

Assistive & Educational Technology Supports in Inclusive Education

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November 4, 2017

Agenda

- Polls
- Introduction
- Assistive Technology
- Educational Technology
- Integrating Technology into the Classroom

Polls

- What grade(s) do you currently teach?
(K-2, 3-5, 6-8, 9-12)
- In which setting do you primarily teach
(self-contained, resource, co-teach, general ed, not currently in a classroom)?
- What subject(s) do you currently teach?
(English/Reading, Math/Science, Social Studies, All)
- How many years teaching experience to you have, **not** including this year? (0-1, 2-3, 4-5, 6+)

Polls

Poll Everywhere

- What are the biggest challenges you face with integrating technology into your classroom?

Introduction

Why technology?

- Visual supports
- Individualized content
- Multiple opportunities for practice
- Increased independence
- Increased student engagement

ASSISTIVE TECHNOLOGY VS. EDUCATIONAL TECHNOLOGY

Assistive Technology

Alternative Access

Student with a disability is not able to access curriculum in the same manner as their non-disabled peers.

- **ACCESS**

Educational Technology

Academic Achievement

Used by teachers and students to enhance academic achievement. Facilitates learning and improves performance.

- **ACHIEVEMENT**

Tiered Support

Service Delivery Model

- Tier I: Site-based Technologies
- Tier II: Equipment Loan
- Tier III: Referral for Assessment

Response to Intervention

- Tier I: General Education
- Tier II: Small-group support
- Tier III: Individualized Intervention

Access

Assistive technology

Assistive Technology

An Assistive Technology Device is defined as 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 the functional capabilities of a child with a disability.

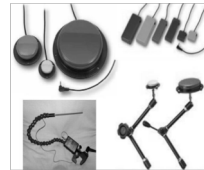
(IDEA, 2004)

Spectrum of Support



Like any other accommodation or modification, Assistive Technology is used when usual and customary accommodations and modifications have not been successful in supporting IEP goals.

Communication Access

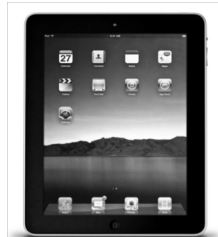


Usual and Customary Supports

Light Tech AT

High Tech AT

Academic Access



Specialized software or apps



iFLY with ULS Curriculum

- News-2-You
- Symbolstix
- Unique Learning System.
 - Adapted curriculum
- Integrating iPad technology



More information available at **N2Y.com**

WINGS Accommodations

Read&Write for Google

- Text-to-speech
- Study tools
- Translation
- Bibliographer
- Word prediction
- Picture dictionary
- Highlighting
- Dictation

More information available
at **Texthelp.com**



WINGS Video 2017

Achievement

Educational Technology

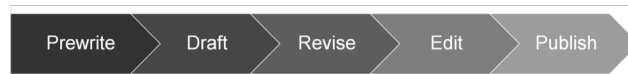
Reading

- Read-aloud: web-based text-to-speech tools, 'Speak' feature in MS Word 2010
- Adjust material reading level: Text summarization tools or Google Advanced Search to differentiate levels
- Highlight key ideas: Use graphic enhancement tools to screen shot and mark up text
- Annotate text: Use web-based tools to note key concepts on web resources
- Incentivized reading programs

Reading

- WriteOutloud, Acapela, Prizmo, Speak It! (Text-to-speech)
- Text Compactor (Text-summarization tool)
- Skitch (Graphic enhancement tool)
- Scribble (Text annotation)
- Ticket to Read, Tumblebooks (Incentivized reading)
- Bookshare.org (Digital resource for individuals with a print disability to access textbooks and more)

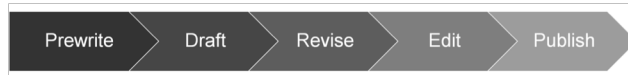
Written Expression



Prewriting

- View images to facilitate descriptive writing
- Locate background information to enhance narrative development
- Collect details to support arguments
- Conduct online research
- Complete digital graphic organizers

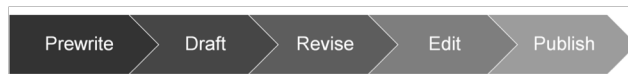
Written Expression



Drafting

- Use word processing software to improve speed and minimize frustration
- Create scaffolded, pre-formatted draft documents (e.g., include sentence starters)
- Use word prediction or text-to-speech functions

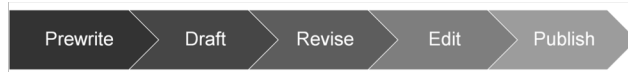
Written Expression



Revising

- Apply text features (e.g., underline, highlight) to improve writing
- Use the word count feature to determine which sentences require additional detail
- Create word clouds to review word choice (e.g., wordle)

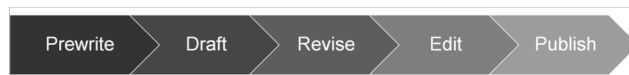
Written Expression



Editing

- Use spell- and grammar-check features to identify and correct errors
- Highlight dialogue and review for punctuation errors
- Highlight conjunctions and confirm comma used when appropriate
- Use text-to-speech to listen to content and identify errors related to sentence structure

Written Expression



Publishing

- Add graphics to illustrate text
- Use publishing software to create pamphlets or brochures
- Design posters, comic strips, or presentations
- Use technology to integrate peer evaluation (e.g., track comments on document saved on shared drive)

Written Expression

Sample Checklist

Revising

- Highlight each sentence one at a time and look at the word count. Do you have any sentences that seem short and may need more detail? Do you have any sentences that are too long and may need to be broken up?
- Highlight the first word of each sentence in blue. Did you start many sentences with the same word?
- Highlight all quotation marks in yellow. Do you have sufficient dialogue in your writing?
- Underline all transitions (see our transition guide on wall). Do you need to add more transitions to make your writing flow more smoothly?
- Highlight your document and create a word cloud. Which words are largest? Find those words in your writing and see if you can find another word or phrase that means the same thing.

Written Expression

- SimpleMind + (Mind mapping)
- Co:Writer (Word prediction software with topic dictionary support)
- Padlet (digital "whiteboard")
- Writer's Diet Test
http://writersdiet.com/?page_id=4 (revising)
- Hemmingway App <http://www.hemingwayapp.com> (editing)
- Phraseology (Drag and drop editing)

Math

- Access graphing calculator apps
- Practice skills with virtual manipulatives
- Use digital graph paper
- Practice computational fluency
- Use video modeling to reinforce instruction
- Incorporate computer-based math games
- Implement computer-based instruction

Math

- Graphing calculator by Mathlab
- National Library of Virtual Manipulatives
<http://nlvm.usu.edu/en/nav/vlibrary.html>
- Khan Academy
- STMath
- ALEKS
- EquatIO (Chrome extension) (digital platform for math)
- Panther math paper

Math

Implementation Example

- After-school tutoring
- Co-teach classes (all levels)



Examples of Other Uses

- **Assessment**
 - Kahoot
 - Quizzizz
 - Quizlet Live
- **Communication**
 - Edmodo
 - Remind
 - Seesaw
- **Behavior**
 - ClassDojo
 - Classcraft
 - CHAMPS
- **Organization**
 - Google Apps for Education
 - Sticky Notes floating windows
 - Voice Memo

Technology in the Classroom

Considerations

Evaluations

Additional resources

Class Mgmt. Considerations

- Establish Rules
 - Explain purpose of the technology, provide examples and non-examples of appropriate use, and explain possible consequences for inappropriate use.
- Student Training
- Establish Routine
 - Explain check-in/ out procedures
 - Assign jobs (i.e., storing, charging, cleaning, etc.)
 - Demonstrate how technology will be incorporated into the lesson (i.e., whole group, small group). What will the students be expected to do?

Gunderson, 2015

SAMR Model of Tech Integration

- Substitution
- Augmentation
- Modification
- Redefinition
- <https://www.youtube.com/watch?v=OBce25r8vto>
0:00-2:46

Software Evaluation

- Boone, R., & Higgins, K. (2007). Software evaluation checklist. *Technology in Action*, 3(1), 1-16.

App Evaluation

- Link to print rubric

<https://static.squarespace.com/static/50eca855e4b0939ae8bb12d9/50ecb58ee4b0b16f176a9e7d/50ecb593e4b0b16f176aa974/1330908312793/Vincent-App-Rubric.pdf>

- Link to info about rubric

<https://learninginhand.com/blog/ways-to-evaluate-educational-apps.html>

App Name: _____ **Educational App Evaluation Rubric**

Purpose for App: _____

	4	3	2	1
Relevance	The app's focus has a strong connection to the purpose for the app and appropriate for the student	The app's focus is related to the purpose for the app and mostly appropriate for the student	Limited connection to the purpose for the app and may not be appropriate for the student	Does not connect to the purpose for the app and not appropriate for the student
Customization	App offers complete flexibility to alter content and settings to meet student needs	App offers some flexibility to alter content and settings to meet student needs	App offers limited flexibility to adjust content and settings to meet student needs	App offers no flexibility to meet student needs
Feedback	Student is provided specific feedback	Student is provided feedback	Student is provided limited feedback	Student is not provided feedback
Thinking Skills	App encourages the use of higher order thinking skills including creating, evaluating, and analyzing	App facilitates the use of higher order thinking skills including evaluating, analyzing, and applying	App facilitates the use of mostly lower order thinking skills like understanding and remembering	App is limited to the use of lower order thinking skills like understanding and remembering
Usability	Student can launch and operate the app independently	Student needs to have a teacher show or model how to operate the app	Student needs to be cued each time the app is used	App is difficult to operate or crashes often
Engagement	Student is highly motivated to use the app	Student uses the app as directed by the teacher	Student perceives app as "more schoolwork" and may be off-task when directed to use the app	Student avoids the use of the app and might complain when its use is required
Sharing	Specific performance summary or student product is saved in app and can be exported to the teacher or for an audience	Performance data or student product is available in app but exporting is limited and may require a screenshot	Limited performance data or student product is not accessible	No performance summary or student product is saved

© Tony Vincent learninginhand.com/rubric Rubric based on one edited by Kathy Schrock and originated by Harry Walker

Technology Integration Matrix

- <http://fcit.usf.edu/matrix/matrix.php>

Entry	Adoption	Adaptation	Infusion	Transformation
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Technology Integration Matrix

- <http://fcit.usf.edu/matrix/matrix.php>

Active
Collaborative
Constructive
Authentic
Goal Directed

Additional Resources

- Center on Technology & Disability
<http://campaign.r20.constantcontact.com/render?m=1117322954723&ca=1418feb4-a264-45bf-afe6-27e6cc2d3549>
- State of Nevada AT resources
[http://adsd.nv.gov/Programs/Physical/ATforIL/Nevada_Assistive_Technology_Collaborative_\(NATC\)/Nevada_Assistive_Technology_Collaborative_\(NATC\)/](http://adsd.nv.gov/Programs/Physical/ATforIL/Nevada_Assistive_Technology_Collaborative_(NATC)/Nevada_Assistive_Technology_Collaborative_(NATC)/)
- Federal mandates info
<http://www.gpat.org/Georgia-Project-for-Assistive-Technology/Pages/Legal-Mandates-for-Assistive-Technology.aspx>

Breakout EDU Activity

- An immersive game platform
- Active learning
- 4 C's: critical thinking, collaboration, creativity, and communication

Sample Activity:

[Og's Great Adventure](#)

- More information: <https://www.breakoutedu.com/digital-tutorials>

Powerpoint Slides

Slideshow will be available at:

Ewoldt.weebly.com

Click on 'Presentations'

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