Digital Instruction: Literacy Supports



Abstract

Providing reading intervention that will enable students to acquire the skills they are missing and advance important meaning-making strategies, which in turn will improve their overall academic success, is necessary to break the cycle of failure many students have experienced. Digital instruction can be successfully leveraged to aid the older struggling reader. Integrated Digital Literacy can be used in four ways to ameliorate the situation: 1) **Develop Critical Language Skills, 2) Increase Interest and Motivation, 3) Transform Understanding, and 4) Embed Supports to Customize Text.** Below is a list of tools that may be useful in integrating digital literacy in each of these areas.



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Introduction: Why Do We Need Integrated Digital Literacy in Middle School?

The older struggling reader faces challenges in accessing the core curriculum because of his or her impaired ability to decode and comprehend text. In her book Teaching Adolescents to Read: It's Not Too Late (2015), Louisa Moats describes the challenge well: The older struggling reader may need instruction in skills they missed in the early grades, but in many other ways they present unique challenges. Reading and writing may be slow, taxing, and frustrating. Students' difficulties are often traceable to early failure with the basics. Spelling and writing are poor. What begins as a phonological and word recognition issue, over time, becomes a pervasive problem with language, both spoken and written.

Over time, they have likely experienced failure and disappointment. Year after year, these students have been given tasks that are too difficult for them to accomplish independently and successfully. Thus, they tend to avoid reading and have learned ineffective coping strategies for getting through their work. A cycle ensues: because reading is difficult, they do not like to read, and so they read (and write) infrequently. As a result, they are not familiar with the vocabulary, sentence structure, and text organization. Consequently, word and world knowledge may be very limited. Consider, as well, the world of the adolescent.

To a middle school or high school student, friends, peer group status, identity, and concerns about the future all influence the teenage brain. A struggling reader is equally, if not more, in need of school experiences that promote self-esteem and social competence. What are schools to do? Provide effective, intensive, structured literacy-based instruction that is personalized for older students through blended learning. Providing reading intervention that will enable students to acquire the skills they are missing and advance important meaning-making strategies, which in turn will improve their overall academic success, is necessary to break the cycle of failure.



Develop Critical Language Skills

Digital instruction can be successfully leveraged to aid an older struggling reader. Basic reading skills can be strengthened in an age-appropriate, and engaging manner, especially within a personalized technology platform. At the same time, comprehension of complex text can be taught. The overriding goal—to improve facets of language on which reading and writing depend—is achievable given intervention time, specially designed digital instruction, and professional development for teachers.

Tools:

<u>Reading Horizons Elevate</u> - The *Reading Horizons Elevate*[®] Direct Instruction Materials empower teachers to provide straightforward multisensory reading intervention that helps students build new brain connections and dissect tricky words. Help students transfer foundational reading skills to connected text while learning about a wide range of high-interest topics. The *Reading Horizons Elevate*[®] Reading Library Books provide 330 content-rich nonfiction passages for every reading level (1-12).

<u>Reading Plus</u> - Built on decades of research, Reading Plus assesses efficiency, and also measures and increases motivation and comprehension. The program allows students to practice at their own pace and uses adaptive technology in a truly meaningful way.

<u>System 44</u> - By focusing on three key components, *System 44* delivers just-in-time intensive intervention and a supportive learning environment that the most challenged readers urgently need. Adaptive instruction offers a personalized path to building foundational skills. Scaffolded instruction helps students meet rigorous standards.

<u>Read 180</u> - Developed using the latest cognitive neuroscience, *READ 180* changes the brains of struggling readers by helping different parts work together more effectively. By tapping into brain science and growth mindset, a more personalized instructional approach accelerates achievement. New engaging content promotes student choice and helps readers make deeper connections that extend well beyond the classroom.

<u>Read Naturally</u> - This web-based intervention efficiently applies the research-based <u>Read</u> <u>Naturally Strategy</u> to accelerate reading achievement. Visual and auditory prompts guide students through the motivating steps to develop fluency and phonics skills, support comprehension, and improve vocabulary. Track student progress easily and use the data to differentiate instruction with Read Naturally Live. Here is a <u>videoclip</u> of the program in action.



<u>Achieve 3000</u> - Achieve3000 Literacy was designed for early screening, identifying skill gaps, targeting instruction, and regular progress monitoring. Help struggling students by using our differentiated content, learning scaffolds, and proven literacy routine. With these tools, struggling students can accelerate Lexile gains toward meeting grade-level college and career readiness expectations.

<u>Fluency Tutor</u>: - Pick any content, any time. Teachers can select any web page or browse a library of over 500 pre-selected reading passages based on content, Lexile level or reading age. Students can rehearse and record their reading in a relaxed environment at school or at home, with extra help provided by a dictionary, picture dictionary and translation tools. Teachers can listen to students' recordings wherever and whenever it's convenient, giving quick feedback or a more in-depth assessment of reading progress.

Lexia PowerUp: PowerUp helps educators simultaneously address gaps in fundamental literacy skills while helping students build the higher-order skills they need to comprehend, analyze, evaluate, and compare increasingly complex literary and informational texts. Blending online student-driven explicit instruction with offline teacher-delivered lessons and activities, PowerUp empowers secondary teachers—regardless of their background or expertise in reading—to deliver the exact instruction each student needs to become a proficient reader. Here is a videoclip of Lexia PowerUp in action.

Increase Interest and Motivation

Learners need to be able to access and choose what to read from high interest texts in order to build motivation and background knowledge. Students who struggle with reading are often provided less choice than peers at higher levels. Offering learners choices can develop greater independence and engagement.

Research shows that providing students with autonomy in their learning creates a sense of ownership. Universal Design for Learning (UDL) confirms that offering choices in reading materials and ways of interacting with those materials can increase learner motivation and connection to learning. It is not enough to simply provide choice; the kind of choice and level of support needs to be optimized.

Often, students do not recognize that they have a variety of interests that drive their reading choices. Students at all levels can be propelled to practice and persist with reading if they are encouraged to read on topics that are of deep interest to them. They may need support identifying those interests (especially at the secondary level), as they explore their identities. Support students to recognize and articulate topics that interest them.



Reading is one of the ways that students acquire knowledge about the world. Reading also enhances one's vocabulary, or word knowledge. World knowledge and word knowledge are critical to learning. The more one reads, the better reader one becomes and the ore knowledge one acquires. Furthermore, reading fiction helps develop social-emotional skills such as developing empathy for others (Wolf, 2018). Dyslexic students are at risk to acquire less knowledge and skills when they do not read as much as their peers. As a result of weak reading skills and repeated failure, these children often read less and thus, learn less, which can lead to even larger gaps. This has been called the Matthew Effect (Stanovich, 1986).

How do schools ensure struggling readers can access the same texts (i.e., information) as their peers when they are reading below grade level? One of the answers is audiobooks. Audiobooks are a research-based option often overlooked. The stigma "that it is not REAL reading" persists. Talking Books serve as important tools for students who are not able to access the visual code. While struggling readers still may need to be taught the code, they should not be doublepenalized by being denied the information in the book. Visual 'reading" and audio 'reading' can and should work in tandem. Audiobooks activate the same neural pathways as visual books.

Older students are highly engaged by current, relevant, and controversial topics. UDL affirms that student engagement increases when students are provided with options that are personally relevant. The more relevant the options for reading material are, the more likely students are to read, which leads to improvements in reading comprehension. Based on what students read, teachers can suggest other related stories to extend or deepen student interests. Teacher recommendations help students to identify topics of interest. Here are two local bloggers that provide book bites on young adult literature: <u>Mrs. Melanie Roy Recommends</u> and <u>Young Adult on the Shelf</u>.

One way to spark enthusiasm for reading is through "teaser" videos. <u>The Book Trailers for</u> <u>Readers website</u> offers a collection of teacher and student-created "commercials" for highlyrecommended books. Students can make their own recordings using tech tools such as <u>Animoto</u>, <u>Adobe Spark</u> and <u>iMovie</u>.

Creating a community around books can also boost student interest. The "Global Read Aloud" projects of Middle School and Young Adults connect classrooms around the world that are reading the same book to share digital responses. Another exciting method is video conferencing using Google Hangouts and <u>Skype an Author Network</u>.

Tween Tribune



Topical Text Websites:

In 2016, Gina Cervetti, Tanya Wright, and Hye Jin Hwang proved that if children read multiple texts around a topic, it accelerates vocabulary growth. Classes using this approach of reading deeply (instead of just widely) consistently outscore similar classes on standardized tests of comprehension. Students need opportunities to increase their overall volume of reading on topics that interest them. Some websites that provide access to varied and topical texts include:

General interest:

<u>Word Generation</u> has a library of debate-worthy texts that will engage learners with student-relevant issues.

<u>Tween Tribune</u> is a repository of articles on a wide range of subjects for tweens and teens. <u>DOGO News</u> provides a searchable library of current event texts, across varied subjects

History/Social Studies:

<u>The Library of Congress</u> website includes stories about people from America's in the Meet Amazing Americans section.

Science:

<u>Science News for Students</u> has short, interesting science themed readings at Science News for Students.

Sports:

<u>Sports Illustrated</u> for Kids offers current-events articles related to sports.

Young Adult:

Each year, the <u>Max Warburg Courage Curriculum, Inc.</u>, publishes a downloadable anthology of nonfiction texts, created by young adults for young adults, focusing on where they have found courage in the face of challenges.

<u>Story Shares</u> has created a library of short chapter books that are both compelling and approachable for struggling teen and young adult readers.

Free public domain audiobook sites:

<u>Librivox</u> - Free - This site offers free text to speech audio books for public domain literature. Volunteers record chapters of books and release the audio files on the internet. <u>Project Gutenberg</u> - Free - This site offers free text to speech audio books for public domain literature. Volunteers record chapters of books and release the audio files on the internet.



Audiobooks - membership sites:

This option is available for individuals with dyslexia that can get a qualified certifying professional to fill out a form from the membership site.

<u>Bookshare</u> - Free - This site offers free text to speech audio books for diagnosed individuals with dyslexia. The books are simply scanned. Then, free or purchasable apps use computerized voices to read the text aloud.

<u>Learning Ally</u> - Paid - This affordable option offers text to speech audio books for diagnosed individuals with dyslexia. Volunteers read the books aloud.

<u>Kindle</u> - The Kindle app has many interactive features like bookmarks, text highlights, making notes and it also lets you synchronize your eBook to another device. But, Kindle allows you to download or purchase eBooks only from the Amazon library.

Purchasable audiobooks:

<u>Audible.com</u> - Paid - This Amazon company provides audiobooks. It also provides magazines, radio shows, podcasts, stand-up comedy, and speeches.

<u>Raz-Kids</u> - Paid - This website provides comprehensive reading resources for students, with hundreds of eBooks offered at 27 different levels of difficulty. Kids access leveled text and read at their own pace.

Transform Understanding

Just as learners vary and are engaged by diverse content, so too should the opportunities to interact with texts be multiple and varied. Encourage students to think about, connect with, and tie their readings to their own experiences and background knowledge through varied ways of expression and social interactions.

There is no medium of expression that is equally suited for all learners or for all kinds of communication. A key principle of UDL is to provide alternative modalities for expression, not limited to written text, both to level the playing field among learners and to allow the learner to express knowledge, ideas and concepts. When students are given options that motivate them, they are better able to show what they know and can do.

Effective communication requires secondary students to be able to communicate, collaborate, create and think critically (the 4 Cs) through multimodal texts in diverse forms. It is important for all learners to learn composition, not just writing, and to learn the optimal medium for any particular task, purpose and audience. Some examples include:



- Compose in multiple media such as text, speech, drawing, illustration, comics, storyboards, design, film, music, dance/movement, visual art, sculpture, or video
- Use social media and interactive web tools (e.g., discussion forums, chats, web design, annotation tools, storyboards, comic strips, animation presentations)
- Use story webs, outlining tools, or concept mapping tools
- Use text-to-speech software (voice recognition), human dictation, recording

There are limitless digital options to assist students in engaging in the 4Cs. Here are a few suggestions:

Collaboration: Tools that help us work together

<u>Scrible</u>: Students use this chrome extension to curate, annotate, tag and share articles. <u>Padlet</u>: A digital canvas that allows users to add all sorts of items as they work together on a project.

<u>Trello</u>: A project management tool that helps keep teams organized as they work. Teachers can create board templates for students. They make a copy of the board, add collaborators and move things around/upload documents, etc. as they complete items.

Communication: Tools that help us share what we've done

<u>Blogger</u>: Part of Google Apps suite, it is a powerful tool to elevate student voice. Students can write a post, reflect on their learning, etc.

<u>Flipgrid:</u> Easily and quickly create topics for students to discuss ideas. These quick videos provide insight into student thinking.

<u>Seesaw</u>: Allows students to capture, organize and share their learning. Like a digital portfolio, a way to share classroom activities with parents, too.

Jilster: Allows students to create online magazines collaboratively.

Creativity: Tools that help us develop products to explore the content

WeVideo: Online video editing software.

<u>Canva</u>: Easily and quickly create visually stunning flyers, posters, collages, infographics and more.

MakeBeliefsComix: Create comics that can be printed or e-mailed.



\bigcirc Critical Thinking: Tools that help us go beyond the content.

<u>Coggle</u>: Collaborative mind mapping Chrome extension that integrates with Google Drive. Students brainstorm ideas and develop maps to show how the content they are learning integrates with previously understood ideas.

KQED Learn: Students work in a semi-gated environment (all students must be attached to a teacher but can communicate with each other), responding to prompts and investigations.

Embed Supports to Customize Text

There are different ways for students to engage and interact using technology, which offer more opportunities to overcome reading challenges that may prevent access to a text. Readers may listen to an audio version of a book and follow along with printed text, also called Audiosupported reading (ASR) or text-to-speech (TTS). Digital text on a computer, tablet, or smartphone can be spoken aloud. A challenging word on a page of a website or ebook may be selected and pronounced. Settings are adjustable to ensure that the speed of the spoken text and voice type are comfortable for the child. It is particularly useful for students who struggle with reading, as it allows them to access the curriculum and sustain engagement with challenging texts. They can also follow along with the highlighted words as a passage is being read to them.

Reading challenges that are "just right" are those that encourage students to grow and struggle productively, while avoiding levels of frustration that will turn struggling readers off. When reading comprehension rather than decoding is the goal, TTS is an example of a support that eliminates decoding barriers so that students can have access to grade appropriate content. Providing digital support can make age-relevant, high-interest texts "just right" for students who usually read lower level material.

Access support tools

Text adjustments

The ability to adjust the way text is presented on the screen can make a huge difference for some struggling readers. It's simple to change the font size and style to find something more readable. Research from Rello and Baeza-Yates (2013) concluded that students with dyslexia might benefit from switching to Helvetica, Courier, Arial, Verdana and CMU fonts. They may also want to try the <u>Open Dyslexic</u> typeface. These researchers also discovered warm background colors such as peach, orange or yellow are beneficial for readability. Also, cool



background colors, in particular blue grey, blue, and green, decreased the text read ability. For all fonts, 12 to 14 pt is considered most comfortable.

Resources for Text-to-Speech (TTS)

Text-to-speech (TTS) can open a wide range of challenging texts to readers, and can motivate students to read and learn more. These resources can be used with Mac or PC computers. See your school Computer Technology specialist for help in getting these, or other, TTS tools working for your students.

- MAC Directions to access TTS directly from the system <u>http://support.apple.com/kb/PH14230</u>
- PC <u>Natural Reader</u> which will read text on the PC
- <u>Read & Write by TextHelp.</u> Read & Write literacy software makes the web, documents and files more accessible on any platform or device.

Immersive Readers

<u>Immersive Reader</u> is a multi-purpose customization tool offered through Microsoft OneNote. It lets you: Change font size, text spacing, and background color, split up words into syllables, highlight verbs, nouns, adjectives and sub-clauses, and choose between two fonts optimized to help with reading. This tool also reads out text aloud, and can change the speed of reading.

<u>Kindle Immersion Reader</u> takes you deeper into a story than ever before! This functionality allows you to read a Kindle eBook and listen to its professionally narrated Audible companion Audiobook – all at the same time. Not only that, but you get the benefit of real-time highlighting, making Immersion Reading a valuable tool to boost reading comprehension and overall retention of content.

E-Pens

Pen scanners can be a great help to students who are required to read volumes of text and take copious notes. The scanner pen can scan, store and transfer selected passages as well as <u>hand-written script</u>, numbers, and even small images. Some to consider:

<u>C-Pen Reader</u> <u>Scanmarker Air</u> <u>Ectaco C-Pen</u> <u>PenPower WorldPenScan</u>



Text Simplification

Students with dyslexia may benefit from content simplification. Generally text simplification tools substitute longer more complex terms with more frequently-used and shorter words. Using more frequent words caused research participants with dyslexia to read significantly faster, while the use of shorter words caused them to understand the text better. These results indicate that struggling readers may benefit from interactive tools that perform lexical simplification.

There are several ways you can modify texts, or find modified texts, to make them accessible to all students.

<u>NEWSELA</u> Easy to set up accounts and classes using Google, Microsoft, or Clever. Nonfiction articles are available and assignable on multiple reading levels. There are even Spanish language versions of articles.

<u>Read Works</u> Includes fiction and poetry as well as nonfiction, text-to-speech for articles and activities. Easy to create classes, assign and track student progress on assignments.

<u>Tween Tribune</u> Engaging nonfiction news articles and graphics, all with a range of reading levels. Includes lesson plans that can be adapted for different grade levels.

Sometimes, though, you don't have the luxury of choosing your own texts for use in the classroom. Or, you may have a specific text you want to use written at a level not yet accessible to some students. In that scenario, these resources can be helpful:

<u>Rewordify</u> This website lets you copy and paste existing text (or key it in if there's no copy option), highlighting difficult words and substituting simpler alternatives. Ease of use; identifies challenging vocabulary and suggests simpler word/phrase substitutions; automatically generates word lists and vocabulary-building activities.

<u>Simplish</u> Like Rewordify, this site allows users to input text by typing, copying and pasting, or by providing a URL. With a click of the button of your choice, the text is then simplified or summarized.

<u>Text Compactor</u> Using a simple formula that measures how many times a key word is used in each sentence. This website condenses text into a tight summary. It doesn't actually substitute words, but it does analyze the passage, eliminating what it perceives as unimportant details to focus readers on the main messages. It's a time-saver for summarizing news articles (where writing tends to be more formulaic), but doesn't work well with narrative texts.



Many apps and websites provide alternatives for students to experience text. A great example of this is the site <u>My Shakespeare</u>. This site offers interactive text versions of plays accompanied by media such as interviews with characters, performances and pop-up notes that appeal to a 21st century learner. Digital products like this give students additional channels to understand, experience, and enjoy difficult text.

Online Dictionary Resources

Just in time supports, such as a click-for-definition online dictionary, can keep students in the flow of reading while supporting increased comprehension and engagement. While there are many online dictionaries, two we like for their student-friendly definitions are listed here:

Longman's Dictionary of Contemporary English Collins CO-Build Dictionary

Translation engines

Did you know that struggling readers who speak other languages make linguistic connections and build better understanding when they see words or passages in familiar languages? And did you know that Google has a free tool your students can use to translate any text? Make <u>Google Translate</u> known and available to students to help them build understanding and engagement with texts.

<u>Microsoft Translator</u> also has a similar tool that can translate menus, street signs, websites, documents, and real-time conversations.

Microsoft Specific Tools:

Microsoft Edge Browser

• Click book icon in browser and then right click to have text read aloud

Microsoft Lens App

- iPhone, Newer Android, iPads
- Open app, snap picture of text, click open in immersive reader (customize font size, speed, voice, and background color)

Microsoft Word/Microsoft OneNote Immersive Reader

- Students can have assignments read aloud using immersive reader under the View Tab <u>Microsoft Word-Dictate</u>
 - Dictating letters, numbers, and symbols
 - Microsoft <u>OneNote</u> has dictate and audio message

Microsoft Word-Dictate

Microsoft OneNote Audio Recording tool



Low Tech-pencil grips, grid paper, and cursive writing <u>Microsoft Planner</u> (Syncs with Outlook Calendar. Free app for phones) Español <u>Microsoft Translator</u> <u>Microsoft Translator</u>

Google Chrome Specific Tools:

<u>Google Read & Write (typically costs money for license for student, changes made because of</u> <u>Covid-19</u>)

- Typically, a student will already have this license as part of their IEP or 504 plan Google Read Aloud Extension (Free)
- Select Extension, highlight text and click read aloud Google Docs Voice Typing (Tools Tab)

Voice Typing in Google Slides

Google Docs Voice Typing (Tools Tab)

<u>Google Keep</u> (Syncs with a students' Google Calendar. Free app for phone and iPads) <u>Google Translator</u>



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