

IEDA

INCLUSIVE EDUCATION: Ensuring participation  
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# **Module 3: Selection of the Right Assistive Technology Tool**

Curriculum on Education on implementation of assistive  
technologies in adult education



# Module 3: Selection of the Right Assistive Technology Tool

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In Module 3, which delves into the Selection of the Right Assistive Technology (AT) Tool, the focus revolves around comprehensive aspects such as assessing needs, acquiring the appropriate device, customization, user training, professional education, coordination with therapies, and ensuring maintenance. The module underscores the significance of evaluating the requirements of students with disabilities, including functional assessments within their typical environments. It also highlights the steps involved in obtaining, modifying, and customizing AT devices, followed by essential training for both students and professionals. Moreover, it emphasizes the coordination of assistive technology with various interventions and services, as well as the vital aspect of maintaining, repairing, or replacing devices when necessary.

## Evaluating the needs

Evaluating the needs of individuals is a critical step in the process of selecting the right assistive technology (AT) tool. This step ensures that the chosen AT tool aligns with the individual's specific requirements, challenges, and goals. Here's a deeper look into the process of evaluating needs:

### **1. Individual Assessment:**

- Start by conducting a comprehensive assessment of the individual's abilities, disabilities, and learning preferences. This assessment may involve interviews, observations, questionnaires, and consultations with specialists.

### **2. Identify Challenges:**

- Clearly identify the challenges or barriers that the individual faces in the learning or daily living context. These challenges could be related to communication, mobility, reading, writing, cognitive processing, or sensory perception.

### **3. Understand Goals:**

- Determine the individual's goals and objectives for participating in non-formal adult education. Understand what they aim to achieve, whether it's improving specific skills, accessing information, or enhancing overall independence.

### **4. Learning Environment:**

- Consider the learning environment where the AT tool will be used. Whether it's a classroom, workshop, online course, or vocational setting, the environment may influence the choice of AT tool.

### **5. Existing Skills and Knowledge:**

- Assess the individual's existing technological skills and knowledge. This helps in selecting an AT tool that matches their proficiency level and minimizes the learning curve.

### **6. Collaborative Approach:**

- Collaborate with the individual, educators, family members, and any relevant specialists to gather diverse perspectives on the individual's needs and preferences.

### **7. Addressing Multiple Needs:**

- Some individuals may have multiple disabilities or challenges. Ensure that the chosen AT tool addresses all relevant needs to provide comprehensive support.

### **8. Communication Style:**

- Determine the individual's preferred communication style. This could be verbal, sign language, augmentative and alternative communication (AAC), or written communication.

### **9. Sensory Preferences:**

- Consider the individual's sensory preferences. Some individuals may prefer auditory input, while others may be more receptive to visual or tactile stimuli.

**10. Mobility and Motor Skills:** - Assess the individual's mobility and motor skills. This is important when selecting AT tools that involve physical interaction, such as touchscreens, adaptive keyboards, or switch devices.

**11. Cognitive Abilities:** - Understand the individual's cognitive abilities and learning style. Choose AT tools that match their cognitive processing speed, memory capacity, and information organization preferences.

**12. Long-Term Needs:** - Anticipate the individual's future needs and consider whether the chosen AT tool can adapt and grow with them as their skills and requirements evolve.

**13. Emotional and Social Factors:** - Consider the emotional and social aspects of using AT. Ensure that the chosen tool promotes the individual's self-esteem, confidence, and social interactions.

**14. Document Findings:** - Document the assessment results, needs, preferences, and any recommendations in a clear and organized manner. This documentation serves as a reference point throughout the selection process.

## Obtaining/acquiring the device

Obtaining or acquiring the right assistive technology (AT) device is a crucial step in the process of selecting and implementing AT tools for individuals in non-formal adult education. This step involves identifying the appropriate device, securing its availability, and ensuring its compatibility with the individual's needs and environment. Here's more information about this step:

### 1. Research and Selection:

- Based on the assessment of the individual's needs, preferences, and goals, choose the specific AT device that best meets those requirements. Consider factors such as functionality, features, and user-friendliness.

### 2. Consultation and Recommendations:

- Seek input from educators, specialists, and professionals experienced in assistive technology. Their expertise can help you make an informed decision about the most suitable device.

### 3. Device Types:

- Depending on the individual's needs, the AT device could range from hardware devices (e.g., speech-generating devices, adapted keyboards, switches) to software solutions (e.g., screen readers, text-to-speech software, communication apps).

### 4. Vendor and Supplier Research:

- Research reputable vendors, suppliers, and manufacturers that provide the chosen AT device. Consider factors such as reliability, customer support, warranty, and the availability of training resources.

### 5. Funding and Budget:

- Determine the funding source for acquiring the AT device. Explore options such as government programs, educational institutions, grants, insurance, or personal funds. Ensure that the chosen device fits within the allocated budget.

## **6. Trials and Demonstrations:**

- Whenever possible, arrange for trials or demonstrations of the AT device. This allows the individual to test the device's compatibility with their needs and provides an opportunity to provide feedback.

## **7. Compatibility and Integration:**

- Ensure that the chosen AT device is compatible with the individual's existing devices and software. It should seamlessly integrate into the individual's learning and living environment.

## **8. Training and Technical Support:**

- Check if the vendor provides training sessions or resources to help the individual learn how to effectively use the AT device. Additionally, ensure that technical support is available for troubleshooting and assistance.

## **9. Customization and Settings:**

- Evaluate the level of customization that the AT device offers. It should allow the individual to tailor settings to their specific needs and preferences.

**10. Accessibility and Accessibility Features:** - Verify that the AT device adheres to accessibility standards and offers features that accommodate the individual's specific disability. This could include compatibility with screen readers, high contrast options, and adjustable font sizes.

**11. Acquisition Process:** - Initiate the acquisition process by contacting the chosen vendor or supplier. Follow their guidelines for placing orders, payment, and delivery.

**12. Delivery and Setup:** - Ensure that the AT device is delivered to the individual in a timely manner. Provide assistance with setting up and configuring the device to their preferences.

**13. User Training:** - Organize training sessions for the individual to learn how to effectively use the AT device. This training could be provided by the vendor, specialists, or educators.

**14. Ongoing Support:** - Establish a plan for ongoing support, including addressing any technical issues, providing updates, and assisting the individual in maximizing the benefits of the AT device.

**15. Evaluation and Adaptation:** - Continuously assess the effectiveness of the chosen AT device in meeting the individual's needs. Be open to making adjustments or exploring alternative devices if necessary.

# Providing necessary modification and customization

Providing necessary modification and customization is a crucial part of the process when selecting the right assistive technology (AT) tool for individuals in non-formal adult education. Every individual's needs are unique, and the AT tool should be tailored to match those needs and preferences. Here's more information about this step:

## **1. Individualized Approach:**

- Recognize that one-size-fits-all solutions may not meet the diverse needs of individuals. Customization ensures that the AT tool is optimized for the specific individual's abilities and requirements.

## **2. Customizable Features:**

- Choose AT tools that offer a range of customizable features, including font sizes, color schemes, navigation preferences, voice settings, and more.

## **3. Accessibility Settings:**

- Explore the accessibility settings within the chosen AT tool. These settings often provide options for adjusting display, sound, input methods, and interaction modes to suit the individual's needs.

## **4. Personalized Profiles:**

- Many AT tools allow users to create personalized profiles. Encourage the individual to set up a profile with their preferred settings and configurations.

## **5. Adaptation to Learning Style:**

- Customize the AT tool to match the individual's preferred learning style. For example, adjust the reading speed of a text-to-speech tool or set up reminders for specific tasks.

## **6. Input Methods:**

- Depending on the individual's motor skills and preferences, customize the input methods of the AT tool. This could involve configuring touch gestures, keyboard shortcuts, voice commands, or alternative input devices.

## **7. Symbol and Icon Choices:**

- If the AT tool uses symbols, icons, or visual elements, ensure that they are chosen based on the individual's familiarity and understanding.

## **8. Communication Preferences:**

- For communication-related AT tools, customize the language, speech rate, and vocabulary to match the individual's communication preferences.

## **9. Trial and Adjustment:**

- During the initial stages of using the AT tool, work closely with the individual to fine-tune the settings. Encourage them to provide feedback and make necessary adjustments based on their experience.

**10. Regular Review:** - Periodically review the customization settings to ensure that they continue to meet the individual's changing needs. Update settings as necessary to accommodate progress and evolving preferences.

**11. Collaboration and Training:** - Collaborate with educators, specialists, and the individual themselves to determine the optimal customization settings. Provide training on how to adjust settings independently.

**12. Emotional Considerations:** - Be sensitive to the emotional impact of customization. Some individuals may prefer tools that closely resemble mainstream options, while others may appreciate highly personalized configurations.

**13. Accessibility Testing:** - Test the customized AT tool with the individual in real-world scenarios. This helps identify any potential issues or adjustments that need to be made.

**14. Document Customization Choices:** - Keep clear documentation of the customization choices made for each individual. This serves as a reference for ongoing support and future adaptations.

# Training the student to use the device

Training the student to use the selected assistive technology (AT) device is a crucial step in the process of ensuring successful integration and optimal benefits. Proper training empowers the individual to effectively use the AT tool, promoting independence and confidence. Here's more information about this step:

## **1. Orientation to the Device:**

- Begin with an orientation session to introduce the individual to the features, functions, and basic operation of the AT device. Familiarize them with the user interface and controls.

## **2. Tailored Training Plan:**

- Develop a training plan that aligns with the individual's learning style, needs, and preferences. Consider their existing technological skills and comfort level.

## **3. Step-by-Step Approach:**

- Break down the training into manageable steps. Begin with foundational skills and gradually progress to more advanced functionalities.

## **4. Hands-On Practice:**

- Incorporate hands-on practice sessions where the individual can interact with the AT device under guidance. Engaging in practical exercises reinforces learning.

## **5. Demonstration:**

- Demonstrate how each feature of the AT device works. Show examples of how the tool can be used in various contexts relevant to the individual's goals.

## **6. Real-Life Scenarios:**

- Provide scenarios that mimic real-life situations where the AT tool would be useful. This helps the individual see the practical applications of the device.

## **7. Personalized Settings:**

- Guide the individual through setting up the device with personalized preferences and configurations, such as font sizes, voices, and accessibility settings.

## **8. Practice Tasks:**

- Assign practice tasks that progressively build the individual's skills. For instance, if the AT tool is for writing, assign tasks of increasing complexity.

## **9. Troubleshooting Skills:**

- Teach the individual how to troubleshoot common issues they might encounter while using the AT device. This promotes self-sufficiency and problem-solving skills.

**10. Repetition and Reinforcement:** - Encourage repeated practice to reinforce learning. Over time, the individual's proficiency with the AT tool will improve.

**11. Ongoing Support:** - Offer ongoing support as the individual becomes more comfortable with the AT device. Address any questions or challenges they encounter during their learning journey.



**12. Peer Learning:** - Facilitate peer learning by connecting the individual with others who have successfully integrated similar AT tools into their routines. Peer insights can be invaluable.

**13. Training Materials:** - Provide written or visual training materials that the individual can refer to outside of training sessions. These materials serve as a reference as they continue to learn and practice.

**14. Review and Feedback:** - Periodically review the individual's progress and skills. Gather feedback on their experiences using the AT device and make adjustments as needed.

**15. Encourage Exploration:** - Encourage the individual to explore the AT device beyond the immediate training scope. This can foster curiosity and help them discover additional functionalities.

**16. Build Confidence:** - Celebrate milestones and achievements in using the AT device. Building the individual's confidence is essential for independent and effective use.

## Training for professionals

Training professionals who work with individuals using assistive technology (AT) tools is a crucial part of the process to ensure effective implementation and support. Professionals, such as educators, therapists, and support staff, play a significant role in guiding individuals in the use of AT devices. Here's more information about this step:

### 1. Understanding Professionals' Roles:

- Clarify the roles and responsibilities of professionals involved in the implementation of AT tools. This could include educators, therapists, IT specialists, and support staff.

### 2. Tailored Training Approach:

- Develop a training approach that is tailored to the specific needs and expertise of the professionals. Training content can vary based on their roles and familiarity with AT.

### 3. Introduction to AT Concepts:

- Start with an overview of assistive technology concepts, benefits, and its significance in enhancing learning and accessibility.

### 4. In-Depth AT Tool Training:

- Provide detailed training on the specific AT tools that will be used. Cover features, functionalities, settings, customization, and troubleshooting.

## **5. Hands-On Practice:**

- Incorporate practical sessions where professionals can interact with the AT tools themselves. Practical experience enhances understanding and confidence.

## **6. Case Studies and Scenarios:**

- Present case studies and scenarios that professionals are likely to encounter in their roles. Discuss how AT tools can be effectively integrated into these scenarios.

## **7. Collaboration and Communication:**

- Emphasize the importance of collaboration and clear communication among professionals to ensure cohesive support for individuals using AT tools.

## **8. Addressing Individual Needs:**

- Teach professionals how to assess individual needs and tailor the selection and implementation of AT tools to match those needs.

## **9. Customization Techniques:**

- Provide guidance on how professionals can customize AT tools for individual users. This includes adjusting settings, personalization, and creating user profiles.

**10. Integration with Curriculum:** - For educators, demonstrate how AT tools can be seamlessly integrated into the curriculum to enhance learning experiences for students with disabilities.

**11. Collaboration with Families:** - Teach professionals how to collaborate with families or caregivers to ensure a consistent approach to using AT tools across different settings.

**12. Addressing Challenges:** - Discuss common challenges professionals might encounter when implementing AT tools and provide strategies to overcome them.

**13. Ethical Considerations:** - Address ethical considerations related to the use of AT tools, including privacy, consent, and respecting the individual's preferences.

**14. Ongoing Support:** - Offer ongoing support to professionals as they become more experienced in working with AT tools. This could involve regular check-ins, refresher training, or a point of contact for questions.

**15. Stay Updated:** - Encourage professionals to stay updated on advancements in assistive technology and best practices through professional development opportunities and resources.

**16. Feedback and Improvement:** - Gather feedback from professionals about their training experience and their insights on how the training process can be improved.

## Coordinating therapies, interventions, or services with assistive technology

Coordinating therapies, interventions, or services with assistive technology (AT) is a crucial aspect of the process to ensure that individuals with disabilities receive comprehensive support that integrates both AT tools and other therapeutic or educational interventions. Here's more information about this step:

### 1. Collaborative Approach:

- Emphasize collaboration among professionals, including educators, therapists, speech-language pathologists, occupational therapists, and others involved in providing services to the individual.

### 2. Individualized Plans:

- Develop individualized plans that outline how AT tools will be integrated with other therapies and interventions. Each plan should be tailored to the individual's needs and goals.

### 3. Goal Alignment:

- Ensure that the goals set for AT tool usage align with the broader goals of therapies and interventions. Coordination ensures a holistic approach to the individual's progress.

### 4. Regular Communication:

- Establish channels of communication among professionals involved. Regular updates and discussions help in sharing insights, progress, challenges, and adjustments.

### 5. Data Sharing:

- Share data and observations about the individual's progress across therapies. This facilitates informed decision-making and the identification of areas that need further attention.

## **6. Training Across Professions:**

- Provide cross-training opportunities where professionals from different fields can learn about each other's expertise and how AT tools can enhance their respective interventions.

## **7. Joint Sessions:**

- Organize joint sessions where professionals collaborate to deliver integrated interventions. This might involve therapy sessions that incorporate AT tools to enhance learning or communication.

## **8. Individualized Strategies:**

- Develop strategies that combine the strengths of different interventions with the capabilities of AT tools. For example, a speech therapy session might use a communication app to support language development.

## **9. Progress Monitoring:**

- Continuously monitor the individual's progress across interventions. Regular assessments help in evaluating the effectiveness of the coordinated approach.

**10. Adjustments and Modifications:** - Be open to making adjustments based on the individual's progress. If certain strategies are not yielding desired outcomes, professionals can collaborate to modify the approach.

**11. Goal Review Meetings:** - Schedule regular meetings where professionals review and adjust the individual's goals based on their progress and changing needs.

**12. Family Involvement:** - Involve the individual's family or caregivers in the coordination process. They can provide valuable insights and support at home that complement the interventions.

**13. Resource Sharing:** - Share resources, strategies, and successful practices among professionals. This collective knowledge benefits everyone involved in the individual's support network.

**14. Holistic Development:** - Ensure that the coordinated approach focuses on holistic development, addressing cognitive, physical, communication, and social aspects of the individual's needs.

**15. Documentation:** - Document the coordinated plan, interventions, progress, and adjustments. This documentation serves as a reference and helps in tracking the individual's journey.

**16. Continuous Learning:** - Encourage professionals to engage in continuous learning about AT tools and interdisciplinary collaboration. Professional development helps in refining their skills.

## Maintenance, repair, and replacement as needed

Maintenance, repair, and replacement are critical considerations in the process of selecting the right assistive technology (AT) tool for individuals with disabilities. Ensuring that AT tools are well-maintained, promptly repaired when needed, and replaced when necessary is essential for the continued effectiveness and longevity of the tools. Here's more information about this step:

### 1. Maintenance Guidelines:

- Provide individuals, caregivers, and professionals with clear guidelines on how to properly maintain the AT tool. This includes cleaning, storage, charging, and regular checks.

### 2. Regular Check-Ups:

- Schedule periodic check-ups to assess the condition of the AT tool. This helps identify any potential issues before they escalate.

### 3. Preventive Measures:

- Educate users about preventive measures to minimize wear and tear. For example, using screen protectors, keyboard covers, or protective cases for devices.

### 4. Technical Support:

- Offer a point of contact for technical support to address any issues or questions that arise during the use of the AT tool.

### 5. Repair Services:

- Establish a clear process for repairing AT tools when they malfunction or experience damage. This might involve working with authorized repair centers or technicians.

### 6. Timely Repairs:

- Prioritize timely repairs to minimize disruptions in the individual's use of the AT tool. A malfunctioning tool could significantly impact their learning and communication.

## **7. Replacement Plan:**

- Develop a plan for replacing AT tools that are beyond repair or have reached the end of their useful life. This plan should outline the steps for acquiring a new tool.

## **8. Assessment for Replacement:**

- Regularly assess the individual's needs and the functionality of the AT tool. Determine if the tool still meets their needs or if an upgraded or different tool is required.

## **9. Funding Considerations:**

- Ensure that funding sources are available for repairs and replacements. Explore insurance coverage, warranties, and funding programs for assistive technology.

**10. Data Transfer:** - If the AT tool stores data or personalized settings, ensure that the process of transferring data to a new device is smooth.

**11. Training on New Tools:** - When replacing a tool, provide training on how to use the new device effectively. This helps the individual transition seamlessly to the new tool.

**12. Environmental Considerations:** - Consider the individual's environment when selecting AT tools. For instance, if the tool is used outdoors, ensure it's durable and resistant to environmental factors.

**13. Document Repairs and Replacements:** - Keep clear records of repairs, replacements, and maintenance activities. This documentation helps in tracking the history of the AT tool.

**14. Collaboration with Vendors:** - Work closely with vendors and suppliers to access repair services and replacement options when needed.

**15. Continuous Assessment:** - Continuously assess the AT tool's condition and the individual's evolving needs. Regularly review the maintenance and replacement plan to ensure it remains relevant.

**16. User Empowerment:** - Empower users to be proactive in reporting issues, seeking assistance, and following maintenance guidelines. This helps in prolonging the life of the AT tool.