

# **Assistive Technology for Individuals with Learning Disabilities**



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A.T.P.  
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This presentation  
can be found on the website

[www.SpecialTeaching.com](http://www.SpecialTeaching.com)

# Assistive Technology

What is it?

Who needs it?

Why have it? Who determines it?

Who pays for it?

A.T. assessment

What is important to know?

Where do I find out more about it?

# What is Assistive Technology?

Any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized,

that is used to increase, maintain, or improve functional capabilities of children with disabilities.

# Categories of Assistive Technology

## Aids for Daily Living:

Self help aids for use in activities such as eating, bathing, cooking, dressing, toileting, home maintenance, etc.

## Augmentative or Alternative Communication (AAC):

Electronic and non-electronic devices that provide a means for expressive and receptive communication for persons with limited or no speech.

## Computer Access:

Input and output devices (voice, Braille), alternate access aids (headsticks, light pointers), modified or alternate keyboards, switches, special software, etc. that enable persons with disabilities to use a computer.

**This category includes speech recognition software and writing assistance.**

## Environmental Control Systems:

Primarily electronic systems that enable someone with limited mobility to control various appliances, electronic aids, security systems, etc. in their room, home or other surroundings.

## Home/Worksite Modifications:

Structural adaptations, fabrications in the home, worksite or other area (ramps, lifts, bathroom changes) that remove or reduce physical barriers for an individual with a disability.

# Categories of Assistive Technology

## Prosthetics and Orthotics:

Replacement, substitution or augmentation of missing or malfunctioning body parts with artificial limbs or other orthotic aids (splints, braces, etc.). **There are also prosthetics to assist with cognitive limitations or deficits, including audio tapes or pagers (that function as prompts or reminders).**

## Seating and Positioning:

Accommodations to a wheelchair or other seating system to provide greater body stability, trunk/head support and an upright posture, and reduction of pressure on the skin surface (cushions, contour seats, lumbar).

## Aids for Vision Impaired:

Aids for specific populations including magnifiers, Braille or speech output devices, large print screens, closed circuit television for magnifying documents, etc.

## Aids for Hearing Impaired:

Aids for specific populations including assistive listening devices (infrared, FM loop systems), hearing aids, TTYs, visual and tactile alerting systems, etc.

## Wheelchairs/Mobility Aids:

Manual and electric wheelchairs, mobile bases for custom chairs, walkers, three-wheel scooters and other utility vehicles for increasing personal mobility.

## Vehicle Modifications:

Adaptive driving aids, hand controls, wheelchair and other lifts, modified vans, or other motor vehicles used for personal transportation

## Supplementary aids and services

- These services include aids, services and other supports, and are to be made available in regular education classes and "other education-related settings" to enable children with disabilities to be educated with their nondisabled peers to the maximum extent appropriate. 20 U.S.C. § 1401(29).
- AT devices and services would be included in this definition. These supports are to be provided in other settings, in addition to the classroom, such as extracurricular activities. 34 C.F.R. § 300.306.
- A student who needs an alternative communication system, for example, should be able to use that system in after school and other nonacademic functions. As noted above, any such use must be listed on the IEP. 20 U.S.C. 1414(d)(1)(A)(iii).

# What are Assistive Technology Services?

- The **evaluation** of the (technology) needs of the child, including a functional evaluation of the child in the child's customary environment;
- Purchasing, leasing or otherwise providing for the **acquisition** of AT devices for individuals with disabilities;
- **Selecting**, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing AT devices;
- **Coordinating** and using other therapies, interventions, or services with AT devices, such as those associated with existing education and rehabilitation plans and programs;
- **Training and technical assistance for a child** with a disability or, if appropriate, that child's family;
- **Training or technical assistance for professionals** (including individuals providing education or rehabilitation services), employers, or other individuals who provide services to, employ, or otherwise are substantially involved in the major life functions of a child with a disability. [20 U.S.C. 1401 (2)]

# Assistive Technology is a TOOL

- A.T. is not a cure to all of a students problems
- A.T. does not fix or repair, but aids and assists
- It is not perfect and often requires modification and customization
- It is strongly dependent on the Users and Use



# DLS #1

There have been no significant court or educational decisions defining what is appropriate and necessary for providing assistive technology

# Considering who needs it - I.E.P. students

- Every I.E.P. must consider Assistive Technology for each student (I.D.E.A.)
- “We considered it and they don’t need it” is being challenged with greater frequency. Having to state why or what has been tried is something that C.S.E.s need to be able to do.
- Assistive Technology can be a method for allowing a student to remain in a less restrictive environment

# Legal Justification of A.T.

## Illinois District Court Ruling 2002

- In developing a student's IEP, the district is required to "... consider whether the child requires assistive technology devices and services." 20 U.S.C. Sec 1414(d). -Wrightslaw
- Several witnesses testified that Kevin should have been assessed for and given AT. Despite this requirement to consider AT, "the District did not 'consider' let alone provide Kevin with AT." Kevin's case manager "was not even familiar with what constituted AT."

The Court wrote, "After reviewing Kevin's IEPs and the above testimony, this Court finds that the District failed to consider or provide Kevin with AT in violation of the IDEA."

# Considering who needs it- Physically and mentally challenged students

- Assistive Technology can be part of seating systems, powered mobility, augmentative communication devices, special switches, assisted listening devices, with commercially available or adapted items.
- These technology solutions are designed to improve an individual's educational abilities to learn, communicate, work and interact

# Considering who needs it- Individuals with processing and attending deficits

- Assistive Technology for these populations can be alternative learning devices, or compensatory aids. A.T. for these populations often derive from ingenuity or necessity.
- These technology solutions are designed to enhance or unlock an individual's educational potentials to learn, communicate, work, and interact.

# Accommodations and Compensations

Modifications- services and equipment made to make tasks easier for an individual

Compensations- services and equipment used to equalize individuals to work alongside their peers



# Considering who needs it-

## Non I.E.P. students with needs

- Modifications and accommodations under Federal 504 statutes can be requested on an individual basis.
- These can be hazy in interpretation with wide variations of use under special education services.
- These are sometimes appeasement or “transitional” services for students moving out of or remaining as non-I.E.P. based learners
- As a part of Response to Intervention activities, assistive technology can be used as a method of intervention

# Considering who needs it-

## Regular education students

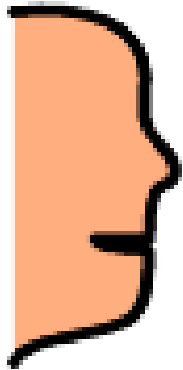
- Assistive Technology modifications are a method for creating UNIVERSAL DESIGN
- Assistive Technology can benefit many students
- Assistive Technology can be purchased for one, and used for others



# Assessment

How

and by



Whom?

# Who Determines it?

- Determining Assistive Technology needs a **generalists approach** instead of a *specialists slant*
- A **team** of specialists working **transdisciplinary** to focus on what an individual needs
- Experience Individual(s) trained to use methodology that incorporates multiple aspects and fields of study

## DLS #2

- There are no regulations or requirements, or official certification for assistive technology evaluations and services in New York.

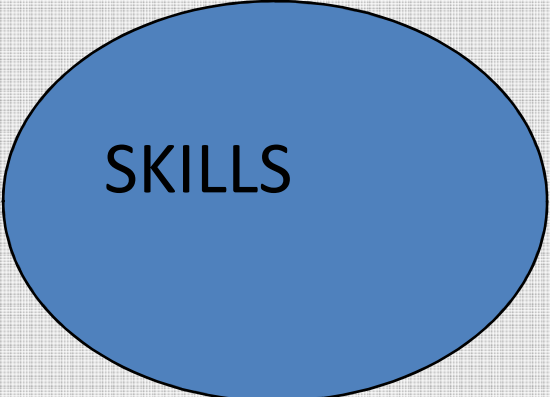


# How should they determine it?

- ❑ S.E.T.T. methodology developed by Joy Zabala
- ❑ Learning Styles Dunne and Dunne
- ❑ Integrated Practices- WATI, Virginia, VESID
  
- ❑ Evaluation should look at the whole student for their whole day
- ❑ Educational relevance and need should be the focus, not the Assistive Technology
- ❑ **The 4 R's of Evaluation**
  - Realistic      Rational      Responsible      Reactive

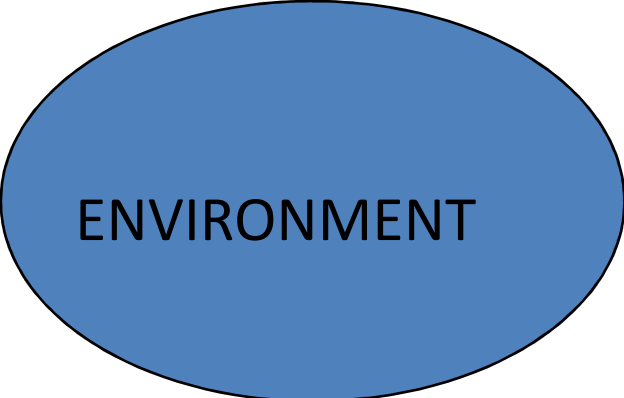
## S.E.T.T.

- Situation
- Environment
- Task
- Technology



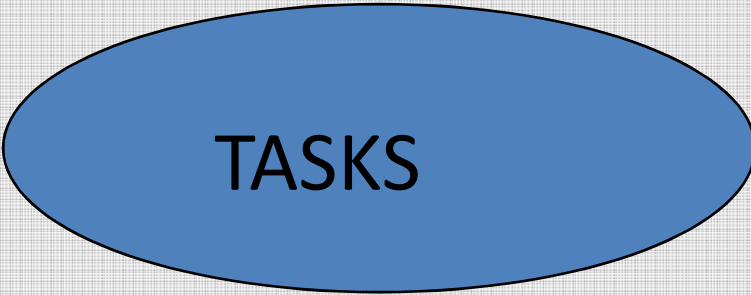
SKILLS

Evaluation



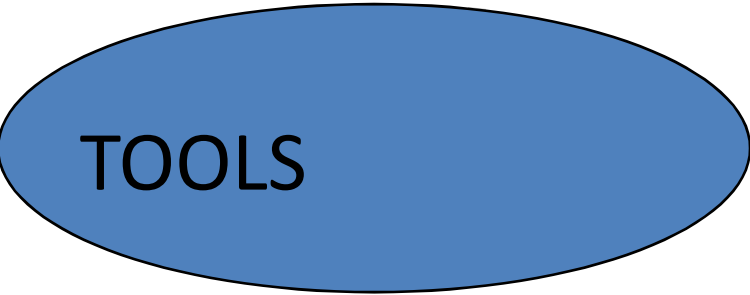
ENVIRONMENT

Observation



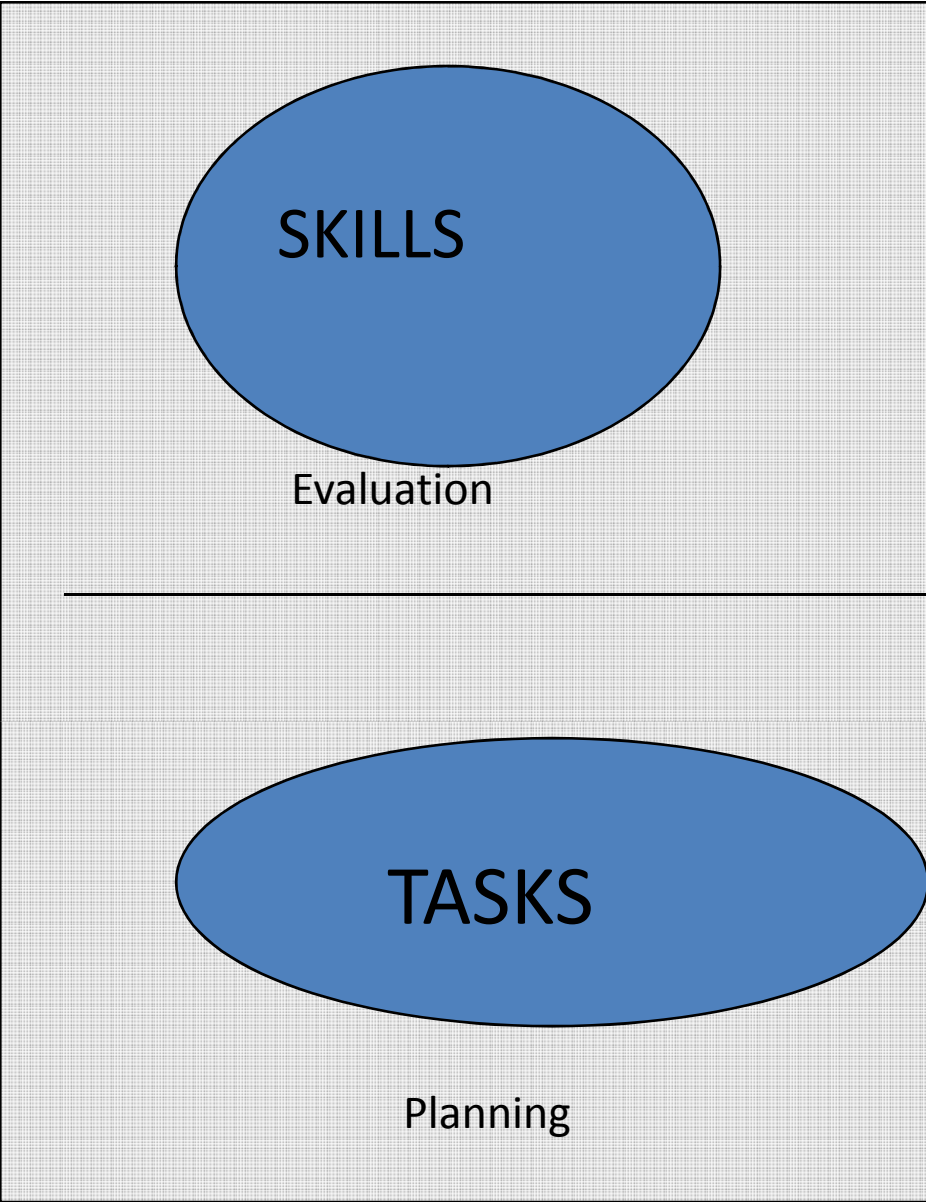
TASKS

Planning



TOOLS

Modification



# S.E.T.T.

- **Situation** Writing
- **Environment** Inclusion Classroom -eighth grade
- **Task** Developing a Persuasive Presentation
- **Technology** Inspiration PowerPoint Word Q

# Something to think about...

Educational assistive technology

Educational technology

Rehabilitation technology

There is a difference...

- Depending on the usage, an item may be useful for a student but may not qualify as medically or educationally necessary.
- There may be different recommendations for educational or therapeutic settings.

# Something to Remember ...

Assistive technology

Educational technology

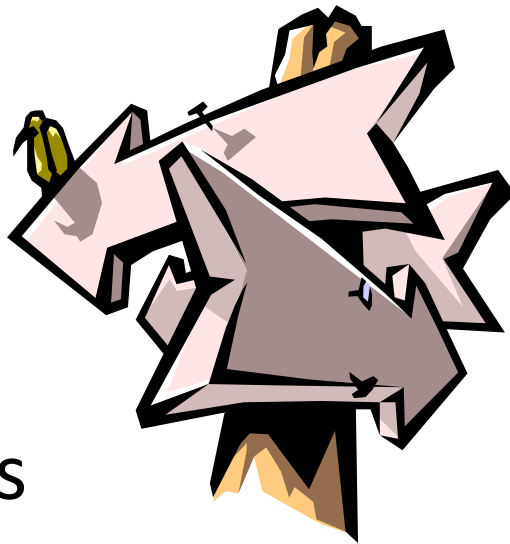
Rehabilitation technology

- ❑ There is a difference...
- ❑ Some devices and software that may be appropriate for working with a student have to be appropriate for educational reasons to be acquired through the C.S.E. process.
- ❑ Versatility and universal design might actually work against an item for particular funding sources like Durable Medical Equipment.
- ❑ Costs and Funding are not SUPPOSED to matter.

# Feature Match

## Individual

- Needs
- Abilities
- Expectations

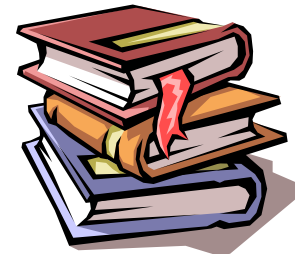


## Technology

- ✓ Input
- ✓ Processing
- ✓ Output
- ✓ Other Properties

# Types of Supports and Features

- Reading Support
- Numeric Assistants
- Study and Work Supports
- Writing Assistants
- Organizational & Scheduling Assistants



# Tasks

- Reading
  - Comprehending
  - Writing
  - Expressing Ideas
- Calculating
  - Following a Schedule
  - Organizing
  - Learning & Studying

# Tool Types

- Word Processing
  - Portable Word Processing
  - Rate Enhancements
  - Electronic Books
  - Text Scanners & Readers
- Calculators
  - Schedulers
  - Reminders
  - Study Tools
  - Specialty Items:
    - Cognitive Retraining Tools
    - Decoding/Vocabulary Support

# C.S.E. Quality Checks

What are the individual's current unmet needs for access to communication, writing, or educational materials?

What are the short and long term educational goals addressing A.T. utilization?

What are the daily educational demands which require the use of assistive technology?

Have the appropriate team members, including parents, been involved in the assessment process?

# Quality Checks

What are the features of the technology that would assist the individual in meeting daily classroom demands?

Why is the selected equipment more appropriate than other alternatives?

Have all of the students environments been considered?

# Appropriateness

Does the selected Interventions reflect a least restrictive intervention strategy?

Is the will the individual physically manage the equipment in all environments?

Is the A.T. necessary to achieve educational goals?

How will the equipment be integrated into the students day?

# Training Independence

How will the use of the assistive technology promote inclusion of the student into activities in the school and community?

Which members of the education team will be trained to use the equipment?

How will the student be trained to use the equipment?

How will the family be involved with student and the equipment?

# Getting what you pay for

- While good assessment practices should take place for every I.E.P. student, evaluation should only happen if the technology that is being considered justifies the cost of the evaluation.
- Use this rule of thumb- If it costs more than you would be willing to pay out of pocket, then it should be listed on the I.E.P.
- \$1000. ceiling. If the anticipated costs will be over \$1000. a formal evaluation should be considered

## DLS # 3

- A laptop with software can be useful for numerous A.T. adaptations that can reduce costs and add versatility.
- An articulated classroom program that *reasonably* demonstrates access and availability for student technology needs, can and should, be used prior to individual equipment requests

# Is Assistive Technology evaluation all about all high tech?

- Assistive Technology is for greater independence, productivity, and participation .
- It can be simple or complex. It can include Velcro, pencil grips, egg timers, adapted desks equipment and recreation activities
- Toys, E.C.U.s and E.A.D.L.s can have € relevance.



## A.T. and Computers

- A.T. does not have to be new or the best
- A.T. only needs to cover new and unique
- A.T. Should be practical and transparent
- Laptops and networks can be good solutions, or large problems
- Educational environments can determine the kinds of A.T. that are appropriate
- Training for all and acceptance by the student are critical

# Medicaid Medicare and Private Insurance

“Durable Medical Equipment” funding is available but is primarily for A.A.C. devices.

The litmus test is that the item should be of little use to anyone except the individual for whom it was intended.

Schools are not bound by this requirement, and any AAC considerations should be a part of the evaluation process

# Who Pays for Assistive Technology?

- If Assistive Technology is being used as part of a student's educational program AND specified in their I.E.P., then the district is obligated to provide it as part of FAPE.
- This can include the purchase, maintenance, training, and availability.

# Who Pays for Assistive Technology?

- This does not preclude a school district from aiding and encouraging outside funding for individual needs.
- Districts can include Assistive Technology as part of technology funding, state and federal grants and aid categories.
- Rentals and trial periods can often be used prior to purchase.

# DLS # 4

- Ignorance can be bliss
- Most C.S.Es and parents have little knowledge or experience with A.T.
- A.T. is easily (and often) delayed to require fact finding and additional information
- It is easier to get a \$500 adapted toilet, then a \$50 software program



# Ownership of Equipment

When a school district or agency purchases AAC or A.T. for use by an individual it is the property of the school not the individual.

Equipment can go home or be purchased for home equipment if it is relevant to the students educational program (TEST- Will it be used for homework or for additional training of school based usage.)

This can be problematic if the individual moves out of the district.

# DLS #5

□ A.T. is usually cheaper than people



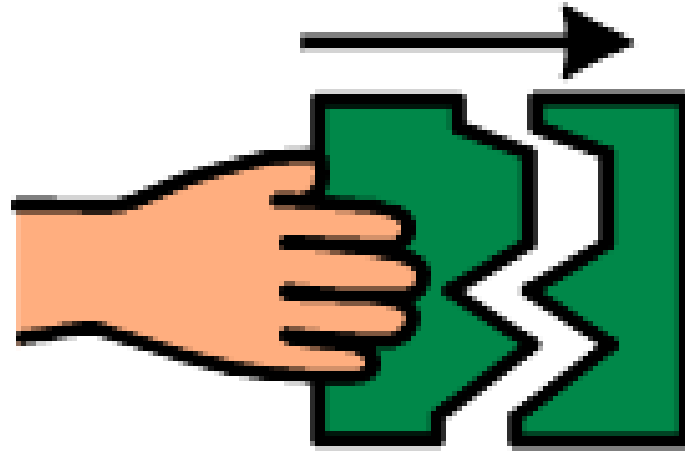
□ Reduced related services, Aides, scribes, class placement can be bargaining chips for Assistive Technology

□ Reduction of one individual aide to a shared aide, pull out service to push in service, or movement to an LRE could fund a laptop for each student in a classroom

# Improving Assistive Technology Success

10 things to look at with A.T.

- Matching Teacher and Student



# Improving Assistive Technology Success and Use

10 things to look at with A.T.

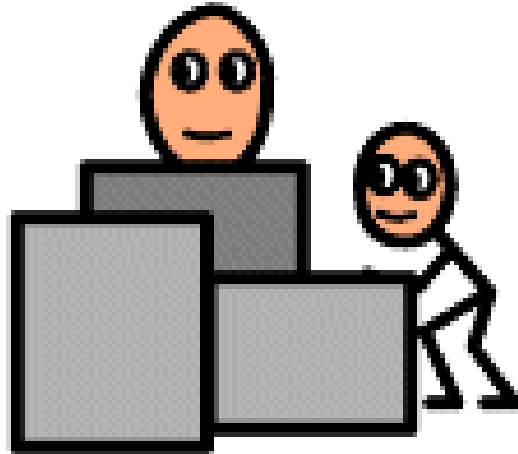
- ❑ Match Teacher and Student
- ❑ Match Teacher and Technology



# 10 things to look at with A.T.

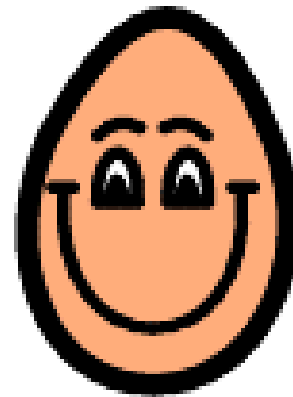
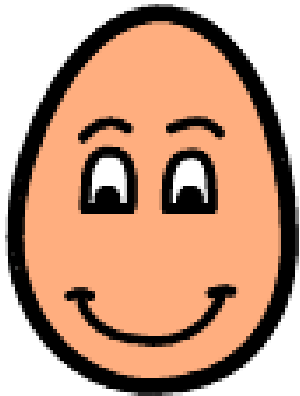
10 things to look at with A.T.

- ❑ Match Teacher and Student
- ❑ Match Teacher and Technology
- ❑ Evaluate the Technology Integration



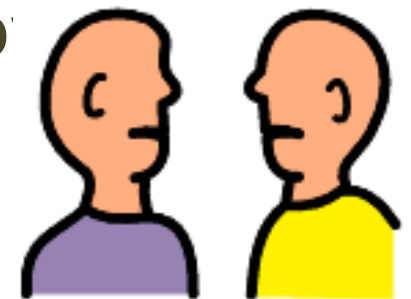
# Improving Assistive Technology Success

- 10 things you can do with A.T.
- Match Teacher and Student
- Match Teacher and Technology
- Evaluate Technology Integration
- Look for Best Practices



# Improving Assistive Technology Success

- 10 things you can do with A.T.
- Match Teacher and Student
- Match Teacher and Technology
- Evaluate Technology Integration
- Promote Best Practices
- Use Technology Yourself
- Get the Hatfields to talk to the McCo



# Improving Assistive Technology Success

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- Promote Best Practices
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- Get the Hatfields to talk to the McCoys
- Pilot



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- Promote Best Practices
- Use Technology Yourself
- Get the Hatfields to talk to the McCoys
- Pilot
- Share what you know

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- Share what you Know
- Promote Universal Design

# Improving Assistive Technology Success

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- Match Teacher and Technology
- Evaluate Technology Integration
- Promote Best Practices
- Use Technology Yourself
- Get the Hatfields to talk to the McCoys
- Pilot
- Share what you know
- Universally Design
- Get Good Help

# Where do I find out more about it?

- [www.SpecialTeaching.com](http://www.SpecialTeaching.com) My home site
- <http://seriweb.com/tech.htm> SPED Technology
- <http://www.vats.org/downloads/ATFunding.doc>
- Virginia Comprehensive guide to AT
- <http://www.casecec.org/> SPED Administrators
- <http://wrightslaw.com/> SPED Advocates

# SpecialTeaching.com FAQ

- [What is Assistive Technology?](#)
- [What is an Independent Assistive Technology Evaluation?](#)
- [Is Assistive Technology just AAC and is it all High Tech?](#)
- [Are there different types of Assistive Technology?](#)
- [What are the regulations school personnel should know about?](#)
- [Who pays for Assistive Technology?](#)
- [What should an A.T. evaluation consider?](#)
- [Who Evaluates a student for Assistive Technology?](#)
- [What Quality should be seen in Individuals working with Assistive Technology?](#)
- [What questions should be asked when reviewing an Assistive Technology Evaluation?](#)

# SpecialTeaching.com FAQ

- [What is an A.T.P.?](#)
- [Does an Item need to be purchased for only one individual?](#)
- [Who is Responsible for the Assistive Technology Device?](#)
- [Is a school district responsible for providing AT in the home if a child is home tutored?](#)
- [What School Documents are necessary for A.T.?](#)
- [If my child has a computer in their classroom, do they have Assistive Technology?](#)
- [When is Assistive Technology Appropriate?](#)
- [When is it Necessary?](#)
- [Assistive Technology Glossary](#)
- [Webliography](#)

Additional Questions?



# Match Teacher and Student

- Push for placement of students with teachers who will be willing to adapt and incorporate technology into their teaching practices
- Team teachers on grade levels and inclusive settings should have technology competency considered as a criteria for their placements

# Match Teacher and Technology

- Support teachers who use the technology with software, blank CD's, online subscriptions
- Push for transparent classroom technology initially to teachers who will use it for numerous students, instead of “floating” technical units
- Reward those who get training, and use the technology.

# Evaluate Technology Integration

- Are collaboration and technology integration district focus areas. Do they walk the walk?



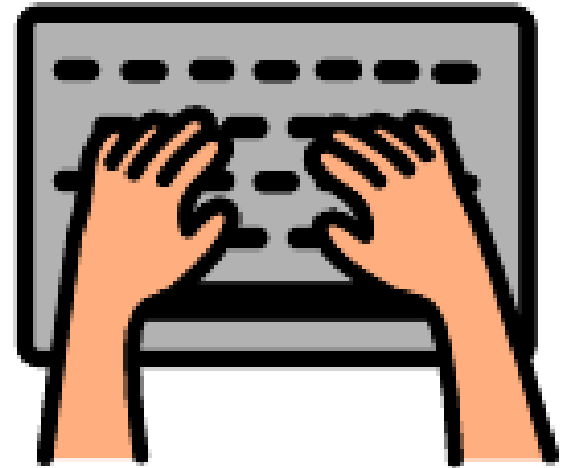
- Is there clear evidence of technology integration in classroom assignments, projects, displays?
- Does the teacher embrace or rebel against the increase of technology for administrative purposes (e-mails, classroom data management, reporting and evaluating)

# Promote Best Practices

- Work with teachers and students to create showcases of technology usage
- Contribute and participate in classroom technology usage
- E-mail articles and web links that promote knowledge and discussion
- Be willing to go green and expect electronic

# Improving Assistive Technology Success

- 10 things you can do with A.T.
- Match Teacher and Student
- Match Teacher and Technology
- Evaluate Technology Integration
- Promote Best Practices
- Use Technology Yourself



# Use Technology Yourself

- E-mail critical (but not vital) information with return receipts and acknowledgements
- Use a laptop and organize yourself digitally
- Get into good back up habits

# Get the Hatfields to talk to the McCoys

- Work to get P.P.S. directors, Curriculum, and Technology administrators to talk and integrate activities and budgets
- Work with parents and teachers to accept more shared resources instead of the focus only on individual services
- Demonstrate with data (and visuals) programs that work to school boards and other stakeholders

# Pilot

- Try a software program or equipment in a single classroom, or pull out setting, or at home and set up a schedule of interventions sequentially
- Expect a learning curve to optimum usage.  
Anticipate failure and monitor modification
- Be a “Pilot” and advocate technology consideration. Look for 30 day trials and “field test” before or during the process.

# Pay it Forward

- Work with grade levels or related services divide and conquer tasks and workloads with technology
- Build a PowerPoint Library of lessons and student projects. Brand them and share them
- Attend workshops, demos, trials of promising items. Share their knowledge.
- Join Listservs and mail lists that reliable resources and expertise available
- Use Textbook Websites and Resources.

# Universally Design

- Place classrooms with special needs close to the action, not out of sight (and out of mind)
- Ask about books on tape, appropriate video adaptations, alternate and support materials
- Normalize adaptations with adjustable furniture, limited barriers, classroom equipment
- Changes for some can benefit others and helps systemic review

# Get Good Help

- Find resources both human and electronic
- Know what you don't know and be willing to admit it, and learn about it
- Expect evaluations, products, and education to be adapted to student needs. Know how to test this.

Be willing to take some slings and arrows for taking some risks and not having all the answers.