with disabilities include:

- **Accessibility:**

Accessibility remains a paramount concern, as many websites, software, and devices are inadequately designed and fail to meet the needs of persons with disabilities. Issues such as font size, color contrast, keyboard navigation, and compatibility with screen readers impede their ability to access and engage with digital information. Consequently, individuals with disabilities encounter difficulties in utilizing ICT tools effectively.

## 1. ICT Challenges for Persons with Disability (2/3)

- **Assistive Technologies:**

Persons with disabilities often rely on assistive technologies, such as screen readers, magnifiers, and alternative input devices. However, compatibility and integration issues with these technologies pose challenges in accessing and using ICT products and services.

- **Affordability:**

Assistive technologies and accessible ICT products can be expensive, making them less accessible for individuals with disabilities. The cost of acquiring and maintaining these technologies can be a significant barrier to their effective use of ICT tools.

## 1. ICT Challenges for Persons with Disability (3/3)

- **Learning and Training:**

Access to proper training programs for using ICT can be limited for persons with disabilities, leading to difficulties in acquiring digital skills. Training resources are often not designed with their specific needs in mind, making it challenging for them to learn and adapt to new technologies.

- **Awareness:**

Lack of awareness and understanding about the needs of persons with disabilities can result in negative attitudes towards their inclusion in ICT initiatives. This can lead to exclusion and limited participation in digital platforms and services.

## 2. Benefits of ICT Accessibility (1/4):

ICT accessibility offers numerous benefits for individuals with disabilities. Some key benefits include:

- **Inclusive Participation:**

ICT accessibility allows individuals with disabilities to actively participate in various aspects of life, such as education, employment, communication, and social interaction. For example, accessible websites, mobile applications, and software ensure that individuals with disabilities can access information, engage in online activities, and interact with digital content without barriers. This inclusion promotes equal opportunities and reduces the digital divide between individuals with and without disabilities.

### 2. Benefits of ICT Accessibility (2/4):

- **Increased Independence:**

Accessible ICT tools and technologies empower individuals with disabilities to perform tasks independently, reducing their reliance on others. For instance, screen readers and magnifiers enable visually impaired individuals to access information and navigate digital interfaces without assistance, promoting self-reliance and autonomy.

### 2. Benefits of ICT Accessibility (3/4):

- **Improved Education and Employment Opportunities:**

ICT accessibility plays a pivotal role in leveling the playing field for individuals with disabilities in education and employment. Accessible courses, digital learning tools, e-learning platforms, assistive technologies, and adaptive software enable students and professionals with disabilities to participate fully and demonstrate their skills and abilities. This fosters greater educational and career opportunities, creating a more inclusive and diverse workforce.

## 2. Benefits of ICT Accessibility (4/4):

- **Enhanced Social Inclusion:**

ICT accessibility promotes social inclusion by enabling individuals with disabilities to connect with others, engage in online communities, and participate in virtual social activities.

Accessible social media platforms, messaging applications, and online forums allow individuals with disabilities to share ideas, express themselves, and build relationships with others. This leads to increased social connections, reducing feelings of isolation and exclusion. Additionally, accessible virtual events and activities provide opportunities for individuals with disabilities to participate in shared experiences, entertainment, and cultural events, ensuring that they can fully engage in the digital social fabric.

### 3. Accessibility Features in ICT (1/4):

Accessibility features are intended to remove barriers and enable equal participation for all users. Common accessibility features found in ICT:

- **Screen Readers:**

Screen readers are software programs that read out the content displayed on a computer screen. They convert text into synthesized speech, allowing individuals with visual impairments to access digital content. Screen readers can also navigate and interact with on-screen elements through keyboard commands.



### 3. Accessibility Features in ICT (2/4):

- **Captions and Subtitles:**

Captions and subtitles are textual representations of spoken words in audio or video content. These features benefit individuals with hearing impairments by providing synchronized text that displays alongside the media, ensuring they can understand the information being conveyed.

- **High Contrast and Color Contrast:**

High contrast options adjust the color scheme of a digital interface, making it easier for individuals with visual impairments, particularly those with low vision, to distinguish between different elements. Color contrast refers to the difference in brightness or color between text and its background, ensuring readability for individuals with visual impairments.

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### 3. Accessibility Features in ICT (3/4):

- **Adjustable Text Size and Font:**

The ability to adjust text size and font type helps individuals with visual impairments or dyslexia read content more comfortably. These features allow users to customize the appearance of text on digital interfaces based on their needs and preferences.

- **Voice Recognition:**

Voice recognition technology allows individuals to interact with digital devices and applications through spoken commands. This is especially helpful for individuals with motor impairments who may have difficulty using a keyboard or mouse.

### 3. Accessibility Features in ICT (4/4):

- **Alternative Text (Alt Text):**

Alt text is a textual description provided for images and graphics on websites or digital documents. Alt text is read by screen readers, allowing individuals with visual impairments to understand the content of the images.

- **Assistive Technologies:**

Various assistive technologies, such as screen magnifiers, braille displays, switch devices, and sip-and-puff systems, are available to accommodate specific disabilities and enable individuals with disabilities to interact with ICT effectively.

## Quizzes (2)

1. List some ICT challenges faced by persons with disabilities?
2. List some benefits of ICT accessibility?

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Thank you

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