

Early Childhood Assistive Technology

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ECAT Advocate

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Early Childhood Intervention Doctoral Consortium
A.J. Pappanikou Center for Excellence in Developmental
Disabilities at UConn Health



Explore and learn about assistive technology and a framework for using it

Define the context and process of deciding how to use assistive technology with young children

Gain knowledge to feel confident enough to be an assistive technology advocate for young children



So, What is Assistive Technology?



Small group discussion

In your own words, create and write down a group definition of
Assistive Technology

Identify a person to record the definition – we will come back to
these definitions later

ASSISTIVE DEFINITION?

Poll 1

TECHNOLOGY

https://www.youtube.com/watch?v=Giiz81_uzK8

ASSISTIVE TECHNOLOGY

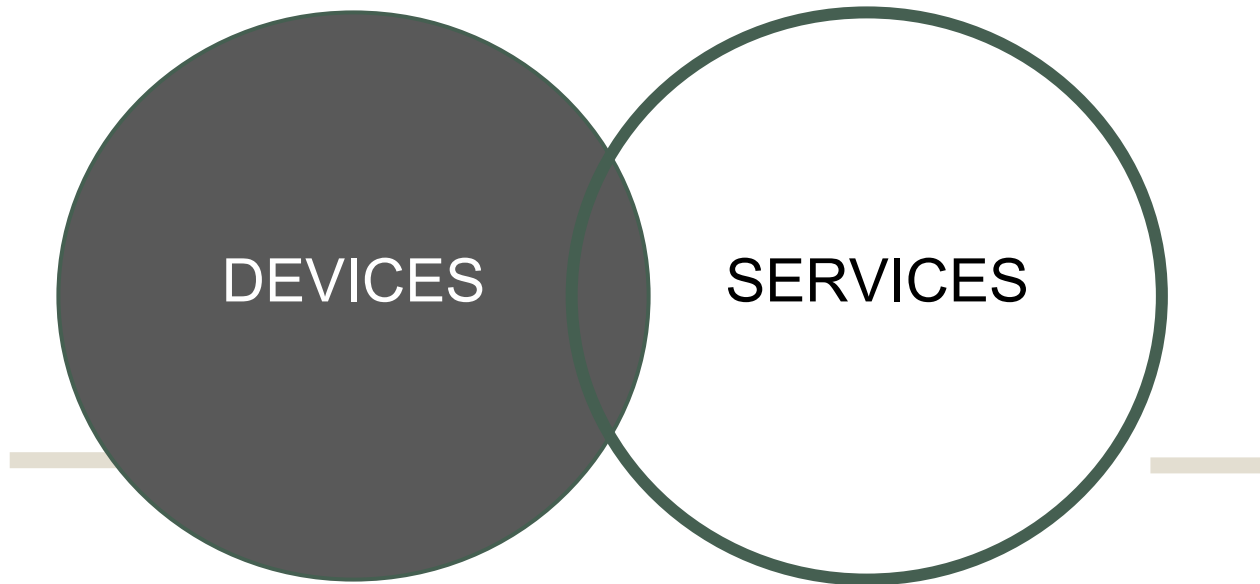
#ECtech16 -

<https://www.youtube.com/hashtag/ectech16>

Panel Discussion - Research To Practice

https://www.youtube.com/watch?v=lbWSgin9gak&list=PLRt8N3Siu_0h9IIJe9_E5VVbxdEQFxUyD&t=1096s

Assistive Technology + Young Children



Individuals with Disabilities Education Act (IDEA) of 2004

Is this an Assistive Technology Device?

- . A = YES
- . B = NO
- . C = It depends
- . D = I'm not sure

#



- A = YES
- B = NO
- C = It depends
- D = I'm not sure

1



- . A = YES
- . B = NO
- . C = It depends
- . D = I'm not sure

2



A = YES
B = NO
C = It depends
D = I'm not sure

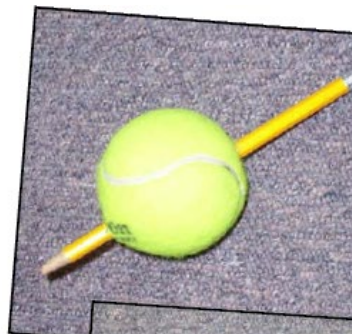
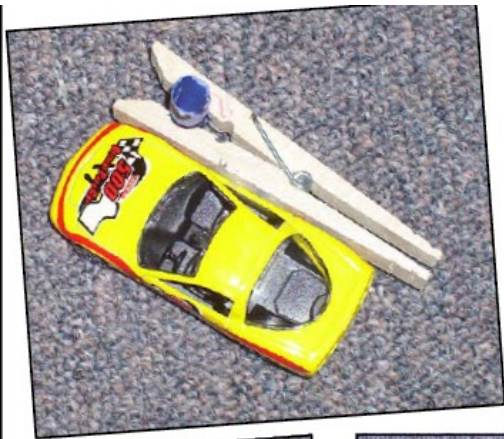
3

PODD



A = YES
B = NO
C = It depends
D = I'm not sure

4



- A = YES
- B = NO
- C = It depends
- D = I'm not sure

5



A = YES

B = NO

C = It depends

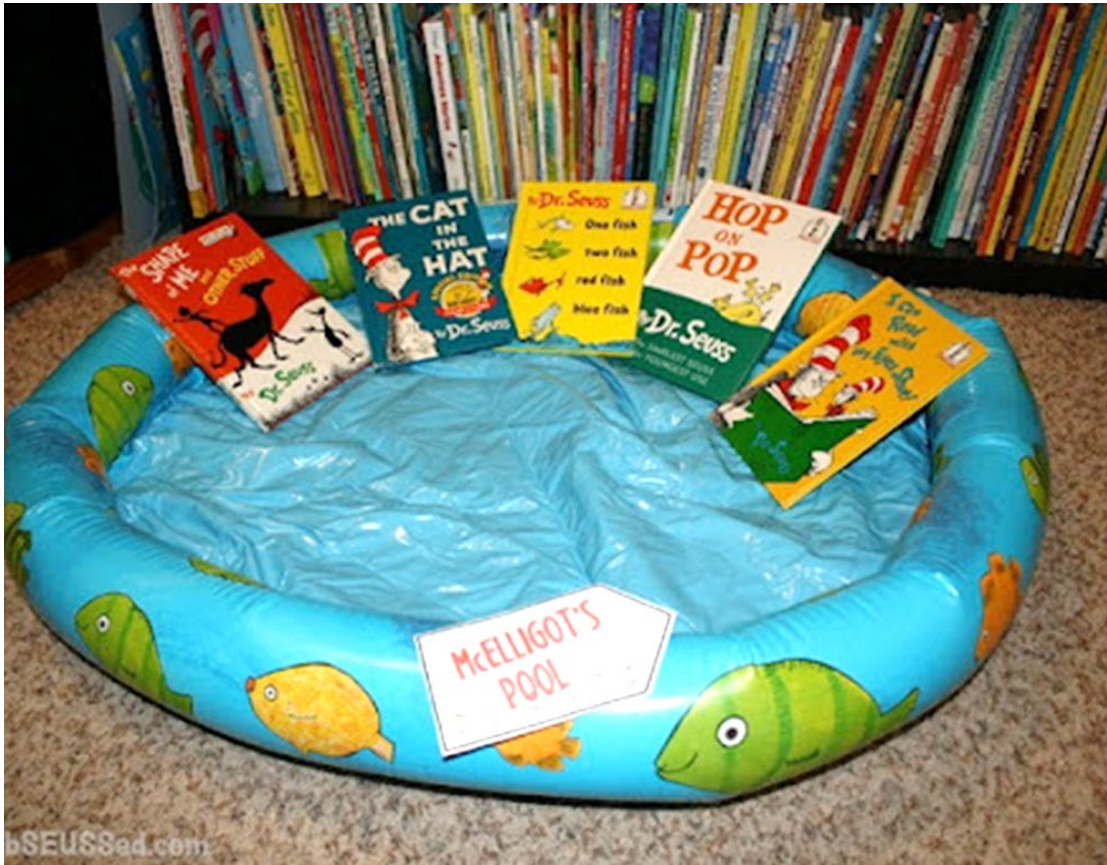
D = I'm not sure

6



- A = YES
- B = NO
- C = It depends
- D = I'm not sure

7

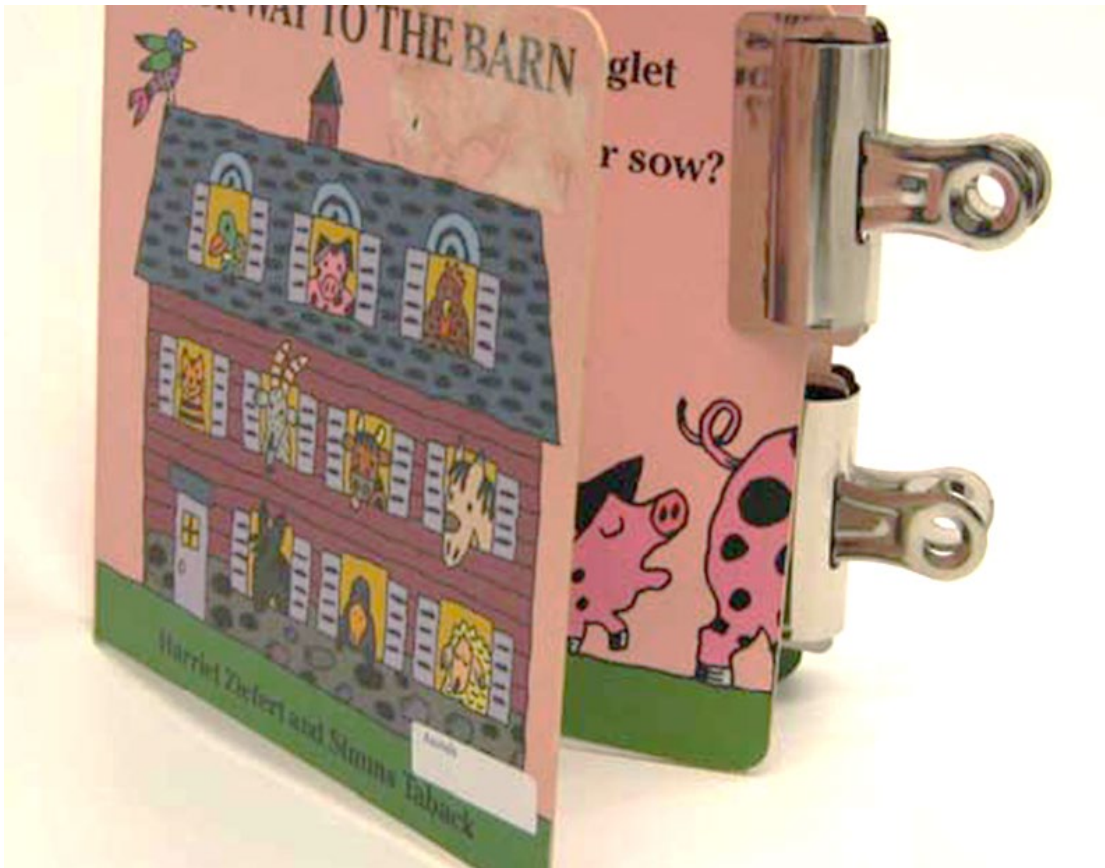


- A = YES
- B = NO
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8



A = YES
B = NO
C = It depends
D = I'm not sure



- A = YES
- B = NO
- C = It depends
- D = I'm not sure

10



11

A = YES

B = NO

C = It depends

D = I'm not sure



- A = YES
- B = NO
- C = It depends
- D = I'm not sure

12



A = YES

B = NO

C = It depends

D = I'm not sure

13



Small group discussion

Group definition – how did you do?

Modify or Refine

Assistive Technology **Device** (for a young child)

is any THING

That helps

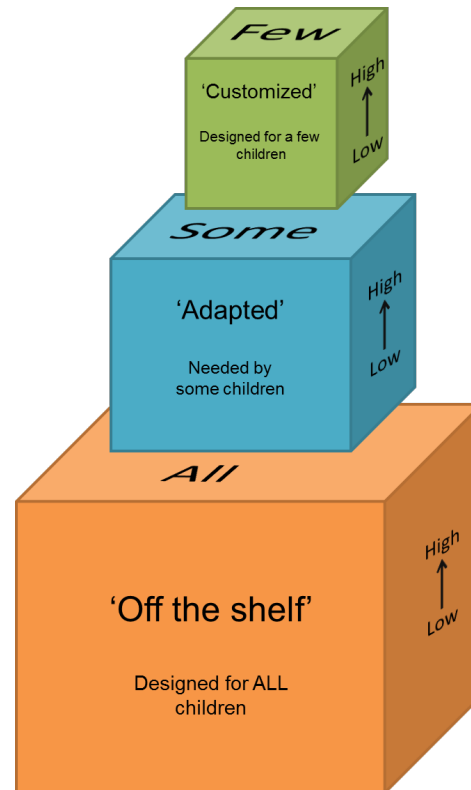
A Child with a Disability/Delay

Do Something

They Could Not
Otherwise Do

<https://ectacenter.org/topics/atech/definitions.asp>

Assistive Technology Gamut



Since he got a device his eye contact and interest in peers has increased!

When he had a communication breakdown and had access to 3 modalities to fix it! Speech, PECS & ipod

Her help picture fell out & she walked up trying to say it "He" & put my hand on her face to help her say it to get a new picture


The day we gave him his voice he said "thank you".

One day, the student's device was charging and she didn't see it. She found another way to communicate using pictures to request her device. She advocated for herself!

Because he has access to a voice output device, he can now tell me about things he did at home the night before.

On his first day of kindergarten, he used his device to tell his teacher "I am excited"
😊

Mom told us that he's so excited to have a communication book that he "slept with it."



Mom told us that
he's so excited
to have a
Communication
book that he
"slept with it."

<http://ectacenter.org/topics/atech/definitions.asp>

Technology Related Assistance to Individuals with Disabilities Act of 1988

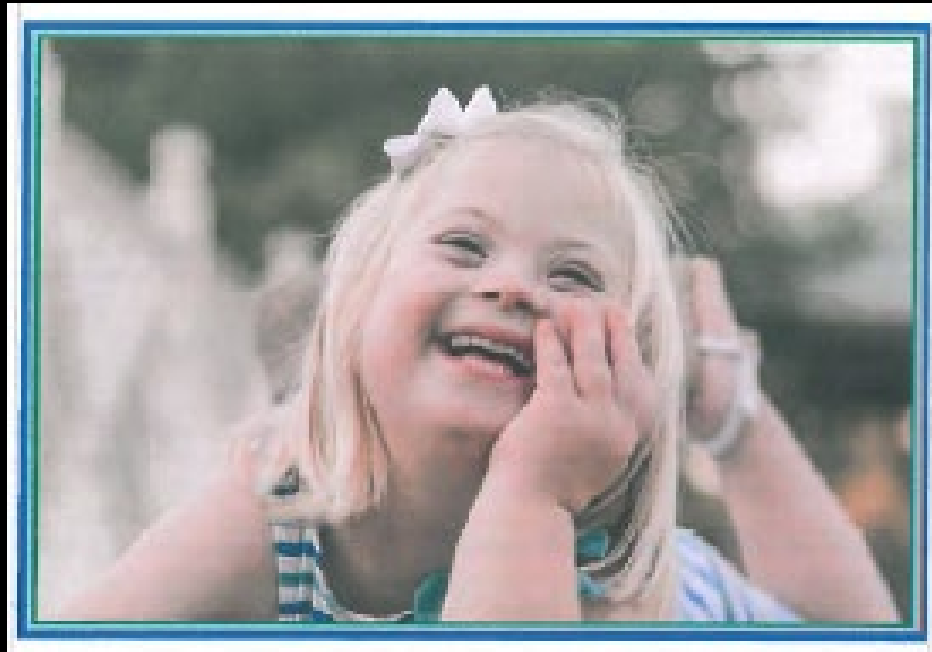
Individuals with Disabilities Education Act

Why now?

Why should we intervene early with

A_{ssistive} T_{echnology} ?

Let's meet Natalie



My PEAT Portfolio

Milbourne, SA

Intro ECE and AT

PEAT's Suite Video – Natalie's portfolio

My PEAT Portfolio

Child's Name: NATALIE ROHE

Insert child's picture, description, or favorite item.



Natalie love to tell jokes and laugh with her friends and family!

Child's Age: 4 Years 10 Months

Date: 12/12/17

Contributors: *Terri, OT* *Shawn, Mom* *Laura, Preschool Teacher*



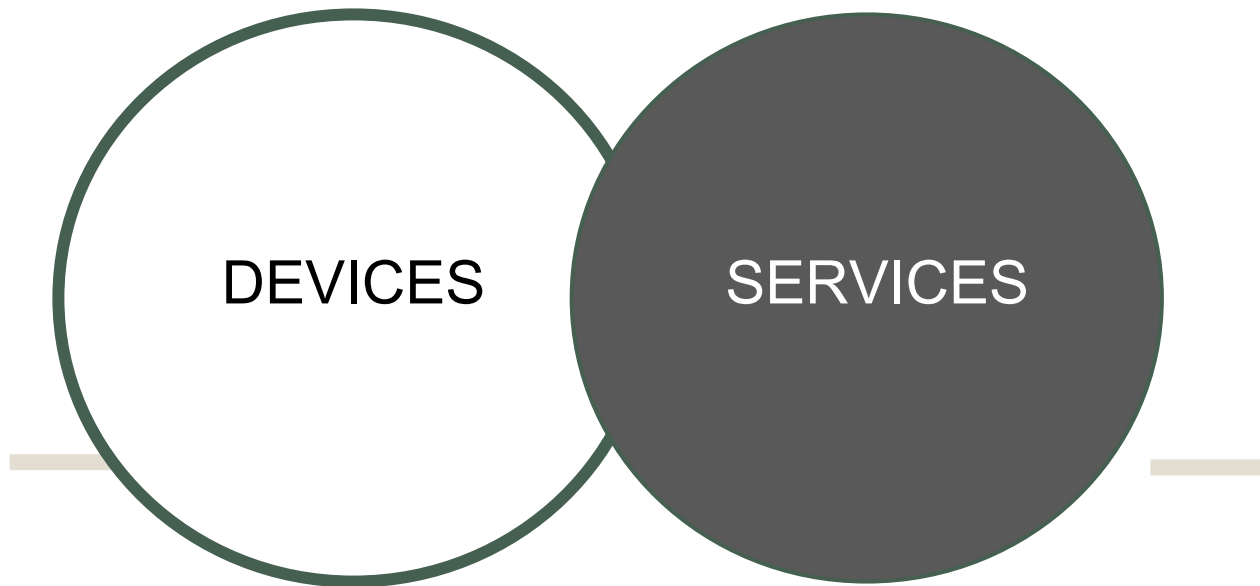
Looking back- perhaps we should have worked on the portfolio right before the IEP.

We were able to bring together our collaborative expertise...this made it possible to recall supports or strategies that had become "just a part of the classroom" but that made a big difference for Natalie. Without the portfolio *we forgot or didn't share much of this information.*

Shawn [Mom] and I finalized the portfolio a couple of months into the school year when Natalie was struggling - *we went back to look to see what things we did* that maybe were not in place in her new school that could make a difference. The questions helped us breakdown our thinking to identify where her struggles might be originating and what we had done - what the new program might do- to support her.

Doing it with Terri [OT] helped to provide *more specific information than we had put into the IEP* and to convey it in such a way that it didn't get "lost."

Assistive Technology + Young Children



Individuals with Disabilities Education Act (IDEA) of 2004

Polls 2 and 3

Assistive Technology **Service** (for a young child)

*Is any **BEHAVIOR***
That directly **assists**

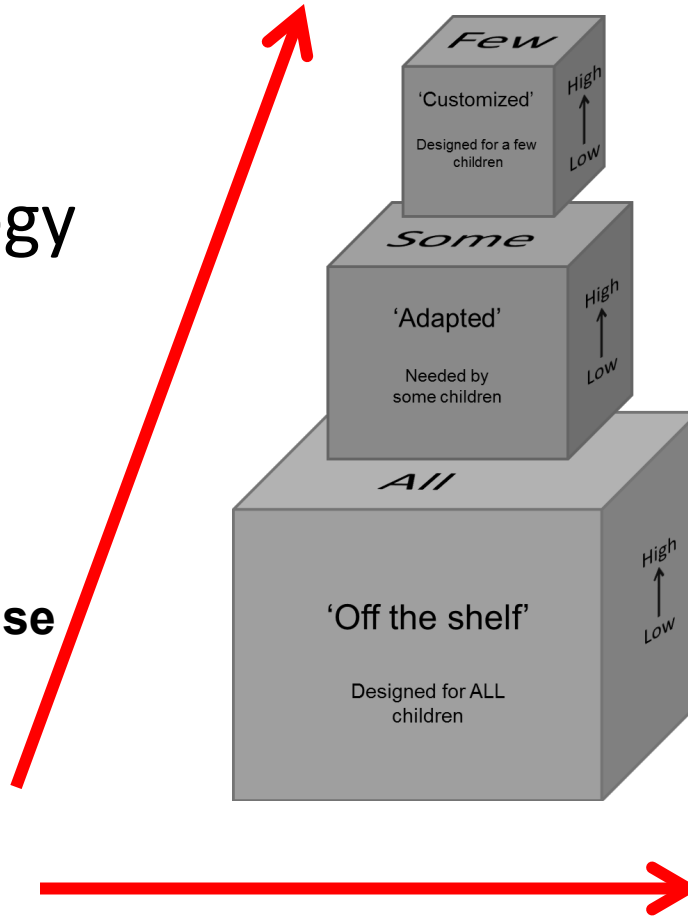
a FAMILY of a child with a Disability/Delay

CONSIDER, TRIAL,
SELECT, ACQUIRE, and USE
assistive **TOOLS**

<https://ectacenter.org/topics/atech/definitions.asp>

Assistive Technology Gamut

Training and Instruction on **AT use**



Training and Instruction on **AT services**

As defined in **IDEA**, an assistive technology **SERVICE** is:

Any service that directly assists a child with a disability in the selection, acquisition, and use of an assistive technology device. The term includes –

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

(Authority 20 U.S.C. 1401(2))

<http://ectacenter.org/topics/atech/definitions.asp>

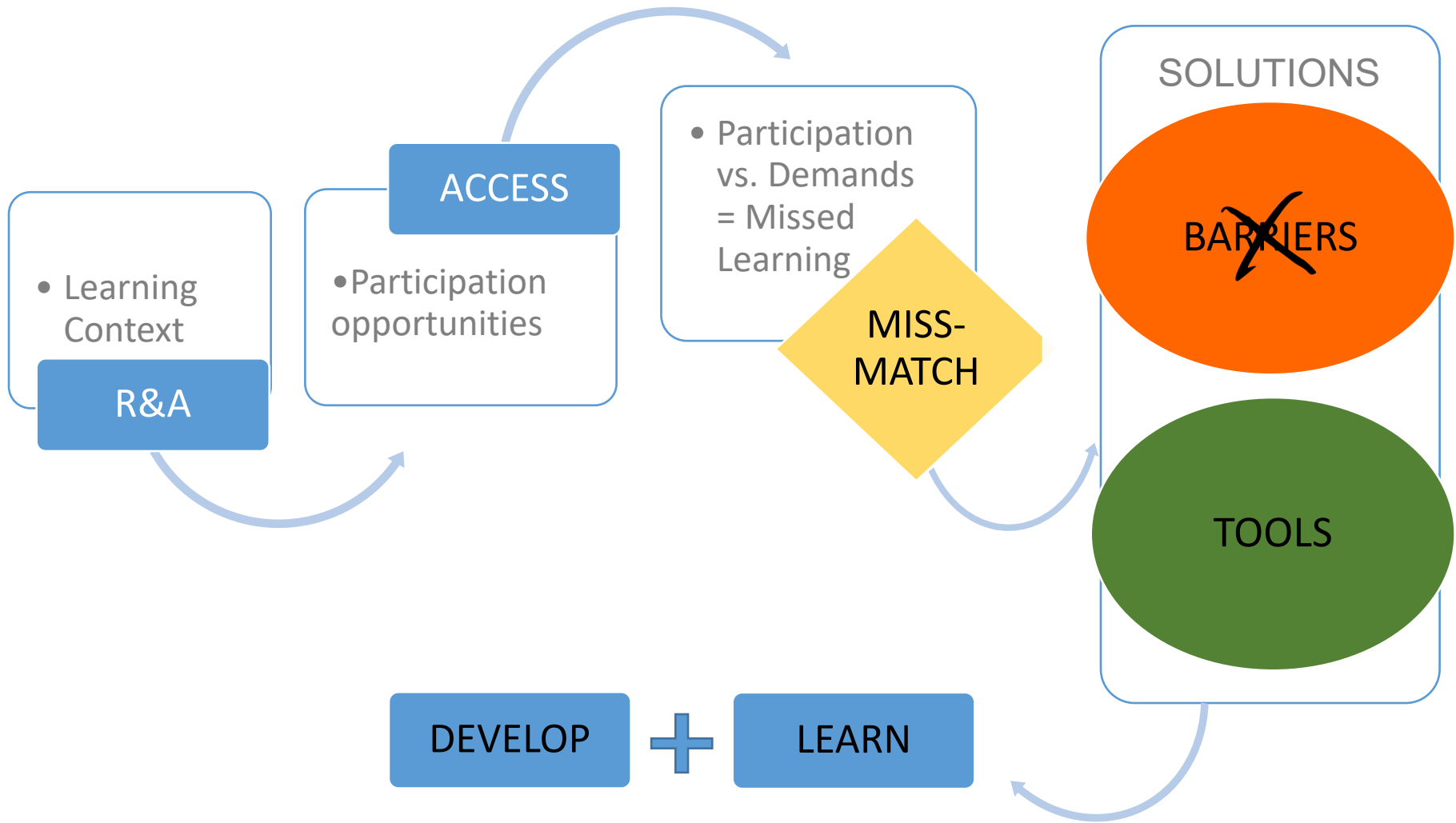
Technology Related Assistance to Individuals with Disabilities Act of 1988

Individuals with Disabilities Education Act

Early Childhood Context for AT Services

True or False?

- T Classroom routines and activities are a context for learning and participation.
- T The more that classroom routines and activities are accessible to a student, the more opportunities the student has to participate.
- T When there is a mismatch between a student's participation and the demands of their routines and activities, the student may miss out on learning.
- T When there is a mismatch, the elimination of physical environment barriers, together with the use of assistive tools as necessary, can resolve the mismatch.





“When a flower doesn’t bloom,
you fix the environment in
which it grows, not the flower.”

Alexander Den Heijer



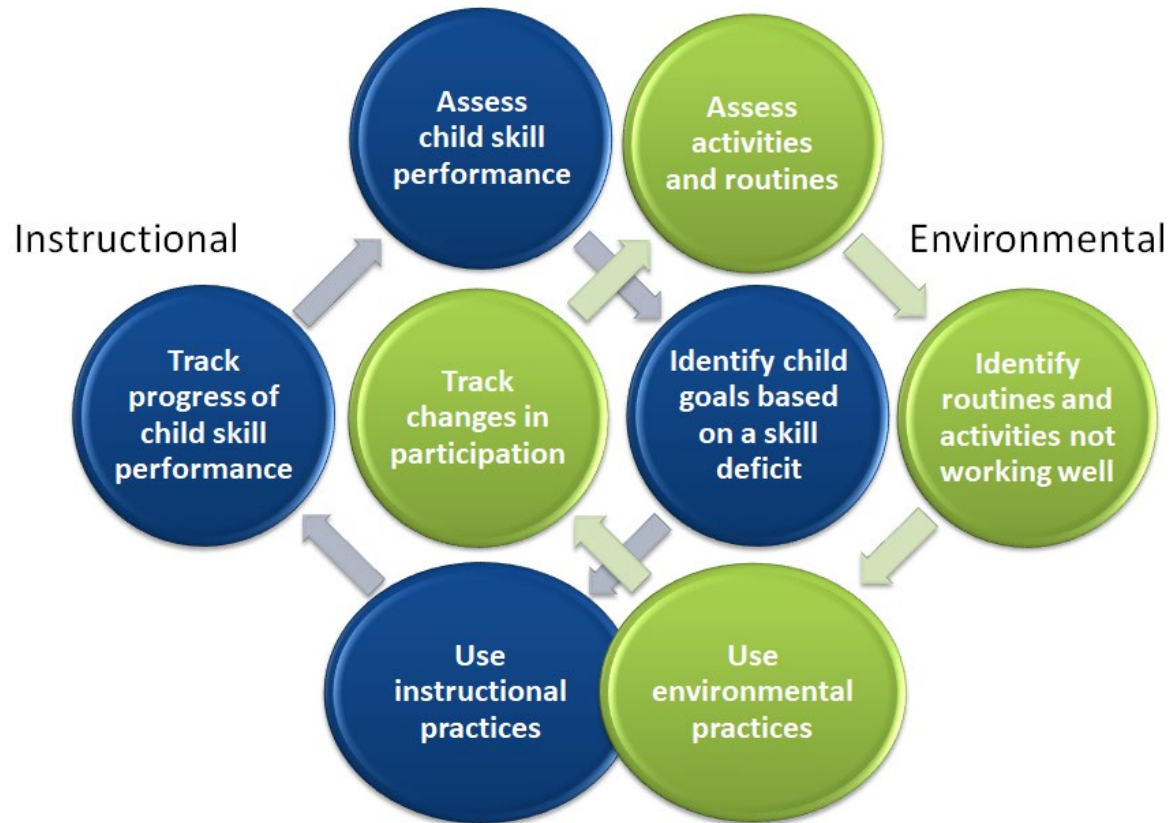
Division for
Early
Childhood

Recommended Practices

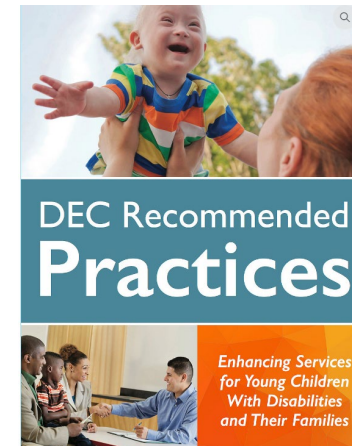
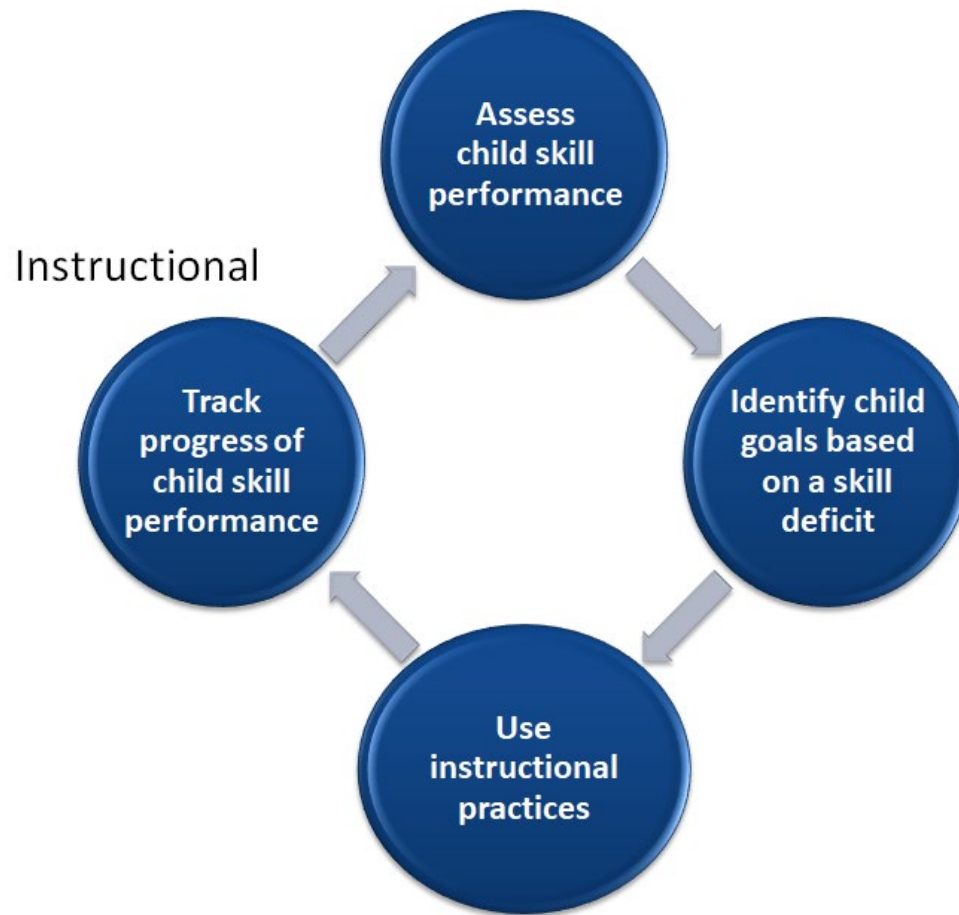
PEAT'S SUITE © 2018

Division for Early Childhood Recommended Practices

Blended Practices



Instructional Practices



Environmental Practices



Environmental Practices



Working Well

Embedded Schedules and Activities/Routines

Skill Acquisition

For TOMORROW

Not working Well

Adaptations and Assistive Technology

Promoting Participation

For TODAY

Environmental Practices



CARA's Kit for Preschoolers
DEC
<http://www.dec-sped.org/>



Cara's Kit for Toddlers
Paul H Brookes Publishing
<http://brookespublishing.com/>

Not
working
Well

Adaptations and
Assistive
Technology

Promoting
Participation

For TODAY

Environmental Practices

Adaptation Hierarchy

The Goal: Use the least intrusive adaptation. If an adaptation is not having the result you want, try the next least intrusive adaptation.

Least Intrusive

Adapt Environment

- Adapt room set-up.
- Adapt/select equipment.

Adapt Daily Schedule

Select or Adapt Activities or Routines

Adapt Materials

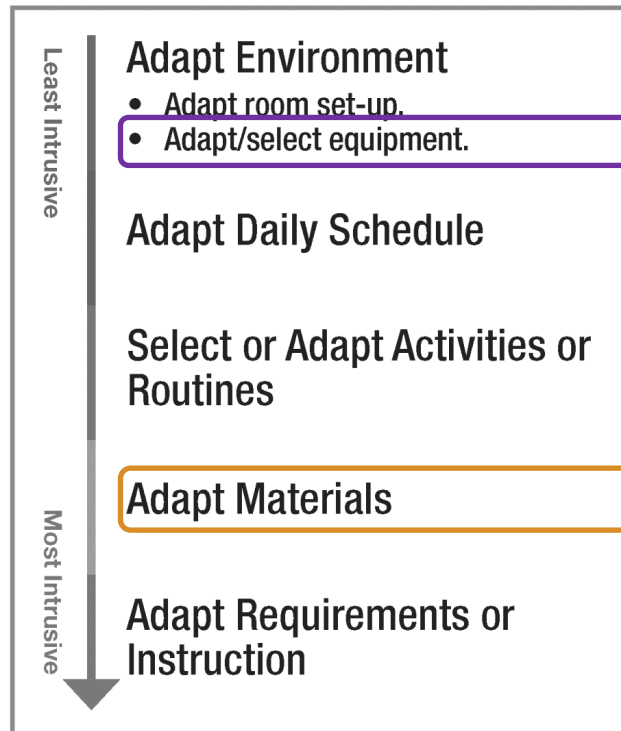
Adapt Requirements or Instruction

Most Intrusive

Environmental Practices

Adaptation Hierarchy

The Goal: Use the least intrusive adaptation. If an adaptation is not having the result you want, try the next least intrusive adaptation.



Including AT

Blended Practices



Young Exceptional Children
Monograph No. 16

<https://www.dec-sped.org/product-page/young-exceptional-children-monograph-no-16-blending-practices-for-all-children>



Features

- A Message From the Editors: Combining beliefs, values, traditions, and practices to best serve all young children
- Frameworks for Response to Intervention in Early Childhood: Description and Implications
- Together is Better: Environmental Teaching Practices to Support All Children's Learning
Philippa H. Campbell and Suzanne A. Milbourne
- Adapting Lesson Plans for Preschoolers: Addressing State Early Learning Standards
Emily Dorsey, Natalie Dahner, and Bernadette Laumann
- Blending Practices to Support Early Childhood Inclusion: A Step-by-Step Process to Guide Itinerant Early Childhood Special Education Services
Laurie A. Dinnebell and William F. McInerney
- Quality Instruction Through Complete Learning Trials: Blending Intentional Teaching With Embedded Instruction
Erin E. Barton, Crystal Crowe Bishop, and Patricia Snyder
- Delivering Individualized Instruction During Ongoing Classroom Activities and Routines: Three Success Stories
Jennifer Grisham-Brown, Kristie Pretti-Frontczak, Alicia Bachman, Corey Gannon, and Dorothy Mitchell
- From All to Each and Every: Preparing Professionals to Support Children of Diverse Abilities
Cernille Carlett, Susan P. Maude, Melanie Nolech, and Susan Simon
- Infant/Toddler Professional Preparation and Development Using Blended Practices and Tiered Supports
Adam S. Kennedy and Anna T. Lees
- Moving Forward: Resources for Supporting Blended Practices
Ashley Lyons



you

**A Message From the Editors: Combining
values, traditions, and practices to best serve
children**

**Frameworks for Response to Intervention in Early
Childhood: Description and Implications**

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**Together is Better: Environmental Teaching Practices
to Support All Children's Learning**

Philippa H. Campbell and Suzanne A.
Milbourne

Blending Practices

**Adapting Lesson Plans for Preschoolers: Addressing
Early Learning Standards**

Young Exceptional Children
Monograph No. 16

Natalie Danner, and Bernadette

<https://www.dec-sped.org/product-page/young-exceptional-children-monograph-no-16-blending-practices-for-all-children>

**Support Early Childhood
Practices to Guide Iti
Services**

A few pieces of information that will enable you to be an AT Advocate

Dispell Myths

Assistive Technology Myths that often present barriers to children using assistive technology devices

PRICE

FIRST

SKILL

TRAINING

PRICE



MYTH

*Assistive technology is too
expensive ~
for young children*

TRUTH

*Assistive technology is made
up of a
range of devices that also
have a
range of prices*

FIRST



MYTH

There are prerequisites to the use of assistive technology that a child must have before considering it

TRUTH

There are
NO
prerequisites
for using assistive
technology

SKILL



MYTH

*Assistive technology is
selected based on a child's
skill level*

TRUTH

Assistive technology that is easy to use, familiar, “fits” the environmental context and is selected with family/caregiver input is best because it will be used

TRAINING



MYTH

*Assistive technology requires
extensive training
to know how to
choose and use it*

TRUTH

Training that focuses on the process and intentionality of using assistive technology is more effective than training focused on “things” called AT



Small group discussion

Use handout “Myth and Mythbusters”

Discuss Myths

#



RESOURCES

Assistive Technology Use with Young Children

MYTH AND MYTHBUSTERS

Aug2016

<https://docs.google.com/a/udel.edu/viewer?a=v&pid=sites&srcid=dWRibC5lZHV8d2VIYXR8Z3g6NDcyMzM2MzA1ODIzYjQ1ZA>

[\[https://docs.google.com/document/d/1u8-CXL2nuS7-6wMw_34OhJWqEXH_tYudlerNJS2bC_o/edit#\]](https://docs.google.com/document/d/1u8-CXL2nuS7-6wMw_34OhJWqEXH_tYudlerNJS2bC_o/edit#)

PEAT's Suite (devices and services)

Supporting a Child's Physical Environment and Assistive
Tool Journey Birth to Five - <http://www.dec-sped.org>

DEC Learning Deck -

<https://drive.google.com/file/d/1kULndPILQ5iVGKs0YdANYuPx1vXWEB7M/view?usp=sharing>

Terminology - Physical Environment and Assistive Tools





PEAT'S SUITE USB CONTENTS

Pilots

- General Instructions
- Environment Pilot
- Universal Pilot
- Modified Pilot
- Specialized Pilot
- Real-Life Examples

Plot Map

- Excel Plot Map Application
- Excel Application Instructions
- Plot Map (Blank)

Portfolio

- General Instructions
- Filling Forms Instructions

- Worksheets
- Real-Life Example

Point-To-Point

- General Instructions
- Filling Forms Instructions
- Worksheets

Miscellaneous Materials

- Leader To-Do Template
- Letter to Leader
- Letter to Parents
- Panorama Mini Poster
- PEAT's Mini Poster
- Primary Sources
- Routines and Activities Starters



fabricATe (devices and services)

www.fabricate4all.org

AT is EVERYONE'S RESPONSIBILITY

Jan2019

<https://www.cds.udel.edu/wp-content/uploads/2019/01/Part-C-materials.pdf>

Technology Solutions for Early Childhood – Research to Practice

Nov2016

[#ECTech16](https://www.youtube.com/hashtag/ectech16) - <https://www.youtube.com/hashtag/ectech16>

Panel Discussion - Research To Practice:

https://www.youtube.com/watch?v=IbWSgin9gak&list=PLRt8N3Siu_0h9IIJe9_E5VVBxdEQFxUyD&t=1096s

ASSISTIVE TECHNOLOGY WHITE PAPER

June 2016

<https://www.cds.udel.edu/wp-content/uploads/2019/01/AT-white-paper-SA-v2.pdf>

ECTA Definitions of Assistive Technology

<https://ectacenter.org/topics/atech/definitions.asp>

Take home messages...

If:

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Is represented as:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

Then:

H -A -R -D -W -O -R -K

$8+1+18+4+23+15+18+11 = 98\%$

And

K -N -O -W -L -E -D -G -E

$11+14+15+23+12+5+4+7+5 = 96\%$

AND

A -T -T -I -T -U -D -E

$1+20+20+9+20+21+4+5 = 100\%$

Continued...

Take home messages...

1. Assistive technology serves as a BRIDGE between a child's skill/abilities and the expectations of the child.
2. A wide RANGE of assistive technology is available to support the developing child.
3. There are NO PRE-REQUISITE SKILLS or AGE restrictions to using assistive technology.
4. FAMILIES play a critical role in the selection, use and evaluation of assistive technology supports. Assistive technology decision-making is family-centered, team-based and collaborative.

Continued...

Take home messages continued...

5. Assistive technology is **INTEGRATED** throughout the day to support the child's participation in daily routines and activities.
6. **EVERYONE** in a child's life has the capacity to play a role in planning for the use of assistive technology.
7. The use of Assistive Technology is a **FLEXIBLE** and **EVOLVING** process that includes a continuous cycle of assessment.
8. Is this assistive technology? - **IT DEPENDS!**