

ACCESSIBILITY FOR ALL

By Jill Nerio & Larry Batson





In a world full of different people with different preferences, different backgrounds, different learning styles and different behaviors we need to think differently about how we share content with our students, coworkers, clients and families. As technology is increasingly leveraged to distribute information across diverse educational institutions, we must make sure it can be received by all people. Accessibility was an important topic prior to COVID-19 and resultant virtual learning environments; now it should be a top priority. Accessible content is, plain and simple, better content for everyone.

Better content starts with learning what accessibility is and what tools you can offer students.

What is accessibility?

Accessibility is achieved when individuals with disabilities can access the information they need to learn and work. These efforts involve screen readers, cell phones, translating materials, providing closed captions or even looking at color contrast. Accessible content benefits everyone, regardless of ability. Offering content via a variety of formats, that can be easily accessed and navigated, improves the user experience for all.

Section 508 of the Rehabilitation Act of 1973 highlights the legal obligation to make information technology accessible to people with disabilities. But the need for, and rewards of, accessible content are far greater than the law can state, especially when it comes to student success.

Imagine you need to access the third floor of an office building. The stairs may work for a majority of the people entering the building and, after all, the stairs have always been there. But if you want to increase access, you want an elevator.

The elevator was built to assist those with disabilities, but it's often an easier path and everyone may benefit from using it. The same applies to building digital content.

Some think of accessibility as making accommodations. Closed captioning is a great example. Have you ever been somewhere and needed or wanted to watch a

video on your cell phone, but didn't have headphones and couldn't play audio? You might have turned on the closed captioning. Or maybe you were watching a foreign film, and the closed captioning provided an accommodation for you.

Career and technical education (CTE) should offer those same accommodations for our learners. For example, in the classroom, if an instructor can video a lab demonstration, everyone benefits. Students can watch as many times as needed, when it is convenient for them. The visual learner is really going to benefit from this.

Add audio and talk through the skill. Students hear industry-related terms; they learn to make connections between auditory and visual learning. Now add closed captioning. Technical vocabulary and processes are heard as well as seen; the content becomes accessible to learners of all styles and with varying abilities.

Accessibility tools

An accessibility toolbox to use when creating content is just as important as any other classroom tool. There are many tools built into products you already use. For example, Microsoft Office products contain accessibility checkers; these will scan your documents for content that might be difficult for people with disabilities:

- Non-standard font faces
- Font colors without enough contrast
- Elements unable to be detected by a screen reader, such as images presented without alternative text

Important accessibility tools might include the following:

Immersive readers

Immersive readers can be great tools for those with dyslexia or struggling readers. These readers can identify parts of words, highlight sections of text line by line and even translate documents. Microsoft Office apps all include an immersive reader; users can even add an (unofficial) immersive reader extension to their Google Chrome web browser. Other tools such as Flipgrid, Nearpod, Buncee and Wakelet also include immersive readers.

Immersive readers are valuable across the spectrum — from individuals with disabilities to English language learners, to individuals who learn best by hearing. A learner can simply input their document into an immersive reader, put on some headphones and have a document read to them.

Audio and visual recordings

As we continue to move our content online to meet the needs of virtual classrooms, the need to diversify content delivery methods will only increase. Even when you cannot be face-to-face with students, you can still provide oral instructions or presentations. (And if we are lucky enough to be face-to-face, recorded instruction assists in making your content more accessible.)

Have you ever participated in a really great professional development session, and wished that it was recorded so you could go back and listen again later? How many times have you taken a recording device with you into the classroom?



CTE students frequently must re-view technical documents, such as the maintenance guide for a CNC machine or installation instructions for a roofing shingle. An immersive reader will not only read the document out loud, but it can also translate the information into understandable words.



Some students remember things better by listening rather than reading.

Most students have a mobile device close by; create your content to meet their unique needs. Record your lectures or develop a podcast. Don't simply hand out notes or send emails. A student with visual impairment would be given a greater opportunity to learn, and so would the auditory learner.

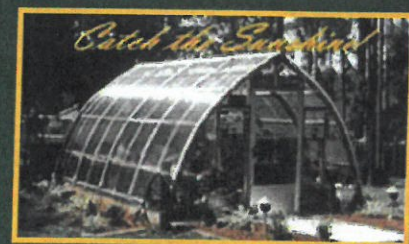
You might even think of recording a short clip at the end of each class — like an exit ticket — with highlights of what students learned that day. Ask students to listen to that same recording before the next class session, as a way to review the material! This is a great strategy from which every student will benefit.

As mentioned previously, closed captioning makes videos more accessible. Instead of turning up the television volume, I turn on the closed captions. I am a

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learner who comprehends better when I hear and read it. Some students will learn better by reading and hearing the information simultaneously.

Color contrasts and fonts

As instructors, we like to be creative. We sometimes add fun colors and fonts to our documents and make them more visually appealing. But consider how these choices might affect students with visual impairments. For example, black text in a white box is easier to see than yellow text in a green box. So how do you know how well your colors are contrasted?

Thoughtful, accessible color design would be important for a student studying printing. Include colors and contrasting in the relevant career and technical education curriculum. WebAIM Contrast Checker is a tool that allows you to determine the contrast color ratio of text and background colors.

Incorporating into industry practice

With accessibility in mind, what are the needs of students as they enter the workforce? Are there technologies or methods that the students can learn while in our classrooms that will meet their accessibility needs in their workplace?

For example, a nurse may need to talk to patient with a hearing impairment. If the nurse uses a mask that has a clear material covering her mouth, the patient can read her lips. Given our current health crisis, it is likely masks may be worn in the classroom by all; therefore, teachers may need these same masks. This is a great example of an accessibility tool used in both the classroom and in industry.

Some fonts are hard to read. Sans serif fonts, those without decorative lines, are easier to read than serif fonts. Popular sans serif fonts are Arial, Calibri, Tahoma and Helvetica.

Consider the work of an electrician. Someone who experiences color blindness may not traditionally have been able to undertake a career in electricity. Why? Because a lot of critical make-ups and connections are dependent on colors. However, applications such as Color Blind Pal make it possible for that student to overcome a roadblock to their career of choice.

Educators will sometimes put limits on students, or prospective students, before trying to address their challenges. If educators use their accessibility toolbox not only to better their content but to also show how these tools can be used in everyday applications, our students will be even more successful in the workplace.

Now, as CTE educators produce more digital content to suit virtual learning environments, we need to focus on how digital content can be accessed by all students, especially those with disabilities. Immersive readers, accessibility tools in documents and PDFs, software tools, accessibility of online textbooks — all will help us make our content more accessible.

This means a change in the way we have been doing things as educators. Instead of creating and sending out content, then expecting the students to figure out how they are going to get the information, we need to create accessible content up front. And we need to provide students with tools they can use. These tools can

not only be used in the classroom, physically or virtually, but they are also tools that can be used as students move into industry roles.

Start with one thing, one tool, one document. Make an effort to focus on the future; leverage accessibility as inspiration to find new ways of teaching.

Discover a variety of ways to share information within your learning communities.

Luckily there are many tools out there that can help us navigate this transition; the onus is on educators to change the content we teach, to ensure that everyone can access and benefit from it. ■

Jill Nerio is an instructional coordinator at Tulsa Technology Center. Prior to being in that role, she was a sports medicine in-

structor. Nerio has a master of education. Email her at jill.nerio@tulsatech.edu.

Larry Batson is an assistant director at Tulsa Tech, where he was worked for 25 years. He formerly served as an instructional coordinator and, prior to that, was an instructor for the electrical technologies program. He has a master's degree in occupational education and achieved National Board Certification as a teacher. Email him at larry.batson@tulsatech.edu.

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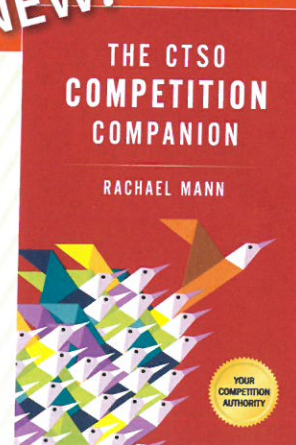
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