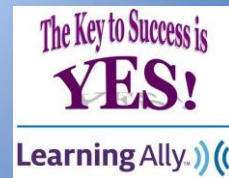


Assistive Technology for Classroom Success



Students with dyslexia often experience greater success when they are allowed to use their **abilities** (strengths) to work around their **disabilities** (challenges).

Assistive Technology tools combine the best of both of these practices.

Dyslexia

Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and background knowledge.

*Adapted by The National Institute of Child Health and Development and
The International Dyslexia Association Board of Directors: November 12, 2002*

Dyslexia: Facts

- Dyslexia is the most common reason for reading, writing and spelling problems. It can also affect math, organization and time management
- Dyslexia is genetic (runs in families)
- 1 in 5 children fall on the spectrum
- Dyslexia is a brain-wiring difference
- Dyslexia is a lifelong condition that affects all aspects of life - not just school

The Reading Brain



Control Brain



Dyslexic Brain

Dyslexia Myths

- We do NOT see letters backward or upside-down
- We will NOT outgrow dyslexia
- We can NOT cure dyslexia by completing a program or taking medication
- Dyslexia does NOT affect primarily boys
- Dyslexia is NOT a vision problem
- We are NOT Lazy, Dumb or less intelligent than your peers.

Common Characteristics

- Feeling 'dumb' and stressed at school
- Difficulty learning letters and their sounds
- Reading slowly and lacking comprehension
- Difficulty organizing thoughts when writing
- Difficulty remembering spelling
- Difficulty with rote memorization (i.e. math facts)
- Difficulty managing assignments, deadlines and belongings
- Difficulty with verbal communication

Common Challenges

- Feeling embarrassed and not wanting to be different
- Feeling confused or frustrated
- Feeling stupid when needing to ask for help more often
- Not understanding directions and struggling with assignments
- Not being able to finish on time
- Not being able to articulate questions well or understand the answers given

Accommodation Examples

- Extra time on assignments and tests
- Teacher and/or peer class notes
- Assignments graded for content - not grammar, spelling and punctuation
- Oral Testing or reader/scribe
- Preferential seating
- **Assistive Technology (AT)**

What is Assistive Technology?

AT is defined as any device, piece of equipment or system that helps bypass, work around or compensate for an individual's specific learning deficits.

Everyone uses AT!

- Smartphones/Tablets
- Calculators
- Laptops
- Spellcheck Software
- At school, work and home

But AT makes a greater impact on the lives of students with learning differences.

Why do we need AT?

- Helps student reach their potential
- Improves certain skill deficits
- Increases self-esteem and sense of independence
- Allows student to work at same rate as peers
- Conserves energy for increased productivity

“I believe those involved in education should work in every way possible to challenge and motivate all students by providing each learner with options for acquiring information and knowledge and for demonstrating what they know.”

Melissa Wetherby, coordinator of educational technology for Landmark College (Vt.), which serves students with learning disabilities or AD/HD.

Is using AT cheating?

- The short answer is NO!
- Levels the playing field allowing LD students to demonstrate their knowledge
- Gives all individuals equal opportunities to learn
- Provides access to information in a way that caters to individual learning styles

Schools and AT

- Request an assessment in writing from your school
- Work with school to identify what is available
- Together, determine how to secure additional AT
- AT should be documented on an IEP, 504, READ Plan, or Rtl information
- If parents are providing additional AT, its use should also be documented

When to start using A/T?

Depends on:

- Technology
- School environment
- Age and comfort level of the student

Elementary School

- Often when AT assessments are completed
- Where learning and acceptance begins

Suggested Assistive Technologies:

- Audiobooks
- Prewriting graphic organizers
- Calculator
- Handheld Spell Checker
- Thermal lined paper and special pencil grips
- Portable Keyboard
- Digital Clocks & Watches / Timers

Middle School

- Re-access needs and add AT as needed
- Additional training and support

Suggested Assistive Technologies

- Computers, Tablets & Smartphones
- Audiobooks
- Text-to-Speech software
- Prewriting graphic organizers
- Spelling & Grammar Editing Software
- Calculators
- Speech-to-text software

High School

- Teachers more accepting of AT
- Make AT the 'norm' in the classroom

Suggested Assistive Technologies

- Computers, Tablets & Smartphones
- Audio Books
- Note Taking Recording Tools
- Text-to-Speech software
- Spelling & Grammar Editing Software
- Calculators
- Speech recognition programs
- Word prediction programs

Why do some students resist AT?

- Lack of Training
- Don't want to be different
- Takes more time and effort at first
- Negative Experiences

Encouraging AT use

- Select technology that fits individual needs, abilities, and experience
- Show the value
- Train student, check for understanding, and follow-up often
- Help student experience success
- Normalize AT in the classroom
 - Model use of Technology
 - Encourage everyone to use technology
- Keep a positive attitude

Parent Support

- Learn about the tools to assist your student
- Practice at home
- Make arrangements to share the technology with teachers
- Promote Self-Advocacy Skills
- Start with small steps and increase over time

Teacher Support

- Be approachable
- Be aware and knowledgeable of your students' AT
- Train and practice with your student
- Listen to your students' needs and concerns
- Support involves a long term view and daily commitment
- Without crucial teacher support, students may give up

Learning Ally Audio Books

- Textbooks and popular titles in an audio format
- PC, MAC, iOS and some Android
- *User Tip: Follow along with the text when listening*
- Recommended Grades: Kindergarten +
- www.learningally.org
- Other audio book sources: Bookshare, Public Library, iTunes, Kindle



Livescribe Smart Pen

- Note taking tool - records lecture while taking notes
- PC and Mac
- Needs special notebook paper
- *User Tip: Use symbols when you have a question or don't understand to easily go back and listen again*
- Recommended Grades: Middle School +
- www.livescribe.com



Dragon Naturally Speaking

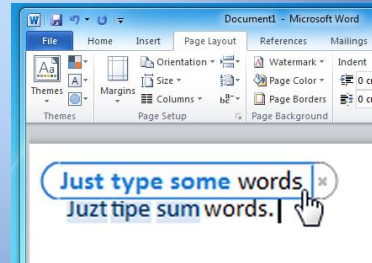
- Speech-to-Text Software
- Windows, Mac, iOS and Android
- *User Tip: Invest in a good headset*
- Recommended Grades: Late elementary +
- www.nuance.com

Nuance®
Dragon®
NaturallySpeaking



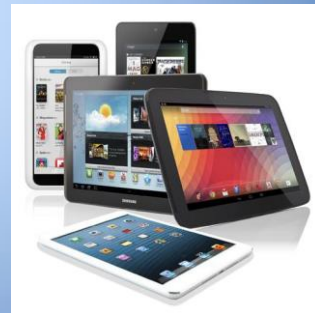
Ginger Spellchecker

- Spell Checker using context clues
- Windows, Mac, iOS
- Limited free version. Paid version includes additional features
- *User Tip: paid version is worth it in older grades*
- Recommended Grades: Middle +
- www.gingersoftware.com



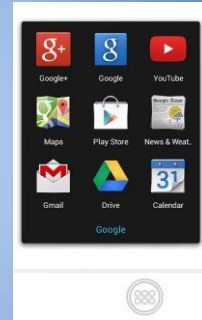
Smartphone/Tablet

- Text-to-Speech
- Speech-to-Text
- Take pictures of board - Assigned Work
- Use calendar function with reminders
- Record lectures
- Voice Reminders
- Notes - To do list
- Research
- Download Helpful Apps
- Recommended Grades: Middle +



Favorite Apps

- Voice Dream - PDF, Word, Web, etc. reader
- Audionote/Notability - note taking tool
- Inspiration Maps - brainstorming organizer
- Time Timer - time management
- Algebra Touch - interactive, hands-on
- Typ-O - word prediction
- myHomework - organizer
- myScript - Calculator
- Sentence Builder
- Vocal - records voice notes and reminders
- Sound Literacy - Orton-Gillingham phonics principles



Other Media Support

Homework Help - Student Tutorials

- www.khanacademy.org
- www.Sophia.org
- iTunes U app

Learning Videos/Presentations

- www.youtube.com
- www.netflix.com
- www.authorstream.com

Educational Programming

- www.history.com
- www.nationalgeographic.com
- www.discoveryeducation.com