AT Implementation in the School Setting: Struggles & Successes

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Learning Objectives

• Describe the 3 barriers to successful AT implementation in their own school setting.

• Identify 3 practical and realistic solutions to improve AT implementation in their school setting.

• Discuss AT implementation with other professionals and the related research, literature and tools available to help to improve AT implementation and integration across the curriculum.
GOAL OF AT IN SCHOOLS
Goal of AT in Schools

- Support achievement of goals
- Expand educational/vocational options
- Increase participation in educational settings and activities
- Increase productivity
- Increase independence
- Increase quality of life
- www.texasat.net
BARRIERS TO SUCCESSFUL AT IMPLEMENTATION
Barriers to Successful AT Implementation

• Implementation is expected to be smooth and effective without addressing specific components in a plan. Team members assume that everyone understands what needs to happen and knows what to do.

• Plans for implementation are created and carried out by one IEP team member.

• The team focuses on device acquisition and does not discuss implementation.
Barriers to Successful AT Implementation

• An implementation plan is developed that is incompatible with the instructional environments.

• No one takes responsibility for the care and maintenance of AT devices and so they are not available or in working order when needed.

• Contingency plans for dealing with broken or lost devices are not made in advance.
Barriers to Successful AT Implementation

• Lack of appropriate staff training and support, negative staff attitudes, inadequate assessment and planning processes, insufficient funding, difficulties procuring and managing equipment, and time constraints are often barriers to effective AT integration within schools (Colpey & Ziviani, 2004).
AT Process in Schools
Each Step Builds on Previous Steps

• Consideration of AT
• AT Assessment
• AT Implementation
• Evaluation of AT Effectiveness
• Improved AT Implementation
AT Consideration in Schools

Consideration Outcomes:

• Student independently accomplishes tasks in all instructional areas using **standard classroom tools**. No assistive technology is required.

• Student accomplishes tasks in all instructional areas with **accommodations and modifications**. No assistive technology is required.

AT Consideration in Schools

Consideration Outcomes:

• Student accomplishes tasks in all instructional areas with currently available assistive technology. Assistive technology is required.

• Student does not accomplish tasks in all instructional areas. Required assistive technology devices are known. Assistive technology is required.

• Student does not accomplish tasks in all instructional areas. Appropriate assistive technology solutions are not known to the IEP team. Obtain additional assistance through consultation or refer for an assistive technology evaluation.

AT Process in Schools
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• Improved AT Implementation
AT Assessments in Schools

• SETT is an acronym for Student, Environments, Tasks and Tools.
• The SETT Framework is based on the premise that in order to develop an appropriate system of Tools (supports –devices, services, strategies, accommodations, modifications, etc.) teams must first develop a shared understanding of the student, the customary environments in which the student spends time, and the tasks that are required for the student to be able to do or learn to do to be an active participant in the teaching/learning processes that lead to educational success.
• When the needs, abilities, and interests of the Student, the details of the Environments, and the specific Tasks required of students in those environments are fully explored, teams are able to consider what needs to be included in a system of tools that is Student-centered, Environmentally useful, and Tasks-focused.
• Created by: Joy Zabala, Ed. D., ATP
AT Process in Schools
Each Step Builds on Previous Steps

- Consideration of AT
- AT Assessment
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- Improved AT Implementation
Purpose of AT Implementation in schools

• For students to use AT to actively participate in curricular and extracurricular activities [www.texasat.net](http://www.texasat.net)

• AT implementation pertains to the ways that assistive technology devices and services, are delivered and integrated into the student’s educational program.

• AT implementation involves people working together to support the student using assistive technology to accomplish expected tasks necessary for active participation and progress in customary educational environments. [www.quiat.org](http://www.quiat.org)
Planning for AT Implementation

Who should be involved in the AT implementation planning process?

• Implementation is on the shoulders of those who work with the student every day.
  The student must have every opportunity possible to use the technology or it will fail.

• Classroom teacher is the key player when planning and implementing AT – he/she is the one who controls the opportunities to use it on a daily basis.

• The Special Ed Assistant implements the technology based on the decisions made by the classroom teacher on when and how the technology will be used.

• SET-BC [www.setbc.org]
Planning for AT Implementation

What can teams bring to AT implementation plan meetings to help the meetings go well?

• Information on the tasks that the student is required to accomplish
  – curriculum content
  – daily schedule

• Evidence of student’s past performance
  – videos
  – work samples

• SET-BC [www.setbc.org]
Planning for AT Implementation

• There needs to be a direct connection between the technology selected and the tasks identified in the student’s IEP
  – What barriers are there which prevent the student from completing those tasks?
  – What technology will help overcome those barriers?
• Teams should not be selecting technology “out of context” without considering whether or not that technology addresses student need and tasks required (e.g. simply requesting a laptop)
  – What are the goals on the IEP?
  – Where do we see the problems in meeting those goals?
  – What technology do we think might help them overcome the problems?
• SET-BC www.setbc.org
Planning for AT Implementation

• Planning is critical for successful implementation
• Creating a classroom environment that supports technology integration is key
• Planning ahead of time for the practical aspects of technology use can make implementation go more smoothly
  – when will it be used?
  – where will it be kept?
  – who is responsible?
• SET-BC [www.setbc.org](http://www.setbc.org)
Planning for AT Implementation

- **Learning** how to use the software or hardware **in advance** is very helpful.
- Planning ahead of time for **data collection** to determine if the technology solution is working is very important.
- Only way to really know if a particular technology will work for a particular student in a particular setting is to **trial it first**.
- Planning how to **engage and motivate** the student to use the technology (often based on his/her interests) is also important.
Develop AT Implementation Plan

Effective assistive technology implementation is only as good as the plan that guides that implementation.

Successful implementation plans address four main areas:
1. equipment support tasks
2. staff and student training
3. methods for integrating technology into the student’s program
4. techniques for assessing the effectiveness of the AT implementation

• SET-BC [www.setbc.org](http://www.setbc.org)
Develop AT Implementation Plan

Successful implementation plans are developed and carried out collaboratively by the student’s school based team identifying:

• an implementation plan coordinator
• team members who are responsible for specific aspects of the plan
• a reasonable implementation timeline
• SET-BC [www.setbc.org]
Develop AT Implementation Plan

• Successful implementation plans arise from the goals established in the student’s IEP (Individualized Education Plan) and proceed based on assessment and performance data

• SET-BC [www.setbc.org](http://www.setbc.org)
Develop AT Implementation Plan

Successful implementation plans emphasize realistic integration of the technology in the student’s curriculum and daily activities so that

• implementation of the technology proceeds at a comfortable pace for both the student and school based team

• other, non technology based tools and strategies are employed when more appropriate
AT Process in Schools
Each Step Builds on Previous Steps

• Consideration of AT
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• Improved AT Implementation
QIAT: Successful AT Implementation...

- Follows a collaboratively developed plan
- Is based on evaluation data and present levels of performance
- Shares responsibilities
- Occurs across environments and activities
- Encourages multiple means of participation
- Includes training for student, staff, family, and others
- Includes management and maintenance of materials
- Changes based on formative evaluation data
- [www.qiat.org](http://www.qiat.org)
How Do We Know We Have Success?

Measure successful AT Implementation and efficient use of AT in the school setting through:

• educational / functional outcomes
• data collection
• video recordings
• self assessments
• questionnaires
Quality Indicators for Assistive Technology Implementation

Assistive technology is integrated into the curriculum and daily activities of the student across environments.

• Intent: Assistive technology is used when and where it is needed to facilitate the student’s access to, and mastery of, the curriculum. Assistive technology may facilitate active participation in educational activities, assessments, extracurricular activities, and typical routines.
Quality Indicators for Assistive Technology Implementation

Assistive technology implementation proceeds according to a collaboratively developed plan.

• Intent: Following IEP development, all those involved in implementation work together to develop a written action plan that provides detailed information about how the AT will be used in specific educational settings, what will be done and who will do it.
Quality Indicators for Assistive Technology Implementation

Persons supporting the student across all environments in which the assistive technology is expected to be used share responsibility for implementation of the plan.

• Intent: All persons who work with the student know their roles and responsibilities, are able to support the student using assistive technology, and are expected to do so.
Quality Indicators for Assistive Technology Implementation

Persons supporting the student provide opportunities for the student to use a variety of strategies—including assistive technology—and to learn which strategies are most effective for particular circumstances and tasks.

• Intent: When and where appropriate, students are encouraged to consider and use alternative strategies to remove barriers to participation or performance. Strategies may include the student’s natural abilities, use of assistive technology, other supports, or modifications to the curriculum, task or environment.
Quality Indicators for Assistive Technology Implementation

Learning opportunities for the student, family and staff are an integral part of implementation.

• Intent: Learning opportunities needed by the student, staff, and family are based on how the assistive technology will be used in each unique environment. Training and technical assistance are planned and implemented as ongoing processes based on current and changing needs.
Quality Indicators for Assistive Technology Implementation

Assistive technology implementation is initially based on assessment data and is adjusted based on performance data.

- **Intent:** Formal and informal assessment data guide initial decision-making and planning for AT implementation. As the plan is carried out, student performance is monitored and implementation is adjusted in a timely manner to support student progress.
Assistive technology implementation includes management and maintenance of equipment and materials.

• Intent: For technology to be useful it is important that equipment management responsibilities are clearly defined and assigned. Though specifics may differ based on the technology, some general areas may include organization of equipment and materials; responsibility for acquisition, set-up, repair, and replacement in a timely fashion; and assurance that equipment is operational.
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Practical and realistic solutions to improve AT implementation

• Assessing the needs of the students and their education team in regards to identification of AT solutions and required training can help set a solid baseline to then identify growth and competence.

• Creating a team approach to AT implementation can help with the integration of the AT throughout the student’s day across the curriculum.
Improve AT Implementation and Integration across the curriculum

Assessment of IEP Team AT Readiness & Competencies

• KWL Charts
• Don Johnston’s Shift AT Implementation Framework
• ATCollective.com
• Wisconsin Assistive Technology Initiative Competency Self-Rating
• Professional Development/Training
AT IMPLEMENTATION FOR STUDENTS WITH COMPLEX COMMUNICATION NEEDS
AT Implementation for Students with Complex Communication Needs

• Students with Complex Communication Needs present with a unique set of challenges for AT Implementation as often more than one technology (software, hardware, interface) is being recommended.
AT Implementation for Students with Complex Communication Needs

• AT should be introduced slowly to not overwhelm the student or the team.
• Priorities should be established to help focus the team on one intervention and outcome at a time.
• Data should be collected to help identify if the AT trials are effective and if not adjustments to features and settings can be made to increase success or other tools can be explored.
AT Implementation for Students with Complex Communication Needs

• For example if a student with CCN has new AT to assist in written production.
• The goal may be for them to write a sentence with their AT to demonstrate knowledge of material they have read.
• They may be delayed in reading and decoding skills, therefore text to speech may be a good solution to increase their access to instructional material.
AT Implementation for Students with Complex Communication Needs

• But if they have never been exposed to material at this level then their comprehension skills may not be at age level and they may require other tools / supports such as embedded questions or prompts (pre-highlighted text), modified text, visual supports, use of manipulatives.
AT Implementation for Students with Complex Communication Needs

• They may also require increased time and repetition of material before they grasp the intended concepts.

• This repetition is best presented in multimedia formats to help them generalize their knowledge (matching game, videos, etc).
AT Implementation for Students with Complex Communication Needs

• When asked to ‘show what they know’ they may be delayed in sentence construction and prioritizing the information they had heard.

• They may require increased scaffolding for sentence production such as word and phrase banks, forced order sentence construction, errorless opportunities, text to speech feedback and/or the use of visuals to support their newly acquired knowledge.
AT Implementation for Students with Complex Communication Needs

- Now they are finally at the point of using their AT to write and answer comprehension questions...
- This process can be overwhelming for the student and the team.
AT Implementation for Students with Complex Communication Needs

- **Time and effort** needs to be accounted for when designing and modifying curriculum for students with CCN.
- When we are **self assessing** if the AT is being implemented successfully we really must identify where in the process is the **breakdown**, and how can we make it a **seamless integration experience** for the student with CCN.
SUCCESSFUL AT IMPLEMENTATION IS A TALL ORDER!
CASE STUDY
Case Study #1: Referral

• D. is 5th grader in a public school with specialized instruction for reading, writing, and math.

• Reason for AT Referral:
  – D. was having trouble with **writing** and wanted to be more independent
  – D. was having trouble **accessing instructional material** above her 3rd grade reading level
Case Study #1: Assessment

- D. is very motivated by technology
- Her team feels her academic potential has not yet been reached
- D. has spastic CP and functions best in her pwc w/left hand joystick; although pwc navigating skills have not generalized (yet) to cursor control d/t decreased visual perceptual skills and delayed literacy skills
- Has the ability to use a switch at left side of her head and benefits from auditory scan
- D.’s LTGs are to have full computer access, currently wants to focus on academics and being more independent in her classroom so she can ‘keep up’
Case Study #1: AT Recommendations

• Current school funded Windows Laptop
• Buddy Button
• Modular Hose Switch Mount
• Clicker 6 PC Software
• CrickBox & Don Johnston USB Switch Interfaces
• Cross Scanner
• Bookshare’s ReadOutLoud
• VoiceDream Reader App
Case Study #1: AT Implementation

Build Capacity at School

• Assess Staff Needs at IEP Meeting
• Conducted Staff Training on Clicker 6 during Professional Development Time for current and next year’s IEP teams
• Creation of Cheat Sheets and photo/video examples of switch / interface setup
• Creation of templates and shared successful activities
Case Study #1: AT Implementation

Facilitate Success for Student

• Multiple training sessions with D., her mom, and her 1:1 aide

• Creation of engaging non academic activities to encourage AT use and practice process

• Progression to academic materials with increased scaffolding to facilitate success as cognitive load increased

• Develop ‘just right’ templates for D. to provide consistency and decrease anxiety as she begins to functionally utilize AT in school settings
Case Study #1: AT Effectiveness

Circle the Wagons!

• Provide frequent communication with the team to gauge the success of the seamless integration
• Identify breakdowns and try to be proactive in addressing them
• Take subjective and / or objective data to identify if D. is making increased progress towards her goals
CASE STUDY #1: IMPLEMENTATION SUCCESS
IT TAKES A VILLAGE!
Questions & Comments

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References

• Georgia Project for Assistive Technology
• Wisconsin Assistive Technology Initiative (WATI)
• National Assistive Technology Research Institute (NATRI)
• Quality Indicators for Assistive technology Services (QIAT)