Curriculum on Education on implementation of assistive technologies in adult education

I E D A

Introduction

To participate fully in the educational process on an equal footing, people with disabilities need different forms of adaptation. One of those forms is assistive technology (AT), which includes all technological solutions designed to enable, support or enhance the functioning of a person with a disability. In formal education, ATs are implemented through organised mechanisms within the education system, while in the field of non-vocational education there is no systematic support for the implementation and implementation of ATs. To adequately integrate people with disabilities into their non-vocational programs, providers of this type of education must have basic knowledge of AT.

The aim of this curriculum is to provide a systematic overview of assistive technologies regarding the type of disability. It will also provide insights into procurement and training opportunities for AT. An integral part of the curriculum is universal design, an idea that promotes the creation of technology accessible to all regardless of the (non) existence of disability.

This curriculum is intended primarily for professionals in the field of non-formal adult education who wish to teach people with disabilities and organisations providing non-formal education to adults who wish to create and implement inclusive educational programs. The curriculum enhances the competencies of experts to understand, assess and implement assistive technologies, but also indirectly strengthens the capacities of organisations through the transfer of knowledge about mobilising their own and acquiring external resources to secure and implement AT. The content of the curriculum can also be useful for other professionals who work with people with disabilities in their professional work, such as integration experts, managers, HR experts, etc.

The innovativeness of the curriculum is reflected in suitability for organisations and professionals without prior knowledge of working with people with disabilities. Therefore, its structure and content are simple, systematic and practically applicable.

The curriculum consists of the following modules

- Introduction to Assistive Technology: Basics, principles and examples of assistive technology tools (4 hours)
- Assistive Technology in educational context: types and implementation (6 hours)
- Selection of the Right Assistive Technology Tool (4 hours)

- Finding and mobilising resources for implementation of assistive technology (2 hours)
- Universal Design: the principles and implementation in educational context (5 hours)
- Using new technologies for supporting the needs of persons with disabilities (3 hours)

Introduction to Assistive Technology: Basics, principles and examples of assistive technology tools

Learning Objectives

- Definition of Assistive Technology (AT)
- Overview of AT for users with disabilities
- How AT works?
- Examples from daily practice
- Myths around AT
- The importance of accessible environment (both digital and physical world)
- Some key tips how to create digital accessible environment
- Some key tips how to create built accessible environment

Learning Outcomes

By the end of this module, learners will

- be able to articulate a clear definition of assistive technology and explain its crucial role in enhancing the quality of life and independence of individuals with disabilities.
- gain the ability to recognize and categorize a wide variety of assistive technologies tailored to meet the specific needs of individuals with various types of disabilities.
- be proficient in exploring and evaluating assistive technology solutions that utilize information and communication technology, including their features and benefits.

- have a comprehensive understanding of non-ICT-based assistive technology solutions, including their functionalities and their suitability for different disability contexts.
- acquire knowledge of the underlying principles and mechanisms by which assistive technology enhances accessibility and promotes independence for individuals with disabilities.
- become familiar with practical examples of assistive technology tools by engaging in hands-on demonstrations, fostering a deeper understanding of their operation and utility.
- be equipped to identify and dispel common misconceptions and myths about assistive technology, promoting a more informed and inclusive perspective.
- recognize the significance of ensuring accessibility in both digital and physical environments and understand the role assistive technology plays in achieving this goal..
- understand the importance of creating an accessible environment, both digitally and physically.

Assistive Technology in educational context: types and implementation

Learning Objectives

- Assistive Technology in Education
    - Benefits and practical use of AT in non-formal adult education for people with disabilities
    - Implementation of Assistive Technology in Education
    - Benefits of assistive technology for students with diverse learning needs
- Examples of AT Implementation

Learning Outcomes

By the end of this module, learners will be able to

- define and understand the concept of assistive technology in an educational context.
- recognize the importance of assistive technology in supporting students with diverse learning needs.

- identify and categorise various types of assistive technology.
- evaluate the suitability of different assistive technology solutions for specific learning needs.
- understand the implementation process of assistive technology in an educational setting.
- apply best practices for integrating assistive technology into teaching and learning activities.
- create an inclusive and accessible learning environment using assistive technology.
- evaluate the impact of assistive technology on students' engagement and learning outcomes.

Selection of the Right Assistive Technology Tool

Learning Objectives

- Evaluating the needs
- Obtaining/acquiring the device
- Providing necessary modification and customization
- Training the student to use the device
- Training for professionals
- Coordinating therapies, interventions, or services with assistive technology
- Maintenance, repair, and replacement as needed

Learning Outcomes

By the end of this module, participants will be able to

- understand the importance of selecting the right assistive technology tool for individuals with disabilities.
- conduct a comprehensive evaluation of the needs of individuals with disabilities in their customary environments.
- identify and acquire appropriate assistive technology devices through purchasing, leasing, or other means.
- customise and modify assistive technology equipment to meet the specific needs of individuals.

- provide basic training and technical assistance to individuals and their families in the use of assistive technology devices.
- deliver training and technical assistance to professionals and service providers involved in the major life functions of individuals with disabilities.
- coordinate the use of assistive technology devices with other therapies, interventions, or services.
- understand the importance of maintenance, repair, and replacement of assistive technology devices.

Finding and mobilising resources for implementation of assistive technology

Learning Objectives

- Understand the importance of finding and mobilising resources for assistive technology implementation.
- Explore national and international resources available for assistive technology.
- Share and learn from good practices in different countries for successful implementation.
- Discover open-source and low-cost solutions for assistive technology.
- Evaluate professional tools and services provided by third-party companies.
- Develop strategies for effectively mobilising resources to support assistive technology implementation.

Learning Outcomes

By the end of this module, learners will

- be able to articulate the significance of resource acquisition in ensuring successful assistive technology implementation, including its impact on accessibility and usability.
- have a basic knowledge of the national and international resources that can be leveraged to support assistive technology projects, including an understanding of their eligibility criteria and application processes.
- be able to identify and discuss best practices in assistive technology implementation from diverse global contexts, enabling them to apply relevant insights to their own projects.

- have the ability to identify, evaluate, and potentially adapt or implement open-source and low-cost assistive technology solutions that meet specific needs and budget constraints.
- will be proficient in assessing the suitability of professional tools and services offered by third-party companies, considering factors such as cost-effectiveness, compatibility, and user-friendliness for assistive technology projects.
- will be capable of formulating and implementing resource mobilization strategies, which may include grant proposal writing, partnership development, and budget planning, to ensure the successful implementation of assistive technology projects.

Universal Design: the principles and implementation in educational context

Learning Objectives

- The theory of Universal Design for Learning (UDL)
- The fundamental principles of UDL
- UDL strategies and techniques
- UDL implementation in Adult Education

Learning Outcomes

By the end of this module, learners will be able to

- understand the theory behind UDL and its applicability to meeting the needs of diverse learners
- recognize that UDL supports educators to intentionally design learning experiences that are inclusive for each and every learner
- understand the fundamental principles of UDL
- apply the UDL principles to the components of a curriculum
- use guidelines, strategies, and techniques for applying UDL principles to improve lesson design, instruction and support high levels of engagement and achievement for all learners
- apply UDL strategies in practice
- demonstrate and apply knowledge of UDL practices and approaches in Adult Education settings

- plan lessons with UDL principles in practice

Using new technologies for supporting the needs of persons with disabilities

Learning Objectives

- Universal design and the new technologies
- The assistive potential of the new technologies
- Implementation of new technologies in Adult Education

Learning Outcomes

By the end of this module, participants will be able to

- understand the connection between Universal Design and the new technologies
- identify the new technologies relevant for advanced assistive products and applications
- understand the role of enabling technologies
- describe the main characteristics of Internet of Things
- describe the main characteristics of Artificial Intelligence
- describe the main characteristics of 3D printing
- describe the main characteristics of Virtual Reality
- describe the main characteristics of Augmented Reality
- describe the main characteristics of Robotics
- describe the main characteristics of Brain - Computer Interface
- dentify new technologies that can be used to increase accessibility of adult training
- recognize the assistive potential of Internet of Things
- recognize the assistive potential of Artificial Intelligence
- recognize the assistive potential of 3D printing
- recognize the assistive potential of Virtual Reality
- recognize the assistive potential of Augmented Reality
- recognize the assistive potential of Robotics
- understand how the new technologies can make Adult Education more inclusive
- identify new technologies relevant for Adult Education

- apply strategies for using new technologies to make the curriculum more effective
- use new technologies to remove instructional barriers
- use new technologies for creating an inclusive educational environment
- use new technologies to create and implement inclusive educational programs