

# Low- and High-Tech Accommodations for Student Success



Researchers estimate that more than half the learners in our programs who read at grade level equivalent seven and lower have learning differences. How can we help these students perform at their best without going crazy? Learn some simple ways to help your students achieve their best results.

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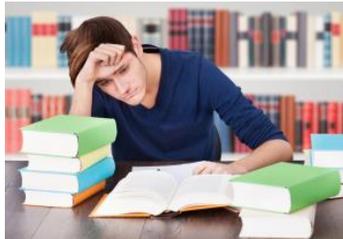
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# Today's Objectives

At the end of today's workshop, I will be able to:

- Explain what a learning difference is and how it may affect adult students
- Describe low- and high-tech assistive technology options



## Learning Difference (Disability) Defined

“Learning disabilities are due to genetic and/or neurobiological factors that alter brain functioning in a manner which affects one or more cognitive processes related to learning (usually reading). Learning disabilities range in severity and may interfere with the acquisition and development of one or more of the following:

- oral language (e.g., listening, speaking, understanding);
- reading (e.g., phonetic knowledge, decoding, reading fluency, word recognition, and comprehension);
- written language (e.g., spelling, writing fluency, and written expression); and
- mathematics (e.g., number sense, computation, math fact fluency, and problem solving).”

Source: Learning Disability Association of America

## What is it Like to Have a Learning Difference?

<p><b>Up and Over</b></p> <p>And in-between The Letters Words Paragraphs Wash Over Me Like a thunderstorm In Georgia on a summer afternoon Full of Sound and Fury I am drenched</p>	<p>and overwhelmed I now search the puddle (Totally muddy) I sift and sort and wash clean the concepts I sort through And I hand these to you These thoughts I struggle to be understood by you Do you understand? I am Clear as Mud</p> <p>- Carolyn Phillips</p>
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## General Principles

- Give students bimodal input:

Seeing It  
+ Hearing It  
Helps Me Remember It!

- Consider cognitive load

Find the sweet spot and not overwhelm students with so much information

- Use assistive technology: “Assistive Technology (AT) is any item or piece of equipment that is used to increase, maintain or improve the functional capabilities of individuals with disabilities in all aspects of life, including at school, at work, at home and in the community” (Phillips, 2022).

## Low Tech Assistive Technology

- Large print text
- Using highlighters
- Using Post-it notes to organize information
- Table toys – squishy balls and fidgets
- Graphic organizers
- Writing frames
- Magnifiers
- Use rulers or cards to focus on one line of text
- Manipulatives (algebra tiles for teaching math; the [National Library of Virtual Manipulatives](#))
- Colored overlays



## Somebody Wanted but So

<b>Somebody</b> <b>(Who?)</b>	
<b>Wanted</b> <b>(What did they want to do?)</b>	
<b>But</b> <b>(What was the problem?)</b>	
<b>So</b> <b>(How was the problem solved?)</b>	

# Writing Frames

Frames are outlines of words or key phrases with plenty of blank lines that provide a structure so learners can focus on what they want to say.

Frames remove the, "I don't know where to start" problem and help students gain confidence in their ability to write.

As students become more confident writers, we can provide them with less structure over time.

Adapted from M. Corley (2012)

## An Example Frame:

I am going to describe how \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I start by \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Then I \_\_\_\_\_

## Somebody Wanted but So Frame

The story takes place \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ is a character in the story who \_\_\_\_\_

\_\_\_\_\_

A problem occurs when \_\_\_\_\_

\_\_\_\_\_

After that, \_\_\_\_\_

\_\_\_\_\_

The problem is solved when \_\_\_\_\_

\_\_\_\_\_

The story ends with \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Irlen Syndrome

“Irlen Syndrome is a perceptual processing disorder caused by the brain's inability to process specific wavelengths of light. Around 50% of children and adults with reading, learning, or attention problems have Irlen Syndrome. For individuals with Irlen Syndrome print may not be clear, stable or comfortable. As a result, reading can be slow and inefficient leading to skipping of words or lines, rereading, or poor comprehension.”

## Irlen Related Reading Problem Signs

<p><b>Poor Comprehension</b></p> <ul style="list-style-type: none"><li>• Misreads words</li><li>• Reads in dim light</li><li>• Skips words or lines</li><li>• Reads slowly or hesitantly</li><li>• Takes frequent breaks</li><li>• Loses place</li><li>• Avoids reading</li></ul>	<p><b>Complaints While Reading</b></p> <ul style="list-style-type: none"><li>• Tired or sleepy</li><li>• Eyes hurt, ache, or feel itchy</li><li>• Headaches or nausea</li><li>• Fidgety or restless</li></ul> <p><b>Other Signs</b></p> <ul style="list-style-type: none"><li>• Rubs eyes</li><li>• Squints</li><li>• Blinks</li><li>• Opens eyes wide</li><li>• Reads close to the page</li><li>• Moves closer or further from the page</li></ul>
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## Helping Students with Irlen Syndrome

Use colored overlays (many students prefer the light blue color), use dimmer light, use natural light (from windows instead of fluorescent lights), use colored paper, wear a dark color cap (or a visor or sunglasses).

For reading on the computer, adjust the screen brightness by

For PCs: Windows button > Settings > System > Display

For reading Microsoft Word documents

Design Tab > Page Color

Source: Irlen.com

# High Tech Assistive Technology

[Reading Skills for Today's Adults](https://www.readingskills4today.com/) (https://www.readingskills4today.com/)

This classic adult education reading site has over 350 levelled reading passages from grade level equivalent .6 to 8.9. Each passage has three audio recordings of the full text. The first audio is a slow read. The second is a little faster, and the third audio is at normal speed. All the readings are in a normal human voice.

## [Select and Speak - Text to Speech Chrome Extension](#)

This Google Chrome add-on tool allows users to highlight text and have it read in multiple languages. It helps students with learning differences as well as English Second Language learners. The basic version is free.

Select and Speak is an add-on tool for Google Chrome that allows users highlight text and have it read to them in multiple languages. It can be very useful for English Second Language learners as well as students with learning differences. The basic version of Select and Speak is free.

## Voice Typing

Voice Typing is Google Docs speech to text feature. Find it under:

Tools > Voice Typing > Click on Microphone and then speak

(Note: You must be using a Google Chrome browser for Voice typing to work)

## ChromeVox Screen Reader

How to Set Up the ChromeVox Screen Reader

1. Open the Chrome web browser ([install Chrome](#), if needed).
2. Type "Chromevox" into Chrome's address bar, or into Google search.
3. Follow the ChromeVox link to the Chrome Web Store (the first link in the search results).
4. Click the "Add to Chrome" button.
5. In the dialog box that opens, click "Add extension."
6. Now installed, find the ChromeVox icon near the top right of Chrome to review its options.
7. In the Options, set the ChromeVox modifier key to Alt or Ctrl or both (referred to here as CVox).
8. In the Options, choose your preferred voice from the Voices menu.
9. Done, turn ChromeVox on or off by pressing and holding the modifier key then pressing the letter "A" twice (i.e., CVox + A + A).

## Reflection

Think about what we have done today. Write (or discuss) one best practice or activity for each of the following:

What is something that:

1. Reinforced something good that I already am doing?
2. Reminded me of something I used to do and will try again?
3. Gave me a new idea that I plan to try?

## References

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## About the Presenter

Steve Schmidt is an adult education consultant and moderator of the LINCS Reading and Writing Community of Practice. He has worked in adult basic education for more than 29 years as an instructor, program director, professional developer, and author. From 2010 to 2019, Steve served as a professional developer at Appalachian State University. He has delivered hundreds of workshops on a variety of topics including at COABE (2012 through 2022). He can be reached at: [schmidtconsulting4@gmail.com](mailto:schmidtconsulting4@gmail.com)