

Informing parents, educators, service providers, and policymakers of research-based and promising practices, state and federal laws and policies, and the successes and challenges of dedicated educational partners as they work to improve and strengthen special education services for students with disabilities in California

THE SPECIAL EDGE

Volume 39, No. 2

Summer/Fall 2025

Applying Technology



What's Inside...

- Letter from the State Director ..2**
- Technology and Universal Design:
Giving Students Access..... 3**
- Bradley's Story: My Hearing Aids 5**
- Assistive Technology for Students with
Low-Incidence Disabilities..... 6**
- Using Technology to Support Students
During Transitions 7**
- Ivory's Story: How Technology
Helped Me Read 10**
- Assistive Technology for Students with
High-Incidence Disabilities... 11**
- Assistive Technology in the
Individualized Education Program
(IEP)..... 12**
- Special Section:
Access Through Technology 14**

Letter from the State Director

At the 2016 Grammy Awards, the legendary musician Mr. Stevie Wonder used a Braille reference sheet to announce the song of the year. Before he began his speech, he offered a powerful reminder: “We need to make every single thing accessible to every single person with a disability.”

This call to action captures the mission of the Special Education Division at the California Department of Education. We are committed to doing everything within our power to ensure that every student with a disability in California has equitable access to a high-quality education—one that prepares them for meaningful adult lives.

Technology plays an increasingly critical role in realizing that vision. While “technology” can refer to tools as simple as a highlighter or as complex as an eye gaze system, its impact is undeniable. Technology is breaking down barriers and expanding opportunities for students with disabilities across the state.

This issue of our publication highlights some of the many ways technology is transforming special education:

- **Student Voices:** Inspiring stories from students in Los Angeles and Sacramento demonstrate how assistive technology has enabled greater engagement in their learning and school communities.
- **Family Perspectives:** Parents share their experiences navigating the transition to high school for their children with disabilities, offering candid reflections on which technologies were effective—and which were not.
- **Universal Design for Learning (UDL):** Educators discuss how UDL strategies in general education classrooms create inclusive environments that benefit all students, not just those with disabilities.
- **Assistive Technology in the IEP Process:** We explore how best to integrate meaningful consideration of assistive technology in IEP development and emphasize the importance of continued access during transitions.
- **Special Section:** This issue includes a valuable resource developed by Jill McCann, an expert in assistive technology, UDL, and accessible educational materials. Her section outlines practical steps for identifying, matching, and implementing AT solutions that meet students’ unique needs.

Whether you’re an educator, administrator, service provider, or family member, we hope this issue offers insights and tools that will support your work. At the heart of every innovation featured here is a simple but essential truth: meaningful progress happens through relationships—with students, families, colleagues, and communities.

We thank you for your dedication and look forward to continuing this important work together. ▢



Rachel Heenan, Ed.D.
Director, Special Education
Division, California Department
of Education

Carmen Hopkins, Ed.D.
Executive Director, Supporting
Innovative Practices Project (SIP)
Kevin Schaefer: SIP Director of
Equity and Inclusion
Kris Murphey: Editor
Mary Cichy Grady: Editor at Large
Geri West: Content Consultant
Janet Mandelstam: Staff Writer and
Copyeditor
Jill McCann: Special Section Writer
Bradley Geller and Ivory Maltby:
Contributing Writers

The Special Edge is published by the Supporting Innovative Practices (SIP) Project. Funding is provided by the California Department of Education (CDE), Special Education Division, through contract number CN077046. Content of this document does not necessarily reflect the views or policies of the SIP Project or the CDE, nor does mention of trade names, commercial products, or organizations imply endorsement.

The information in this issue is in the public domain unless otherwise indicated. Readers are encouraged to copy and share but to credit the SIP Project and the CDE.

To request a subscription, please email join-edge-newsletter@mlist.cde.ca.gov

To unsubscribe, please email unsubscribe-edge-newsletter@mlist.cde.ca.gov

Please direct questions to EdgeNewsletter@cde.ca.gov



Technology and Universal Design: Giving Students Access

The students in Kim Kendall's class are reading a novel—or listening to it. “It doesn’t matter how they get the story,” says Kendall, an eighth-grade teacher at Redwood Preparatory Charter School in Fortuna. Their assignment is to demonstrate that they understand the themes of the novel, and they are offered a menu of choices to show what they have learned:

- They can create a piece of art—drawing, painting, or sculpture—to represent the theme.
- They can compile a music playlist of at least five songs, including lyrics, that relate to the theme.
- They can create a social media profile for one of the characters in the novel, including photos and hashtags that relate to the theme.

There is a fourth option, too. If students have other ideas, they can present a plan to Kendall “and prove to me how [they] can show the themes of the novel.”

This is Universal Design for Learning (UDL) as it is practiced throughout Redwood Prep, a small, 225-student school with one class per grade level from transitional kindergarten to eighth grade.

UDL is a framework for instruction that recognizes an important reality: students learn in a variety of ways. By offering students multiple means of acquiring information and multiple options for demonstrating what they have learned, UDL is making lessons accessible to all students, including the 15 percent of the student body at Redwood Prep who have Individualized Education Programs (IEPs).

Staff worked with the Humboldt County Office of Education on a year-long UDL training, but much

of what they learned felt familiar. “A lot of the principles embedded in UDL align with our core values,” says Karissa Feierabend, the school’s director. Founded by parents, teachers, and community members in 2011, Redwood Prep promotes a “child-centered, project- and inquiry-based, active learning environment.” UDL, Feierabend says, “made us more intentional and reflective.”

“We have a creative staff, and we’re not afraid to take risks,” says Melanie Downing, the sixth-grade teacher and a co-founder of the school. “We were

UDL is a framework
for instruction that
recognizes an important
reality: students learn in a
variety of ways.

all kind of doing UDL before we knew what UDL was.” The training, she says, “has given us some new language.”

For Kendall, UDL has been about “breaking down barriers to learning, about asking what [the student] needs to be successful, asking, ‘What helps you learn this?’”

Redwood Prep has embraced UDL in all grades. In one class, for example, Melanie Downing’s sixth graders are studying the United Nations’ Sustainable Development Goals (SDG). They are gathering information to share with a “sister class” in Taiwan.

“The students choose a focus that aligns with SDG climate action—everything from food sovereignty to wildfire prevention—and then highlight what’s happening in Humboldt County,” Downing says.

The multiple means of gathering information for the project include

printed text, videos, and interviews.

“We took a field trip to Cal Poly [California State Polytechnic University, Humboldt] to meet with students and experts who aligned with their focus,” Downing says.

The students could record the interviews, take notes, even draw pictures of what they had learned.

Then, using a program called Book Creator, the students collaborated in groups of three to decide how to showcase their information in digital books. Among their options, they could use text, make videos, add audio and sketches, and more. One trio, which included a student with an IEP, focused on sustainable building techniques and composting. Their book used text, photos, and audio.

The class sent the digital books, which included a translation of their material into Taiwanese, off to Taiwan. The students expect to receive in return a comparable project that highlights the same Sustainable Development Goals with a focus on the local Taiwanese environment.

When UDL is built into a project, Downing says, “students are empowered to make choices about their topic, the media they use, and how they present their learning.” And when students have choices, they develop a sense of agency.

In another example, the students in Katie Dore’s science class are becoming genetic engineers. Their assignment is to solve a problem by genetically changing an organism using CRISPR, a gene-editing technology that allows scientists to modify DNA. Their first task was to choose a “gene of interest” from a list of about a dozen.

“They accessed their information online with a curated list of websites that gave information about the gene they chose,” says Dore, Redwood’s seventh- and eighth-grade science

and math teacher. “I also have several science reference books in my classroom that they were able to look through. Students also watched some videos online.” Here, too, the students worked collaboratively. “Once they picked the gene they were interested in, I grouped them based on interest,” Dore says.

After selecting a problem for which they would engineer a solution and explaining how they would use CRISPR gene editing technology to attack the problem, the students were offered a choice of how to present their material. They could use PowerPoint or stop-motion animation; they could design a poster or a brochure.

Again, with UDL, the students had choices at every step of the lesson.

In both the sustainability and gene-editing lessons, the students were exposed to issues beyond the classroom. Downing said she connected the sustainability project “to real-world issues and encouraged students to think about how they can

make a difference related to their chosen goal.” In Dore’s class, the students were asked to consider the question, “In your opinion, is it right to insert genes from one organism into another organism’s DNA?”

In her math classes, Dore says, “For every lesson, students have access to a copy of my notes, a spread sheet, videos, and links to web sites.” UDL, she says, has moved math from a very traditional teaching method where students work independently to one where students often work in groups. There was, for example, a test in which students had to work together to solve problems. For a recent assessment, the students could choose among exams with ranges of difficulty called “mild, medium, or spicy.”

Because there are no special day classes at Redwood Prep, students with disabilities are embedded in their grade-level classrooms and “pulled out” individually or in a group when they need extra support. A resource specialist and classroom aides provide additional support for students with

disabilities.

Feieraband was a special education teacher before becoming director. With the learning options offered by UDL, she says, “all kids have access to all the tools, and there is no stigma attached” to having a disability. A student without a disability might be just as likely as a student with an IEP to use such tools as speech-to-text or text-to-speech to complete a project.

UDL seems to be working for the whole school community.

When Emily DesJardins, UDL content lead at the Open Access project, visited Redwood Prep, she reported that students expressed “excitement about the ways teachers made learning fun and engaging.” All of the teachers, Feieraband says, “are willing to be flexible in how information is presented and to accommodate all learners, to meet the students where they’re at.”

And, Kendall acknowledges, “We’re still learning.” □



Bradley's Story: My Hearing Aids

Hi, my name is Bradley Geller, and I am 12 years old. I was born with bilateral moderate hearing loss. We know this because I failed my newborn hearing screen at the hospital. What followed was years of testing and technical assistance.

When I was five months old, I got my first hearing technology, called a Bone Anchored Hearing Aid (BAHA). The BAHA was a headband with a plate/box on it that bypassed my ears. This was important because I was fully deaf, and it was important that I began hearing for my language development. My parents and I received services through the Sacramento County Office of Education. They provided specialists who met with me every month. I began to learn American Sign Language (ASL) as well. My mom tells me that my first sign was "milk" when I was just 7 months old! My parents tell me that I must have been happy to be able to hear, as I never messed with the band or tried to take it off.

I finally became old enough at 11 months to have surgery to put tubes in my ears to release the fluid in my eardrums. Then I was able to get my traditional Behind the Ear (BTE) hearing aids, which I have worn ever since. My mom put me in a music group for young children so I could get used to listening to different sounds and appreciate music from a young age.

When I was seven years old it was time to get new hearing aids. My mom and I went to a routine hearing aid appointment where my audiologist ran tests to calibrate my hearing aids. While we were there, my mom asked why I couldn't have Bluetooth hearing aids. She had been told previously that they did not issue Bluetooth hearing aids to children for fear that they may listen to music or something and not pay attention in class. To our surprise, the audiologist confirmed that my new



Bradley wearing his hearing aids

hearing aids WERE Bluetooth capable and set them up for me. As I left the clinic, I made my first phone call to my dad and was SO excited to hear his voice directly in my ears! Bluetooth capability was an amazing development as I was able to connect to my school Chromebook while we were doing distance learning during the pandemic.

I use my Bluetooth hearing aids daily on my iPad, cell phone, and computer to make calls and play games with my friends. My parents don't have to hear all the noise, and I have realized that traditional headphones that cover your ears sometimes muffle the sounds because the microphone on my hearing aid gets covered. One other benefit of the hearing aids is that if I don't want to hear what's going on around me, I can just take them out of my ears or turn them off. And no, I don't play music or goof around with my Bluetooth while in class.

One of the downsides of having hearing aids is that I get frequent ear infections because they "clog" my ears and prevent air from consistently drying them out. These ear infections are the worst! They are so painful and prevent me from wearing my hearing aids for a few days. Another issue

that comes up sometimes is when the hearing aids don't charge overnight because I put them in the charger incorrectly. This impacts me when I have to go to school or when I have an activity where I really want to be able to hear. It takes approximately 3-4 hours for my hearing aids to charge. Do not ask me how many times my parents have forgotten my charger when we have gone camping or on vacation for a few days. We now own several chargers and keep one in the car just to be safe.

I have a 504 plan at school that outlines ways to hear better in the classroom. One is to have my teachers wear an FM system that connects directly to my hearing aids. I have not had to have this put in place as all of my teachers speak loudly, and I position myself in my sixth-grade classroom so I can see and hear them. When I go to seventh grade next year, I will have many different teachers and classrooms and will need to reassess how I hear in each different environment.

If I could invent something for others who are hard of hearing, I would make waterproof hearing aids. I love to swim but I am not able to wear my hearing aids in the water, so I miss out on a lot of what's going on with my friends and family while we are having fun in the pool. Additionally, I have to wear ear plugs (so I don't get too many ear infections), which muffles the sound even more. Waterproof hearing aids would be so cool! I can only imagine the sounds I could hear underwater in nature!

In conclusion, I am thankful for the technology that lets me hear. I am pretty much completely deaf without my hearing aids. I also am glad I can use American Sign Language when I need to, but prefer to use my hearing aids. I am very, very happy with my hearing aids. □

Assistive Technology for Students with Low-Incidence Disabilities

A low-incidence disability is defined as a severe disabling condition with an expected incidence rate of less than one percent of total statewide enrollment in special education. Examples include hearing impairments, vision impairments, severe orthopedic impairments, or any combination thereof.

Technology for Students with Visual Impairments

Most devices now have built-in features to support visual impairments. For example, the iPhone will read text aloud when users take a photo of text and choose “speak” (once “speak” features are enabled in the accessibility settings). Students may feel less conspicuous using these built-in options rather than separate devices.

Many schools use KAMI to support access to PDFs/worksheets. It includes text to speech and an Optical Character Recognition (OCR) feature to convert otherwise inaccessible text. Most standard devices and programs now include text-to-speech and optical character recognition.

Other available technologies include:

- Screen readers such as JAWS (Job Access With Speech) or NVDA (NonVisual Desktop Access)
- Braille displays and notetakers
- Magnification devices such as video magnifiers and screen magnification software (like ZoomText)
- OCR to scan printed text and convert it into digital format that can be read aloud or displayed in Braille

Communication Devices for Students with Speech and Language Disabilities

- Augmentative and alternative communication (AAC) devices give students with speech and language disabilities better access to educational and social opportunities. These range from low-tech picture boards to sophisticated speech-generating devices.
- Speech-generating devices (SGDs) like Tobii Dynavox or the Proloquo2Go app allow students to construct and vocalize sentences using touch-screens or eye-gaze technology
- Symbol-based systems and strategies like PECS (Picture Exchange Communication



System) use visual symbols to enable students to express wants and needs. Core Word Approach focuses on using a small set of frequently used words to enable students to communicate effectively and flexibly

- Voice amplifiers enhance vocal volume and clarity

Mobility and Physical Access Tools

Students with significant physical disabilities often face barriers to navigating classrooms and using standard learning materials. Assistive technology in this area includes:

- Powered wheelchairs and mobility aids
- Adaptive keyboards and mice
- Environmental Control Units (ECUs) allow students to control lights, doors, and educational tools
- Mounting systems and adjustable furniture help position devices such as communication tools or computers
- Switch-accessible toys and games like Tarheel Game Play, page turners, and All-Turn-It Spinner enable students with disabilities to participate in classroom activities with their non-disabled peers

Hearing Assistance Technology

- FM/DM systems transmit the teacher’s voice directly to the student’s hearing aid or cochlear implant
- Real-time captioning or CART (Communication Access Real-time Translation) provides text-based access to spoken language
- Alerting devices notify students of events such as fire drills or school announcements
- Cognitive and learning support tools and resources such as the math tutorial from DeafTech

Technology for Students with Intellectual Disabilities

- Task management apps like Choiceworks or Time Timer clarify tasks and provide structure
- Simplified software interfaces reduce cognitive load
- Adapted games and educational apps reinforce academic concepts in engaging and accessible ways
- Monarch Reader (previously Tarheel Reader), a simple tool, creates accessible, individualized books for students. □



Using Technology to Support Students During Transitions

When Lelah Coppedge went with her son, Jack, to his first day of high school, it was scary. Jack has a disability that requires extensive support. He and his family had toured various high schools hoping to find one that could meet his needs. They thought they had chosen the right one—a small school with about 200 students and staff that was committed to inclusion.

“But they probably never had a kid like Jack,” says Coppedge. “And he was very quickly segregated.” Halfway through the first day, they left the school in tears. She adds, “I may have yelled at the office on my way out.”

Jack uses a high-tech device called a Trilogity that operates through eye gaze. He is very intelligent and can communicate through facial expressions without this device. But without the ease that the device provides, he is not able to build strong relationships with peers. In his general education classes, “the kids are nice,” says Coppedge, but she does not expect them to know how to communicate with her son without assistive technology (AT).

AT access for Jack “has always presented a challenge,” she says. “Finding the right access point with a body like his, finding people who know what they’re doing, and then getting the equipment”—all of these things complicate the challenge.

Jack had previously attended CHIME¹, a K–8 Charter School in Woodland Hills, where all the supports—assistive technology, augmentative and assistive communication, physical therapy, occupational therapy—are on site all the time. At Jack’s new school, specialists were available occasionally,

sometimes coming once a week. Coppedge believes now that staff at the school had good intentions. But without built-in support, the school was not ready for Jack.

After that first day, they disenrolled. Jack was out of school for two months while they figured out what to do next.

Jack’s friend and fellow CHIME student Maceo McKay had a similar experience. Maceo has cerebral palsy, which limits independent physical movement and makes access to communication very difficult. He uses

always located in the same place on every page. For instance, nouns are always yellow buttons located vertically down the left side of the page, and verbs are green buttons across the middle.

Maceo’s mother, Holly Palmer, came fully prepared to the initial meeting with the staff at Maceo’s first high school. She brought his person-centered plan that he had developed through the Self-Determination Program at the regional center. “I shared it with his new school team

so that they could get a clear picture of who Maceo is,” she says, describing it as “a beautiful plan, with pictures and text boxes illustrating things like a typical day for him and how his care works. It’s very easy to read.”

The plan included information about Maceo’s likes and dislikes. It explained how to understand what he is saying. It even included links to online trainings designed to help school staff learn more about his particular device.

The group had two hours to meet, so Palmer thought they had time to review the document. But Maceo also needs a nurse at school. The practicality of that need took

precedence, and the communication discussion was cut short. Palmer was disappointed. “It was great that we had the meeting,” she says, but the switch halfway through kept her from communicating adequately what the school needed to know about Maceo.

She says there were some engaged school administrators at the first high school “for whom I was very thankful, but ultimately there were some key administrators who were not open to collaboration.”



Jack with his assistive communication device

a PRC Accent 1000 communication device with a NuPoint headmouse. The headmouse reads a small reflective sticker placed between his eyebrows. As he moves his head, hardware mounted to his wheelchair reads the path of the headmouse. The Accent 1000 runs Prentke Romich Company (PRC) software which generates Maceo’s speech. The PRC software is designed to teach literacy, with 60 buttons that Maceo can use to access parts of speech which are

¹ Learn more about CHIME at the school’s website: <https://chimeinstitute.org>

Coppedge came to her initial meeting similarly equipped for staff who would be working with Jack, distributing “All About Me” packets with bullet points. “But there is simply no way to prepare a staff in a two-hour training session for a kid as complicated as Jack,” she said in an email.

Palmer calls their first attempt at high school “a stop along the way to where we are now, which is working really well.” Both Maceo and Jack ended up at Birmingham Community Charter in Lake Balboa.

Collaboration with Parents

Parents are experts when it comes to their kids. Teachers who know this typically benefit from working collaboratively with parents and specialists. Yet school policies and heavy workloads can prevent educators from being able to take full advantage of these partnerships.

“In order for schools to support kids with complex needs, their parents need to be welcomed, if only to provide the information about how the child can learn and access the curriculum most efficiently,” Palmer says. In their experience, Palmer and Coppedge say, coaching from parents also can help educators avoid assumptions about student behavior that might be in error.

Collaboration needs to start early. “Schools need to ensure that parents have a line of communication open with the people who will be supporting our kids BEFORE these transitions happen,” Coppedge says.

Throughout the difficult time of transition, Palmer says, “Parents need to be respected by the district, by the principal, and by the various school service providers.”

Flexibility

Palmer knows that her son needs a lot of support, and that those supporting him must be trained for everyone to feel safe.



Jack’s mom says that although he’s very good at communicating with facial expressions, assistive technology is essential.

Maceo’s second high school, Birmingham, showed a great deal of flexibility and good will, she says. The school was able to hire the paraeducator Maceo had at CHIME to be his educational assistant, a move

that Palmer describes as “absolutely wonderful.” This person had been with Maceo for eight years and knew his AT needs.

But the hiring process took a while. Palmer says Maceo “missed 85 percent of the first semester of ninth grade,” while this support person was put into place.

“There is an inefficiency that dogs these kids,” Palmer says. “No child benefits from waiting to figure things out and the priority should be getting onboarded really fast.”

For her part Coppedge praises Birmingham’s flexibility in letting her accompany Jack to school “all day for two weeks—training everyone who worked with him.” She calls this opportunity “incredible.” She acknowledges that not all schools may be able to allow this—but says she is grateful that Birmingham could.

Training and Experience

Both of these parents believe that service providers and teachers could benefit from working with a wide variety of students who have complex learning needs, then working closely with parents and family members to understand how these students experience the world.

Palmer describes how people who don’t know Maceo might observe that he’s going into a dystonic position and assume “he doesn’t like what we’re doing”—then respond based on that assumption. But if you knew Maceo well, you would know that this could also mean he needs to have his arms stretched for a second, or he may need

Hard copies are back!

A limited number of printed copies of each issue of The Special EDge are now available. To be added to the list of those who would like to receive a hard copy for future issues, email EdgeNewsletter@cde.ca.gov



to use the restroom, or he could have an idea that is not included in the questions that you ask, or he might just be excited about what's going on at the moment.

"There are so many layers to that communication," she says, "and if you're not open to the nuance of a multimodal communicator, you may miss his communications." You might even assume the student is not cognizant of what is happening in the classroom.

Scarcity of Resources

The Self-Determination Program offered through the regional center has been very useful for Maceo, according to Palmer. Some parents may avoid using their regional center or pursuing the Self-Determination program due to the length of time and many steps involved in getting into the program, she says. "But I try to impart that there are many things like assistive technology, equipment, support in the home such as respite or nursing hours if that's the profile of your kid," where the program can be a huge help.

She says that parents have to be both patient and proactive. "There are

people out there who know this stuff and care passionately about it, who can help our kids."

While she would like there "to be more of them," Coppedge advises parents who are preparing for a transition for a child with communication support needs to find a provider to help with AT well before the transition. "I think we all get focused on one thing at a time.

“There is an inefficiency that dogs these kids,”

Maceo’s mom Holly Palmer says. “No child benefits from waiting to figure things out.”

I’ll get really focused on getting a piece of equipment, and sometimes the communication stuff gets pushed back.”

She also has been placed on many waiting lists trying to get time with specialists. For one device, she waited

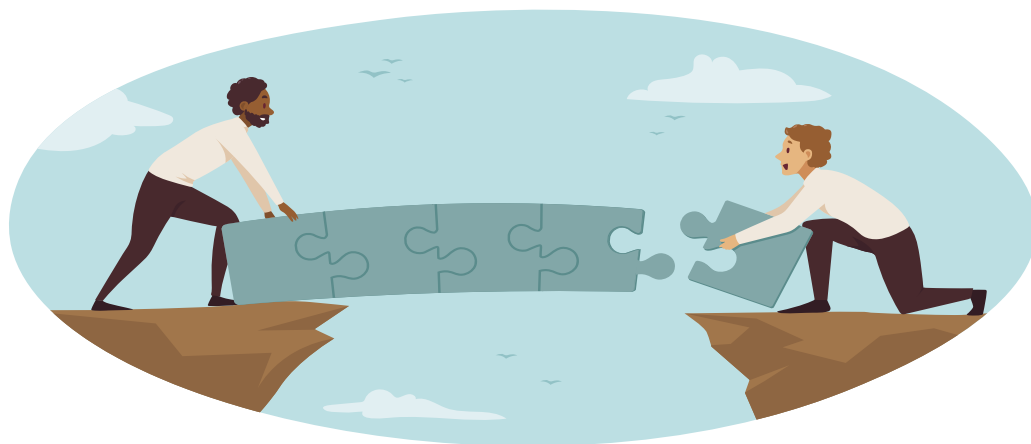
an entire school year for support. Then she found herself with a month trial but no one to help her with it. “If you’re giving them this language system but they have no way to access it, then it doesn’t matter,” she says.

In the larger picture, Coppedge says it also is critical for parents to know what supports are built into any new school they are considering for their child. “I did not understand that some school districts have providers [who] come by occasionally. I didn’t understand what that looked like,” she says, or how much less effective it would be for Jack.

Things are better at Birmingham for both Jack and Maceo. Last year, Jack was in the student council. Next year, he’s assuming another leadership role and Maceo is going to be on the yearbook team. Both Palmer and Coppedge have good things to say about the school.

“Inclusion is such an important part of life for all,” Palmer says, and Maceo enjoys the inclusive environment at Birmingham. “We feel very fortunate that he’s there.”

Both parents know it’s hard. They know it’s complicated. They appreciate every effort. □



Ivory's Story: How Technology Helped Me Read

Hi. My name is Ivory. I have ADHD, dyslexia, and dysgraphia. School used to be very hard for me, but now it's not so bad. Technology has helped me, and I want to tell you how.

The year that the pandemic started, I was in kindergarten. A few weeks after schools closed, I started meeting with a friend and my kindergarten teacher in the park to work on reading. No matter how many times we went over the letters and the sounds, I just couldn't remember which letters made which sounds. My friend was learning fast, and it made me feel sad and embarrassed.

In first grade, I was in Zoom school, which I hated because it was so hard for me to pay attention, and I couldn't read yet. Whenever I would be called on, I would not know the answer.

My mom and my teacher started to worry. My mom started working with me at home on sounding out words, and I made some progress, but eventually the books got harder and the words got longer, and I couldn't do it.

I stopped trying. I would refuse to do my homework, and it made my mom mad. I went back to in-person school during first grade, but I still couldn't read or write. Sometimes I felt like I knew the answer, but I couldn't get it out because I couldn't spell or write well. I just thought, "Maybe I can't do it. Maybe I'm dumb."

We went to see a special doctor who did some tests with me for learning disorders. She found out I had dyslexia and dysgraphia. Dyslexia means it's hard for me to sound out words and read fast. Dysgraphia means it's hard for me to write neatly or fast. For me, these things also mean I learn differently.

My mom went to the school and told them about my dyslexia and



dysgraphia. They started an IEP [Individualized Education Program]. My IEP helps me learn to read and write in a way that is easier for me. I started leaving class sometimes to see a special reading teacher. My IEP also helps me by giving me some adjustments during tests, like extra time and taking the test in a quiet place with fewer distractions. Also, sometimes my homework is allowed to be typed instead of written, and that makes it a lot easier for me to finish it. Outside of school, I also started seeing a special reading teacher named Mrs. Crabtree. She knew how to teach me the way I needed to learn.

Technology started to help me when Mrs. Crabtree introduced me to a spell-checker. If I spell a word wrong, or even sometimes if I don't, I will check it on the spell-checker, which will tell me if I got the word close to correct, or not at all close to correct. I only have to be able to spell the word close to correct for the spell-checker to find it and show me the right way to spell it. Then I can spell it correctly and go right along.

Another way technology helps me is through audio books. I remember when other kids my age were talking about Harry Potter, and I felt sad that I couldn't read a book that a lot of people were talking about. I wanted to read it for myself. My mom got it as an audio book, and we listened to it together. It

was so fun! It inspired me to become a Harry Potter nerd (I am in Hufflepuff)! I am going to Harry Potter World for my birthday this year, and it all started because of an audio book!

Technology has also helped me because of "talk to text." That is where I click on a little button on the computer that looks like a microphone and then just start talking. You can say whatever your ideas are, like, "I love Harry Potter!" or "I love cats!" and it will type it out for you on the screen. Because I can just speak my ideas, I don't have to be focused on how to write a letter the right way. Instead, I can just focus on my thoughts on a topic. This year my class had to write a story at home and bring it to school. I used talk to text, and it was faster and easier for me to get my story written. I had the longest story of anyone in my class!

"Text to speech" is another cool part of technology. The app takes the text on a computer screen and turns it to speech. It reads to me when I have trouble with tests. I can just click this button that looks like a "play" button, and it will read me the paragraphs or the story or the math problems. If I'm done with the story, or want to pause it, I can click the "stop" or "pause" buttons. I mostly use this technology on tests, and this makes it easier for me to read the questions. Even my math tests have word problems! Because I do not have to spend all my time struggling to read the questions, I have time to do the math problem or think about my answer to the question.

Now it's easier for me to read and write in school. I do better on tests and can share my ideas more easily. Technology like this has helped me not hate school and even like it a little! I hope other kids with dyslexia, dysgraphia, and ADHD also get a chance to use these technologies! □

Assistive Technology for Students with High-Incidence Disabilities

High-incidence disabilities include learning disabilities, speech or language impairments, emotional or behavioral disorders, and mild intellectual disabilities. While these disabilities may be less visually apparent than low-incidence disabilities, they pose significant challenges to academic achievement and classroom engagement. Students can benefit from a range of no-tech to high-tech solutions and strategies to support communication.

Assistive Technology for Learning Disabilities

- ▶ Text-to-Speech (TTS) software supports access and comprehension of written materials.
- ▶ Speech-to-text tools, also known as voice recognition software, allows students to dictate their thoughts, which the computer converts into written text—helpful for students with dysgraphia or writing difficulties.
- ▶ Word prediction software assists students in constructing grammatically correct and coherent sentences by predicting the next word based on context.
- ▶ Math support tools such as digital manipulatives, calculators with visual support, and other math apps help students with dyscalculia understand and solve math problems.



Tools for Speech or Language Impairments

- ▶ Augmentative and alternative communication (AAC) apps can benefit students with speech impairments.
- ▶ Language development software offers structured language and articulation practice with visual and auditory feedback.
- ▶ Visual support tools such as picture schedules, visual timers, and graphic organizers help students structure thoughts and follow verbal instructions.

Supports for Mild Intellectual Disabilities

- ▶ Graphic organizers and mind mapping tools help students plan essays, understand concepts, and organize information visually.
- ▶ Interactive educational games offer engaging, level-appropriate content that supports academic development.
- ▶ Step-by-step task apps break down instructions into small, manageable steps to help students stay on task and complete assignments.

Behavioral and Emotional Regulation Tools

- ▶ Self-monitoring apps allow students to track their own behavior,

set goals, and receive feedback.

- ▶ Mindfulness and relaxation apps teach students strategies for reducing anxiety and improving focus.
- ▶ Noise-canceling headphones create a calmer learning environment for students who are sensitive to sensory input or easily distracted.

General Classroom Tools

Beneficial Across High-Incidence Categories

- ▶ Audiobooks (and E-books paired with TTS software) provide access to curriculum content in audio formats, helping students who struggle with print.



- ▶ Closed captioning and subtitles on videos improve comprehension for students with language processing issues.
- ▶ Timers and visual cues, tools that support time management and task initiation, help students develop executive functioning skills. These tools—when carefully chosen and integrated into instruction—provide essential scaffolding for students to access curriculum, express ideas, and develop independence. □

Assistive Technology in the Individualized Education Program (IEP)

The Individuals with Disabilities Education Act (IDEA) requires that the Individualized Education Program (IEP) team consider assistive technology (AT) needs in the development of every IEP. Federal regulations adopted in 1992 include provisions that AT devices and services be made available to any child with a disability, if such services are required as a part of the child's special education, related services, or supplementary aids and services. If it is determined that AT is necessary for the student to make progress toward educational goals, that must be documented in the IEP—and the school is responsible for its provision and integration.

Part of the process of developing an Individualized Education Program is to consider whether a student needs assistive technology (AT). But the IEP is a complicated process that involves many people and many considerations. How can teams avoid just “checking the box”?

“The main focus should always be the student's needs,” says Leah Padilla, coordinator of facilitated improvement and support for the Open Access project, part of California's statewide system of support. This focus includes facilitating access to technology—and considering what training may be needed for teachers, additional staff, paraprofessionals, and parents to support the student in its use.

Setting the Tone and Building Relationships

Parent Jessica Luther's experience at IEP team meetings for her two children was “confusing.” This was in the early 2000s at a school in the San Francisco Bay Area. “There were people that I didn't know, and there was a lot of jargon. It felt like I had to fight for what my kids needed,” she says.

Her experience shows how important it is for teams to establish a tone of collaboration and mutual respect. The High Quality IEPs project, a partnership between East County and Santa Clara County Special Education Local Plan Areas (SELPA) has developed a tool that can

What the Law Says

(a) Each public agency must ensure that assistive technology devices or assistive technology services, or both, as those terms are defined in §§300.5 and 300.6, respectively, are made available to a child with a disability if required as a part of the child's—

- (1) Special education under §300.39;
- (2) Related services under §300.34; or
- (3) Supplementary aids and services under §§300.42 and 300.114(a)(2)(ii).

(b) On a case-by-case basis, the use of school-purchased assistive technology devices in a child's home or in other settings is required if the child's IEP Team determines that the child needs access to those devices in order to receive FAPE (Free Appropriate Public Education).

- *Individuals with Disabilities Education Act (IDEA) §300.1*

help. “Promoting Meaningful Participation” emphasizes the importance of shared decision-making and trust between families and other team members.

Jennifer Yales, executive consultant at High-Quality IEPs, is also a parent of a student with autism. She says she wishes this tool had been available for her son's IEP meeting years ago. The AT device her son used was supposed to go home with him, and she was supposed to be trained in its use. But that didn't happen in a way that worked for her family.

She says there was “a missing piece about meaningfully engaging with me as a parent” that would have allowed the family to better use the device across all environments.

“Really taking a partnership approach and engaging with

families,” is vital, she says. “I'm thinking about things like empathy and connecting—and not just at meetings.”

The High-Quality IEPs project has developed a tool called *Building on My Strengths*, which is designed to identify unique characteristics of each student that can guide the IEP process and considerations for AT. The tool is translated into multiple languages with versions for parents, students, and educators. It gives prompts such as “My child engages with others best when...” (parent edition) and “Who do I like to spend time with?” (student edition) that reframe the conversation toward solutions.

Tools for AT Consideration

Selecting the appropriate AT tools is an iterative process. It begins with trials of various technologies, ranging from low-tech solutions (e.g., slant boards, visual schedules) to high-tech devices (e.g., eye-gaze systems, screen readers). The goal is to identify tools that are effective, appropriate for the student's cognitive and physical abilities, and feasible to implement within the educational setting.

The Student, Environment, Tasks, and Tools (SETT) framework is one commonly-used tool. Dr. Joy Zabala developed the SETT framework in the 1990s to help collaborative teams gather and organize information to

guide decisions about AT devices and services. Using a framework such as SETT ensures a holistic approach that aligns technology with the student's needs and context.

Laurie Balsano-Wright is coordinator of facilitated improvement and support at Open Access. She says the process of identifying and employing appropriate AT is often adult directed at the start, but then moves to adult facilitated in what she calls a “gradual release” until the student can be solely independent.

Balsano-Wright recommends a worksheet called “My AT Backpack” which helps students understand the tools they can access and when to use them. “It’s a nice little graphic organizer,” she says. “It places the student at the center of that conversation.”

Removing Barriers

Budget and time constraints, lack of awareness or expertise, and reluctance to try new tools are all common barriers to the meaningful inclusion of AT in the IEP process. Overcoming these challenges requires systemic commitment, professional development, and recognition that technology is a core component of accessible education.

Again, relationships are important. Jessica Rosenberg, assistive technology specialist at San Jose Unified School District and an Open Access AT regional implementation specialist, says that her relationship with her district’s tech department “is an absolute game changer. I’ve gone to their technology meetings and talked with them about technology and assistive technology. It took years to build that relationship.” As a result, she says, they are more comfortable approving her requests for AT when needed.

With help from Open Access, San Jose Unified is working to share the Universal Design for Learning (UDL) framework across the district.

Rosenberg trains case managers to put assistive technology in place for everyone and familiarizes staff with tools that are easily available. With this training, team members will be knowledgeable about AT and more likely to recognize when it should be part of a student’s IEP.

My AT BACKPACK Open Access Planning

Name: _____ Date: _____
 My Current Teacher or Case Manager: _____ School: _____

My Strengths: _____
 What are some challenges that assistive technology helps me with? _____

MY TOOLS & STRATEGIES

Tool or Strategy:	What sort of tasks do I use it for?	Where & when do I usually use it?	Can I use it independently?

Where do I get help or training if I need it? _____
 What I'd like my next teacher to know about my assistive technology: _____

©2022, revised. www.openaccess-ca.org

The “My AT Backpack” worksheet from Open Access places the student at the center of the conversation.

“I go in and talk about text readers, or speech to text. We also train all of our occupational therapists in the fact that universal design and assistive technology go hand in hand. Our speech and language pathologists have training on assistive and augmentative communication devices.”

In some cases the process of getting a formal assessment can present a barrier. Rosenberg encourages specialists in her district to simply try the equipment they think will benefit the students—noise canceling headphones, adaptive paper, alternate seating—in the classroom setting. To make the district more responsive and efficient, she says. “We would prefer to have them try it without an

assessment.”

Rosenberg also says that using built-in tools is often more comfortable for students who might feel peer pressure as a result of using a separate device. “My experience is that if students are going to look different, they’re not going to use (assistive technology) in middle and high school,” she says, “unless they’re very self-assured.” In these cases, an extension on a Chrome browser or other technology built into the learning management system is less likely to be abandoned by the student. Under the UDL framework, these tools are available to everyone who wants to use them.

Changing the Mindset

Rosenberg says she dislikes the term assistive technology because it implies something complicated. “People automatically think it is a computer, that is has a battery,” she says, when really “it’s good things to have for everybody: highlighting post-it notes, highlighting tape, adaptive rulers, calculators. I mean, it could be anything.

“We want AT to be commonplace,” she says. “It’s not rocket science; it’s good teaching.”

Additional Resources

- Open Access has a wealth of valuable AT resources including an “AT Consideration Quickguide” on its resource page: <https://www.openaccess-ca.org/open-access-at-resources>
- High Quality IEPs has toolkits and resources here: <https://highqualityieps.net/>
- *Strategies for a Successful and Collaborative IEP Meeting* can be found at: <https://drive.google.com/file/d/1IHx4Fp0QMPSjXxVCK-r0yLrnO6sbKrnUZ/view> or by going through the Open Access link above. □

Special Section: Access Through Technology

by Jill McCann, M.S., SpEd

Four basic steps can guide educators who are working to give students the assistive technology that will effectively ensure their access to school and learning. These steps involve (1) improving processes for team decisionmaking, (2) incorporating the principles of Universal Design for Learning (UDL), (3) providing accessible educational materials, and (3) matching those materials with specific student needs. Below I explain and explore each step in detail, and then offer a quick guide that summarizes the key points of each step.



Jill McCann is an Assistive Technology (AT) specialist, instructor for teacher credentialing programs, and former statewide AT Lead for the Open Access Project in Placer County

01

Understanding Mandates and Processes

Clearing the path to access begins by addressing myths and knowing the facts about Assistive Technology (AT). The new Myths and Facts guidance from the U.S. Department of Education addresses 28 common misconceptions, each paired with clarifying facts and supporting explanations to deepen understanding. Myth #1 is a great starting point for teams to reflect and ask, “Are we having meaningful conversations about AT at every student’s IEP meeting?” The answer to that question directly impacts whether or not students have access to the tools they need.

MYTH #1: Assistive Technology (AT) should only be considered at some IEP Team meetings.

FACT: Each time an IEP Team develops, reviews, or revises a child’s IEP, the IEP Team must consider whether the child requires AT devices and services.

Discussing AT may feel uncomfortable for some teams, especially those used to an “expert-driven” model where decisions are typically deferred to the AT specialist. AT specialists can be particularly helpful when a student’s needs are complex or when complex communication tools are needed. In this case, an augmentative

alternative communication (AAC) specialist is appropriate.

There currently is momentum in California to build confidence in the IEP team when considering the use of AT, especially for students who qualify for special education services with high-incidence disabilities. In addition to funding such initiatives as the Open

Access Project (see “Pave the Way to Better AT Considerations” below), the California Department of Education, Special Education Division, has been working diligently in recent years to improve the IEP

process. One specific outcome of these efforts is the ongoing development of a statewide IEP template that is designed to ensure a collaborative and dynamic IEP process, one that results in the best possible outcomes for every student. With the support of this and other resources, teachers can provide digital tools and assistive technologies to students more efficiently and effectively.

Recognize Unintentional IEP Team Barriers

The Quality Indicators for Assistive Technology (QIAT) were developed and validated through research. These indicators offer guidance to teams on the qualities they need to appropriately consider AT for students.

The QIAT website also lists some of the common barriers to ensuring quality AT. For example, some IEP teams lack sufficient knowledge about AT; others don’t follow a consistent process for team-based decision-making. In some cases, AT choices are often limited to familiar or readily available tools and sometimes only considered for students with severe disabilities. Finally, teams may overlook access to the curriculum and IEP goals; and when AT is deemed unnecessary, the rationale is often not documented.

Pave the Way to Better AT Considerations

Recognizing and addressing the barriers your teams are experiencing is the first step to making improvements. Many teams have been introduced to a capacity-building model for AT through professional development from the Open Access Project, which was developed under a grant from the California Department of Education. This model changes the question “How

do we handle increasing numbers of referrals while knowing we are only reaching a small number of students who could benefit from AT?” to “How can we train, coach, mentor, and facilitate site-based teams to meet the AT needs of their high-incidence students?”

IEP teams in California are becoming more confident using a process based on the SETT Framework : Student, Environment,

Task, and Tool (developed by Joy Zabala). Teams use this framework to gather detailed information on each area, then review and try tools to find out if they work. It is important for teams to continuously evaluate each tool’s effectiveness to ensure the technology is working for the student.

The SETT Framework is considered the AT industry’s gold standard and best practice for the

consideration of AT. It includes the core components teams should consider when having conversations about AT.

Open Access’s quick guide can be used as a scaffold for teams that are working on improving their conversations surrounding AT.

Detailed information is readily available to teams on the Open Access website: <https://www.openaccess-ca.org>.

02

Designing for All Through a UDL Lens

Universal Design for Learning (UDL) has gained momentum over the years, and the newest release of the Center for Applied Special Technology (CAST)’s Guidelines 3.0 in July of 2024 is a reminder that UDL is not static. It responds to new research and input from practitioners.

The framework for UDL was developed by David Rose and Anne Meyer and inspired by the idea of universal design in architecture—designing for accessibility from the start and eliminating the need to retrofit later on. They applied this same concept to learning, which led to the creation of CAST in 1984. Over the next two decades, CAST established the foundational work that shaped UDL into a practical research-based framework that includes the overarching principles of engagement, representation, action, and expression along with nine guidelines and 36 associated considerations (previously called checkpoints).

Essentially, UDL is a roadmap to

support educators in recognizing and intentionally planning for potential barriers that students

often encounter. UDL reminds practitioners to offer meaningful choices and foster student agency. It recognizes that humans have a multitude of variabilities and honors the diverse ways people learn and express themselves.

UDL Guidelines 3.0

CAST has made some important updates in the July 2024 release. The overarching principles remain the same, but the overall goal of UDL has changed to “develop learner agency that is purposeful and reflective, resourceful and authentic, strategic and action-directed.”

In practice, this means creating learning environments where students have opportunities to make meaningful choices about how they learn, reflect on their progress, and use tools and strategies that work best for them. Students set their own goals, use personalized supports or strategies, and engage in tasks that matter to them—building not just academic skills but confidence and independence as lifelong learners.

The UDL considerations are sets of specific strategies and tools that practitioners can use as they design learning experiences while working to reduce barriers and honor each student’s variability.

The UDL Guidelines have been thoughtfully organized, placing access at the top to emphasize its foundational importance. They remind practitioners that learners need to be able to access materials, feel safe, and have ways to express understanding. Imagine a student trying to create a slideshow with a device that doesn’t support speech-to-text—when that’s precisely what the student needs. Or imagine that the student hasn’t been shown how to use the device or given the option to try. UDL Consideration 4.2 guides educators to “optimize access to accessible materials and assistive and accessible technologies and tools.” It prompts practitioners to ensure that students have access to the tools and assistive technologies they need to interact with learning materials and tasks.

The UDL guidelines are a great place to start when designing inclusive and accessible learning environments. □

Design Multiple Means of
Engagement



Design Multiple Means of
Representation



Design Multiple Means of
Action & Expression



03

Ensuring Access to Educational Materials

After setting the stage with UDL, educators can examine the materials they are using and consider to what degree they are accessible to all learners. Whether digital or physical, educational materials should be usable by all students including those with disabilities.

“Accessibility is shaped by what we need to do, our interactions with the environment, and our personal preferences” (CAST AEM Center).

As stated in a joint letter from the U.S. Department of Justice and the U.S. Department of Education (June 29, 2010), educational materials and technologies can be considered “accessible” when people with disabilities can “acquire the same information, engage in the same interactions, and enjoy the same services” as individuals without disabilities. Individuals with disabilities must be able to do so “in an equally integrated and equally effective manner, with substantially equivalent ease of use.”

In April 2024, the U.S. Department of Justice finalized updates to the Americans with Disabilities Act Title II, requiring public education institutions—from early learning through higher education—to make sure their digital learning tools, including websites and mobile apps, are accessible to students with disabilities. In a nutshell, this includes online curriculum platforms, instructional materials—both

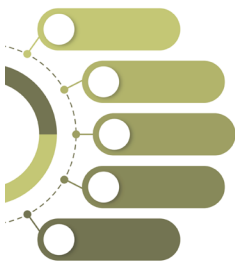
AEM may seem complex and even a bit daunting, but CAST’s AEM Center is ready to help!

The center offers a variety of resources to support learning about AEM basics. A good place to begin is on the “Get Started, What’s Your Role?” area on the website. K-12 and early childhood educators can use the site to dive deeper into ways to make materials and instruction more accessible for everyone. Some of the topics covered included designing for accessibility and creating accessible documents and videos. Go to <https://aem.cast.org>.

teacher created and third party. It also applies to communication systems and systems used for grading and learning management. Implementation compliance is due in 2026 and 2027 (depending on the size of the district) and many tools have been updated in recent years with new, built-in accessibility features. There are a few exceptions to the final rule; more information can be found on the AEM Center website: <https://aem.cast.org/get-started/defining-accessibility>. □



Accessibility is when a person with a disability can . . .



ACQUIRE the same information
ENGAGE in the same interactions
ENJOY the same services

in an equally effective, equally integrated manner,
with substantially equivalent ease of use

. . . as a person without a disability.

04

Matching AT to Student Needs

For some students, addressing accessibility through Universal Design for Learning and accessible educational materials may not be enough. Here's where specific accessible technology (AT) becomes essential. Tools can range from basic no-tech tools to more specialized programs, devices, and equipment.

When thinking about the specific tools a student needs, start by considering no-tech and low-tech tools that are often readily available. For instance, students can use reading rulers while reading a print-based text in order to support visual tracking and keep their places. If this is a strategy that works well for the student, the team can also consider a similar app or extension that is available for online reading tasks.

There are many no-tech and digital tools to support common strategies that are used in classrooms. Here are just some examples of no-tech and digital versions of a reading guide and highlighter.

Something else to consider is that a particular tool may be an option for some students, but if it "increases, maintains, or improves functional capabilities" of a child with a disability, then the team should identify it as AT and document it in the Individualized Education Program (IEP).

There is no doubt we are living in a pivotal time of technology and accessibility options. Not long ago, specialized tools were only available as costly devices and software. These features are now integrated into every device and operating system.

Generally, the categories for AT consideration include: reading, writing, math, executive function, access, hearing, vision, activities for daily living, recreation and leisure, seating, positioning and mobility, and communication.

Some of the built-in features commonly available across platforms are:

- Closed captions
- Customizable keyboards and mice
- Mouse and cursor options
- Reading modes and color filters
- Speech to text (STT) tools
- Spelling and grammar checkers
- Switch control capability
- Tools that reduce and simplify text
- Translation tools

Discuss and Consider



Student

Strengths | Skills | Preferences | Needs

Environment

Staff | Spaces | Materials | Routines

Tasks

Activities | Goals | Participation | Expectations

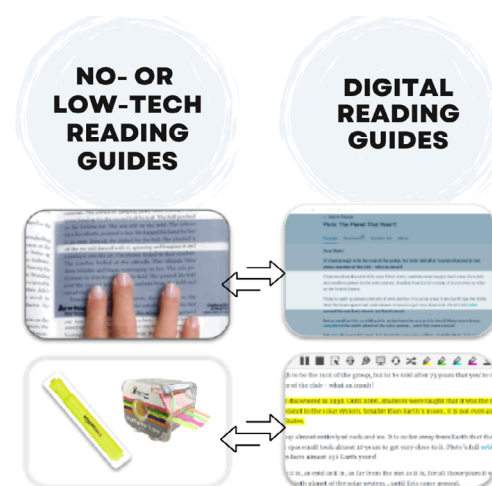
Tools

Features | No-tech to High-tech | Strategies | Training

- Voice control capability
- Word prediction and smart composing
- Zoom and magnifiers

It's no wonder IEP teams can sometimes struggle with deciding what constitutes AT and how to document it. Some teams are mistakenly not documenting AT in the IEP because the district or school offers a particular tool "universally" to all students. However, if a specific student on an IEP requires the tool, then documenting it in the IEP is critical. Imagine the student leaving to a different school or district that doesn't offer the tool to all students and ask yourself, "Will the student struggle to access information without this tool? Will the student be less independent? Does the tool help the student with self-expression?" If the answer is yes, then document the tool as AT in the IEP.

When educators consistently work to understand assistive technology mandates and processes, design educational environments to benefit all learners, provide accessible materials, and match learners with the appropriate assistive technology tools, they are creating a classroom in which all students can thrive. □



Clearing a Path for Access: At a Glance

01

Know AT Mandates and Processes

Step 1: Understand Assistive Technology (AT) mandates and improve process for team-based decisions

Important Facts

- AT should be considered every time an IEP is developed, reviewed, or revised.
- While IDEA doesn't require an AT evaluation, the team may decide one is needed after considering AT.

Common IEP Team Mistakes

- AT is considered only for severe disabilities.
- No team member is trained in AT.
- Decisions are not based on student/task/environment data.
- Tools are limited to what's familiar to team members.
- Documentation and a rationale are missing when AT is not selected.
(from Quality Indicators for Assistive Technology: <https://qiat.org>)

Tip

- Build team confidence using SETT—Student, Environment, Task, Tool
- Consider the *student*: the strengths, needs, preferences.
- Be familiar with the *environment*: the contexts, supports, barriers.
- Understand the *task*: what the student is required to do.
- Know the available *tools*, and which can precisely support access and independence.

02

Design for ALL with Universal Design for Learning

Step 2: Address access for ALL Through Universal Design for Learning (UDL)

Anticipating and Removing Barriers

- Embrace UDL.
- Become familiar with the common barriers that students encounter.
- Support access and student agency through materials and assistive technologies and tools.

UDL Guidelines 3.0

Develop learner agency that is:

- Purposeful and reflective
- Resourceful and authentic
- Strategic and action-directed

UDL's Fundamental Tasks

- Offer meaningful choices
- Support goal-setting and reflection
- Honor human variability

Tip

When content is offered in a digital format, give students the option of using text-to-speech (TTS)—and then be sure they know how to use it. Otherwise, their access and learning may be blocked.



In the toolbox



LUDIA = UDL + AI

Ludia is an AI tool designed to support the implementation of UDL. It is available free of charge to help educators remove barriers and customize plans: <https://www.openaccess-ca.org/oa-udl-resources>

Clearing a Path for Access: At a Glance

03

Make Materials Accessible

Step 3: Ensure access through accessible educational materials (AEM)

Make Materials Accessible to All Students

- Design and provide accessible materials from the start to remove the need for retrofitting and to ensure that students can access learning from the first day of class.
- Explore CAST's Accessible Educational Materials (AEM) Center website and choose "Get Started: What's Your Role?" to learn more (go to <https://aem.cast.org/get-started/by-role>).

Putting AEM in Action:

- Check materials for accessibility.
- Make sure that PDFs are readable by AT and screen readers.
- Offer multiple formats.
- Provide print, audio, and digital options.
- Caption videos.
- Add or display accurate and complete captions to support all learners.
- Design accessible slides and documents.
- Use high contrast, alt-text, and logical structure in all materials.
- Teach the use of built-in tools, such as text-to-speech and highlighting.
- Choose accessible platforms.
- Evaluate websites and apps for their accessibility features.

Tip

Visit CAST's AEM Center online at <https://aem.cast.org> and learn about Accessible Media Producers (AMPs) and services such as Bookshare, Learning Ally, and NIMAC.

04

Match AT Tools

Step 4: Match tools and assistive technologies to specific student needs

Remember:

If UDL and AEM don't meet a student's needs, targeted AT may be required.

Common AT Areas of Need

- Reading
- Writing
- Math
- Executive function
- Communication
- Vision/hearing
- Mobility

Consider All Tools

- No tech, e.g., a change of lighting, new seating arrangements
- Low tech, e.g., pencil grips, magnifying glasses, graphic organizers
- Mid tech, e.g., calculators, audio books, digital recorders
- High tech, e.g., electronic Braille displays, speech-recognition software, eye-tracking devices

Tip

Ask the following questions to determine whether a tool is essential AT:

- Would the student experience a barrier without it?
- Does the student benefit from it?

Resource

For more details about the types and range of AT available, go to Vanderbilt University's Iris Center at <https://iris.peabody.vanderbilt.edu/module/at/cresource/q1/p02/>



Universal Design for Learning, Accessible Educational Materials, and Assistive Technology have a lot in common!

**Eliminate
barriers**

**Create learning
pathways**

**Empower every
learner**

Additional Resources on UDL and UDL Guidelines 3.0

- ▶ Nicole Tucker Smith, “What is UDL 3” video on Youtube: <https://www.youtube.com/watch?v=bA-juSJSHRA>
- ▶ The UDL Guidelines at CAST: <https://udlguidelines.cast.org>
- ▶ Katie Novak on UDL and UDL 3.0: <https://www.youtube.com/watch?v=T3Pp3WrXJzQ>
- ▶ Webinars and modules from Supporting Innovative Practices (SIP) featuring Nicole Tucker Smith and Lessoncast: <https://www.sipimpact.org/What-We-Do/Archived-Virtual-Events/Universal-Design-for-Learning-UDL/index.html>

Additional Resources on Assistive Technology

- ▶ A thorough introduction to the use of assistive technology in the classroom can be found at Vanderbilt University’s Iris Center: <https://iris.peabody.vanderbilt.edu/module/at/>
- ▶ The California Department of Rehabilitative Services features extensive information on assistive technology, including information on how to find an IT advocate, how to access an IT lending library, and the work of the Assistive Technology Advisory Committee: <https://www.dor.ca.gov/home/assistivetechology>
- ▶ The California Department of Education provides an extensive list of assistive technology tools organized by the skill the tool is supporting: <https://www.cde.ca.gov/sp/se/sr/atexmpl.asp>



Supporting Innovative Practices
Innovate. Elevate. Impact.

The Special EDGE is published by the Supporting Innovative Practices Project (SIP). SIP is committed to upholding human dignity by challenging exclusionary practices through systemic change and advocacy, ensuring all students, particularly those with disabilities, have the access, support, and opportunities needed to achieve fair outcomes and a true sense of belonging.

<http://www.sipimpact.org>