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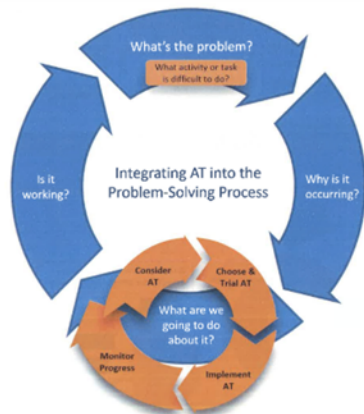ATClosingTheGap

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contents   December, 2021 / January, 2022

volume 40 | number 5
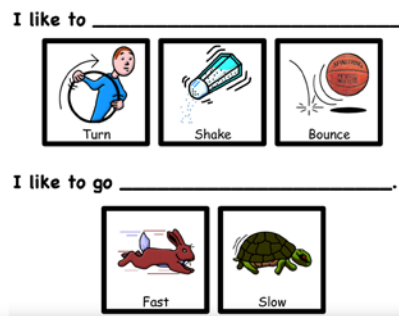
Advocating for Assistive Technology in School Settings: Tools and Tips for Parents of Students with Learning Disabilities

Summary:

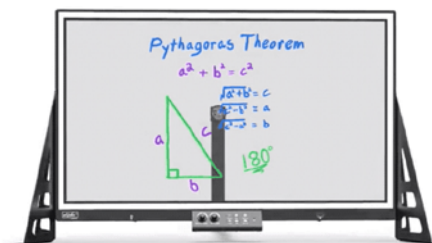This article will give an overview of legislation that outlines parent involvement in special education processes and the benefits of assistive technology for students' with learning disabilities. The Assistive Technology (AT) consideration process is described so that parents can more confidently advocate for their students' AT needs, especially during educational transitions. Practical examples of language to use with educational teams, AT documentation in the IEP, communication channels, quality indicators for effective AT implementation, and AT resources will be provided.

Think of a time when you have felt underprepared or frustrated when advocating for your student's learning needs. How did the scenario play out? Did you achieve your objectives? Why or why not?

Skilled parent advocacy in special education requires specific knowledge, skills, and access to information. Parents can improve their special education knowledge, advocacy activity, satisfaction with services, school-family partnership, and feelings of empowerment following direct instruction in special education law and advocacy skills (Goldman et al., 2020a; 2020b).

One challenge parents of students with learning disabilities may encounter is securing Assistive Technology (AT) in school settings. In general, parents need seven types of information to effectively advocate for AT their child: 1) knowledge of how and when parents can contribute to special education processes; 2) awareness of the benefits/barriers to AT use; 3) evidence-based processes teams use in considering AT; 4) options for documenting AT throughout the IEP or 504 plan; 5) skill sets in the use of effective language when advocating; 6) awareness of academic communication channels, and 7) influences that impact AT use/disuse when students change educational settings. This information is necessary to facilitate effective interdisciplinary communication, support student AT use, facilitate AT follow-through during educational transitions, and provide a history of AT supports needed for classroom, district, and high-stakes testing settings (Burke, 2013; Johnson et al., 2002). Parents need to be able to ask the "right" questions and provide the "right" data to work within an educational frame of reference and fully engage with educational teams. How does that happen? Parent education is key.

KIRSTEN KOHLMEYER: OTD, MS, OTR/L is an occupational therapist with 37 years of experience across physical rehabilitation, assistive technology, and special education practice areas. A lifelong learner, she recently completed her post-professional doctorate at UW-Madison.

Kirsten has held multiple clinical and administrative roles, published, presented, and taught on a variety of topics, including assistive technology and learning disabilities. She draws on her special education experiences as a parent, service provider, consultant, and advocate when working with educational teams. Kirsten is passionate about providing tools and advocacy skills to students and families to facilitate full participation in desired academic, vocational, and avocational pursuits.

LEGISLATION SUPPORTING PARENT INVOLVEMENT

Various pieces of legislation stipulate parent involvement in the special education process and AT consideration. The Individuals with Disabilities Education Act (IDEA) mandates that parents have opportunities for "meaningful participation" and be active members of the Individualized Education Program (IEP) team decision-making process (Burke et al., 2016a; 2016b,2019; Goldman & Burke, 2017; IDEA, 2004). IDEA also federally mandates the inclusion of yearly assistive technology consideration in special education as well as in the transition process. The Assistive Technology Act of 1998 emphasizes family involvement for goal setting, skill maintenance, and generalization across settings (GovTrack, 2021; Hemmingsson et al., 2009; Illinois State Board of Education, 2021). And, the Family Education Rights and Privacy Act of 1974 (FERPA) gives parents or eligible students the right to inspect, review, and request that a school correct education records maintained by the school which they believe to be inaccurate or misleading. This is relevant for documentation that supports the need for AT across academic settings and for establishing a history in order to apply for similar available accommodations for high stakes testing (ADA, 2021). Knowing parent rights and roles in special education processes can contribute to effective engagement with educational teams to support student needs.

BENEFITS AND BARRIERS OF AT USE FOR STUDENTS WITH LEARNING DISABILITIES

Knowing the benefits of AT can also help parents advocate for students' learning needs. Research shows that students with learning disabilities such as dyslexia, dysgraphia, dyscalculia, and executive functioning disorder who use AT have more successful transitions to high school; improved quality of work; more positive perceptions of themselves as learners and more positive post-school outcomes (Bouck et al., 2012; Keelor et. al., 2020; Schock & Lee, 2016, Young, 2012). In fact, both school personnel and AT were shown to empower students with learning disabilities so that they could independently thrive in high school and as they worked towards college and a career (Walker, 2017).

Similarly, understanding potential obstacles student AT use can help plan for, prevent, and troubleshoot difficulties when educational teams are considering and trying to support AT implementation. Students have reported that feeling "different", needing help using tools, lack of tool integration in the classroom, peer reactions, and a negative self-image can get in the way of using AT tools (Hemmingsson et al., 2009, Schock & Lee, 2016). Roadblocks for parents can be a lack of comfort with the technology, lack of training to support their students' AT use and troubleshooting difficulties at home, lack of collaboration with the educational team, and decreased advocacy skills (Todis,1996). Teachers report that their pedagogical beliefs about "good" education, inadequate AT knowledge and AT skills, in-consistencies in approaches to using assistive technology, and lack of support to integrate AT can interfere with their ability to support students' AT use. (Aldunte & Nussbaum, 2013; Ertmer et al., 2012; Tondeur et al., 2016; Vongkulluksn et al., 2018).

Successful AT use in educational settings, especially after educational transitions, is often a function of communication about and openness to AT use in the new academic environment, adequate teacher training to support AT use, assessment of AT "goodness of fit", and AT advocacy on the part of students, teachers and parents (Specht et al., 2007). Understanding and actively participating in the AT consideration process can promote student success.
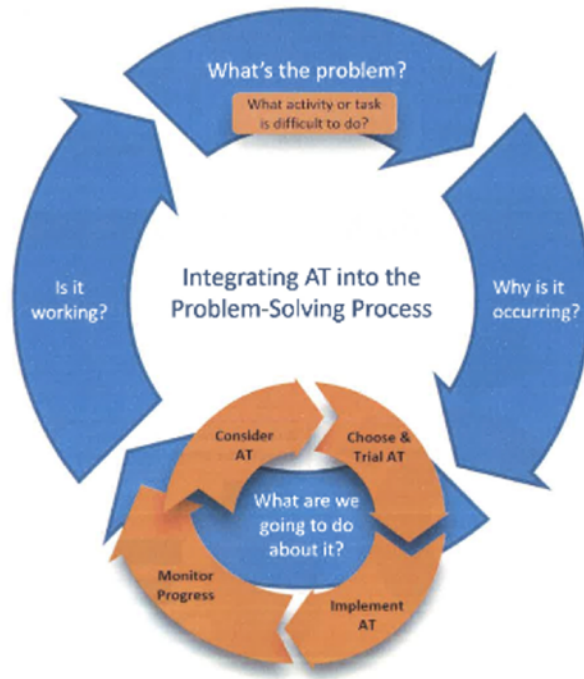
WHAT IS AT CONSIDERATION?

"Technology" means different things to different people, and it's important to differentiate between types of educational technology when discussing students' learning needs. Instructional technology (IT) includes practical instructional delivery techniques that systematically aim for effective learning, with or without the use of media (Gagne, 2013). Instructional technology staff often deal with systems-level distribution of technology in schools, troubleshoot difficulties, and monitor for safe use across general and special education environments (i.e., Chromebook management, accessibility to features/apps).

Universal Design for Learning (UDL) is an educational framework which assumes that barriers to learning are in the design of the environment, not the student. UDL principles include multiple means of 1) engagement (such as providing various levels of challenge); 2) representation (such as providing various options for engaging with texts: text-to-speech, audiobooks, or partner reading) and 3) action/expression (such as allowing students to show what they know through a variety of formats, such as a poster presentation or a graphic organizer) (CAST, 2021; Edyburn, 2010). Advances in and more ubiquitous use of technology can sometimes blur the distinction between UDL and AT tools. For example, speech-to-text and text-to-speech embedded accessibility features are readily available to all students. These technologies are identified as AT for a student with a disability if they are used as a compensatory intervention and an IEP team determines that a student needs them to receive a "Free and Appropriate Education" (FAPE). Additional technology may be needed to help a student with disabilities access their curriculum and perform student tasks (Bowser, 2020).

Assistive technology is defined as any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability (Authority: 20 U.S.C. 1401[1]) (GovTrack, 2021). AT usually moves beyond what is "free" and provides a greater level of specialized support than a majority of IT and UDL tools.

AT consideration is mandated as part of the special education eligibility process. It occurs at an initial IEP meeting, each

What's the problem?

What activity or task is difficult to do?

Is it working?

Integrating AT into the Problem-Solving Process

Why is it occurring?

Consider AT

Choose & Trial AT

What are we going to do about it?

Monitor Progress

Implement AT

Change the context	Change the student
• Use principles of Universal Design and Universal Design for Learning to reduce barriers to participation • Consider individual accommodations, including **assistive technology**	• Document medical interventions • Consider therapeutic interventions • Consider behavioral interventions • Consider instructional interventions, including **instructional technology**

Consider AT

Choose & Trial AT

Monitor Progress

Implement AT
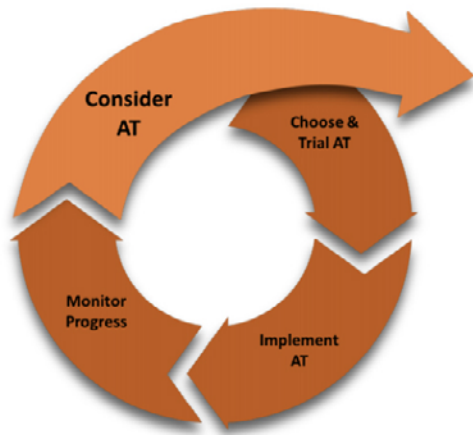
Q: Could assistive technology augment or replace the difficult task-demands?

Use a Consideration Guide to find AT features that match…

Difficult-task demands

Student preferences

Environmental factors
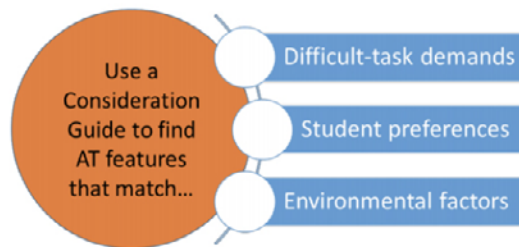
Possible answers:
1. **No**: Instruction, therapy, and no-tech accommodations will be sufficient for student to meet expectations or AT features cannot augment or replace the difficult task-demands
2. **Yes**: AT is already effectively being used. Continue to IMPLEMENT and MONITOR PROGRESS
3. **Maybe**: Data is needed to determine effectiveness. CHOOSE & TRIAL AT.

Figure 1: JHU AT Cycle

subsequent annual review, or at an educational team member or parent's request (Bowser, 2020). Potential team members involved in the AT consideration process include the student, family, teachers, instructional assistants, related service providers, nurse, school administrators, school technology coordinators, and assistive technology consultants. The key word is "process", which varies across school districts.

Discussion points in the AT consideration process include looking at a student's strengths and challenges across academic and social-emotional domains (i.e., reading, writing, organizational skills, executive functioning), environmental contexts where the student functions throughout their day, tasks the student struggles with (i.e. decoding text, producing written work, completing math problems) and the (relative) effectiveness of previously used interventions. Points to consider: Are there AT tools that might mitigate some of the challenges? What is the level of "buy-in" from all parties? (Zabala,1995).

Development of a "game plan" is key. First steps include interdisciplinary brainstorming around current resources and ideas about which AT tools and strategies to try. If additional resources are deemed necessary, the IEP team may consider a referral to other resources within the school building, school district, or other agencies.

Many educational teams use a feature-matching process to discuss and reach consensus on what to initiate for an AT trial in an attempt to compensate, augment, or replace the difficult task demands (Cochrane, 2021). Some factors to consider are 1) student training needs (i.e., how much training does the student require; when will training be provided; what kind of direct supervision and support will the student need in order to use the AT tool effectively); equipment considerations (i.e., who will provide the tool; where will the tool be used; how will the tool be supported across environments); 3) staff and family training needs (i.e., what will various staff and family members need to know about the AT tool and how it works; who will provide the training; who is the identified "go to" for troubleshooting) and 4) outcome questions (i.e., how do you know if the tool is working or not). (Bowser & Reed, 2012). Identification of who is responsible for what, the length of the AT trial period, and follow-up training and meeting dates are also established.

AT consideration is more than a brief conversation at an IEP meeting, checking a box on an IEP form, and simply providing AT tools. It is an ongoing problem-solving process, recorded in a student's IEP, by which AT is considered, selected, provided, supported, and periodically re-evaluated to determine its effectiveness for a student. The John Hopkins University AT Cycle Model summarizes the AT consideration process (JHU, 2021) (see Fig.1).

EFFECTIVE LANGUAGE FOR AT CONVERSATIONS

Educational team members, administrators, and families may have differing opinions on the AT consideration process and AT tool use. Table 1. examples of language you might consider

using if you find yourself in a difficult conversation. It is helpful to remain factual, calm, and open-minded to be perceived as a valuable member of your student's team.

If a school official says….	Parent response might be…
We've considered your child's need for "XYZ" and have determined that s/he will not benefit.	I would like to review the documentation that supports your decision. Can you show me the data regarding performance with Assistive Technology (AT) and performance without? How has AT skill acquisition/competency and implementation been demonstrated?
Best practice suggest we begin with no-tech solutions first.	Consideration is not a linear process of trial and error. All solutions need to be explored to minimize the impact of persistent underperformance and frustration.
We can't afford that.	Cost cannot be considered a factor in AT Consideration.

If a school official says….	Parent response might be…
We have tools that do the same thing.	Can you do a task analysis and show me how the tools you are suggesting do the same things to meet "XYZ's" needs.
We are not sure whats types of AT are out there.	What steps wll you take to fulfill the AT consideration mandate?
We don't want him to become dependent on a text reader. When wll he ever learn to read?	"XYZ" doesn't have the independent reading sills at/above grade level text, fluency, or comprehension for the amount he has to read in the time he has to read it. How will you demonstrate he has access to the curriculum? Share uPAR data.
We want to see what he can really do.	I understand that premise if you want to evaluate decoding, but my child needs to access the curriculum in a way that he can take it in, learn, and show what he knows

Table 1: Examples of effective language for AT conversations (adapted from Edyburn, 2009)

If a school official says....	Parent response maybe might be...
Your child is not the only one that struggles with this problem.	I can appreciate your concern but my primary interest is the success of my child. What are we going to do to ensure my child can demonstrate their abilities via leveling the playing field?
We will provide some specialized technology but there is no need to write it in the IEP/504 plan.	I'm happy to hear AT will be provided. To ensure the rights of all parties are protected, the plan for acquiring/using AT should be documented in the IEP or 504 plan.
We are not authorized to make a decision about AT.	I'm disappointed. Let's adjourn and reschedule when an appropriate administrator can be here.

Table 1: Conintued

HOW DO YOU KNOW IF AN AT TOOL WORKS?

Once a student demonstrates the ability to use an AT tool with minimal support, the tool is made available, educational staff have sufficient support/training, and the tool is embedded into the learning situation, task performance should improve. Student learning curves for tools can vary. For example, speech recognition may be an immediate benefit for getting ideas down on paper and providing short answers; however, it takes additional training for longer, more complex pieces of writing. Educational teams should determine outcome measures during the AT consideration process for the AT trial. Level of independence in producing work, grammar, vocabulary, length of writing, lexile level, sentence structure, and writing conventions such as spelling and punctuation are some factors to consider when evaluating utility of AT writing tools.

A solid 6-8 week trial period and progress monitoring is recommended before making a decision about the effectiveness of AT. Bottom line: does the student use the tool? How often? Is their performance better with the tool than without it? Edu-

cational teams also need to monitor progress over the course of the academic year to determine long-term effectiveness (Cochrane, 2021). Sometimes, even with clear evidence of the benefit of AT tools, students aren't ready to embrace using them. At that point, it's often best to use gentle encouragement and, on occasion, circle back. Again, AT consideration is mandated yearly at a student's annual review.

DOCUMENTING AT IN THE INDIVIDUALIZED EDUCATIONAL PLAN (IEP)

Once deemed effective, AT tools should be clearly documented in the IEP so that students' learning needs can be met, educational professionals are aware of and can support AT use, and gaps in services are minimized across educational transitions. Additionally, a paper trail which documents a history of accommodations is required to apply for use of AT accommodations on high-stakes testing as well as in post-secondary settings.

AT tools can be documented across multiple sections of the IEP:

Present Levels of Performance (PLOP) can indicate what AT is being used; how; for what reason and the impact the AT has on the student's performance.

IEP Goals & Objectives can focus on a student's various levels and types of competencies when using AT tools: operational competence (i.e. learning how to use AT); functional competence (i.e. performing tasks with the AT tools);

strategic competence (i.e. knowing when to use various AT tools) and/or

social competence (i.e. ability to explain and advocate for AT tools) (adapted from Light & Binger, 1998, Cochrane, 2021).

Consideration of Special Factors

The need for AT devices and/or services to access a "Free and Appropriate Education" (FAPE) is documented in this section of the IEP. The box needs to be checked "yes" or "no" and reasons given for what was checked (see example of Illinois IEP form, Figure 3).

CONSIDERATION OF SPECIAL FACTORS

Check the boxes to indicate if the student requires any supplementary aids and/or services due to the following factors. **For any box checked "yes," specify the special factors in the "Supplementary Aids, Accommodations and Modifications" section listed below.**

☒ Yes   ☐ No   Assistive technology devices and/or services. **If yes, please specify needed AT. If no, specify why AT is not needed to access FAPE.**

████ continues to require technology that provides:
Text to Speech
Speech to Text
Audio Books
Access to digital text that allows for reading, annotating and highlighting
Software that allows flexible spelling and PDF conversion to digital text that can be interfaced with AT tools
Headphones and microphone
Spelling and grammar checks
Word prediction

Figure 3: Example of IEP AT documentation in Consideration of Special Factors

Related services: AT minutes should be included in the *Related Services* section of the IEP if a related service provider such as an occupational therapist or speech-language pathologist provides instruction specific to the AT tool (e.g., support for speech to text in writing). Districts are required to maintain related service logs (Bowser, 2020).

Accommodations & Modifications: Many schools prefer to describe the AT using feature terminology, and not list specific tools, which gives them flexibility in providing different AT tools if they have the same utility. An example of this is "John continues to require use of text to speech to access materials above his independent decoding level". Because different text to speech tools serve different functions, it is beneficial to list current specific tools in the *Additional Information* section of the IEP. For example, "John uses Learning Ally (https://learningally.org/) for pleasure reading. Kami (https://www.kamiapp.com/) and Bookshare (https://www.bookshare.org/cms/) are used to access and interact with digital text for highlighting, annotating, and notetaking". Specifying tools in *Additional Information* can more clearly articulate the level of support and variety of tools needed, depending on the educational tasks and environment. For a student to use AT in permitted sections of statewide and high-stakes testing (i.e. NWEA MAP, PSAT, SAT, ACT), AT must be documented in the *Accommodations and Modifications* section of the student's IEP or 504 plan (College Board, 2021,U.S. DOJ, 2021). The history of use, student familiarity, and utility of various accommodations such as MP3 players, human readers, and digital formats should be considered related to student's abilities to interact with, reread, and reference text when testing.

Additional Information: In addition to documenting specific AT tools, this space on the IEP document can articulate meeting discussion points, concerns, and ongoing AT monitoring plans in a narrative format (Bowser, 2020).

Support for School Personnel: This can sometimes be overlooked. It is important to document and allocate time if staff need AT training on the tools, mentoring on how to embed the tools into the instructional environment, and support for troubleshooting difficulties. This can be especially relevant when implementing new AT tools and/or during educational transitions (Bowser, 2020)

If a student with a learning disability does not, or no longer qualifies for special education services under IDEA, they may still qualify for accommodations (including AT supports) under a 504 plan. In fact, students with wide-ranging academic profiles, rigor of academic courses, and levels of academic achievement may qualify for a 504 plan. This type of plan derives from Section 504 of the Rehabilitation Act of 1973 Federal civil rights law, which intends to prevent discrimination against people with disabilities. Section 504 defines an "individual with a disability" broadly as "Any person who (1) has a physical or mental impairment which substantially limits one or more of such person's major life activities; (2) has a record of such an impairment; or (3) is regard-

ed as having such an impairment." (U.S. Department of Health and Education, 1978). "Major life activities" may include, but are not limited, to performing manual tasks, communicating, speaking, reading, learning, concentrating, and thinking.

DOCUMENTING AT IN THE 504 PLAN

The physical presentation of 504 plans tends to vary across school districts more so than IEPs. Documentation of AT accommodations to support identified challenges which limit "major life activities" serves to remove barriers and give students access to learning (Figure 4).

COMMUNICATION

Establish preferred methods and timing of communication with your child's educational team. Parent access to classroom pages, blogs, and a school's learning management system can help monitor class activities, student work completion, and performance. No one likes surprises, including students, parents, or teachers.

If there is an AT issue, it's probably best to have the student first communicate if possible, with the identified educational team member for troubleshooting AT difficulties if age-appropriate. It is never too early to start modeling and teaching communication and self-advocacy skills. Identify the issue: is it a communication, timing, or lack of awareness? Are accommodations being implemented? Some of them? All of them? Across all classes? Note the timeline and create a "paper trail" to ensure that all parties are on the same page. If the problem is not resolved, you can go up the communication chain to the student's case manager, department head, and principal. Communication with the Director of Special Education most often occurs much further into a problem-solving situation. It's best to be a proactive advocate, as opposed to an adversary during stressful situations. During stressful situations, it's best to be a proactive advocate, as opposed to an adversary.

DECREASE IN AT USE DURING ACADEMIC TRANSITIONS

Change is ongoing. Students, environments, tasks, demands, interests, and technology all change. Studies done on AT abandonment cite a myriad of social, personal, and economic factors similar to AT barriers discussed above (Beigel, 2000; Johnson & Evans, 2005; Laure et al., 2016). In a recent survey (Kohlmeyer, 2021) parents of students who attended an elementary school for students with learning disabilities reported the following AT tool use after a transition to mainstream schools:

Greater use	No change	Less use	Don't know
3.6%	25%	57.1%	14.3%

Figure 5: Parent report of level of student AT tool use after transition to mainstream school

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2. Describe how the mental or physical impairment substantially limits a major life activity: ██████ showed weaknesses in several areas that are known to contribute to or are often observed in those with a reading disorder. ██████'s handwriting is characterized by problems with spacing and horizontal alignment. Her below grade level automaticity of sight word reading, phonemic decoding and reading accuracy, fluency and comprehension of connected text are of moderate weakness. The results indicate that her spelling ability was at the low end of the average range when writing words in isolation and from dictation. It is not uncommon for children who struggle with handwriting and reading in early elementary school to then find writing more challenging as they progress through school. This is certainly the case for ██████. She expends a tremendous amount of effort to improve her writing. Her impairments in letter writing can interfere with spelling and expressive writing. ██████'s ADHD diagnosis impacts her in the classroom through decreased attention, difficulty with sustained attention, inconsistent availability for learning, difficulty with executive functioning: organization of writing, time management, and some anxiety.

3. Describe the services, accommodations, and/or other supports that are necessary (including their frequency, location, and duration) and who will provide them:
- Extended time on reading and writing assignments throughout the curriculum
- Extended time on classroom assessments (1.5x)
- Access to digital tools and resources (ie: AT tools for word prediction and flexible spelling engines, assessments)
- Access to audiobooks/audio text when possible (including classroom assessments and assignments)
- Access to School Social Worker Social Worker to consult with teachers and parents to monitor self-esteem/coping skills
- Preferential seating near the point of instruction
- Positive reinforcement to encourage positive self-esteem (e.g., ██████ benefits from reassurance)
- Provide checklists (ie: editing) and graphic organizers digitally as often as possible
- Prompt ██████ before calling on her
- Clarify/rephrase instruction as necessary
- Check for understanding of directions and instruction
- Word bank for content-based vocabulary
- Assess written work primarily on content and modify grading for spelling
- Allow use of fidgets and breaks as needed
- Check in/out for assignments and homework completion
- Provide class notes/study guides
- Break down assignments and projects into smaller parts
- Establish cues for redirection - (verbal and nonverbal - work with ██████ for appropriate cues)
- Check in to see that ██████ completes all components of assignments and assessments
- Testing: Extended time on district and state tests (1.5x) with an AT compatible testing format Small group testing

Figure 4: Example of AT documentation in a 504 plan

Perhaps even more importantly, parents reported the following delays in implementing AT documented in the IEP at the new school:

Immediately to 2 weeks	1-2 weeks	3-4 weeks	Between 1-3 months	Not yet implemented 4 months into the school year
39.4%	16.1%	5.4%	16.1%	16.1%

***The remaining 7% were mixed answers, or unspecified answers

Figure 6: Parent reported length of time to implement AT tools in new school setting

Parents can be a crucial link in facilitating continuity in AT tool use across environments. They are the only constant as students move through educational settings.

When preparing for a move to a different class, grade-level, or school, the following can increase the likelihood of a smooth AT transition: 1) discuss if the technology is available in the new setting, and if not, how to acquire it or a comparable tool; 2) demonstrate the current level of use and independence (work samples are helpful); 3) identify potential new technology that may be needed (some tools may need to be tweaked if changing platforms); 4) identify the "go to" person for troubleshooting; (Bowser, 2020) and 5) request that all needed organizational accounts are established, and that ISBN numbers of texts be requested from Bookshare or other digital text sources over the

summer so that materials are available for immediate use. Prior to the transition, providing the new educational team with a brief student profile, written and sent by the student, can help teachers connect a face with a name and an IEP, and to gain an understanding of how AT tools facilitate learning from the student's perspective prior to the transition (Figure. 7).

Student Name '24
Student email
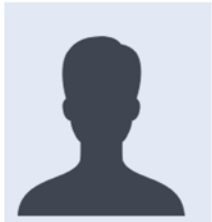
Vision/Goals:
In my sophomore year, I hope to increase my independence for selecting appropriate study strategies to help me memorize and recall information. I hope to learn assistive technology strategies for note-taking and annotating digital text. I hope to improve my ability to express more complex ideas using a variety of sentence structures.

Why I have an IEP:
I have dyslexia, dysgraphia, dyscalculia, and inattentive type ADHD. Memorization and multi-step tasks are challenging for me, and I process information slowly.

My strengths:
I'm good with number concepts, summarizing main ideas, following rules, using my tools, and getting along with people. I work hard, and I don't give up easily. I am a creative thinker.

What I struggle with in school:
I have a hard time getting my ideas out of my head and onto the page, slowing down to read all the way through directions, making inferences, and memorizing definitions. Sometimes I need to see how something is supposed to look like in the end to know how to start my thinking. I get nervous about new things, and meeting new people.

What helps me to learn and to show what I know:
I do best when I use assistive technology for reading and writing, skill sheets and manipulatives in math, when I get extra time for tests and assessments, and when I can see examples or models of what is expected. I like having video tutorials of what to do and how to do it, so I can repeat both seeing and hearing explanations of assignments.

What helped me succeed in remote learning:
It helped to have a daily check-in with a teacher to make sure I knew what was expected each day, and how to get started. It helped to have timelines for longer-term projects.

Things I like outside of school:
Soccer, drawing, playing Rocket League, running, biking, listening to music, my two cats

Figure 7 : Example of student to teacher introduction and learning profile

QUALITY INDICATORS FOR SUCCESSFUL AT IMPLEMENTATION (QIAT, 2021):

To summarize, effective AT implementation is a collaborative, interdisciplinary effort which encompasses the following indicators:

1. **Assistive technology implementation proceeds according to a <u>collaboratively developed plan</u>.**

Intent: Following IEP of 504 development, all those involved in implementation work together to develop a written action plan that provides detailed information about how the AT will be used in specific educational settings, what will be done, and who will do it.

2. **Assistive technology is <u>integrated</u> into the curriculum and daily activities of the student across environments.**

Intent: Assistive technology is used when and where it is needed to facilitate the student's access to, and mastery of, the curriculum. Assistive technology may facilitate active participation in educational activities, assessments, extracurricular activities, and typical routines.

3. **Persons supporting the student across all environments in which the assistive technology is expected to be used <u>share responsibility</u> for implementation of the plan.**

Intent: All persons who work with the student know their roles and responsibilities, are able to support the student using assistive technology, and are expected to do so.

4. **Persons supporting the student provide opportunities for the student to use a <u>variety of strategies–including assistive technology</u>– and to learn which strategies are most effective for particular circumstances and tasks.**

Intent: When and where appropriate, students are encouraged to consider and use alternative strategies to remove barriers to participation or performance. Strategies may include the student's natural abilities, use of assistive technology, other supports, or modifications to the curriculum, task, or environment.

5. **<u>Learning opportunities</u> for the student, family, and staff are an integral part of implementation.**

Intent: Learning opportunities needed by the student, staff, and family are based on how the assistive technology will be used in each unique environment. Training and technical assistance are planned and implemented as ongoing processes based on current and changing needs.

6. **Assistive technology implementation is initially based on assessment <u>data</u> and is adjusted based on performance data.**

Intent: Formal and informal assessment data guide initial decision-making and planning for AT implementation. As the plan is carried out, student performance is monitored and implementation is adjusted in a timely manner to support student progress.

7. **Assistive technology implementation includes <u>management and maintenance of equipment</u> and materials.**

Intent: For technology to be useful it is important that equipment management responsibilities are clearly defined and assigned. Though specifics may differ based on the technology, some general areas may include organization of equipment and materials; responsibility for acquisition, set-up, repair, and replacement in a timely fashion; and assurance that equipment is operational.

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SUMMARY

Introductory-level knowledge of special education law and assistive technology can improve parents' ability to collaborate, advocate, and acquire AT tools for students with learning disabilities in school settings. Several special education legislative acts stipulate that parents meaningfully participate in the special education process. There are significant benefits of AT use for students with learning disabilities, such as higher positive self-perception, independence with work, academic achievement, and more options after high school. There are also barriers to student use of AT, especially during educational transitions. AT consideration is an interdisciplinary process that is discussed at the student's annual review or at parent request. QIAT has defined a set of descriptors that serve as overarching guidelines for quality implementation. They include a specified action plan, curricular integration, identified responsibilities, training/support for all parties, and outcome data. Student use of assistive technology tools needs to be clearly documented in multiple areas of the IEP. Open and timely adherence to established communication channels can support students' needs and facilitate AT troubleshooting difficulties.

RESOURCES

There is a plethora of information about assistive technology for students with learning disabilities. You can start with the educational team. If your student starts an AT trial, ask for training. Network with other parents and local or national learning disability organizations. State Boards of Education have resources on AT and the AT consideration process. There are state, regional, and local Family Resource Centers on Disability which can provide information on advocacy, AT evaluation, and tools. National conferences such as Closing the Gap and ATIA are great resources for Assistive Technology, and they now offer virtual attendance options. Investigate local and state conferences. Websites can also provide great resources. Most AT tool vendors offer 30-day trials for "hands on" exposure as well as instructional videos so that you can have a better understanding of their products.

Examples of selective resources are categorized and listed below. Those that are state-specific, have similar resources in other states.

AT PROCESS & PLANNING

AT Process in Schools
https://sites.google.com/uic.edu/problem-solving-assistive-tech

Illinois Assistive Technology Guide
https://www.isbe.net/Documents/assist-tech-guidance-manual.pdf

https://www.isbe.net/Pages/Special-Education-Assistive-Technology.aspx

Family Information Guide to Assistive Technology and Transition Planning
https://www.ctdinstitute.org/library/2014-10-20/family-information-guide-assistive-technology-and-transition-planning

DISABILITY RIGHTS & ADVOCACY

Learning Disabilities Association of America: Disability Rights & Advocacy
https://ldaamerica.org/advocacy/disability-rights-and-advocacy/

Wrights Law
https://www.wrightslaw.com/

STATE BOARD OF EDUCATION

Illinois State Board of Education
https://www.isbe.net/

ISBE/Illinois Assistive Technology Guide 2020
https://www.isbe.net/Documents/assist-tech-guidance-manual.pdf

ISBE/Parents rights
https://www.isbe.net/Pages/Special-Education-Parent-Rights.aspx

ISBE/Educational Rights and Responsibilities: Understanding Special Education in Illinois
http://frcd.org/wp-content/uploads/2013/08/parent_guide_english.pdf

ISBE/Special Education
https://www.isbe.net/Pages/Special-Education-Programs.aspx

NATIONAL, REGIONAL, AND LOCAL FAMILY RESOURCE CENTERS ON DISABILITY

Pacer Center
Minnesota Parent Training and Information Center
Funded by U.S. Department of Education's Office of Special Education Programs
8161 Normandale Blvd, Bloomington, MN 55437.
Phone: 952-838-9000
Email:
Website: https://www.pacer.org/

Wisconsin Family Assistance Center for Education, Training & Support, Inc (FACETS)
600 W. Virginia Street, Suite 501
Milwaukee, Wisconsin, 53204
Toll-Free: (877)-374-0511

Phone: (414)-374-4645
Fax: (414)-374-4655
Website: https://wifacets.org/

Family Matters - PTI
Serving 94 counties in IL, except the counties of Cook, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Wi
1901 S. 4th Street, Suite 209
Effingham, IL 62401
Toll-Free: (866) 436-7842
Phone: (217) 717-8016
E-mail: info@fmptic.org
Website: http://www.fmptic.org

Family Resource Center on Disabilities – PTI
Serving Chicago Area
20 E. Jackson Boulevard, Room 300
Chicago, IL 60604
Toll-Free: (800) 952-4199 (in IL)
Phone: (312) 939-3513
E-mail: info@frcd.org
Website: http://www.frcd.org

TESTING ACCOMMODATIONS

ADA
https://adata.org/learn-about-ada

www.ada.gov › regs2014 › testing_accommodations

ATIA Policy Brief https://www.atia.org/atia-policy-briefs/

College Board https://accommodations.collegeboard.org/?exc-mpid=VT-00009

Don Johnston https://learningtools.donjohnston.com/2019/02/cowriter-test-mode-for-assessments/

Every Student Succeeds https://www.ed.gov/essa

IDEA. https://sites.ed.gov/idea/about-idea/

National Center on Educational Outcomes https://nceo.info/About

Office of the State Superintendent of Education: https://osse.dc.gov/service/testing-accommodations

U.S. DOJ Testing accommodations: https://www.ada.gov/regs2014/testing_accommodations.html

WEBSITES

Assistive Technology Industry Association: https://www.atia.org/

Assistive Technology Internet Modules: https://atinternetmodules.org/

Center on Technology and Disability: https://www.ctdinstitute.org/

Closing the Gap: https://www.closingthegap.com/

Quality Indicators for Assistive Technology Services: https://qiat.org

Understood https://www.understood.org/en/school-learning/assistive-technology

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Closing The Gap on Transition Success by Starting Early

Transition can be a scary word as it equates to change though it does not need to be scary. Instead, it can be a way to celebrate a new stage or a new chapter like a journey. We can celebrate this new path when we have the skills we need to embark on the journey. Part of this skill building is developing positive transitions early even in elementary school. If we can build successful transitions early and we can build smaller transitions smoothly then the bigger transitions can be less intimidating.

Smaller transitions can be going from one activity in the classroom to another activity such as going from carpet time to a Centers activity. It may be going from one classroom to another classroom such as going from art to the lunchroom. And it may be going from elementary school to middle school or middle school to high school. If some of these smaller transitions are performed smoothly and are methodically planned with skills developed along the way that are needed for transition success, then transition may not be as scary.

We can start by asking several questions. How are we introducing these transitions? What is in place to help with these smaller transitions? Can the elementary school student going to middle school get a private tour with a peer before school is open? Can they attend orientation with a special education assistant? Can a student transitioning from early intervention to an Early Childhood Special Education preschool classroom get a tour of the classroom without the students in it? Can they see where they will be eating lunch and where they will hang their coat? Can they look in the bathroom and get oriented to the classroom? Can the teacher provide the typical songs to the parents so they are familiar to the student when they enter the classroom? What are we doing to help prepare the family and the student for the upcoming transition? Can a social narrative be provided? Can a video be created that may show the building or the classroom in a less intimidating way? Can the expected behavior be modeled in a video showing the transition? There are many opportunities to create successful smaller transitions so the big transition is not so scary.

Most of us think of high school graduation when we hear the word transition. IDEA stipulates that transition planning must be addressed in the Individualized Education Plan (IEP) by the age of 16 with some states requiring transition planning to oc-

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DEBORAH SCHWIND DHSc, OTR/L, BCP, SCSS. Deborah is a school-based occupational therapist with over 30 years of experience. She completed her doctoral dissertation from Drexel University with her research focused on developing job skills, work behaviors, social skills and self-determination skills through a school-based Community Based Instruction (CBI) program for students with autism in elementary school. She received an Innovator Award from NBCOT related to this program in 2021. She has presented nationally on transition skills, community-based instruction, IADL interventions, accessible curriculum using UDL principles, and adapted art tools. She has been published on these topics and has co-authored a chapter in the Best Practices in School Based OT and is currently working on co-authoring a book with AOTA Press. She graduated from East Carolina University where she completed internships at Duke University and Johns Hopkins University. She received her graduate degree from Old Dominion University in educational administration. She has worked in pediatric rehab, early intervention, home health, and inpatient (including NICU) and outpatient settings. She is an active member of the AOTA Community of Practice-Transition work group.

cur by the age of 14. In order to be successful upon graduation, there are many transition skills that must be established. These are not skills that magically develop by the age of 16. These are skills that build upon themselves and develop as part of a continuum over many years. Transition skills must be addressed early if we want our students to be successful upon graduation. The post-secondary transition outcomes are not very good for students with disabilities even for those who have attended college with college degrees. There are high unemployment rates for those adults with disabilities and the rate has been unchanged for many years. It is not just unemployment though it is also poor mental health and physical health with poor quality of life. We can make a difference in these outcomes by starting early.

There are many skills or predictors of success that students need to acquire before they can be successful on a job or in a volunteer experience (Mazzotti et al., 2021; Test et al., 2009). Students need to be able to display workplace behaviors which include being able to self-regulate and problem solve job tasks or social situations to name a few. They need to have social skills with inclusive programming and understand personal boundaries. Expectations for work should be present and students should have functional life skills. There should be identified career interests by 14 or 16 and they should have self-determination skills and self-advocacy skills. But, the best predictor of employment success upon graduation is whether a student has had work experience in high school (Wehman et al., 2014).

If the expectation is that students in high school will complete off campus internships or volunteer work in the community, then these predictors of success must already be established. In order to address the many predictors, skills need to be developed as part of a continuum starting in elementary school. By using Community Based Instruction or CBI in the school many of these skills can be developed early. Community Based Instruction is an evidence-based practice that allows students to apply information they have learned in the classroom to a community setting for generalization of the skills. For older students, CBI is usually performed off campus but for younger students, CBI can be very successful when performed on campus or within the school as part of a school jobs program. By using the school as the community, the program can be performed in inclusive ways for relationship development and peer interactions.

IN ACTION

A Community Based Instruction (CBI) program has been part of a K-2 and 3-5 Autism program within a neighborhood elementary school to build job skills, shape work expectations, establish work behaviors and develop self-determination. The jobs they perform are part of the school community and incorporate academic skills including numeracy and literacy skills as well as science and civics topics. Being part of the school community creates opportunities for interactions with typical peers

and the general education teachers for social participation and the development of social skills. In this way, every teacher in the building gets to know the students and the typical peers can see that our students are contributors and are valued. The students are taught a variety of jobs in the school building and are taught work behaviors such as keeping their hands to themselves, working quietly, staying on the job, asking for help, problem solving and working as a team. These are skills that have been identified by employers in Virginia and the Virginia Department of Education as important for employment success (https://www.doe.virginia.gov/instruction/career_technical/workplace_readiness/index.shtml).

Jobs are performed daily as part of their daily visual schedule and each job typically takes about 15 minutes. Every job is not performed everyday but jobs are performed daily. The jobs allow for academic skills to be embedded and applied for realistic applications. Academic skills are different for each student depending upon their needs and the jobs can be adapted so that each student can work at their level even addressing academic IEP goals. These jobs create natural breaks in the day. They incorporate movement and heavy work for sensory input. There is a clear start and finish and the jobs are part of the student's routine during the day so there is consistency, familiarity and repetition.

Some of the jobs include:

- Gardening – planting, watering, harvesting, and washing crops (Image 1)

Image 1: Working in the garden getting ready to plant while learning about the plant life cycle, the needs of a plant, the parts of a plant, the water cycle and healthy eating.

- Farmer's Market – washing crops from garden, packaging, selling vegetables or other homemade items (Image 2 and 3)

- Composting – collecting materials from kitchen staff, place in composter (Image 4)

Image 4: Composting coffee grounds from the Coffee Cart and lettuce from the cafeteria to show how we recycle and take care of our Earth.

- Feeding Birds – filling bird feeders (Image 5)

Image 2: A packaged bag filled with student harvested carrots and potatoes ready to be sold in the Farmer's Market.

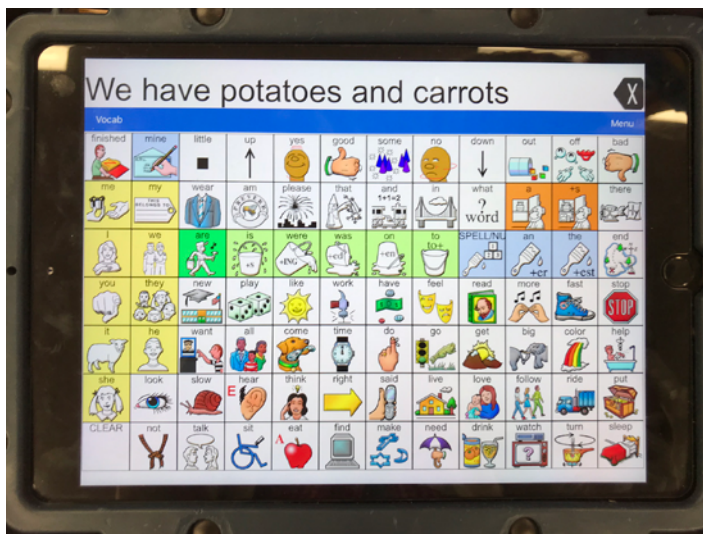Image 3: Using an AAC device to make a commercial for the Farmer's Market on the school wide Morning Announcements.

Image 5: Feeding the birds and filling the birdfeeders in the garden

- Ice Cream Cart – giving ice cream to students in cafeteria on cart
- Coffee Cart – navigating, greeting, stocking sweeteners, selling (Image 6)

Image 6: Coffee cart is stocked and ready to go on a Friday afternoon complete with real cash and a cash register.

- Backpack Buddies - delivering numbered backpacks to numbered classrooms
- Sweeteners and Condiment Stocking – in cafeteria and in teacher's lounge (Image 7)

Image 7: The sweetener caddy is stocked and ready for the teachers to start their day.

- Lost and Found – sorting items into buckets and hanging clothing items by color (Image 8)

Image 8: The student run Lost and Found is organized and color coded for application of practical life skills in the school community.

- Food Recovery – setting up buckets in cafeteria, collecting items at end of lunch and sorting into refrigerator
- Library Helper – helping gen ed Library Helpers collect books and also scanning books back in, placing onto library cart into genres
- School Store – stock items, sell items
- Nursing Bags – assembling bags for school nurse
- Banker – counting money or sorting money after Coffee Cart, Farmer's Market or school store
- Marketers – making commercials for morning announcements about Coffee Cart, Food Recovery, Farmer's Market and making posters for hallways
- Standardized Test Taking Bags – assemble and distribute good luck bags for gen ed peers for their standardized assessments at end of year

Building skills needed for transition early is important. When developing the transition plan at age 14 or 16, we ask the students what they would like to do after graduation. If you ask them at 14 or 16 what they would like to do when they grow up, yet they have never had any opportunities to explore and perform jobs, how is a student supposed to be able to answer that question? How do they know what they like? How do they know their job strengths or job preferences? Through the performance of jobs, the student can begin to understand jobs they like and jobs they do not like. They can begin to express their desires and their preferences for specific jobs. They can begin to make choices about how they perform a job. They can begin to state that they do not like noisy jobs or outdoor jobs for example if they have been able to experience a variety of jobs.

These expressions of job preferences can develop self-advo-

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cacy, choice making and decision-making skills. They may begin to ask to do specific jobs or they may ask to do the jobs with a specific team member or peer for self-advocacy. They can begin to complete sentences such as "I like to _____." I want to _____." I do not want to _____." I am good at _____. "Can I do _____?" They may even develop their own way of doing a job by using problem solving skills. These statements can support a growth mindset and facilitate self-determination and self-advocacy. For students who are non-verbal, the use of alternative and augmentative communication (AAC) is encouraged and promoted on the jobs. We can use our observation skills to see their responses and interactions with different jobs to determine if they like specific jobs or dislike certain jobs. Are they choosing the same job when given a choice? Are they avoiding a job when given a choice? Facial expressions, body language, and grimacing can help us determine if a child likes a job or task or dislikes a job or task.

These skills can develop at home as well by performing chores. Chores can help develop interests for leisure activities but also vocational interests. Chores develop functional life skills and there is a correlation between independence in life skills and employment in the future (Pillay & Brownlow, 2017) so chores can have lifelong impacts. Even for students on a college track, functional life skills are essential to have to navigate a college campus and college life successfully. Chores can increase activity levels and can promote family engagement. Performing chores and jobs in the school and at home can increase physical stamina, strength and endurance. They can push carts to make deliveries, pick up objects and can carry heavy objects such as birdseed and fill feeders. Movement that is functional and serves a purpose can promote learning but may also minimize the number of movement breaks during academic instruction.

Self-assessment of job interests or chore interests can also be performed through vocational portfolios beginning in elementary school. Simple pictures of the jobs can be used and placed inside a file folder. One side of the file folder can be green with a thumbs up and a happy face indicating jobs they like. The other side can be red with a sad face and a thumbs down to indicate jobs they did not like. For some students, they can verbally express why they like a particular job or why they do not like a job. They may not like a job because there is too much conversation, too much noise or too much unpredictable activity. Just as the jobs can be individualized, the self-assessment and vocational portfolio can also be individualized depending upon a child's cognitive level, reading level and writing level.

When students perform authentic work that they enjoy, problem solving can be a natural consequence and can be embedded. For example, when they are in the garden watering the plants and the hose gets kinked preventing the water from flowing, how does the student solve that problem? Or when the student is hanging coats in the Lost and Found but the jacket is inside out, how do they problem solve that? When the door is locked that holds supplies, what do they do? Problem solving can be frustrating especially in an unfamiliar environment but in a familiar environment where a job is part of their routine, there is more confidence that can lead to problem solving without frustration.

We can modify tasks by eliminating steps or using backwards chaining techniques, simplifying the task and the like to ensure success but we do not always think to modify the size of the environment. The off-campus environment is unfamiliar and unpredictable. It is the off-campus community setting that can cause the most difficulties for students with sensory processing disorders. Sensory overload can lead to behaviors, shutdown and negative experiences on a job so starting with a smaller, more familiar environment where the child is comfortable can promote positive success and self-regulation. It is difficult to process information and learn when experiencing sensory overload. We can decrease the size of the community and the complexity of the environment by using the school or the home to build these skills so it is much less overwhelming. Addressing these contextual factors by collaborating with the school team can ensure success.

When students are successful performing a job, there are expectations that are created. These are peer expectations, parental expectations, even sibling expectations and staff expectations. It does not stop there though. Students develop expectations for themselves and feel a responsibility to perform the job. As job preferences or interests become evident, discussions about how a school job can translate into a job in the future should occur to establish future expectations. If a student really enjoys working in the school library, then future expectations can be discussed. "You are a great library worker. I think you could work in a bookstore when you are an adult."

As students begin to express interest, other opportunities can be crafted. In the elementary school, a 5th grade student who may have an interest in the library and who reads on a second-grade level, can be a guest reader in the kindergarten class to promote self-confidence. Being seen as a leader or a role model can build self-esteem and self-worth. A 4th grade student who has an interest in the garden but may have poor reading skills with good language skills can teach students in the general education class about the composting job. The student can educate their peers about the items that can go in the composter located in the garden. In this way, the students are seen as knowledgeable and as an expert. Students from this program also make commercials advertising upcoming jobs. For example, when the Farmer's Market was implemented, a student who used an AAC digital voice output device, stated that carrots and potatoes would be sold during the school wide morning announcements alongside their typical peers. In this way, the students are included in the school wide initiatives and school wide programs.

THE CONTINUUM OF SKILLS – AN EXAMPLE

In preschool, students should have the opportunity to do pretend play around community helpers and other career jobs. Pretend play and dress up allows students to take on a role they may like. They can pretend to be teacher, police officer, car mechanic with the Little Tikes car, nail salon, hairdresser, construction worker and the like. Many of our students with disabilities do not have pretend play or imaginary play skills so facilitating that type of play is important. Let them pretend to be the coffee shop worker or the ice cream shop worker in the kitchen area of the preschool classroom to build imagination, problem solving skills, self-confidence, social skills, self-care skills by donning the outfit, manipulation skills and role playing. Play is a child's first occupation.

In elementary school, students can stock a coffee cart and stock the coffee station supplies in the teacher's lounge. They can sort and stock sweeteners, creamers, napkins, coffee stirrers and the like. In addition, they can run a Coffee Cart once a week with peer involvement to promote communication skills, language skills, social skills and relationship development. Workplace behaviors can be a focus such as staying on the job, finishing a job, working as a team, wearing a uniform (an apron) and the like. Money skills, literacy skills, time skills and counting can all be embedded into the jobs. Banking skills such as counting money at the end of the Coffee Cart can be performed and predictions about how much money they will make can be incorporated.

Upon transition to middle school, the skills learned in elementary school can be expanded upon. One way to expand the Coffee Cart job is to incorporate inventory tasks and to create lists of supplies needed. They may go off campus to purchase the supplies for the Coffee Cart and they may have the Coffee Cart for several days each week. An ordering process and a delivery process may also be incorporated at the middle school to expand the job duties. Social skills, workplace behaviors, expectations, career exploration through hands on learning, self-assessment and independence should continue to be promoted and built upon in inclusive ways. In addition, in the middle school, students should have opportunities to be involved in the inclusive Career and Technical Education courses such as art, band, chorus, art, Family and Consumer Science and Technical Education where further leisure activities and career interests can develop.

In high school, students can operate a student run coffee shop that is operated by students of all abilities working side by side. It can be part of a culinary arts program or can be run by a business club with all students working in it side by side as equals. Because students with disabilities have had the opportunity to operate a coffee business since elementary school, they are coming into the coffee shop prepared with work behaviors, social skills and expectations. By 16, the expectation should be that they can leave campus and work in a coffee shop in the neighboring community with many transition skills already developed.

How are the students taught these skills? There are a variety of ways that can be used throughout the continuum. Systematic teaching can be provided in the classroom and then generalization of the skills to the community can be implemented. Because the jobs increase in complexity through the years and have more steps or more demands, the systematic teaching incorporates more steps as the student ages. Social narratives and interactive books about a job can be created. Backwards chaining, environmental modifications, video modeling, incorporating technology for instruction and prompting, experiential learning and community-based instruction are all evidence-based practices that are used to teach the skills for the job. Role playing, the use of visual supports including scripts, and self-determination strategies are all implemented to teach the various jobs. https://ohioemploymentfirst.org/up_doc/evidence_based_practices_for_transition_youth_-_accessible.pdf

The Coffee Cart is just one example of a job continuum. Students should be exploring a variety of jobs throughout their school years in hands-on ways to establish interests and strengths as well as transition skills including the workplace behaviors, social skills, self-determination skills and functional life skills. At 16, they should be going to a job site that they have expressed interest in themselves through self-determination and self-advocacy. In high school, work task boxes should not be the focus. Work task boxes may be used to reinforce a specific skill needed for a specific job but in high school going to a job site and performing work should be the goal to promote positive outcomes upon graduation. Going to a job site and implementing the skills they have acquired since elementary school should be the emphasis and the goal.

By performing jobs in the inclusive, school community with peers, a sense of community is built where all students are accepted, valued and embraced. Empathy and compassion are built with an understanding and awareness of all abilities. Having inclusive jobs demonstrates a - bilities in a visual way and demonstrates everyone's value. The jobs embrace a student's strengths especially when they are choosing the jobs. The jobs are a way to build independence in a functional, meaningful, purposeful way. The jobs promote active engagement in their world and promotes citizenship where everyone is seen as a contributing member. If we can alter the transition outcomes for students with disabilities in the area of employment, education and independent living then we are closer to achieving the goal of IDEA. Closing the gap on transition success must start early.

See Video of the program next page-
https://vimeo.com/161837834

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Video of the program - Occupational Therapy at Cedar Lane Elementary School - https://vimeo.com/161837834

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UPCOMING LIVE WEBINARS

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CEUs are provided by the AAC Institute and are available for live webinars at no additional fee (does not include sponsored webinars unless noted). A 60-minute webinar = 0.1 CEUs. A 90-minute webinar = 0.2 CEUs

All Learn: Curriculum-based High-Leverage Supports, Strategies, & Tools – Part 2
By Kelly Fonner and DonnaMcNear
Thursday, December 9, 2021
3:30 pm – 5:00 pm (Central Standard Time)

Do you have a child or student(s) who require significant supports, intensive instruction, modified materials and curriculum, delivered through accessible and engaged participation with technology, tools, and of course, inclusive practices? For students with high needs who have visual, physical, social, intellectual and/or Complex Communication Needs(CCN), the classroom setting has had a multitude of barriers from learning.

During this 3 part webinar, we will share strategies and planning for specially designed instruction through the use of accessible educational materials, assistive technology, and modified curriculum. Examples of tools and strategies will be delivered through video and print case studies. Mere participation is not enough for students with high needs; engaged, excited and scaffolded learning experience daily is a must.

During this 2nd webinar, Donna and Kelly will take a closer look at specially designed curriculum, With AEM, AAC and other Assistive Technologies available, educators have often hodge-podged together opportunities for "participation". In recent years, publishers and manufacturers have been creating universally designed curriculum and time will be spent reviewing several of those options. We will also discuss data collection planning and have the option to receive feedback from the presenters.

Kelly Fonner, self-employed consultant and trainer in assistive and educational technology.

Since 1986, she has presented to schools, universities & families in 48 US states & internationally in Australia, Canada and South Africa. She presents on a wide range of topics including technology integration, augmentative communication, computer access, literacy, electronic writing, organizers, assistive technology assessment and implementation strategies.

Donna McNear, M.A., COMS, is an independent educational consultant specializing in services and supports to children with visual impairments. She provides on-going technical assistance and training to educational agencies, organizations, and families nationally and internationally. She is an author, researcher, and frequent presenter at workshops/conferences. She is a recipient of the Outstanding Leadership Award from the Council for Exceptional Children.

Learning Outcomes:

1. Participants will be able to compare and contrast the components of at least 2 specially designed curriculum for students with high-needs disabilities in their current setting.

2. Participants will be able to locate resources for content area supports.

All Learn: Curriculum-based High-Leverage Supports, Strategies, & Tools – Part 3
By Kelly Fonner and DonnaMcNear
Thursday, January 6, 2022
3:30 pm – 5:00 pm (Central Standard Time)

Do you have a child or student(s) who require significant supports, intensive instruction, modified materials and curriculum, delivered

through accessible and engaged participation with technology, tools, and of course, inclusive practices? For students with high needs who have visual, physical, social, intellectual and/or Complex Communication Needs(CCN), the classroom setting has had a multitude of barriers from learning.

During this 3 part webinar, we will share strategies and planning for specially designed instruction through the use of accessible educational materials, assistive technology, and modified curriculum. Examples of tools and strategies will be delivered through video and print case studies. Mere participation is not enough for students with high needs; engaged, excited and scaffolded learning experience daily is a must.

During this 3rd webinar, Donna and Kelly will assist you to pull together your current strategies and tools through introducing an organized, strategic plan for implementation. This 7-part accommodation framework for integrating accessible instructional materials and tools will be demonstrated through example students from their consultation caseloads. They will also share with you how to design a short-term plan for getting off to a great start!

Kelly Fonner, self-employed consultant and trainer in assistive and educational technology. Since 1986, she has presented to schools, universities & families in 48 US states & internationally in Australia, Canada and South Africa. She presents on a wide range of topics including technology integration, augmentative communication, computer access, literacy, electronic writing, organizers, assistive technology assessment and implementation strategies.

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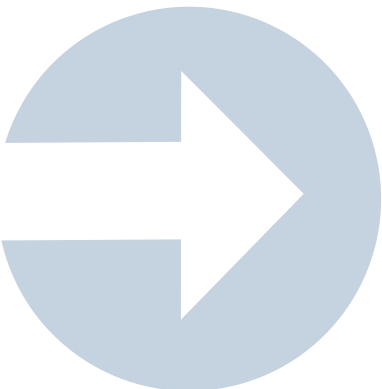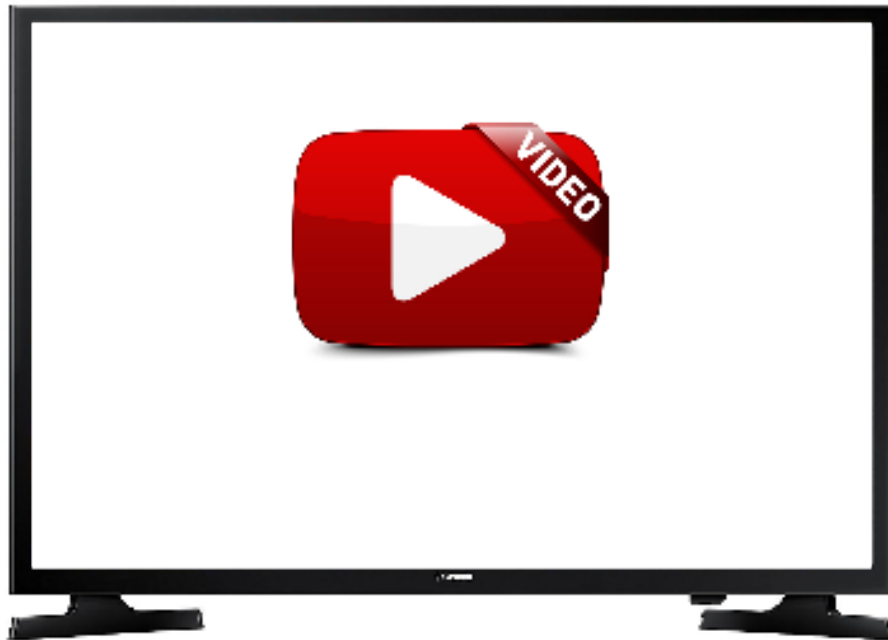
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Partner Skills Tips and Strategies for Supporting your Students that Use Core Boards and Devices
BY KELLY KEY

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Awesome Ways
to Increase Meaningful Participation, Access and Communication for Students with Multiple and Complex Needs

Summary:

Look no further for simple ways to increase communication, access and participation for your students. Here you will learn ways to teach, adapt, and modify everyday games/activities to better meet your students' needs. You will also learn to meet the participatory needs of your students using both direct and indirect access methods. "Think outside the board game box"" and shift your thinking to adapt "off the shelf" games and materials to not only increase participation but allow meaningful interactions, communication and access. This can all be done with a deck of cards, dice and board games! Materials can be found here https://finemotorbootcamp.net/order

AFFILIATION: Julie Marzano is an independent contractor occupational therapist for CADES school-based program in Pennsylvania.

Emily McCarthy is an independent contractor speech language pathologist for CADES early intervention program in Pennsylvania and a member of ASHA.

Julie and Emily are owners and co-creators of Fine Motor Boot Camp, LLC where they sell curricula and activities and are paid to present for their consultative services.

JULIE MARZANO, is an occupational therapist for www.cades.org school program. Julie is a nationally certified occupational therapist and works and resides outside of Philadelphia with her husband and 3 young children. She has worked in the public school system and now works at an approved private school serving students 3-21 with MANY abilities for 20 years. Julie loves her job and the creative aspect of "thinking outside the box" to come up with solutions from an OT perspective. Along with her identical twin sister Emily, a speech-language pathologist, Julie is the co-creator of Fine Motor Boot Camp business and program www.finemotorbootcamp.net and social media pages and is also the co-creator of the soon to be released oral hygiene and dentist program called Tooth Camp www.toothcamp.net. CADES Organization Headquarters https://cades.org/

EMILY MCCARTHY, is a speech Language Pathologist for www.cades.org birth to 3 year old program. Emily is a nationally certified and licensed, Speech-Language Pathologist. She worked in the public school setting for 12 years before transitioning to early intervention. Emily now works with the birth to three population in Pennsylvania. Emily, along with her twin sister, and occupational therapist, Julie Marzano, co-created the business, Fine Motor Boot Camp. Fine Motor Boot Camp includes curriculum and professional development that address fine motor and language needs in early childhood. Emily lives and works in the suburbs of Philadelphia, PA. She lives with her husband and 3 children, only a few streets away from Julie! Emily now works with the birth to three population in Pennsylvania for https://cades.org/

It is time to shift to a strengths-based approached for our students with multiple disabilities. It's time to focus on what they can do and start becoming even more meaningful active participators in life. In the United States, 2% of students with IEPs fall under the classification of multiple disabilities. Multiple disabilities is defined by IDEA as "Concomitant (simultaneous) impairments (such as intellectual disability-blindness, intellectual disability-orthopedic impairment, etc.), the combination of which causes such severe educational needs that they cannot be accommodated in a special education program solely for one of the impairments." Due to the unique abilities of this low incident population, resources such as curriculum and materials are often not readily available to implement and purchase. Therefore, educators and caregivers alike must be creative and "think outside the box" when it comes to differentiating curriculum, instruction and daily routines. Since no two students' needs are the same, success comes from uniquely designing and implementing each differentiated task to match each student's abilities. This level of layered differentiation can be challenging for even the most seasoned professionals. The starting point is presuming competence and potential.

PRESUMING COMPETENCE/POTENTIAL/INTENT:

We have an obligation to see the abilities in each and every student. If you have heard it once, you have heard it twice, and we are going to state it again. We must believe that each and every individual on this planet is competent and has the potential to learn. Presuming an individual is inherently capable, sets the tone of the educational program. We must believe that all students, no matter educational classification, are capable of learning through meaningful and active participation. When we not just recognize competence and potential but act on it, the smallest ability can yield the greatest outcomes.

PARTICIPATION:

Historically, school for our most complex students, focused on contentment and personal care needs. In the United States, federal laws now mandate that all students participate in standards-based learning in their educational environment. So, what does "participation" mean for our students? The World Health Organization defines participation as "Involvement in life situations. The interaction of the person and environment." (Chiarello & Palisano, pp. 1). Participation is active, engaging, and meaningful. It is not passive. We can measure active participation by engagement level, that is, the time and energy students invest in educationally purposeful activities (Hu, et. al 2002). Many of our students have spent a majority of their lives being done "to" or done "for" and have spent their life spectating instead of participating. It's time to move beyond this and dig deeper into increasing active and meaningful participation. When you put together an activity or write a student goal, ask yourself, "Does it pass the frozen turkey test?" Each time you put together an activity, think to yourself, "can a frozen turkey can do this and master the goal?" If this is the case, it is NOT active participation. A frozen turkey can "accept hand over hand" and "tolerate a prone stander."

Now you're thinking, "OK, so what do I do?". You start and build on communication.

COMMUNICATION:

Communication comes in many different modes and is the foundation of active participation for students with complex needs. Communication is not just speech. It is estimated that 80% of typical, everyday communication is "nonverbal." Nonverbal communication includes eye contact, facial expressions, vocalizations, gestures, body language, emotional responses and pitch/intonation changes. We identify and honor these alternative modes of communication called "active response methods." These active response methods are communicative functions that allow active participation by refusing, obtaining, engaging in social interactions and seeking new information (Rowland, C). When we honor and respond to all modes of communication, active participation will occur.

ACTIVE RESPONSE METHODS:

Active response methods are modes of communication that occur at all communication levels and can include motor movements both big and small (i.e. extending in wheelchair, dropping head down, shrug of a shoulder, hand movement, etc.), direct vocalizations (i.e. click, grunt, sigh, etc.), facial expressions (i.e. smile, smirk, frown, etc.), and shifts in eye gaze/visual focus (i.e. glance at communication partner, focus on object, etc.). Active response methods require an in-tune communication partner or "smart partner" that is responsive to these modes, acknowledges them, interprets them and assigns intent and meaning to them (Burkhurt). Active response methods can be used to shape a more consistent and independent access method. Let's go through a simple routine as an example of an active response method for a student named "Kim".

Communication partner: "Kim, let me know when you are ready for me to move your wheelchair."

Student: 5 seconds later Kim responds by moving/turning her head.

Communication partner: "Kim, I saw you move your head. You are telling me that you are ready for me to move your wheelchair." The communication partner then moves Kim's wheelchair.

Active response methods can be used all day, every day in simple routines and require no technology, just a responsive and in-tune communication partner.

ACCESS:

Access is the way we control a computer, tablet, communication device or other electrical device (Kangas). There are 2 types of access methods (direct and indirect).

Direct Access can include pointing, touching, eye-gazing to select an object, choice/speech generating device and includes picture/object exchange.

Indirect Access is an access method used to compensate for motor limitations and includes switch scanning (one/two switch, inverse, automatic selecting, etc.), partner assisted scanning, and active responses methods.

Partner assisted scanning (aka manual scan): A communication partner prepares a statement/question/choice and goes through the prompts while pausing between each to allow for processing time. "Terrell, you can choose the music. Do you want country, rap, or pop". The next time through the communication partner pauses between choices "country (pause), rap (pause), pop (pause)". If the student demonstrates an active response reacts to one of the prompted choices we identify, acknowledge and label that as their choice. The student can also use a single message device that says "Stop" to indicate their choice when stated. Rule of thumb, allow for three rotations of the choices presented. Here you will find a more detailed resource on partner assisted scanning by Gretchen Hanser. https://www.med.unc.edu/ahs/clds/resources/deaf-blind-model-classroom-resources/partner-assisted-scanning/

One switch, single switch, automatic scan: The student uses one switch while the device automatically rotates through the choices. When the students hears/sees their choice they activate the switch to select.

Two switch scanning or step scanning: Student uses two switches to move through choices. One switch scans to the next target and the other switch selects the target.

Never let the lack of an accurate access method inhibit the modeling and teaching of language. Access will come, we can not make students wait to learn language while we try to help them figure out an accurate access method. Use an individual's active response methods for access.

APPLICATION:

As we stated earlier, we must use a strengths-based approach and focus on what the student can do and acknowledge and respect their intent. You do not always need high-tech fancy materials for meaningful participation, access and communication! We challenge you to look at the individual, activity and environment in a different way. Look at the occupation and activity and come up with a solution. As educators, we can get stuck in the mentality of the things we "don't have" to program for our students, when everything we need is right under our nose! Most of the time, the solution to participation requires nothing fancy or costly.

Below are a few of our "Awesome Ways to Increase Meaningful Participation, Access & Communication for Students with Multiple & Complex Needs". Check out our recorded live session from CTG 2021 for more information and tons of ideas.
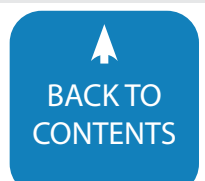
Think Outside the Dice: The moment you add some dice to an activity it becomes a game.

Here are examples of all different types of dice you can adapt to play games. These dice include: dry-erase, bowling, golf, time, who/what/where, alphabet, dreidel, 1-6, 1-9, 1-12, and 20+ dice, left/right/center, shape, money dice.

Here are ways we can adapt to roll dice. There are commercially available ones listed below. You can use a switch adapted cup pourer. However, we love using recycled containers that can be kicked, pushed off a tray, placed on head or dropped. Students can use their active response method to indicate "go" while you shake the dice in a container. https://www.adaptivetechsolutions.com/dice-roller-switch & https://enablingdevices.com/product/high-roller/

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GAMES:

Here are examples of games we have adapted to meet access needs of students to allow for active participation. Games are great activities that often integrate math skills, social skills and recreation/leisure skills. Games are great as both home and school activities.
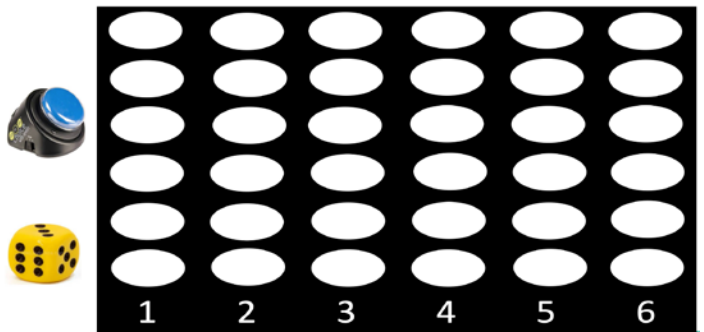
Connect 4 board video tutorial on how to play using different access methods/modes: https://vimeo.com/432701793

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4 In a Row

Materials:
4 in a Row board, 2 dry erase markers, recordable multiple step button (i.e. step-by-step), single message recordable button (i.e. big mac), 2 switches, yes/no pictures, go & stop pictures, alternate/smartboard spinner with numbers 1-7.

Directions:
Direct Select: Point to spot/number and fill in or put in real piece.
Eye Gaze: Yes/No or Go/Stop on eye gaze board (i.e. you say "space 1", student looks at go or stop...if they say go, say "space 2", etc., when they look at "stop" fill in spot), go to spin the spinner
1-Switch/Partner Assisted Scanning: Using partner assisted scanning (i.e. you go through number's & provide student with a "Stop" switch to choose number. Point to numbers/spots as you scan for student.
2-Switch: Using step scanning (one switch with multiple message counting 1-7 or single message "Go" & other switch with "stop"). Point to where the student is on board as they scan.
Positive Indicator: If you do not have access to switches, use the individuals "**positive indicator**" or "**active communication response**" to make a "choice/selection". This might be a **visual focus** (i.e. gaze towards choice or partner) **motor action** (i.e. head or limb movement), or **vocalization** (i.e. a sound). NO REPONSE=NO or "not that one".
CORE Targets: Turn, go, stop, more, yes, no, play, you, my, up, down, diagonal, me, my, look, more, end, need, on, think, not, have, help, put, get, good, bad

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Here is an example of one of our "Adapted Core Game" cheat sheets for the game Connect 4. Included are supply suggestions and ways to participate using different access methods. It also includes core vocabulary targets.

Here is an example of a no-tech Connect 4 board, 6-sided dice and single message device for counting 1-6 so students can choose the location for their turn. You can fill in the selected spot on the board using a dry-erase marker.
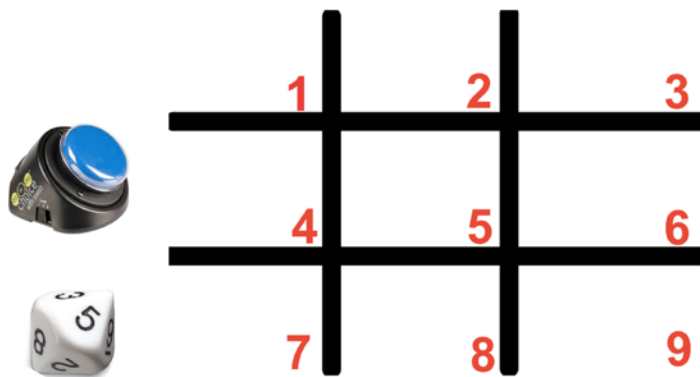

TIC TAC TOE

Materials:
Tic tac toe board, switch, dry erase marker, recordable multiple step button (i.e. step-by-step), single message recordable button (i.e. big mac), 2 switches, yes/no pictures, go & stop pictures, alternate/smartboard spinner 1-9.

Directions:
Direct Select: Point to spot/number and fill in.
Eye Gaze: Yes/No or Go/Stop on eye gaze board (i.e. you say "space 1", student looks at go or stop...if they say go, say "space 2", etc., when they look at "stop" fill in spot)
1-Switch/Partner Assisted Scanning: Using partner assisted scanning (i.e. you go through number's & provide student with a "Stop" switch to choose number. Point to numbers/spots as you scan for student.
2-Switch: Using step scanning (one switch with multiple message counting 1-9 or single message "Go" & other switch with "stop"). Point to where the student is on board as they scan.
Positive Indicator: If you do not have access to switches, use the individuals "**positive indicator**" or "**active communication response**" to make a "choice/selection". This might be a **visual focus** (i.e. gaze towards choice or partner) **motor action** (i.e. head or limb movement), or **vocalization** (i.e. a sound). NO REPONSE=NO or "not that one".
CORE Targets: Turn, go, stop, more, yes, no, play, you, my, up, down, diagonal, me, look, end, need, on, think, not, have, help, put, get, good, bad

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Here is an example of one of our "Adapted Core Game" cheat sheets for the game of Tic-Tac-Toe. Included are supply suggestions and ways to participate using different access methods. It also includes core vocabulary targets.

Here is an example of a no-tech Tic-Tac-Toe board, 9-sided dice and single message device for counting 1-9 so students can choose the location for their turn.

Here is an example of a no-tech Rock Paper Scissor choice board, dice and single message device that can say "rock, paper, scissor."

Rock, Paper, Scissors

Materials:
Rock/Paper/Scissor die (make with dry erase die), <,>, & = cards, rock paper scissor pictures/objects, yes/no cards, or 2 smartboard interactive dice with paper/scissor rocks, go & stop pictures, switch, switch operated cup pourer, Tupperware with lid to roll die.

Directions:
Direct Select: Roll die or play by hand,

Eye Gaze: Paper, scissor, rock picture choice on eye gaze board

1-Switch/Partner Assisted Scanning: Step by step that says, "rock, paper, scissors, shoot" &/or "big, little, equal", spin smartboard die, switch operated cup pourer to roll die

2-Switch: Step by step says "rock, paper, scissors, shoot" & other switch says, "Stop" to choose. One switch can spin smartboard die while other comments.

Positive Indicator: If you do not have access to switches, use the individuals "**positive indicator**" or "**active communication response**" to make a "choice/selection". This might be a **visual focus** (i.e. gaze towards choice or partner) **motor action** (i.e. head or limb movement), or **vocalization** (i.e. a sound). NO REPONSE=NO or "not that one".

CORE Targets: Turn, go, stop, more, yes, no, play, you, my, up, down, diagonal, me, look, end, need, on, think, not, have, help, put, get, good, bad

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Here is an example of one of our Adapted Core Game cheat sheets for the game Rock Paper Scissors. Included are supply suggestions and ways to participate using different access methods. It also includes core vocabulary targets.

Rock Paper Scissor adapted game video tutorial that goes over a detailed explanation on how to use access methods
https://vimeo.com/432697119

LITERACY:
There are so many ways to increase participation in literacy activities using a variety of access methods. Some great tools are alternative pencils (Hanser, 2010), alphabet spinners, alphabet dice, and single message devices with A-Z recorded. More information on alternative pencils can be found at www.lindaburkhurt.com. Here is just one of our many ways to increase active participation and literacy using all direct and indirect access methods.

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"Guess the Word"

You can play "failure free" literacy games like "Guess the Word" where students pick a letter and the educational helper sees if it's a letter in the word. The single message device can have letters a-z and whatever letter the student stops on is their choice. https://www.ablenetinc.com/little-step-by-step/
An alternate spinner can be used with an alphabet template. https://www.ablenetinc.com/all-turn-it-spinner/
An alphabet dice can be rolled too to fill in the letters.
The CVI adapted alternative pencil can be found on our website here: https://finemotorbootcamp.net/order/

FAILURE FREE WRITING/ERRORLESS JOURNALING:

Outside of scribbling and writing with alternative pencils we like to pull writing topics straight from the school curriculum unit. Failure free writing affords the opportunity for students to write/journal about their experiences. The journal is a great way for students to communicate about the school day with caregivers too. Our students' journals have been a wonderful memory to send home at the end of the school year. All direct and indirect access methods can be used to participate in journaling.
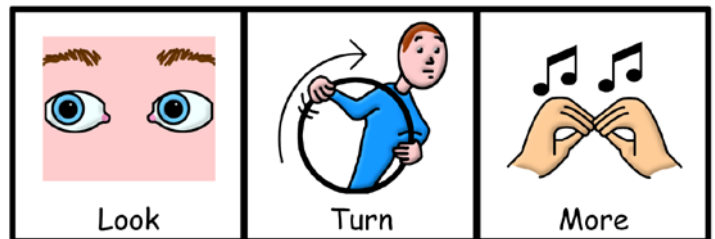

I like to _____.
Turn   Shake   Bounce

I like to go _____.
Fast   Slow

Here is an example of an errorless/failure free journal entry we did with our students during the "My Healthy Body" unit. This specific entry was about "moving my body." Students were in their adapted seating and we paired the movement with the visual/verbal.

Here is a video tutorial and detailed explanation on how to do "failure free writing" activities using all access methods: www.vimeo.com/430355018

SHARED READING:

There is so much joy and learning in shared reading. In classrooms, we typically read through a story twice. The first time, we read all the way through for familiarity. On the second time through, we use a "reading script" to increase active participation (a few predetermined core vocabulary targets). We like setting students up with single message devices with "come here" for students to gain attention to bring the reader over to use the reading script). Shared reading is a great time to target core vocabulary words like: Look closer (I want to look at the pictures and text.), More (Please read that page again.), Turn (Turn the page.), Go (Go to next page), Stop (Stop and pause I need to process.), Like (I really liked that line/page/picture.), Not (Not for me. I do NOT like it.), etc.

Look   Turn   More

Here is an example of a simple shared reading script using core vocabulary to increase active participation. Once, the student gains attention during the story, we might respond with "you have something to say" and then go over to that student and partner assist scan the choices on the reading script to allow for activate participation.

SCIENCE:

We created an adapted "Science Fair" with seven activities and participation/adaptation cheat sheets. We take students through the "scientific method" and adapt to meet their communication and access needs. You can find them at https://finemotorbootcamp.net/order/

Paper Airplanes

Materials

- Paper
- Tape measurer
- Switch accessible electric leave blower, hair dryer or air mattress pump

Activity Ideas

- Watch video/read book about the experiment
- Start the "scientific method"
    - Questions (come up with a few to test
    - Hypothesize (IF….THEN…statements)
    - Experiment
    - Collect data
    - Analyze data
    - Report data

Adapted Ideas

- Pre-record the steps or predictions on step-by-steps
- Record "1, 2, 3, Go" to throw/use blower
- Use Powerlink for blower devices
- Record rote numbers on step by step to predict and "measure" the distance (i.e. measuring 1, 2, 3, 4, etc. inches)
- Choose which design/number for students to choose

Here is an example of one of our seven adapted science fair "cheat sheets" with paper airplanes. It includes the materials, activity ideas and ways to adapt. The students went through the entire scientific method in the process.

Students had the opportunity to choose through pictures and the actual object which paper airplane they wanted to test for the experiment.

Students had the opportunity to choose through pictures and the actual object which "power/air" source they wanted to use to flight test their paper airplane.

We hope you enjoyed this article on a few of our "Awesome Ways to Increase Meaningful Participation, Access & Communication for Students with Multiple & Complex Needs". Much like a child views a really great cardboard box, we challenge you to look beyond the intended use of your materials and find new uses for these materials to increase active participation for your students, increase engagement, communication and active participation. To learn many more ways to increase engagement, communication and active participation, check out our recorded live session from CTG 2021 Conference. On our website you can find single page lesson plans for up to 20 different games adapted to meet the access/participatory needs of all individuals including core vocabulary target words here: https://finemotorbootcamp.net/product/adapted-core-games/. If you have any other questions please reach out to us at finemotorbootcamp@gmail.com

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product spotlight

WayFinder Unlocks the World of Independent Travel for People with Cognitive Disabilities.
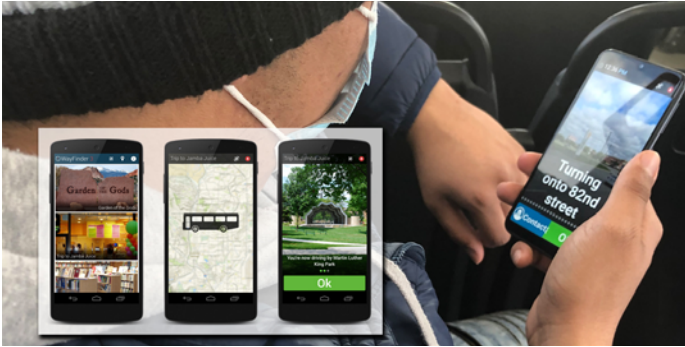
AbleLink Smart Living Technologies was founded in 1997 specifically to address the significant need for research-based cognitive support technologies for individuals with cognitive disabilities and those experiencing cognitive decline. Our team has been built purposefully with individuals representing relevant fields of expertise including human services, human factors, rehab technology, software engineering, occupational therapy, and clinical and experimental psychology. AbleLink researchers have conducted over 80 research and development projects to investigate, research, and develop technology applications for individuals with cognitive disabilities and for seniors utilizing technology to help "age in place

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Weave Chat – Everyone should be able to communicate.

Weave Chat is a free Augmentative and Alternative Communication (AAC) application designed to help people who have difficulty using their natural speech to communicate. Weave Chat is a category-based system with a dynamic display and synthetic voice output. Populations who may want use Weave Chat include, but are not limited to, Autism, Down syndrome, ALS, Apraxia, Stroke, and/or other conditions that may affect a person's ability to use their natural speech to communicate.

Communicate using pictures! Weave Chat allows users to easily 'chat' using their individual devices (e.g. application on iPad, tablet, cellphone) while sitting next to their communication partner, or while their communication partner is out of their immediate environment. 'Chatting' or 'messaging' with Weave Chat from afar is made easy – Download the Weave Chat app and begin weaving into conversations with fellow app users – friends and family!

This gap in texting ability of individuals who can or do not use traditional means of communication became ever more highlighted during the COVID-19 pandemic. While many individuals communicate daily via phone calls or texting, individuals who communicate differently did not have this option readily available.

Interaction between individuals serves the purpose of transferring vital information AND for sharing personal experiences. By sharing current, past, and future information people achieve "social closeness" (Light, J. 1988).

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## Eschenbach – Introducing the new Smartlux Digital!

The new Smartlux® Digital is an ergonomically designed, portable video magnifier with full HD camera that features a 5" reflection-free display, large field of view and personalized setting options. The LEDs are individually adjustable and a new customizable menu provides 14 color contrast mode options, adjustable lines and blinds and more. The new Smartlux Digital® has an easy-to-use interface with four color-coded tactile control buttons and provides a customizable reading and writing solution for those who are visually impaired.

The integrated stand allows for 3 different uses: fully retracted for hand-held use, fully extended for placing on reading material and partially extended for writing under the display. An optional handle is available to provide optimal stability and a supportive grip and an eyelet at the bottom of the magnifier allows for a lanyard to be attached so it can be worn around the neck.

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eGlass – The New Whiteboard
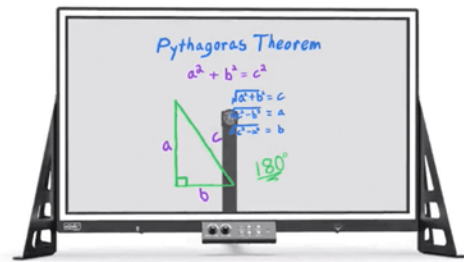
Glass is an illuminated transparent writing glass with a built-in camera, that captures your face and writing in the same picture, boosting student engagement to unprecedented levels. Imagine never turning your back to write again. Imagine a tool that will help you close the gap. That's eGlass.

How it works
- Integrated camera captures writing and teacher's face
- The image is 'flipped' so writing reads left-to-right
- Connects to computer via USB cable
- LED lighting is injected into glass
- Live video is displayed on projector or flat panel
- Any existing lesson plans, any format can be brought on eGlass and written on

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Colibri (Hummingbird) – Control your cell phone and computer with your head.

Colibri (Hummingbird) provides wireless accessibility and autonomy for people who cannot use their hands.

With Colibri, people with physical disabilities use computers and mobile devices with head movements and eye blinks. The device is suitable for:

- Tetraplegia - Spinal Cord Injury and others
- AVC/AVE - Stroke / Encephalic Accident
- Cerebral Palsy - Motor and speech difficulties
- Other Limitations - Difficulties with the use of hands

Colibri captures intuitive head movements to precisely control the mouse pointer.

Clicks can be made with a blink or with a cheek.

The sensor also senses head tilt to scroll the screen easily.

The Colibri is lightweight, wireless, has a rechargeable battery and can be attached to any eyeglass frame.

All you need is a computer or some model of a Bluetooth-enabled cell phone or tablet.

Adaptive Switch Laboratories – ASL 110 FUSION Proportional and Digital Head Array

The ASL 110 FUSION Proportional and Digital Head Array* is designed as a multi-use drive control. The functionality built in through programming will allow it to be used for a wide variety of patients with a wide range of diagnoses.The FUSION will allow a person to control the speed and direction fully proportionally. The adjustability options are designed to fit customizable needs and progressions of disabilities.

The FUSION Proportional Head Array is designed for persons with MS, ALS, CP, Arthrogryposis and high-level spinal cord injuries. With the addition of ASL accessories, a client can wirelessly connect to an AAC device, a mouse emulator and the Tecla E.

Adjustments can be made to change the force required to drive proportionally by direction, change the system from Digital to Proportional, change the direction of the pad to help a patient have better control, and turn the Auditory Features on and off to help a patient know what function they are controlling.

The FUSION, through programming, is customizable to meet the needs of a patient.

The FUSION's hardware and software combination was designed with flexibility and adjustability to meet the most clinical needs.

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Attainment Company – GoTalk Go & GoTalk Select

A watch-sized, nine message, wearable AAC device

- Records and stores nine messages in three levels, on three buttons
- Includes a plastic wristband
- Provides high-quality speaker
- Rechargeable via USB

Reliable, easy-to-access communication always within arm's reach!

The rechargeable GoTalk Go offers three programmable message buttons. Try the new easier-to-use capacitive touch buttons to activate a message. Program 1, 2, or 3 messages on each of three levels for a total capacity of nine messages!

It looks similar to a watch with the plastic wristband, providing a convenient, wearable AAC device for on-the-go! The robust volume of this device will amaze you. Great to use for conversations in the cafeteria, at recess, on community outings, and many more places.

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Speaksee – Enjoy Full Accessibility

In-Person Meetings
Speaksee (patented) is the first microphone system able to transcribe up to 9 persons accurately.Speaksee shows you in a different color per person what's being said so that you can easily see who says what.Beam forming microphones ensure high accuracy also when there is background noise.

Digital Meetings
peaksee AutoCaption live captions what's being said in a meeting in real-time so that you can fully participate.

AutoCaption can also be used for online trainings, webinars, podcasts or online video's.

AutoCaption works seamlessly with all conferencing platforms, including Zoom, MS Teams, Google Meet, WebEx and all others.

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