UPDATED DIGITAL LITERACY TRAINING CURRICULUM

FOR

ENHANCING KNOWLEDGE MANAGEMENT, ICT ADAPTION, DIGITAL SKILLS AND ACCESS TO SERVICES FOR PERSONS WITH DISABILITIES

Compiled by:

Eight Tech Consults
People. Innovation. Technology. Services

EIGHT TECH CONSULTS LTD

In Collaboration with

NATIONAL UNION OF DISABLED PERSONS OF UGANDA

JUNE, 2025

Table of Contents

1. Introduction and background

1.1 Introduction

Uganda Communication Commission(UCC) in accordance with its mandate under section 3 and 5 of the Uganda Communications Act 2013 through UCUSAF is desirous of extending services to the unserved and underserved parts of the country with activities related to addressing digital inclusiveness of Persons with Disabilities, by enhancing knowledge management, ICT adoption, digital skills and access to E-services for Persons with disabilities across the country through this project.

In order to implement the above activities, National Union of Disabled Persons of Uganda (NUDIPU), in collaboration with Eight Tech Consults Limited was awarded a grant by Uganda Communications Commission (UCC) to carry out activities related to addressing digital inclusiveness of Persons with disabilities.

1.2 Background

In the digital age, access to information and communication technologies (ICT) is crucial for participation in social, economic, and educational activities. However, Persons with Disabilities often face significant barriers to digital inclusion, limiting their opportunities and contributing to social exclusion. According to the World Health Organization (WHO), over one billion people, or about 15% of the world's population, experience some form of disability, with many facing challenges in accessing digital technologies (World Health Organization, 2011).

Research has shown that digital inclusion for Persons with Disabilities can lead to significant improvements in quality of life, social participation, and economic opportunities (Seale, 2014). Digital skills training is a vital component in bridging the digital divide and empowering Persons with Disabilities to fully participate in the digital economy (Goggin & Newell, 2003). Inclusive digital education not only provides Persons with Disabilities with the necessary skills to use technology but also fosters a more equitable and inclusive society.

Recognizing these challenges and opportunities, the inclusive ICT project was initiated to promote digital inclusivity for Persons with Disabilities through a phased approach. The first phase focused on the development and operationalization of an inclusive National Persons with Disabilities digital observatory. This observatory was designed to improve data management for Persons with Disabilities, promoting evidence-based policy and program design. The establishment of baseline ICT indicators was a key aspect of this phase, providing a foundation for understanding digital inclusiveness among various categories of Persons with Disabilities.

In the second phase, the project concentrated on establishing Persons with Disabilities ICT innovation development, enhancing technology access, and implementing digital skilling

programs. This phase also aimed to enhance the uptake and usability of the outputs from Phase One, ensuring that the established systems and data were effectively utilized.

The current phase, Phase Three, emphasizes extensive nationwide digital literacy training for categorized Persons with Disabilities. This phase involves the development of the Persons with disabilities digital skills curriculum, localized digital content tailored for capacity building, digital observatory profiling for Persons with Disabilities on various ICTs, and the creation of a National Assistive Technology Strategy. By focusing on these areas, the project aims to provide Persons with Disabilities with the skills and knowledge necessary to navigate and utilize digital technologies effectively.

1.3 Objectives

The primary objectives of this digital skills training curriculum for Persons with Disabilities are:

i) Provide comprehensive digital literacy training tailored to the needs of various categories of Persons with Disabilities, ensuring they can effectively use digital devices and applications.
ii) Equip Persons with Disabilities with the skills and knowledge to access and benefit from digital technologies, thereby promoting social and economic inclusion.
iii) Create and disseminate digital content that is accessible and relevant to Persons with Disabilities, facilitating better understanding and usability.

1.4 Purpose of the Curriculum

The primary purpose of the digital literacy training curriculum for Persons with disabilities (Persons with Disabilities) is to equip individuals with the skills and knowledge necessary to navigate and utilize digital technologies effectively by providing comprehensive training tailored to their unique needs.

The curriculum aims to foster digital inclusion, enhance accessibility, and empower Persons with Disabilities to participate fully in the digital society. This initiative is designed to bridge the digital divide, promote social and economic inclusion, and support the development of a more equitable and inclusive digital environment.

1.5 Target users

This curriculum is designed for:
Persons with disabilities including physical disability, visual disability, hearing disability and speech impairment.

Caregivers and Educators: Individuals who support and educate Persons with Disabilities, providing them with the necessary skills to facilitate digital literacy.

ICT Trainers and Facilitators: Professionals involved in delivering ICT training to Persons with Disabilities, equipping them with the knowledge to address specific needs and challenges.

Policy Makers and Advocates: Stakeholders involved in the development of policies and programs that promote digital inclusiveness for Persons with Disabilities.

1.6 Intended Outcomes

The curriculum aims to achieve the following outcomes:

a) Increased Digital Proficiency: Persons with Disabilities will gain essential digital skills, enabling them to operate digital devices, use basic applications, and navigate the internet confidently.

b) Enhanced Accessibility: Improved access to and usability of digital tools and technologies, tailored to the specific needs of Persons with Disabilities.

c) Empowerment and Independence: Empower Persons with Disabilities to leverage digital technologies for personal, educational, and professional growth, fostering greater independence.

d) Informed Policy Development: Provide valuable data and insights from the digital observatory to support the creation of informed, evidence-based policies and programs for Persons with Disabilities.

e) Widespread Adoption of Assistive Technologies: Facilitate the adoption and effective use of assistive technologies, improving the overall digital experience for Persons with Disabilities.

By addressing these areas, the curriculum will contribute to bridging the digital divide and fostering an inclusive digital environment for all.

2. Scope of the Curriculum

This curriculum covers a range of topics related to digital literacy, including:

Module 1: Understanding disability (concepts, categories and characteristics)

Module 2: Introduction to Digital Devices and Software Operations

Module 3: Inclusivity and Accessibility Features and Tools

Module 4: Use of Basic Digital Applications

Module 5: Communication Using Internet, Email and Social media

Module 6: Electronic Services

Module 7: Online and Electronic user safety and security

2.1 Utilisation of the Curriculum

This curriculum is intended for a broad range of users, including Persons with Disabilities themselves, caregivers, educators, ICT trainers, and policy makers. For Persons with Disabilities, the curriculum provides foundational skills in using digital devices and applications, tailored to specific disabilities as well as knowledge on disability and inclusive approaches to deliver knowledge and skills. Caregivers and educators can use the curriculum to better support persons with disabilities in relation to digital learning and accessibility needs of Persons with Disabilities. ICT trainers will find structured guidance on delivering effective and inclusive digital literacy training. Policy makers can leverage the insights and data gathered from this training to inform evidence-based decisions and policies aimed at enhancing digital inclusivity.

2.2 Mode of Delivery

The topics within this curriculum are designed to be delivered through a blended learning approach, combining online and offline methods to ensure accessibility and inclusivity. Online modules will be available through accessible e-learning platforms (www.elearning.8learning.org), featuring multimedia content, interactive exercises, and assistive technology tools such as screen readers and magnifiers. Offline components will include translated materials in accessible formats (e.g., large print for persons with low vision and Braille for persons with total sight loss), in-person workshops, and community-based training sessions.

This blended approach ensures that all learners, regardless of their specific needs or access to technology, can benefit from the curriculum.

2.3 Assessment Methods

To ensure that learners achieve the desired competencies, the curriculum employs a variety of assessment methods. These include formative assessments, such as quizzes and interactive activities embedded within the online modules, to provide immediate feedback and reinforce learning.

Summative assessments will include practical assessments where learners demonstrate their ability to use digital devices and applications in real-world scenarios.

Peer assessments and self-assessment tools will also be used to encourage reflective learning and continuous improvement. Additionally, feedback from instructors and caregivers will be incorporated to provide a comprehensive evaluation of the learners' progress and areas for further development. These diverse assessment methods are designed to accommodate the varying needs and abilities of Persons with Disabilities, ensuring a fair and accurate measure of their digital literacy skills.

3. Modules to be Covered

Module 1: Understanding disability

In this module we shall explore the different aspects of the disability context in terms of concepts, categories and characterizes and needs of persons with disabilities.

<table>
<tr><td colspan="2">Subject: Digital Skills Training</td><td colspan="2">Module 1: Understanding Disability</td><td>Time: 3 hours</td></tr>
<tr><td colspan="2">Major Learning Objectives
Comprehend the fundamental concepts and definitions related to disability.
Identify and categorize various types of disabilities in Ugandan context
CRPD defines disabilities and groups them.
Recognize the unique characteristics and needs of individuals with different disabilities.
Develop a holistic understanding of the social, cultural, and legal contexts of disability.
Cultivate empathy and positive attitudes towards persons with disabilities.</td><td rowspan="2">Content Summary Topics
Introduction to Disability
Categories of Disabilities
Physical Disabilities
Sensory Disabilities (Hearing, Vision)
Intellectual and Developmental Disabilities
Mental Health Conditions
Characteristics and Needs of Persons with Disabilities
Physical and Health Needs
Communication and Social Interaction Needs
Educational and Employment Needs
Accessibility and Environmental Adaptations</td><td rowspan="2">Learning Activities
Interactive Lectures and Discussions
Overview of disability concepts and categories
Guest speakers with lived experiences
Case Studies and Group Work
Analysis of real-world scenarios
Development of inclusive solutions
Multimedia Resources
Documentaries and videos on disability issues
Interactive simulations</td></tr>
<tr><td>Knowledge and understanding
Conceptual clarity on what constitutes a disability.
In-depth understanding of different disability categories.
Awareness of the unique needs of individuals with disabilities.
Familiarity with legal frameworks and social dynamics affecting persons with disabilities.</td><td>Skills to be Gained
Analytical Skills: Ability to assess and categorize various disabilities.
Communication Skills: Effective interaction with persons with disabilities.
Problem-solving Skills: Designing inclusive environments and solutions.
Promoting disability rights and inclusion.</td><td>Attitudes and values that shall be attained
Empathy and Sensitivity: Towards the experiences of persons with disabilities.
Respect for Diversity: Appreciation of diverse abilities and contributions.
Active support for inclusive practices in all areas of life.
Dedication to advancing the rights of persons with disabilities.</td></tr>
</table>

Instructional Strategies : Combination of lectures, demonstrations, and hands-on activities - Encouragement of active participation and peer collaboration
Course Media: Presentation slides, and interaction
Course outline
1. **Introduction to Disability** ○ Definitions-refer to the definition according to the CRPD and Ugandan Law, Historical Perspectives, Models of Disability(intergrate cultural/social-for the deaf community, human rights, charity models, medical) ○ Impairment and disability, persons with disability and disabled person 2. **Categories of Disabilities** ○ Physical, Sensory, Intellectual, and Mental Health Conditions ○ Include all the categories but mainly those with ICT related issues. ○ Mention the relationship between the ICT and the disability category ○ Sensory disability should be broken down into the different categories 3. Characteristics and Needs of Persons with Disabilities ○ Health, Communication, Education, Employment, Accessibility 4. **Legal and Social Contexts** ○ Cultural Attitudes, Rights and Legislation, Inclusive Practices, 5. **Final Projects and Reflections** ○ Group presentations on inclusive solutions ○ Reflective journals and discussion
Materials required: • Handouts summarizing key concepts
Resources 1. National Union of Disabled Persons of Uganda (NUDIPU) - (NUDIPU Website) 2. Uganda National Action on Physical Disability (UNAPD)- (UNAPD Website) 3. National Council for Disability (NCD) 4. Uganda Society for Disabled Children (USDC) 5. Legal Action for Persons with Disabilities Uganda (LAPD)- (LAPD Website) 6. Comprehensive Rehabilitation Services for Uganda (CoRSU) 7. Uganda Parents of Persons with Intellectual Disabilities (UPPID) 8. National Union of Women with Disabilities of Uganda (NUWODU) –(NUWODU Website) 9. Action on Disability and Development (ADD) International - Uganda 10. African Centre for Treatment and Rehabilitation of Torture Victims (ACTV)—(ACTV Website)

Module 2: Introduction to Digital Devices and Software Operations

In this module, we will introduce the participants to the world of digital devices and help them understand their importance and how to put them to good use.

<table>
<tr><td colspan="3">Subject: Digital Skills Training</td><td colspan="2">Module 2: Introduction to Digital Devices and Software Operations</td><td>Time: 4 hours</td></tr>
<tr><td colspan="3">Major Learning Objectives
Understand the historical development of computers and the current state of digital technologies.
Familiarize participants with the fundamental components and basic operations of computing devices.
Understand the different types of digital devices, their functions, and advantages.
Provide specialized training for visually impaired participants to effectively use a keyboard.</td><td colspan="2">Content Summary Topics
Evolution of Computing
Components/Parts of a Computing Device
How to Operate a Computing Device
Keyboard Orientation for Visual Impairments
Hardware components</td><td rowspan="2">Learning Activities
Interactive lecture on digital device types and functions
Hands-on demonstration of software operations - Group discussion on the importance of digital literacy
Guided practice sessions on device navigation and software usage
Reflection exercises on personal attitudes towards technology
Peer sharing sessions on overcoming digital challenges and embracing opportunities</td></tr>
<tr><td>Knowledge and understanding
Understanding of digital devices and software operations
Awareness of basic functions of digital devices and software applications
Recognition of the importance of digital literacy in modern society</td><td>Skills to be Gained
Proficiency in operating digital devices and software effectively
Ability to navigate digital interfaces and perform common tasks
Capacity to troubleshoot digital issues and seek relevant assistance</td><td>Attitudes and values that shall be attained
Open-mindedness towards technology adoption
Confidence in utilizing digital tools for personal and professional tasks
Appreciation for continuous learning and adaptation in the digital age</td></tr>
<tr><td colspan="6">Learning Assessment Criteria:
Assess participants' ability to: - Identify different types of digital devices - Navigate basic software interfaces - Perform common tasks using software applications</td></tr>
<tr><td colspan="6">Instructional Strategies : Combination of lectures, demonstrations, and hands-on activities - Encouragement of active participation and peer collaboration</td></tr>
<tr><td colspan="6">Course Media: Presentation slides, Video tutorials demonstrating software operations, Translated Content in the different local languages</td></tr>
<tr><td colspan="6">Course outline</td></tr>
</table>

6. Importance of ICT for persons with disabilities
7. **Evolution of Computers and mobile phones.**
    - Definition of a digital device and other related terms with examples.
    - Evolution of Digital Technologies
    - Current state of Digital Technologies
8. **Basic Operations of a computing device:**
    - Components/Parts of a Computing Device(smart phones and computers)
    - Definition of key terms (RAM, ROM, etc)
    - Powering on/off devices.
    - Navigating menus and interfaces.
    - Using touchscreens and buttons effectively.
    - Troubleshooting and maintenance.
    - Software installation and ad-ons.
    - Safety cautions when using digital devices.
9. **Digital Devices:**
    - Explanation of smartphones, tablets, and computers.
    - Digital device specifications and types (peripherals, speaker capacity, storage, processor, etc)Differences between each type of device and their respective advantages.
10. **Keyboard Orientation for Visual Impairments**
    - Layout and types of the keyboard
    - Key combinations and shortcuts
    - Finger placement and typing techniques

Materials required:

- Computers or mobile devices for each participant
- Software applications for practical exercises
- Handouts summarizing key concepts

Facilitation Guide

1. Evolution of Digital Technologies

- Discuss the historical context of computing, starting from early mechanical calculators to modern digital computers. Early Innovations: Abacus, mechanical calculators, Introduction in the 1970s and 1980s, bringing computing to homes and small businesses, Mobile Computing: The rise of laptops, smartphones, and tablets in the 2000s.
- Modern Computers: Desktops, laptops, and the role of operating systems, Mobile Devices: Smartphones, tablets, and wearable technology. Internet and Connectivity: The role of the internet in modern computing, including cloud computing, Emerging Technologies: AI, IoT, VR, and their potential impact.

2. Components/Parts of a Computing Device

- Hardware Components: CPU, RAM, hard drive, motherboard, input/output devices, Peripheral Devices: Keyboard, mouse, monitor, printer. Hands-on session where participants identify and label parts of a computer. Demonstrate how to properly start and shut down computing devices.
- Starting a Computer: Power button, logging in, and accessing the desktop, Shutting Down: Proper shutdown procedures to avoid data loss. Guide participants through navigating operating system menus and interfaces.: Desktop Environment: Start menu, taskbar, system tray, File Management: Creating, opening, and organizing files and folders.
- Teach effective use of touchscreens and physical buttons on various devices, Touchscreen Gestures: Tapping, swiping, pinching, and scrolling, Button Functions: Home button, volume controls, power button.

3. Types of Digital Devices

- Explanation of Smartphones, Tablets, and Computers, Define and differentiate between smartphones, tablets, and computers, Smartphones: Portability, communication features, apps, Larger screen size, versatility for media consumption and productivity, Greater processing power, suitability for complex tasks.

4. Keyboard Orientation for Visual Impairments

- Familiarize participants with the standard keyboard layout, Alphabetic keys, numeric keypad, function keys, special keys, Tactile Markers: Identify markers on the 'F' and 'J' keys for finger placement.
- Teach essential keyboard shortcuts to enhance navigation and productivity, Copy (Ctrl+C), paste (Ctrl+V), save (Ctrl+S), undo (Ctrl+Z), Screen Reader Shortcuts: Specific combinations for screen readers like JAWS and NVDA.

Module 3: Inclusivity and Accessibility Features and Tools

This ensures that participants gain the necessary knowledge, skills, and attitudes to effectively use and appreciate inclusivity and accessibility tools, promoting digital inclusion and independence for Persons with Disabilities.

<table>
<tr><td>Subject: Digital Skills Training</td><td colspan="2">Module 3: Inclusivity and Accessibility Features and Tools</td><td>Time: 5 hours</td></tr>
<tr><td colspan="4">Key Topic Competency:
Understanding and effectively utilizing inclusivity and accessibility features and tools to enhance digital accessibility for Persons with disabilities (Persons With Disabilities).</td></tr>
<tr><td>Learning Objectives
• Understand various inclusivity and accessibility tools and their importance for Persons With Disabilities.
• Learn to use and customize accessibility features such as TalkBack, magnifiers, text-to-speech, and speech-to-text tools
• Gain knowledge about specific applications like Cash Reader, Be My Eyes, Voice Aloud Reader, Google Lens, Lookout, and Kibo.</td><td colspan="2">Content Summary Topics
• Introduction to inclusivity and accessibility tools
• Overview of TalkBack,</td><td>Learning Activities
• Demonstration and hands-on practice with TalkBack, magnifiers, text-to-speech, and speech-to-text tools</td></tr>
</table>

• Recognize and appreciate the role of accessibility tools in promoting digital inclusion and independence.				
Knowledge and understanding	**Skills to be Gained**	**Attitudes and values**		
• Comprehensive understanding of various inclusivity and accessibility tools • Knowledge of how and when to use different accessibility features for Persons With Disabilities • Awareness of the capabilities and limitations of specific applications like Cash Reader, Be My Eyes, Voice Aloud Reader, Google Lens, Lookout, and Kibo	• Proficiency in using and customizing accessibility tools such as TalkBack, magnifiers, text-to-speech, and speech-to-text • Ability to navigate and utilize specific applications designed to aid Persons With Disabilities • Competence in tailoring accessibility settings to suit individual needs and preferences	• Appreciation for the importance of digital inclusivity and accessibility • Recognition of the value of accessibility tools in enhancing independence and quality of life for Persons With Disabilities • Commitment to ongoing learning and adaptation of new tools and technologies for better accessibility	magnifiers, text-to-speech, and speech-to-text tools. • Specific applications: Cash Reader, Be My Eyes, Voice Aloud Reader, Google Lens, Lookout, and Kibo • Customizing accessibility tools to individual needs	• Interactive sessions exploring and using specific applications like Cash Reader, Be My Eyes, Voice Aloud Reader, Google Lens, Lookout, and Kibo • Customization exercises for accessibility tools based on individual needs and preferences • Group discussions on the impact of accessibility tools on daily life and independence
Assessment Criteria: Demonstrate proficiency in the use digital devices to create, store, find and retrieve digital information.				
Instructional strategies				
The course will be an instructor-led course, with a slide presentation and many exercises. The following methods will be employed at various places in the course: Demonstration, Discussion, Question and answer exercises and group sessions.				
Course media				
The course will utilize the following media Presentation slides Video tutorials demonstrating software operations • Translated Content in the different local languages Slide presentations				
Course content **1. Introduction to Inclusivity and Accessibility Tools** ○ Importance of accessibility in the digital age, Overview of available tools and features				

- Computer based accessibility (Overview of JAWS, NVDA, and Narrator, accessibility features for, keyboard for the physical disabled, joystick, infrared pointer, sticky keys, bounce keys, filter keys, sound sentry, speech to text accessibility, auto complete, memory cues(intellectuals), site map.
- Mobile phone accessibility

2. **Overview of TalkBack, Magnifiers, Text-to-Speech, and Speech-to-Text Tools**
   - TalkBack: How it works and practical applications
   - Magnifiers: Types and uses, Text-to-Speech: Setting up and using the feature, Speech-to-Text: Setting up and using the feature
3. **Specific Applications**
   - Cash Reader: Identifying and using currency
   - Be My Eyes: Connecting with volunteers for visual assistance
   - Voice Aloud Reader: Reading documents and web pages aloud
   - Google Lens: Visual search and information retrieval
   - Lookout: Assistance for people with vision impairments
   - Kibo: Reading and accessing printed and digital text
4. **Customizing Accessibility Tools**
   - Adjusting settings for TalkBack
   - Customizing magnifiers and text-to-speech settings
   - Personalizing speech-to-text preferences

11. Computer Assistive Technologies

5. **Introduction to Screen Readers**
   - Overview of JAWS, NVDA, and Narrator
   - Strengths and weaknesses of each
6. **Customizing Screen Readers**
   - Adjusting settings for individual needs
   - Rate of speech, voice, and other preferences
7. **Specifications for Installation**
8. Hardware requirements for screen reader

Materials required:

1. Computer / Tablet / Smartphone, Internet Connection

Module 4: Use of Basic Digital Applications

This module will focus on teaching participants how to utilize essential software applications to streamline their daily tasks.

<table>
<tr><td colspan="2">Subject: Digital Skills Training</td><td>Module 4: Use of Basic Digital Applications</td><td colspan="2">Time: 3 hours</td></tr>
<tr><td colspan="5">Key Topic Competency: Proficiency in operating basic digital devices and applications</td></tr>
<tr><td colspan="3">Major Learning Objectives
Gain proficiency in Microsoft Word, PowerPoint, and Excel, including knowledge of keyboard shortcuts specific to these applications.
Learn to use web browsers such as Chrome, Firefox, and Edge effectively.
Understand and utilize various assistive technologies, with a focus on screen readers such as JAWS, NVDA, and Narrator.
Learn to adjust screen reader settings to suit individual needs, including rate of speech and voice preferences.
Know the hardware requirements necessary for the installation and optimal use of screen readers.</td><td rowspan="2">Content Summary Topics
Microsoft Packages (Word, Power Point, and Excel)
Keyboard shortcuts specific to these applications
How to Use the Observatory?
Web Browsers Chrome, Firefox etc
Computer Assistive Technologies
Introduction to Screen Readers
Overview of JAWS, NVDA, Narrator
Hardware requirements for screen readers.</td><td rowspan="2">Learning Activities
Hands-on exercises creating, editing, and formatting documents in Word
Developing presentations in PowerPoint
Performing calculations
Practicing keyboard shortcuts
Guided tour of the observatory interface
Practical tasks navigating and using different features
Interactive sessions on navigating and using Chrome, Firefox, and Edge
Demonstration and practice using JAWS, NVDA, and Narrator</td></tr>
<tr><td>Knowledge and understanding
Basic Digital Applications
Web Browsers
Assistive Technologies
Customization of Assistive Tools
Technical Requirements: Understanding the hardware</td><td>Skills to be Gained
Proficiency in Microsoft Applications
Effective Web Navigation
Usage of Assistive Technologies
Technical Skills
Knowledge to install and configure assistive technologies on various hardware.</td><td>Attitudes and values that shall be attained
Open-mindedness towards technology adoption
Confidence in utilizing digital tools for personal and professional tasks
Inclusivity and Accessibility
Empowerment through Technology</td></tr>
<tr><td colspan="5">Learning Assessment Criteria:
Assess participants' ability to: - Identify different types of digital devices - Navigate basic software interfaces - Perform common tasks using software applications</td></tr>
<tr><td colspan="5">Instructional Strategies</td></tr>
<tr><td colspan="5">Combination of lectures, demonstrations, and hands-on activities - Encouragement of active participation and peer collaboration</td></tr>
</table>

Course Media
Presentation slides Video tutorials demonstrating software operations Translated Content in the different local languages
Materials required: • Computers or mobile devices for each participant • Software applications for practical exercises • Handouts summarizing key concepts
Course outline
1. **Microsoft Packages (Word, PowerPoint, and Excel)** • Introduction to each application • Key features and functionalities • Keyboard shortcuts for efficiency **2. How to Use the Observatory** • Introduction and purpose • Navigation and features 3. **Web Browsers** • Overview of popular web browsers: Chrome, Firefox, and Edge, brave web browsers (recommended google chrome) • Pay attention to settings on browsers, making a browser default, set Gmail to be appearing when browser is opened, bookmarking • Features, advantages, and accessibility options • Recommendations for use with screen readers **4. Collaborative communication tools** o Zoom, Google Meet & Microsoft Teams Accessibility features and shortcuts

Module 5: Communication Using Internet Email and Social Media

This module will focus on teaching participants how to effectively communicate using internet email and social media platforms, which are essential tools for networking, marketing, and information dissemination in the digital age.

<table>
<tr><td colspan="2">Subject: Digital Skills Training</td><td colspan="2">Module 5: Communication Using Internet Email and Social Media</td><td>Time: 3 hours</td></tr>
<tr><td colspan="5">Key Topic Competency:
This module will focus on teaching participants how to effectively communicate using internet email and social media platforms, which are essential tools for networking, marketing, and information dissemination in the digital age.</td></tr>
<tr><td colspan="3">Learning Objectives
• Understand the importance of internet email and social media in agricultural communication.
• Learn how to use email and social media platforms for effective communication and networking.</td><td>Content Summary Topics
• Connecting to the internet
• Introduction to Email.
• Social Media Basics
• Accessibility while using social media
•</td><td>Learning Activities
1. Mind map on “the internet”
2. Practical sessions on using WWW, email, video conferencing and ecommerce
3. Participants watch videos on “internet” and “the cloud”
4. Practical sessions on accessing & uploading data from and to the cloud
5. Quiz on internet use</td></tr>
<tr><td>Knowledge and understanding</td><td>Skills to be Gained</td><td>Attitudes and values</td><td colspan="2" rowspan="2"></td></tr>
<tr><td>• Ably identify the types services that can be provided and/or accessed online
• Ability to Identify the different online services
• Ability to Learn and understand the different types of internet services available
• Ability to Learn how to consume various internet services using both computers and smart devices
• Learners ably understand the basics of online safety</td><td>• Use of computers and smart devices to access the internet
• Use of email and social media applications
• Video conferencing
• Basics of e-commerce</td><td>• Recognise the value of, and gain competence in use of internet services
• Gain knowledge on online safety.</td></tr>
<tr><td colspan="5">Assessment Criteria:
Demonstrate proficiency at ICT tools (taught during the study) for enabling service provision at personal and professional levels.</td></tr>
<tr><td colspan="5">Instructional strategies</td></tr>
<tr><td colspan="5">The course will be an instructor-led course, with a slide presentation and many exercises. The following methods will be employed at various places in the course: Demonstration, Discussion, Question and answer exercises, Case study involving extensive practice of new skills to solve a problem.</td></tr>
<tr><td colspan="5">Course media</td></tr>
<tr><td colspan="5">The course will utilize the following media; Course guide, Course instructor, Slide presentations, Flip charts, Videos</td></tr>
</table>

Course Outline
9. Connecting to the internet ○ How to connect to the internet (computer and smartphones) ○ search engines ○ Introduction to Artificial intelligence(chatbots) **10. Introduction to Email:** ○ Setting up an email account. ○ Sending and receiving emails. ○ Managing contacts and organizing emails. **11. Social Media Basics:** ○ Overview of popular social media platforms (e.g., Facebook, WhatsApp, Twitter). ○ Creating social media accounts and profiles. ○ Understanding the benefits and risks of social media. **12. Inclusivity in the use of social media** ○ Accessible features like photo descriptions 13. **YouTube** ○ Using keyboard shortcuts ○ Accessible navigation
Course development tools
The course was assembled and developed in Microsoft Word and Microsoft PowerPoint.

Module 6: Electronic Services

This module will introduce participants to various e-government services available to farmers, providing them with access to valuable resources, information, and support.

<table>
<tr><td colspan="2">Subject: Digital Skills Training</td><td colspan="2">Module 6: Key E-government services for citizens</td><td>Time: 4 hours</td></tr>
<tr><td colspan="5">Key Topic Competency:
This module will introduce participants to various e-government services available to farmers, providing them with access to valuable resources, information, and support for their agricultural activities.</td></tr>
<tr><td colspan="5">Learning Objectives
• Understand the benefits of e-government services.
• Learn how to access and utilize e-government platforms for business purposes.</td></tr>
<tr><td>Knowledge and understanding</td><td>Skills</td><td>Attitudes and values</td><td>Content Summary Topics</td><td>Learning Activities</td></tr>
<tr><td>• Understanding the concept of E-Government services
• Identifying key E-Government services available for citizens
• Exploring the benefits and limitations of Government services</td><td>• Navigating E-Government websites and portals
• Registering for E-Government services
• Accessing and utilising the different E-Government applications</td><td>• Recognising the importance of E-Government services in enhancing citizen engagement
• Building trust in the security and reliability of E-Government services
• Embracing digital citizenship and the use of technology for public services</td><td>• Accessing Government Websites
• Applying for Permits and Licenses
• Digital Payment Systems</td><td>• Interactive presentation
• Group discussion on the importance of e-government services in improving access to government services
• Hands-on practice sessions using simulated e-government platforms</td></tr>
<tr><td colspan="5">Assessment Criteria:
Demonstrate proficiency in the use</td></tr>
<tr><td colspan="5">Instructional strategies</td></tr>
<tr><td colspan="5">The course will be an instructor-led course, with a slide presentation and many exercises. The following methods will be employed at various places in the course: Demonstration, Discussion, Question and answer exercises and group sessions.</td></tr>
<tr><td colspan="5">Course media</td></tr>
<tr><td colspan="5">The course will utilize the following media
Presentation slides</td></tr>
</table>

Video tutorials demonstrating software operations

- Translated Content in the different local languages Slide presentations

Materials required:

2. Computer / Tablet / Smartphone
3. Internet Connection

Facilitation Guide:

The topic is conducted as face-to-face for 4 hours. The following will be the activities to be undertaken and timelines for their execution.

1.Government Services.
2. E-commerce.
3. Financial services.
4. E transport services (uber, faras, ride-now)
5. E ticket

Introduction to E-government Services:

- Start with an explanation of what e-government services are and their significance in modern governance.
- Provide examples of common e-government services, such as online tax filing, government benefit applications, and online permit applications, Discuss the objectives of e-government services, including improving access to government services, enhancing efficiency, and promoting transparency.
- Encourage participants to share their experiences, if any, with e-government services and their expectations from such services.

2. How to Access E-government Services Online:

- Explain the various channels through which citizens can access e-government services online, such as government websites, mobile applications, and service centers, provide step-by-step instructions on how to access e-government services through different channels, Demonstrate the navigation of government websites and mobile applications to locate specific services.

3. Step-by-Step Guide on Using Specific E-government Services:

- Select a few key e-government services mentioned earlier (e.g., (e.g., ***UG hub, E-passport Portal, Uganda Drivers Licensing system, URA portal, URSB Portal, E-cities system, EGP system, E-banking systems, E-business, UCC website, NIRA***) and provide detailed step-by-step guides on how to use them, break down the process into manageable steps and demonstrate each step clearly.
- Provide explanations and tips for navigating through the service interfaces, filling out forms, uploading documents, and completing transactions.

4. Importance of Trust and Security in E-government Transactions:

- Discuss the importance of trust and security in e-government transactions to ensure the confidentiality, integrity, and availability of citizens' information.
- Explain the measures implemented by government agencies to safeguard citizens' data and protect against cybersecurity threats.
- Provide tips for citizens to enhance their own security when accessing e-government services, such as using strong passwords, enabling two-factor authentication, and being cautious of phishing attempts.

5. Benefits of E-government Services for Citizens:

- Discuss the various benefits that e-government services offer to citizens, such as convenience, efficiency, transparency, and cost savings.

- Share examples and success stories of how citizens have benefited from using e-government services in their daily lives.
- Highlight specific features of e-government services that contribute to these benefits, such as 24/7 accessibility, reduced paperwork, faster processing times, and improved service delivery.

Module 7: Online and electronic user safety and security

This module will focus on educating participants about online safety practices to protect themselves and their information while using digital platforms.

<table>
<tr><td colspan="2">Subject: Digital Skills Training</td><td colspan="2">Module 7: Online Safety</td><td>Time: 3 hours</td></tr>
<tr><td colspan="5">Key Topic Competency:
This module will focus on educating participants about online safety practices to protect themselves and their information while using digital platforms.</td></tr>
<tr><td colspan="3">Learning Objectives
Understand common online threats and risks.
Learn best practices for maintaining online safety and security.</td><td>Content Summary Topics
Identifying Online Threats
Creating Strong Passwords
Protecting Personal Information
Safe Browsing Habits</td><td>Learning Activities
Protecting computers from Viruses
online security and scam recognition
Fake websites and Identity theft
Data protection</td></tr>
<tr><td>Knowledge and understanding</td><td>Skills</td><td>Attitudes and values</td><td colspan="2" rowspan="2"></td></tr>
<tr><td>Learners shall able to understand the Key concepts of safe while using computers.
The course will enable participant being able to explore how to stay safe online
Being able to recognise good practice in protecting computers and information</td><td>Secure Data management
Secure Web use security concepts</td><td>A candidate should be able to apply good IT security principals to manage connections, devices and data effectively and safely.</td></tr>
<tr><td colspan="5">Assessment Criteria:
The learner should be able to set up a hot spot and share it with all the security features associated with it.
A practical session on hot to set up a two-factor authentication
The learner will be introduced to a practical session of setting up and maintaining the privacy settings</td></tr>
<tr><td colspan="5">Course media</td></tr>
<tr><td colspan="5">The course will utilize the following media
Presentation slides
Video tutorials demonstrating software operations, Translated Content in the different local languages Slide presentations</td></tr>
</table>

Course content.

1. **Identifying Online Threats:**
   - Identifying counterfeit devices.
   - Recognizing common scams, mobile money hackers, phishing attempts, and malware.
   - Understanding the importance of antivirus software and security updates.
   - Sexual harassment and cyber bullying.
2. **Creating Strong Passwords:**
   - Best practices for creating and managing secure passwords.
   - Using password managers and two-factor authentication for added security.
3. **Protecting Personal Information:**
   - Understanding privacy settings on email, social media and other online platforms.
   - Safeguarding sensitive information and avoiding oversharing online, using public information centers (café's).
4. **Safe Browsing Habits:**
   - Tips for safe browsing and avoiding malicious websites.
   - Recognizing warning signs of potential online threats.
   - Use of VPN

Instructional strategies

The course will be an instructor-led course, with a slide presentation and many exercises. The following methods will be employed at various places in the course: Demonstration, Discussion, Question and answer exercises and group sessions.

Materials required: Smart phone | Tab, Laptop, Internet connection, Social media accounts, Software System and Application

Free resources

https://www.which.co.uk/consumer-rights/advice/how-to-spot-a-fake-fraudulent-or-scam-website-aUBir8j8C3kZ
https://www.globalsign.com/en/blog/six-cybersecurity-tools-and-services-every-business-needs
http://www.crossdomainsolutions.com/cyber-security/tools-techniques/
https://cyberexperts.com/cybersecurity-tools/
https://www.fortinet.com/resources/cyberglossary/snort#:~:text=SNORT%20can%20be%20used%20to,Internet%20Protocol%20(IP)%20networks.

Facilitation Guide;

1. Protecting Devices

- Explain the importance of protecting devices from physical damage, theft, and malware, discuss strategies for safeguarding devices, such as using screen protectors, password protection, and antivirus software, provide guidance on best practices for handling and storing devices to prevent accidents and damage, demonstrate how to set up security features on devices, such as remote lock and wipe capabilities.

2. Protecting Personal Data and Privacy

- Discuss the significance of safeguarding personal data and privacy in the digital age, explain common threats to personal data and privacy, such as identity theft, phishing scams, and data breaches, provide guidance on protecting personal information online, such as using strong, unique passwords and enabling two-factor authentication, discuss privacy settings on social media platforms and other online services and how to adjust them for increased privacy.

3. Protecting Well-being

- Highlight the importance of maintaining a healthy balance between digital technology use and other aspects of life, Discuss the potential negative impacts of excessive screen time on physical and mental well-being, such as eye strain, poor posture, and sleep disturbances, Provide tips and strategies for promoting digital well-being, such as setting boundaries on device use, taking regular breaks, and engaging in offline activities Discuss the importance of practicing self-care and seeking support if participants experience negative effects from their digital technology use.

4. Protecting the Environment

- Raise awareness about the environmental impact of digital technology use, such as energy consumption and electronic waste generation, Discuss strategies for reducing the environmental footprint of digital technology use, such as energy-efficient devices, recycling electronics, and minimizing electronic waste, Provide information on eco-friendly practices for using digital devices, such as powering off devices when not in use and using energy-saving settings.

5. Online Child Safety

- Discuss the unique risks that children face online, such as exposure to inappropriate content, cyberbullying, and online predators, Provide guidance on how parents and caregivers can protect children's online safety, such as setting age-appropriate content filters, monitoring online activity, and educating children about online risks, Discuss resources and tools available to help parents and caregivers promote online safety for children, such as parental control software and educational materials.

6. Cyberbullying and Harassment

- Define cyberbullying and harassment and discuss their prevalence and impact, Provide examples of cyberbullying and harassment behaviors, such as spreading rumors, sharing private information, and sending threatening messages, Discuss the emotional and psychological effects of cyberbullying and harassment on victims and the importance of taking such incidents seriously.
- Provide guidance on how to respond to cyberbullying and harassment, including blocking and reporting abusive individuals, documenting incidents, and seeking support from trusted adults or authorities

4. Training Methodology

The training methodology combines both online and offline learning methods to ensure accessibility for all participants. This includes interactive e-learning modules, hands-on practice sessions, group discussions, and personalized coaching. Modules are designed to be accessible with screen readers and other assistive technologies. They include multimedia content such as videos, audio instructions, and interactive exercises to accommodate different learning preferences.

Practical hands on session will be incorporated in the training delivery. These sessions allow participants to apply what they've learned in a practical setting. Participants will have access to digital devices and assistive technologies to practice navigating and using various tools and applications.

Facilitated group discussions and collaborative activities encourage participants to share their experiences and learn from each other. This approach helps build a supportive learning community. Instructors will also provide one-on-one support to address individual learning needs and challenges. This includes customizing training materials and methods to suit each participant's unique requirements.

Moreover, the curriculum delivery will incorporate local examples and contextually relevant content to ensure relevance and applicability to the specific needs and circumstances of Persons with Disabilities. By drawing on familiar contexts and examples from the participants' own experiences, the curriculum aims to resonate with their realities and facilitate deeper understanding. This approach not only enhances engagement but also empowers participants to see the practical value of digital literacy in their everyday lives. Ultimately, by tailoring the content to local contexts, the curriculum seeks to maximize its impact and effectiveness in supporting the digital skilling of smallholder farmers.

Regular feedback is provided to participants to help them track their progress and identify areas for improvement. Instructors remain available for questions and additional support throughout the training period.

4. Instructors Guide

a) Introduction and Icebreaker: Begin the session by introducing yourself and explaining the purpose of the training. Conduct an icebreaker activity to help participants get to know each other, which helps create a comfortable and collaborative learning environment.
b) Explain the Learning Objectives: Clearly outline the learning objectives for the session. Explain what participants will learn and how these skills apply to their daily lives. This helps set expectations and gives participants a clear understanding of the training's value.
c) Deliver Content in Segments: Break down the content into manageable sections to avoid overwhelming participants. Use a variety of instructional methods, including

lectures, demonstrations, and interactive exercises, to cater to different learning styles and keep the training engaging.

d) Use Accessible Teaching Techniques: Provide clear and concise instructions, and use visual aids, large text, and high-contrast materials. Incorporate screen readers and other assistive technologies for demonstrations to ensure all participants can follow along.
e) Facilitate Hands-On Practice: Allow participants to practice using digital devices and applications during the session. Provide step-by-step guidance and support during these practice sessions, and encourage participants to ask questions and seek help as needed to reinforce their learning.
f) Encourage Group Discussions and Collaboration: Organize small group discussions to foster collaboration and peer learning. Assign group tasks that require teamwork and communication, helping participants learn from each other and build a sense of community.
g) Monitor Progress and Provide Feedback: Observe participants' progress and offer constructive feedback throughout the training. Address any challenges or difficulties they encounter promptly to ensure they are supported and can keep up with the material.
h) Summarize and Review Key Points: At the end of each session, recap the main points covered to reinforce learning. Highlight key concepts and skills, ensuring participants leave with a clear understanding of what was taught.
i) Assign Practice Tasks: Provide participants with tasks to practice independently after the session. Encourage them to apply what they have learned in real-life scenarios to reinforce their skills and build confidence.
j) Conduct Formative Assessments: Use quizzes, interactive activities, and discussions throughout the training to gauge participants' understanding and provide immediate feedback. This helps identify areas where they may need additional support.
k) Perform Summative Assessments: At the end of the training, administer practical exams or projects to assess participants' overall competency. These assessments ensure that participants have mastered the necessary skills and are ready to apply them.
l) Collect Feedback: Gather feedback from participants about the training's effectiveness and areas for improvement. Use this feedback to refine future training sessions and ensure they meet participants' needs.
m) Award Certificates: Provide certificates to participants who successfully complete the training, based on the assessments. This formal recognition of their achievements can boost their confidence and motivation.

5. Assessment, Evaluation, and Certification

Formative Assessments: Throughout the training, participants will complete quizzes and interactive activities to reinforce learning and provide immediate feedback. These assessments help instructors tailor the training to address any gaps in understanding.

Summative Assessments: At the end of each module, participants will undertake practical assessments where they demonstrate their ability to use digital devices and applications. These assessments evaluate the overall competency gained during the training.

Peer and Self-Assessments: Participants will engage in peer assessments and self-assessment exercises to encourage reflective learning and self-improvement. This process fosters a deeper understanding of the material and builds confidence.

Certification: Upon successful completion of the training program, participants will receive a certificate of completion. This certification recognizes their proficiency in using basic digital applications and assistive technologies, and can be used to enhance employment opportunities or further educational pursuits. Moreover, the certificates will be validated by reputable organizations such as the Uganda Communications Commission (UCC) and the Uganda Communications and Universal Service Access Fund (UCUSAF), further attesting to the participants' proficiency and competence in digital skills.

6. Follow-up Support and Resources

Post-Training Support: Ongoing support will be provided to participants through follow-up sessions and access to a dedicated support team. This ensures they continue to apply their skills effectively and receive assistance with any challenges they encounter.

Resource Library: Participants will have access to an extensive library of resources, including tutorials, guides, and troubleshooting tips. This library is regularly updated to include the latest information and tools.

Community of Practice: Participants are encouraged to join a community of practice where they can connect with peers, share experiences, and continue learning. This community provides a platform for networking and mutual support.

Mentorship Program: A mentorship program pairs participants with experienced users of assistive technologies. Mentors provide guidance, answer questions, and offer encouragement as participants continue to develop their skills.

7. Implementation Guidelines

Detailed program planning is essential for successful implementation. This includes setting clear objectives, defining the scope of the training, and preparing all necessary materials and resources.

Instructors will be trained in both the content and delivery methods of the curriculum to ensure they are familiar with the assistive technologies being taught and skilled in adapting instruction to meet diverse needs.

Accessibility Considerations will be put in place to ensure that all training materials and methods are accessible to participants with disabilities. This includes providing materials in multiple formats (e.g., large print, 2D animations, audio) and using accessible e-learning platforms and foster a supportive and inclusive learning environment. Encourage active participation, provide opportunities for feedback, and address any barriers to engagement promptly.

Technology and Equipment necessary for the training will be secured for hands-on practice sessions. This includes digital devices, assistive technologies, and reliable internet access for online components.

Monitoring and Evaluation mechanisms will be put in place to continuously monitor the training program to ensure it meets the needs of participants and achieves its objectives. The use evaluation data to make improvements and adapt the program as needed.

Guiding Resources

1. **General Resources on Digital Skills Training**
    - **a)** Digital Literacy Standards and Frameworks
    - **b) Northstar Digital Literacy:** https://www.digitalliteracyassessment.org/
    - **c) International Society for Technology in Education (ISTE) Standards: https://www.iste.org/standards**
    - **d) European Commission's Digital Competence Framework (DigComp):** https://ec.europa.eu/jrc/en/digcomp
2. **Assistive Technology Resources**
    - a) Web Accessibility Initiative (WAI) by the World Wide Web Consortium (W3C): https://www.w3.org/WAI/
    - b) National Center on Accessible Educational Materials: http://aem.cast.org/
    - c) Job Accommodation Network (JAN): https://askjan.org/
    - d) American Foundation for the Blind (AFB): https://www.afb.org/
    - e) Specific Resources for Microsoft Packages (Word, PowerPoint, and Excel)
    - f) Microsoft Word: https://support.microsoft.com/en-us/word
    - g) Microsoft PowerPoint: https://support.microsoft.com/en-us/powerpoint
    - h) Microsoft Excel: https://support.microsoft.com/en-us/excel
3. **Accessibility Features in Microsoft Office**
    - i) Microsoft Accessibility: https://www.microsoft.com/en-us/accessibility
    - j) Office Accessibility Center: https://support.microsoft.com/en-us/accessibility
4. **Screen Readers and Assistive Technologies**

a) JAWS (Job Access With Speech): https://www.freedomscientific.com/products/software/jaws/

b) NVDA (NonVisual Desktop Access): https://www.nvaccess.org/

c) Microsoft Narrator: https://support.microsoft.com/en-us/windows/use-narrator-to-read-and-write-email-messages-491b82e7-4d0f-d573-3a5b-e6c4d5a5e2dc

d) JAWS Training and Resources: https://www.freedomscientific.com/Training/JAWS-training**; https://www.nvaccess.org/files/nvda/documentation/userGuide.html**

e) **Microsoft Narrator Guide:** https://support.microsoft.com/en-us/help/22808/windows-10-complete-guide-to-narrator
f) **Web Browsers and Accessibility**
5. **Web Browser Guides**
g) **Google Chrome Accessibility: https://support.google.com/accessibility/chrome/answer/7035977?hl=en**
h) **Firefox Accessibility Features: https://support.mozilla.org/en-US/kb/accessibility-features-firefox-make-firefox-and-we**
i) **Microsoft Edge Accessibility: https://support.microsoft.com/en-us/microsoft-edge/accessibility-features-in-microsoft-edge-85ff3b34-3d90-793b-d9e1-1d793d8a07c7**
6. **Specific Applications and Tools for Persons With Disabilities**
a) Assistive Applications
b) **Cash Reader:** https://cashreader.app/
c) **Be My Eyes:** https://www.bemyeyes.com/
d) **Voice Aloud Reader: https://play.google.com/store/apps/details?id=com.hyperionics.avar&hl=en&gl=US**
e) **Google Lens:** https://lens.google/
7. **Social Media**
a) Facebook**: Accessibility resources and guides:** https://www.facebook.com/help/accessibility
b) Twitter**: Twitter's accessibility features and tips:** https://help.twitter.com/en/rules-and-policies/accessibility
c) LinkedIn**: LinkedIn accessibility features:** https://www.linkedin.com/accessibility
d) Instagram**: How to use Instagram with accessibility features:** https://help.instagram.com/292478487812558
8. **Best Practices for Accessible Social Media**
a) Web Accessibility Initiative (WAI)**: Accessible social media guidelines:** https://www.w3.org/WAI/media/av/social-media/
b) Social Media Accessibility Toolkit**: https://www.socialmediaexaminer.com/social-media-accessibility-best-practices-and-tools/**
c) University of Minnesota**: Accessible social media guide: https://accessibility.umn.edu/what-guidelines/social-media**
9. **Assistive Technologies for Social Media**
a) Using Screen Readers with Social Media**: Guides on how screen readers work with various social media platforms: https://www.perkinselearning.org/technology/blog/social-media-and-screen-readers**
b) WebAIM**: Screen reader compatibility with social media platforms: https://webaim.org/articles/voiceover/social_media/**
10. **Online Safety**
c) **StaySafeOnline.org: National Cyber Security Alliance's resources for online safety: https://staysafeonline.org/**
d) **CyberAware: UK government's advice on staying safe online: https://www.ncsc.gov.uk/cyberaware/home**
11. **Accessible Online Safety Tools**

a) Screen Readers and Online Security**:**

b) Freedom Scientific**: Tips for using JAWS with online security: https://www.freedomscientific.com/learn/training/jaws-tutorials/**

c) NVDA**: Security tips and best practices:** https://www.nvaccess.org/