REVIEWS

Using INFOhio, Ohio's PreK-12 Digital Library, To Lead Instruction in the Reading of Digital Text

—Emily Rozmus

"There are few more powerful mirrors of the human brain's astonishing ability to rearrange itself to learn a new intellectual function, than the act of reading"

Maryanne Wolf, *Proust and the Squid: The Story and Science of the Reading Brain*, pp. 4-5.

Reading is an act of learning, growth, pleasure and for some, frustration. It is one way humans interact and react. Like any act of growth, reading takes practice and patience, and will be easier for some than others, but it is an essential part of learning in our culture, joined equally by hearing, seeing, and speaking. In the 21st century, there is no longer one way for text to be delivered and read. Today's learners can access both print and digital text, and are expected to comprehend it and then use that understanding to create and evaluate. Numerous studies show that humans read digital text – words on a television, computer, or handheld device – differently than printed text. The very nature of digital text – pixels, word layout, scrolling – leads readers to skim, lose focus, and grow tired (Konnikova). Skilled readers will work to make the transition, but those who are learning to read and reading to learn, students in elementary, middle, and secondary school, need additional support and instruction to master the comprehension, evaluation, and synthesis of digital text's concepts. INFOhio, Ohio's PreK-12 digital library, leads in promoting the use of digital text in classrooms. This state-funded collection of resources has a variety of texts and resources that help educators incorporate the skills and strategies needed to develop strong readers of text online. With access to thousands of reliable and authentic texts provided at no cost, all Ohio educators can incorporate digital text from INFOhio into curriculum and instruction.

Intentional Learning

When it comes to developing digital readers, educators must make real efforts to ensure that the necessary skills are being addressed. Teachers must encourage and teach digital reading along with print reading to develop literate digital citizens. While the term "digital native" may apply to millennial students, they live here as tech comfy and not tech savvy; they play and relax with tech, but they don't necessarily work with it. It is the responsibility of teacher and parents to help students become sophisticated as "info-sumers, critical thinkers, and savvy participants in digital space" (Maiers).

Part of being a working digital native is *understanding* that the effort required is extraordinary. Ernest Morrell, co-author of *Every Child a Super Reader* and professor of English at Columbia University, believes we must teach our learners about "Crouching Tiger mode" as a key way to engage and empower students for learning. Crouching Tiger mode is a state of readiness for learning, an alertness for the task and desired results. It helps students create a sense of identity as a learner and prepares them (Morrell). Morrell's Crouching Tiger parallels the growth mindset theory. This popular educational topic maintains the belief that to learn, one must acknowledge that intelligence is not fixed, but rather can be developed and strengthened with grit, determination, and a willingness to complete a difficult task (Dweck). Before we teach students to be better digital readers, it is important to let them

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know that it won't be easy. Being a good reader of any type of text means being intentional in one's learning and planning the steps needed to be successful.

Educators Preparing for Digital Text

Educators should begin by developing their own digital reading skills. INFOhio created *Success in 6,* an adult online learning tool available at no cost, which contains six modules on current educational topics, including engaging readers in digital text. Each module is worth three contact hours, and can be completed at the teacher's preferred pace. Within the digital text module, adult learners will find specific strategies to help students master comprehension of digital text. Strategies such as using guiding questions, annotation, and chunking are not new, but when paired with digital tools, they can lead to active reading by students and develop understanding and mastery of concepts. Completing the "Engage Your Students with Reading Resources" in *Success in 6* is an excellent first step for educators who want to learn more about instruction of reading with online text.

Having been introduced to effective strategies to integrate into instruction, educators must next think about curriculum and greater still, their teaching theory. The importance of creating a media-rich learning environment in the classroom is promoted in *Tap, Click, Read* by Lisa Guernsey and Michael Levine. They call this environment "Readialand," and describe it as a place where educators and families come together to celebrate literacy and the media that can support reading and critical thinking. Students in all grades deserve this encouraging learning setting, and educators must be intentional in their creation of Readialand (Guernsey and Levine 20). Educators can take small steps when creating their own Readialand by adding various forms of media to lessons, displaying books, magazines, and devices, and by asking students to use INFOhio's databases and literacy resources for learning or pleasure.

Grades PreK-2: Learning to Read

For those students who are learning to read, parents and educators should work together to make sure students are fully immersed in a reading culture. These practices can help lead to support for students learning to read digital text:

- Teach skills plus knowledge
- Use print and digital text simultaneously
- Use literacy software in instruction, not just as "technology time"

- Differentiate using special features (read aloud, highlighted text)

Tap, Click, Read, Guernsey & Levine, 2015 .

INFOhio offers three resources specifically for early readers – those students in grades PreK-2. Scholastic's *BookFlix* pairs popular fiction and nonfiction titles for students to read. World Book's *Early World of Learning* is an early learning portal including leveled eBooks, and *World Book Kids* is an encyclopedia for students in primary grades. Each of the resources allows readers to choose to listen to the text as it is read to them or to read it alone. Modeling clear, concise, and animated reading promotes fluency for early learners. The highlighted words make it easy for learners to follow along, and encourages understanding of digital print concepts and word recognition. When teachers use digital text in the classroom, not only are the students learning about the concepts in the books, but they are also gaining valuable skills for reading print and digital text. Differentiation occurs when students have the option to turn off read aloud functions, allowing the learners to read with as much or little support as needed for success.

Pairing the print and digital form of a book is a great way to create Readialand in a classroom or home. INFOhio's early literacy resources can help teachers and parents. Visit *BookFlix* for the Weston Wood video of *Curious George* or Pigeon from Mo Willems. Then, show students the print book as well to help them understand that reading happens in various places. *Early World of Learning* has printable books to accompany each of the titles in the leveled reading program Welcome to Reading. Students can read the digital version at school, and take the printed book home to read again with an adult.

Reading digital text with a class or in groups is one way to integrate literacy software into the classroom. Many teachers assign digital texts from *BookFlix, Early World of Learning,* and *World Book Kids* as silent reading time or as part of their Daily Five. However, using eBooks and electronic articles as part of the teacher-facilitated lesson is recommended. In fact, studies show that students who use technology and read with the support of an adult will have greater success as readers in the future (Guernsey and Levine 129). Modeling reading of various types of text is crucial in the home and the classroom for optimal student learning. The Beginning Readers flyer designed by INFOhio and available at https://www.infohio.org/educators/

library/toolkit/flyers offers strategies that require adult interaction with children when using INFOhio's early literacy resources to help students learn to read. INFOhio's Integration Support blog also has tips and lesson ideas to help teachers integrate INFOhio's digital text into instruction for important development of Readialand in PreK-2 classrooms. Similarly, Ohio students have access to these resources anywhere there is an internet connection. Parents and caregivers can also strengthen early reading of digital text using INFOhio's digital resources at home, at the library, or on the go.

Grades 3-8: Reading to Learn

As students transition from learning to read, to reading to learn, they will still need the support and interaction of adults. During these years, students begin to develop preferences for genres. They will think about what they read and make choices for reading for pleasure. These years are the golden years of adolescent reading when children learn that the words on a page can have meaning in their lives. In *Digital Reading: What's Essential in Grades 3-8*, Franki Sibberson and William L. Bass II note that the definition of reading must expand so students in the digital age understand how what they read has meaning in their lives. Teachers must be intentional in their inclusion of great novels as well as digital text and tools. Digital reading cannot be viewed as an "add on" (7). The following are indicators of how adults can help students use digital text as part of their reading to learn:

- Make reading digital text authentic
  — Choice, ownership
  — Embedded tools – content and tools work together

- Be intentional about reading online
  — Decision making
  — Thoughtful interaction and tracking

- Encourage connections when reading digitally
  — Form community in reading
  — Create text sets to extend thinking
  — Digital Reading: What's Essential in Grades 3-8 (Bass & Sibberson, 2015

Creating authentic reading experiences with digital text is key in developing digital readers. Students need to have experience with text that they will encounter outside of the classroom, and allowing students to choose what they will read is a powerful tool and hook for even reluctant readers. Many INFOhio resources offer students choice. Scholastic's *Storia* has 160 titles for Ohio's fourth grade students to choose from, and ISearch will bring students back many options, not only from almost all its databases, but also from the print collections of school libraries who use INFOhio's automation.

It is also important that students in these grades have authentic experiences with the tools we use in our classroom for learning. Storia, with its highlighting and notetaking features, is one resource that will help students have an authentic digital reading experience. Annotation tools allow students to read deeply for meaning and are proven to improve student comprehension of digital text (Konnikova). Storia's tools allow students to highlight words or phrases, and take notes for comprehension of text. A built-in dictionary allows students to learn the meaning of a word without having to use another source.

ISearch, INFOhio's discovery search tool, promotes student choice, as well as offers tools for working with the text. It searches almost all INFOhio's databases, including EBSCO's collection with *Biography*, *Points of View Reference Center*, *Science Reference Center*, and *Literary Reference Center*. World Book encyclopedia articles are also included in the search results. *ISearch* uses a tabbed search interface to allow students to choose the level they would like – basic or advanced. School libraries that use INFOhio's automation also have a tab for their library. In this tab, students can search for print books and eBooks available from their school library. INFOhio's *Digital Video Collection* and eBook collection will also be a in the search results for the My Library tab. When using *ISearch*, students can use various tools to help them with their reading and comprehension of digital text. Students can choose to have the text read-aloud, printed, or sent to a more supported digital storage space such as Google Drive, Dropbox, or OneDrive. These tools are helpful for students who struggle or who just need to keep the digital content in one place for ease of access.

Reading of digital text must be intentional as well. Adults should model how to use both print and digital text with staff and students, and help them navigate intentionally between both mediums. Using digital tools to help students understand the decisions they make as readers includes having a toolbox of trusted websites where they can look. Once again, INFOhio offers quality digital content. *ISearch* is a great tool and teaching students to use the tabbed browsing for different text levels, and using the source (magazine, journal, book) or publication in the limiters are two great ways they can search reliable sources for digital content that they will enjoy.

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Using tools to track and interact with media is a key part of mastery of the text. *ISearch's* tools for sending the text to an online platform such as Google Drive is an intentional way of a reader understanding that text is of interest to him and he wants to engage with it. "Students are truly learning when they think about the skill that matches their purpose in their independent work" (Sibberson and Bass). Just placing a digital text in front of a student is not enough. To facilitate real learning, we must ask our students to think about what they need to be able to do and how they will use the text and various tools to do that.

Making connections about reading is a key way to develop comprehension for online readers. In today's world, community and connecting with community are a given. We do not experience moments anymore without sharing them in some way with the people around us – even people we will never know or meet. Allowing students to share reading and books with their community is a key part of digital reading. There are many online reading communities – Goodreads, blogs, and Biblionasium are examples. INFOhio's newest tool for student creators, *Book Nook*, is one way students can share their reading experience with their community. The tool has everything readers need to create and publish a book trailer about the book they have read and their experience with it. Students can explore other book trailers as well to discover books to read or students who share an opinion on a title.

Text sets are another way learners understand that that community is larger than just a group of people. Text sets encourage a deeper understanding of concepts. INFOhio's diverse and current digital content is an important place to begin when creating text sets for readers. *Points of View Reference Center* allows students to read about both sides of an issue and make connections about the concept at hand as well as to see issues from diverse points of view. Furthermore, using video as part of a text set is one way to encourage students to make connections between what is read and what they view/hear. Students can also search the *Digital Video Collection* from INFOhio to find additional media to add to their collective learning of a concept or idea.

Grades 9-12: Getting Ready for College and Career

When students reach high school, reading becomes essential for college or career preparation. While many aspects of learning will change in college for learners, one thing remains the same: the need to read complex text and understand and use its meaning for evaluation and synthesis. In his article, *Too Dumb for Complex Texts*, Mark Bauerlein states "The clearest differentiator in reading between students who are college ready and students who are not is the ability to comprehend complex texts" (29). The professor and author of *The Dumbest Generation* also holds that students tend to engage at a shallow level, with texts and that, "(t)he more students are exposed to complex texts, the more they realize that they can't complete their studies through "a single superficial reading" (29). In order to create critical thinkers who are ready to read complex texts, we must develop a willingness to probe and to engage in uninterrupted and deep thinking (Bauerlein 30-31).

Analysis and dissection of text is a key part of higher-level thinking. Modeling reading of this type of text in its digital context is an important part of creating students who are ready for college. Students must establish within themselves their understanding of and commitment to what the text is saying, and create their individual place within that text. Once they have done this, then they can begin to interact with others to share and connect ideas. *Literary Reference Center* is an overlooked resource provided by INFOhio, but it is a key part of getting students ready for college with complex texts. This complex text requires students to read with patience, focus solely on the text, and pause for reflection.

Additional Online Resources – Strategies for Digital Reading

Educators in the 21st Century must build bridges between standards and content and digital tools for learning. While reading strategies that work remain grounded in research and proven results, the methods for implementing the strategies will and have changed with reading of digital text. For example, using guiding questions to engage students in text and encourage active reading is an established way to create purpose for student reading. However, the use of digital tools when reading digital text can heighten learning for a variety of reasons, from learning styles to student engagement. For early readers, *BookFlix's* popular titles will be enhanced by using guiding questions for readers to answer as they

read/follow along with the digital text. Teachers can use tools such as Padlet, Google Apps for Education, and Evernote where students can answer guiding questions, discuss thoughts and opinions, and take notes for understanding, even at a young age.

There are also tools available that allow students to highlight and add notes directly on digital text found on INFOhio. Students who find an HTML article in ISearch can save the article to an account in Diigo. With the Diigo annotation browser extension, students can annotate -highlight and add notes to -the web page, which will be saved for additional study or use. Google Apps for Education also offer similar tools to help students read, analyze, and evaluate digital text. Teachers can easily access student accounts when shared, allowing for interaction and support at the virtual level.

Finally, breaking complex text up into smaller chunks is a helpful way to immerse readers in text that is difficult to read and understand for learning. Digital tools that allow users to "snip" a portion of a screen view are very helpful. Teachers can display a piece of complex text from INFOhio's World Book (Lexile levels are available for most articles) and "snip" one chunk of the text. Using the free Windows Snipping Tool, teachers can then ask for volunteers to come forward to highlight words or phrases, or use the pen tool to write or underline text. There are also other tools available online which allow non-PC users to access similar features. Breaking down text into smaller chunks is a simple way to help readers decode and understand text in any form – whether print or digital.

Parent and Home Connection

Making sure that students interact with digital text is a task that must occur both in the classroom and at home. Schools should communicate with parents to provide them with information about INFOhio and other reliable web sites where they can find quality content to read with their child. INFOhio's *Reading 'Round the Clock* series (created in partnership with Ohio Educational Library Media Association, Ohio Parent Teacher Association, and State Library of Ohio and available at: https://www.infohio.org/students/parents/resources-for-the-third-grade-reading-guarantee) offers flyers and videos to parents of early readers – those in grades PreK-3 – with simple tips on how to read anywhere, anytime with children. The series focuses on preparing students for Ohio's Third Grade Reading Guarantee and offers tips for digital reading including using smart phones to access *BookFlix* or *Early World of Learning* while waiting to be seated at a restaurant, or watching television with closed captioning on. Teachers can also provide activities for home by sending home INFOhio's instructional "bags," which include INFOhio's digital early reading resources and simple activities for adults and children.

Conclusion

INFOhio offers many online resources that can be used to engage and empower readers no matter what level: PreK -2 students who are learning to read, students in grades 3-8 who are reading to learn, and secondary learners in grades 9-12 who are preparing for reading for college and career. At all levels, students need support to comprehend and reflect on what they have read to process, analyze, and synthesize information to create knowledge. Digital text is no different in its need for instructional support, and requires early, frequent, and varied exposure. When paired with best practice strategies and techniques, INFOhio's digital text is a powerful tool in Ohio's classroom.

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