Virginia Assistive Technology, Tools, and Strategies:

Consideration and Assessment Guidance Document

VIRGINIA DEPARTMENT OF
EDUCATION

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Introduction

This document is intended to be used by school divisions as guidance for the consideration and/or assessment of assistive technology (AT), including planning and implementing AT services for students with disabilities. This document should be used in conjunction with and does not replace federal or state regulations.

This document also includes information on Universal Design for Learning (UDL), educational technology (ET), and accessible instructional materials (AIM). Each provides a comprehensive structure for designing, planning, and implementing inclusive instructional environments to meet the needs of all learners through the inclusion of assistive technology.

What is Assistive Technology?

Assistive technology is any technology used by individuals with disabilities who may otherwise not be able to or would not be able to perform a task as well without the technology. Assistive technology includes both the devices (communication devices, apps, extensions, hardware, software, mobility devices) and the services provided to access and implement the devices. Assistive technology consists not only of high-tech devices such as laptops, environmental control devices, or electric wheelchairs, but includes low-tech devices such as pencil grips, schedules, or laminated communication boards. Assistive technology must be considered for all students with a disability.

When Individualized Education Program (IEP) Team members are knowledgeable about assistive technology, the benefits, and the laws impacting AT use, it increases the likelihood of effective AT identification, implementation, and progress throughout the student's school years. For this reason, IEP Team members should have awareness of commonly used AT; how to consider, identify, and trial appropriate assistive technology; where to go for additional information and support; and how to embed AT into the student's IEP and instructional program.

Universal Design for Learning

Universal Design for Learning (UDL) is a "*framework to guide the design of learning environments that are accessible and challenging for all. Ultimately, the goal of UDL is to support learners to become "expert learners" who are, each in their own way, purposeful and motivated, resourceful and knowledgeable, and strategic and goal-driven. UDL aims to change the design of the environment rather than to change the learner. When environments are intentionally designed to reduce barriers, all learners can engage in rigorous, meaningful learning*" (Center for Applied Special Technology, 2018).

The principles of UDL are increasingly present in developing technologies and learning environments and are an important starting point when designing learning environments for **all** students. Professionals can intentionally design environments that are accessible and challenging for all by providing multiple means of engagement, multiple means of representation, and multiple means of action and expression without lowering curriculum

expectations. Students with disabilities benefit from this proactive educational design, in addition to their specially designed instruction, accommodations, and modifications, to fully participate and benefit from instruction.

Technology and digital media are important in UDL because they can offer teachers the tools for providing varied materials and resources. For example, when using a computer, students can manipulate the style and size of text; change the background color; have text read aloud; add sound; hyperlink to resources; vary input through options such as alternate keyboards, voice recognition, or a switch; and connect to a variety of peripherals (e.g., braille printer). When lessons have been prepared through a single type of classroom media such as traditional paper and pencil worksheets, textbooks, and whiteboards, it becomes difficult to make those materials accessible to learners who cannot see them, use their hands to manipulate them, or decode and comprehend the information written on them. Although very beneficial to many students in the learning environment, these static materials may be barriers to learning for many individuals with disabilities as the tools cannot be modified to accommodate individual learning needs. Technology and digital media can help to reduce these barriers and ensure access to instruction for all students, including students with disabilities.

Learn more about Universal Design for Learning and designing learning environments to meet the needs of all students by exploring additional resources on the VDOE's website.

Educational and Instructional Technology

Educational technology (ET) is all technology for teaching and learning and includes technology that benefits a wide array of learners (Israel & Williams, 2022). Educational technologies typically include general technology, such as multimedia presentations or browser extensions, as well as content-specific technology, such as graphing calculators or digital graphic organizers.

The VDOE uses the term educational technology rather than instructional technology (IT). Some school divisions in Virginia may use the term "instructional technology." In this guidance document, ET and IT will be used synonymously.

The 2018-2023 Educational Technology Plan for Virginia (Virginia Department of Education, 2018) is the latest revision of the long-range technology plan adopted by the Virginia Board of Education to support its Comprehensive Plan. The focus of the plan has remained relatively consistent over the years, especially the emphasis on integrating technology into the classroom.

The technology referenced within the educational technology plan includes technology for **all** students with increased emphasis on personalized learning. Along with the needs of typical students, addressing the diverse needs of exceptional students is important.

Educational technology includes any type of technology or strategy that is used in the teaching and learning process. Technology does not automatically become assistive technology when used by a student with a disability unless it is required by the student to

make educational progress or access a free appropriate public education (FAPE). In most cases, if the student with a disability is accessing or applying ET in the manner or method typically used by their peers as part of the learning environment, the technology would not be considered assistive technology. For example, if all students in a class are using scientific calculators to complete an assignment, including two students who have learning disabilities in the area of reading and do not require the calculator to access FAPE, the scientific calculators are not assistive technology.

Technology is considered assistive technology if the student with a disability would be less able or unable to independently participate in a task or independently access the resources in the environment relevant to their IEP goals without the technology. Additionally, if a student's use of technology requires a modification or accommodation to how it is typically used, then the technology and the adaptation would be considered assistive technology. This includes many of the educational tools that are provided as part of the typical resources for classroom instruction. For example, voice dictation features are often utilized in today's classrooms as ET for all students. Voice dictation may also be considered an AT option for some students with disabilities who have difficulty writing if the use of this technology increases, maintains, or improves the functional capability of writing. Teams may ask, "What would happen for the student if this tool was taken away?" to help decide if the educational technology may be assistive technology for that student.

If a student with a disability requires access to this technology to access FAPE, the technology should be documented within the student's IEP. This includes both low- and high-tech technology.

Accessible Instructional Materials

Students who are not able to use traditional print formats require accessible instructional materials (AIM) to access the same curricula as other students. Accessible instructional materials refer to print-based educational materials that are converted into specialized formats (e.g., braille, large print, audio, and digital text) and are required for students with IEPs to access their educational program. While this definition of AIM specifically focuses on the specialized formats of braille, large print, audio, and digital, many formats cannot be used without additional assistive technology. Effective use of AIM requires ensuring compatibility between the needed formats and the software and hardware required to access these materials, such as for text-to-speech programs.

The Accessible Instructional Materials Center of Virginia (AIM-VA) is a service of the Virginia Department of Education through a grant to The Helen A. Kellar Institute for Human disAbilities at George Mason University. The AIM-VA offers a statewide library system for providing accessible educational media under the standards set by the National Instructional Materials Accessibility Standards (NIMAS) at no cost to local educational agencies. These materials are available to Virginia K-12 students who meet the federal and state requirements for having print disabilities and are identified as needing accessible educational media within their IEP, as required under Part B of IDEA. School divisions should follow local processes and

protocols for identifying students who qualify for AIM and for requesting the appropriate materials from AIM-VA.

Additional information about the Virginia Department of Education's [policy and protocols related to accessible instructional materials in alternate formats](#) are available on the VDOE website.

Compliance with Regulations

The *Technology-Related Assistance for Individuals with Disabilities Act of 1988* first defined assistive technology devices and assistive technology services. These definitions were adopted in the 1990 authorization of *Individuals with Disabilities Education Act* (IDEA) and have remained in subsequent re-authorizations.

Assistive technology device was defined by IDEA 1997 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." This definition was clarified in the 2004 revision of IDEA to include, "The term does not include a medical device that is surgically implanted, or the replacement of such device" ([34 CFR §300.5](#)).

Assistive technology service is defined as "any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device" ([34 CFR §300.6](#)).

These services include:
- The evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment.
- Purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by children with disabilities.
- Selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing AT devices.
- Coordinating and using other therapies, interventions, or services with AT devices, such as those associated with existing education and rehabilitation plans and programs.
- Training or technical assistance for a child with a disability or, if appropriate, that child's family.
- Training or technical assistance for professionals, including individuals providing education or rehabilitation services; employers; or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of that child.

To ensure the consideration of AT needs in non-academic settings, the IEP must address educational needs apart from progress in the general curriculum. This includes the consideration of "supplemental aids and services" in which such supports can be provided not

only in regular classrooms but also "in other educationally-related settings." This may include work-based learning experiences, community-based instructional opportunities, social opportunities, and others as deemed appropriate by the IEP Team.

Consideration of devices and services should include, but not be limited to, the following areas of need, which are also defined in Appendix A:

- Communication
- Auditory Processing
- Reading
- Mechanics of Handwriting
- Written Composition
- Spelling
- Math
- Behavior
- Sensory Processing
- Sensory: Vision and/or Hearing
- Recreation, Leisure, and Adaptive Play
- Executing Functioning
  - Study Skills
  - Organization Skills
  - Self-Regulation and Attention
  - Task Completion
- Technology Access
- Environmental Controls
- Positioning, Seating, Mobility
- Activities of Daily Living
- Vocational Skills

The IDEA 2004 (34 CFR §300.324 (a)) requires that all IEP Teams consider the need for assistive technology for students with a disability to access FAPE. The consideration for the need for AT must be documented within each student's IEP. This consideration should be documented under the summary of considerations as well as other areas within the IEP, as appropriate. Consideration of AT should be based on data collected and analyzed by the team, not based on opinion.

Teams must consider the need for assistive technology to access FAPE in the least restrictive environment (LRE) through (1) special education services (including goals and specialized instruction), (2) related services, and/or (3) supplementary aids and services (34 CFR §300.105). As with other IEP decisions, consideration of and decisions regarding the need for assistive technology should be determined on a case-by-case basis and meet the individual need(s) of each student.

If the IEP Team determines the student does not require the use of assistive technology solutions for any of the areas listed above, the team will document this under the summary of considerations. The consideration process is complete at this time but should be considered as part of the development of any future IEPs and as part of the problem-solving process if adequate progress is not being made or additional concerns arise.

If the IEP Team determines the need for assistive technology, the data used to determine this decision, as appropriate, should be documented under the summary of considerations and discussed within the Present Level of Academic Achievement and Functional Performance (PLAAFP). This may include current AT solutions that data show is effective for the student. The full range of identified services and/or accommodations, including both low- and high-tech technology, must also be documented within the IEP.

Consideration of Assistive Technology

Consideration and assessment differ in terms of depth and duration. Consideration of AT devices and/or services is intended to be a shorter discussion that takes place during the IEP meeting to determine whether or not current AT and strategies are adequate. Although a less rigorous process, consideration of AT is a careful and thoughtful discussion of the student (including both their abilities and needs), the environment, tasks, and how tools (both devices and services) can support the student in accessing FAPE and reaching their goals. In the consideration process, teams use already existing data (and results of AT trials, as appropriate) to identify AT devices and/or services that are required by the student to access FAPE. Consideration of AT should include a continuum of both low- and high-tech options. Teams should also consider AT needs within and outside of the school setting, including extra-curricular activities.

Quality Indicators for Consideration of Assistive Technology Needs

The Quality Indicators for Assistive Technology Services (QIAT) (Quality Indicators for Assistive Technology Services, 2021a) outlines components of strong AT consideration processes during IEP development and should be referred to as part of any consideration of assistive technology needs. School divisions may also use these indicators to drive systemic support for assistive technology. These indicators are also appropriate for students who qualify for services under other legislation such as Section 504.

1. Assistive technology devices and services are considered for all students with disabilities regardless of type or severity of disability.
2. During the development of an individualized educational program, every IEP Team consistently uses a collaborative decision-making process that supports systematic consideration of each student's possible need for assistive technology devices and services.
3. The IEP Team members have the collective knowledge and skills needed to make informed assistive technology decisions and seek assistance when needed.
4. Decisions regarding the need for assistive technology devices and services are based on the student's IEP goals and objectives, access to curricular and extracurricular activities, and progress in the general education curriculum.
5. The IEP Team gathers and analyzes data about the student, customary environments, educational goals, and tasks when considering a student's need for assistive technology devices and services.
6. When assistive technology is needed, the IEP Team explores a range of assistive technology devices, services, and other supports that address identified needs.
7. The assistive technology consideration process and results are documented in the IEP and include a rationale for the decision and supporting evidence.

Virginia Assistive Technology, Tools, and Strategies: Consideration Guide

The Virginia Assistive Technology, Tools, and Strategies (VATTS): Consideration Guide (2022) is designed to facilitate a meaningful decision-making process that ensures compliance with regulations as well as the quality indicators related to AT devices and services. While not

required, the VATTS: Consideration Guide can help to ensure that the AT consideration process is in line with best practices and fully explores the student's strengths and needs; the environments in which the student lives, works, and plays; the tasks the student will need to complete; and the potential tools that are needed to address challenges. In addition, the VATTS: Consideration Guide extends the conversation beyond assistive technology and includes discussions about other technology tools and strategies that may benefit the student. The Student, Environment, Tasks, and Tools (SETT) process is an established model for AT consideration and decision-making. The SETT Framework is embedded within the VATTS: Consideration Guide to assist the team in organizing existing data to help the team make informed decisions about possible AT devices and/or services.

SETT Framework for Decision-Making

The SETT Framework provides structure to the consideration and/or assessment of assistive technology. The SETT Framework may also be used to assist in identifying potential AT solutions while preparing for upcoming IEP meetings, reporting progress, and brainstorming possible technology tools and strategies for all students. A teacher or team may choose to use the VATTS: Consideration Guide to help organize existing data and information related to a student's preferences, strengths, and needs. When used in this context, the team is not gathering any new data without parental consent.

The SETT Framework is built on the premise that in order to develop an appropriate system of assistive technology devices and services, teams must first gather information about the student, the customary environments in which the student spends his time, and the tasks that are required for the student to be an active participant in the teaching and learning processes to identify the required AT tools based on the student's task(s) and need(s). Teams are encouraged to utilize the SETT Framework to enhance discussions around potential AT solutions for each area identified as a need. For many students, each area of consideration will be unique depending on multiple factors influencing progress.

For each of the areas identified for the student potentially requiring assistive technology, the IEP Team should gather information related to the student, the environment, and the tasks completed in those environments.

- **Student:** Describe the student's strengths and needs related to the area(s) of concern.
- **Environment:** Describe the environments (home, school, community); environmental factors, including accommodations and tools; and strategies already in use.
- **Task:** Describe the activities or assignments the student needs to complete. This may include challenges related to the current tools and strategies in place.

Based on the information gathered and discussed, teams should identify the tools that the student needs to perform these tasks in those environments. Different tools may be required in different environments and/or for different tasks.

- **Tools:** Describe the features/characteristics of potential tools needed to address the challenges.

The following prompts may be used by teams to help facilitate conversation in identifying needed assistive technology. These prompts are expected to encourage discussion rather than to be complete and comprehensive.

Student
- What is the functional area(s) of concern?
- What does the student need to be able to do that is difficult or impossible to do independently at this time?
- Special needs (related to area of concern)
- Current abilities (related to area of concern)

Environments
- Arrangement (instructional, physical)
- Support (available to both the student and the staff)
- Materials and equipment (commonly used by others in the environment)
- Access issues (technological, physical, instructional)
- Attitudes and expectations (staff, family, others)

Tasks
- What specific tasks occur in the student's natural environment that enables progress toward mastery of IEP goals and objectives?
- What specific tasks are required for active involvement in identified environments (related to communication, instruction, participation, productivity, and environmental control)?

Tools
In the SETT Framework, "Tools" include devices, services, and strategies. Analyze the information gathered on the Student, the Environments, and the Tasks to address the following questions and activities.
- Is it expected that the student will not be able to make reasonable progress toward educational goals without AT devices and services?
- If yes, describe what a useful system of AT devices and services for the student would be like.
- Brainstorm tools that could be included in a system that addresses student needs.
- Select the most promising tools with needed device features for trials in the natural environment. Plan the specifics of the trial (expected changes, when/how tools will be used, cues).
- Collect data on effectiveness.

After discussing the unique considerations for each identified area of concern, the team will analyze the gathered data and use it to make an informed decision on each instructional area identified as a need. Teams may identify that no AT is needed, that the current AT is sufficient, or additional assessment data is needed to make an informed decision.

Summary of Consideration

Different team decisions may be made as a result of the AT considerations process. Include these decisions and the data used to make these decisions within the student's IEP.

The team may decide:

- Existing AT, tools, and strategies are appropriate. Based on existing data, it is anticipated that appropriate progress can be made using existing technology and/or AT. This may also include if the student utilizes universally available educational technology and the team identifies the student's needs for technology to make appropriate progress toward goals. The identified AT is added to the IEP.
- Appropriate AT devices have been identified, but AT services such as customizing, coordinating, training, and/or coaching are needed to support the student, staff, and/or family in implementation. Assistive technology services may also be identified to support the implementation of newly identified AT devices. These services are added to the IEP.
- Trials are needed to identify AT tools. The IEP Team anticipates that appropriate progress cannot be made without the support of AT. The AT devices and/or services are required by the student and will be used for designated tasks in customary environments. The trial process should be documented within the IEP and/or prior written notice as appropriate. The VATTS: Consideration Guide provides space for teams to also document trial plans during their consideration discussion.
- Additional information is needed. The IEP Team determines that further investigation/assessment is needed to determine if or what AT devices and services may be required. The team will specify details and timelines for gathering this information. Refer to the school division's policies for assessment policies. Teams may refer to the [Assistive Technology Assessment section](#) in this document for more information.

Implementation Fidelity

To ensure fidelity of implementation, teams should develop a plan for how identified assistive technology devices and/or services will be implemented within the IEP or tried during a trial period. This plan should include:

- the AT tool(s) and/or strategy to be tried;
- the task(s) in which the student will utilize the AT (including where, when, and how);
- who is responsible; and
- proposed implementation dates.

If the team is proposing new AT, part of the plan should also ensure the student is taught how to access and utilize the new AT. Students need to be able to describe the specific educational and assistive technology supports that they use and explain why to ensure that they can advocate for those supports as they move into new classrooms, participate in community-based instruction, and prepare for life after graduation.

Teams should also identify the potential professional learning, including training and coaching, that may need to be provided to ensure fidelity of implementation. This implementation plan should also be developed following the identification of AT devices and/or services following an AT assessment.

Assistive Technology Trial Period

In many instances, the AT implementation dates will align with the implementation dates for the IEP. In some cases, the team may want to try out a device, service, or support for a short period to determine its efficacy before adding it to the IEP. This is known as a "trial period."

A trial period may be recommended when the data suggests the student needs AT to make progress but the team wants to ensure the identified tool is the right fit for the student. If a trial period is recommended, teams should consider the following:

- What is the goal for the student's use of the device?
- How will the team know the trial has been successful (or unsuccessful) in working toward the goal?
- How long will the trial period occur?
- What data will be collected to monitor progress?

Trial data can also be used to drive goals and progress monitoring if the AT is added to the IEP.

When completing a trial, the team should schedule a date to reconvene and review the results of the trials. Teams may decide to implement the AT device or service, not implement the AT, trial an alternatively identified device and/or service to meet the student's needs, or decide additional data is needed. This process should be documented within the IEP and/or prior written notice, as appropriate.

Assistive Technology Assessment

At any point during the consideration process, IEP Teams may decide that further investigation or assessment is needed (i.e., new data) to make an informed decision about whether a student requires AT to be successful in their customary environment, such as the classroom, cafeteria, playground, home, community setting, or workplace. Assessment takes an in-depth look at the student's abilities and difficulties and the demands of the environment and tasks. The AT assessment also includes the acquisition of new information (Reed & Lahm, 2004).

The consideration of assistive technology services requires school divisions to evaluate the needs of a student with a disability, including a functional evaluation of their environment (34 CFR §300.6 (a)). The Federal Register (July 10, 1993) distinguishes between assessment and evaluation as described below.

- Evaluation: A group of activities conducted to determine a child's eligibility for special education.
- Assessment: A group of activities conducted to determine a child's specific needs.

Since IDEA requires that each IEP Team "consider" the student's need for assistive technology, there is no "eligibility" criterion for assistive technology. Assistive technology can be provided to any student with a disability who requires AT to access FAPE. Thus, the purpose of the AT evaluation is to assist in the consideration of the student's need for assistive technology and evaluate what AT is functionally appropriate and effective for the student, not to determine eligibility for services. This functional evaluation of the student in their environment is considered an assessment rather than an evaluation for eligibility.

The SETT Framework can and should be used by teams as part of a more comprehensive AT assessment process to organize both new and existing data to make informed decisions. The process for AT assessment applies many strategies, tools, and checklists. *Assessing Students' Needs for Assistive Technology* (Reed & Lahm, 2004), developed by the Wisconsin Assistive Technology Initiative, and the *Student, Environment, Tasks, Tools (SETT) Framework* (Zabala, 2002) are considered to be two of the leading resources for assistive technology assessment. These materials are provided free of charge, and links to the websites are included in the Appendix.

Quality Indicators for Assessment of Assistive Technology Needs

The Quality Indicators for Assistive Technology Services ([Quality Indicators for Assistive Technology Services, 2021b](#)) also outlines practice guidelines for the assessment of AT. These guidelines may be referred to by teams during the assessment process as well as by school divisions in their development and implementation of assistive technology systems, including AT teams. The following seven indicators have been identified by QIAT for assistive technology assessment:

1. Procedures for all aspects of assistive technology assessment are clearly defined and consistently applied.
2. Assistive technology assessments are conducted by a team with the collective knowledge and skills needed to determine possible assistive technology solutions that address the needs and abilities of the student, demands of the customary environments, educational goals, and related activities.
3. All assistive technology assessments include a functional assessment in the student's customary environments, such as the classroom, lunchroom, playground, home, community setting, or workplace.
4. Assistive technology assessments, including needed trials, are completed within reasonable timelines.
5. Recommendations from assistive technology assessments are based on data about the student, environments, and tasks.
6. The assessment provides the IEP Team with clearly documented recommendations that guide decisions about the selection, acquisition, and use of assistive technology devices and services.
7. Assistive technology needs are reassessed any time changes in the student, the environments, and/or the tasks result in the student's needs not being met with current devices and/or services.

Assistive technology assessment is an ongoing continual part of educational planning and not a "one-shot" separate event. The assessment process yields recommendations based on data collected from trials with AT tools used for meaningful tasks in the student's daily environments. Part of this data includes the student's feelings about the proposed AT. Quality AT assessment recognizes and plans for the support that will be needed for family, peers, and teachers to ensure the successful use of a device.

Assistive Technology Assessment Team

Assistive technology assessment can be completed by an IEP Team, provided that someone on the team is knowledgeable about AT assessment. In other cases, identified AT teams may help to support IEP Teams in the AT assessment process. It is recommended that the AT assessment team be comprised of individuals with the collective knowledge and skills needed to determine possible AT solutions that address the needs of the student. According to Reed and Lahm (2004), five core team members should be represented on every team making decisions about assistive technology. This includes:

- a person knowledgeable about the student (this may be the student and/or parents or other family members);
- a person knowledgeable in the area of curriculum, usually a general or special education teacher;
- a person knowledgeable in the area of language, usually a speech/language pathologist;
- a person knowledgeable in the area of motor skills, often an occupational and/or physical therapist; and
- a person who can commit the district's resources, not only for the purchase of devices but to authorize staff training and guarantee implementation in various educational settings, usually an administrator.

Additional team members may include the following:

- Audiologist
- Instructional Technology Specialist
- School and/or Vocational Counselor
- Early Intervention Specialist
- Instructional Assistant
- Nurse

- Physician
- Rehabilitation Engineer
- Social Worker
- Teacher of Hearing Impaired
- Teacher of Visually Impaired
- Behavior Specialist

This is not an exhaustive or prescribed list. Each student's team should be unique and customized to reflect the student's needs and strengths. Anyone who has the potential to contribute to the decision-making or implementation may be invited to participate on the team. When team members share roles and responsibilities and integrate their knowledge and findings, then assistive technology becomes a team responsibility and the AT assessment process does not rely solely on one team member and their area of expertise.

Virginia Assistive Technology, Tools, and Strategies: Resource Guide

The [Virginia Assistive Technology, Tools, and Strategies (VATTS): Resource Guide](#) is a resource for IEP Teams to identify tasks within instructional areas as well as potential accommodations, modifications, and AT solutions. This guide aligns with the Virginia Assistive Technology, Tools, and Strategies: Consideration Guide and is provided to assist educational teams in considering assistive technology in the development, review, and/or revision of a student's IEP. While the VATTS: Resource Guide is not an exhaustive list and does not endorse any specific tool or device, the guide does list tools to consider along with all relevant factors related to the student, environment, and tasks to be completed.

Summary

Assistive technology is an essential component of ensuring that students with disabilities receive a free appropriate public education (FAPE) in their least restrictive environment. More than this, assistive technology increases students' opportunities for social interactions and engagement with same-age peers, meaningful postsecondary outcomes and employment, and builds overall independence. Assistive technology can significantly impact graduation rates, postsecondary outcomes, independence, self-expression, self-esteem, and overall quality of life.

Self-awareness, self-advocacy, and self-determination are critical in ensuring that students understand and can advocate for the assistive technology they need. Students must have the opportunity to explore, identify, learn to use, and advocate for needed assistive technology while in school so they have the skills to independently identify and advocate for needed AT (and other) supports in the workplace and community. This starts with quality consideration of assistive technology within the IEP.

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Appendix A: Definition of Terms for Virginia Assistive Technology, Tools, and Strategies Consideration

Activities of Daily Living
Activities oriented towards taking care of one's own body and activities that are essential for survival and well-being. In the school systems, these may be eating, toileting, getting dressed for gym, and mobility around the school (Schell & Gillen, 2009, p. 1153).

Adaptive Play
Adaptive play lets a child with limited function in abilities such as movement, speech, eyesight, hearing, comprehension, or communication play more fully (Persels, 2019, para. 2). It may involve customizing toys, using adaptive equipment, accessing assistive technologies, making new ways to play, and using the setting. Play can be adapted for your child at home, in the community, or while in the hospital.

AIM-VA
Accessible Instructional Materials Center of Virginia (AIM-VA), funded by the Virginia Department of Education, provides accessible instructional materials to eligible Virginia K-12 students who have an Individualized Education Program (IEP) and are unable to access traditional print. Accessible instructional materials, or AIM, refers to print-based educational materials that are converted into specialized formats required by the IDEA (e.g., braille, large print, audio, and digital text). Accessible instructional materials can positively impact student performance.

Assistive Technology Assessment
Assistive technology assessment is a comprehensive and thorough evaluation of the student's needs, their environments, the tasks or goals they are wanting to achieve, and the possible AT tools that may help facilitate these goals (Assistive Technology and Accessible Educational Materials Center, n.d., para. 2). The AT assessment process does not end with tool selection but also includes follow-up and ongoing assessment as tasks and environments change and new tools are developed.

Assistive Technology Device
Assistive technology device means 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. The term does not include a medical device that is surgically implanted, or the replacement of such device (34 CFR §300.5).

Assistive Technology Service
Assistive technology service means any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device (34 CFR §300.6).

Assistive Technology in the IEP
A student's IEP should clearly reflect the AT needed, describe how it will be used, and define the supports required for its use (Pennsylvania Training and Technical Assistance Network, 2021, paras. 6-8). Because appropriate AT devices and services can take various forms for students with broad ranges of academic and functional needs, team members need to understand the various options for thoughtfully considering and including AT in the IEP document. Once considered, as described above, AT devices and services can be appropriately documented in the IEP in several areas. The following sections of the IEP are appropriate locations for documenting AT: special considerations, present levels of academic achievement, transition services, participation in state and local assessments, goals and objectives, related services, supplementary aids and services, program modifications, specially designed instruction (SDI), and/or supports for school personnel. Regardless of where AT appears in the IEP, the IEP document should clearly reflect the AT needed, describe how it will be used, and state the supports required.

Attention
Attention is the cognitive ability to focus on a task, issue, or object (Schell & Gillen, 2009, p. 1154).

Auditory Processing
Auditory processing includes auditory attention, auditory memory, auditory discrimination, auditory figure-ground, and auditory cohesion (Virginia Department of Education, 2020).

Behavior
Assistive technology to support behavior should align with the identified function(s) of any undesired behavior(s) and support context-appropriate behavior and skill development. The AT for behavior may include tools that assist with providing reminders of desired behaviors, self-management, self-regulation, and focusing on the current activity.

Communication
Communication is the active process of exchanging information and ideas (American Speech-Language-Hearing Association, 2013, paras. 1-2). Communication involves both understanding and expression. Forms of expression may include personalized movements, gestures, objects, vocalizations, verbalizations, signs, pictures, symbols, printed words, and output from augmentative and alternative communication (AAC) devices. When individuals communicate effectively, they are able to express needs, wants, feelings, and preferences that others can understand.

Environmental Controls
Environmental controls enable individuals with limited mobility to control activities and events within their environment (Disabilities, Opportunities, Internetworking and Technology, 2022). Environmental control units (ECU) enables an individual with mobility impairments to operate electronic devices in their environment through alternative access methods (e.g., switch or voice access). The ECUs can control things such as lights, televisions, telephones,

music players, door openers, security systems, and kitchen appliances. These systems are also referred to as electronic aids to daily living (EADL).

Executive Functioning
Executive function (EF) is a set of mental skills that help an individual to control their thinking and behavior (Dawson & Guare, 2010). These skills allow an individual to select and achieve goals or to develop problem solutions. Executive function skills include planning, organization, time management, working memory, and metacognition. The EF skills also help individuals guide their behavior toward these goals including response inhibition, emotional control, sustained attention, task initiation, flexibility, and goal-directed persistence.

Grade
Grade refers to the student's current grade level, including preschool. When developing a standards-based IEP, the IEP is directly linked to and framed by Virginia's course content Standards of Learning (SOL) for the grade in which the student is enrolled or will be enrolled (Virginia Department of Education, 2016). If a student is transitioning from Part C to Part B, between grades, programs, and schools, it is important to involve past and current service providers in this discussion. If this student is of transition age (aged 14-21), it is especially important for these students to learn self-advocacy skills, learn about AT, and identify AT that will help increase their success in postsecondary environments.

IEP Team
The IEP Team is the group of individuals who come together to develop a student's Individualized Education Program (IEP). In the context of an IEP meeting, the local educational agency shall ensure that the IEP Team consists of members outlined in [§8VAC20-81-110 C](#) (Virginia Department of Education, 2010).

Math
Ability to understand and remember mathematics concepts, rules, formulas, basic computation skills, and sequence of operations (Virginia Department of Education, 2021a, para. 4). Math also includes the ability to perform mathematical calculations and notation.

Mechanics of Handwriting
Handwriting requires the integration of perceptual-motor processes and cognitive processes (Virginia Department of Education, 2017, p. 26). Some characteristics of students having difficulty with handwriting may include poor letter formation; letters that are too large, too small, or inconsistent in size; incorrect use of capital and lower-case letters; letters that are crowded and cramped; incorrect or inconsistent slant of cursive letters; lack of fluency in writing; and incomplete words or missing words.

Organization
Organization refers to skills in the areas of self-organization, information management, time management, and materials management which are the underlying skill set needed to be successful throughout the education process (Wisconsin Assistive Technology Initiative, 2009, p.1).

Participants

Participants in the educational team may include the student, family, related service providers, general educators, special educators, instructional assistants, case manager/service coordinator, administrators, instructional facilitators, and any other person who can help select AT devices and services, instructional technology, and other strategies and resources necessary to receive a free appropriate public education (FAPE) in the least restrictive manner. In the context of an IEP meeting, the local educational agency shall ensure that the IEP Team consists of members outlined in §8VAC20-81-110 C (Virginia Department of Education, 2010).

Positioning, Seating, Mobility

Optimal positioning in a "seating system can provide support to the body to improve skeletal alignment, normalize tone, prevent deformities, and enhance movement" (Cook, et al, 2020, p. 212). "The primary purpose of seating devices is to maximize a person's ability to function in activities across all performance areas" (Cook, et al, 2020, p. 193). Mobility "allows movement that enables function in a seated or standing position" (Cook, et al, 2020, p. 444).

Reading

Reading instruction includes elements that teach five critical areas of literacy: (a) phonemic awareness, (b) phonics, (c) fluency, (d) vocabulary, and (e) text comprehension (Virginia Department of Education, 2017, p. 19). These skills align with the State's English Standards of Learning for Virginia Public Schools.

Recreation/Leisure

Recreation refers to all those activities that people choose to do to refresh their bodies and minds and make their leisure time more interesting and enjoyable (National Center for Biotechnology Information, 2010, paras. 10-11). Examples of recreational activities are walking, swimming, meditation, reading, playing games, and dancing. Leisure refers to the free time that people can spend away from their everyday responsibilities (e.g., work, domestic tasks) to rest, relax, and enjoy life. It is during leisure time that people participate in recreation and sporting activities. The types of recreation, leisure, and sports activities people participate in vary greatly depending on the local context, and tend to reflect the social systems and cultural values.

Self-Regulation

Self-regulation is the ability to adapt emotional expression, behavioral activity level, and attention/arousal level effectively in response to the contextual demands of the environment (Schell & Gillen, 2009, p 1167).

Sensory Processing

Sensory processing may include reception, modulation, integration, and organization of sensory stimuli occurring in the central nervous system. It may also include the behavioral responses to sensory input (Schell & Gillen, 2009, p. 1167).

Sensory: Vision and/or Hearing
Sensory disabilities can involve any of the five senses, but for educational purposes, it generally refers to a disability-related to hearing, vision, or both hearing and vision (Virginia Department of Education, 2021b, paras. 1-2). Sensory disabilities affect access to visual and/or auditory information. Most content information is presented visually and/or auditorily in the classroom. Children experiencing vision and/or hearing loss must be appropriately identified to ensure access to education.

SETT Framework
The acronym SETT is for Student, Environments, Tasks, and Tools. The SETT Framework is a four-part model intended to promote collaborative decision-making in all phases of assistive technology service and design and delivery from consideration through implementation and evaluation of effectiveness (Zabala, 2021). Although the acronym SETT forms a memorable word, it is not intended to imply an order, other than that the student, environment, and tasks should be fully explored before tools are considered or selected.

Spelling
Spelling requires knowledge of sound sequences, letter patterns, and morphemes (base words and affixes (e.g., un-comfort-able)) (Virginia Department of Education, 2017, p. 26).

Strategy
Practices that are used to teach students how to learn and perform (Budin et al., 2022). Strategy instruction builds independence by facilitating students' abilities to be more self-directive in identifying and achieving social, academic, physical, and behavioral goals. This includes the use and training of assistive technology.

Task Completion
The sustained effort, including staying focused and organized, to plan and complete all steps and tasks involved in an assignment or activity.

Team Meeting
During a team meeting, participants may review existing data, discuss a teacher or related service provider's observations or ongoing classroom observations, or review data from the administration of a test or evaluation that is administered to all children or for which parental consent had already been secured. No new data is gathered for these meetings. Teams may identify AT, tools, and strategies to implement or share information to assist the student, staff, or families.

Technology Access
This means individuals with disabilities who cannot control technology with standard tools (e.g., keyboard, standard mouse) engage with and operate devices (e.g., laptops, smartphones, calculators, tablets, audio/visual equipment) with the use of peripheral assistive technology devices (e.g., switches, adapted mice, large keyboards), accessibility features built into the device, or universally designed equipment.

Tools and Strategies
Tools and strategies may include educational and/or instructional materials or evidence-based practices that will support the student in meeting their IEP goals.

Trials
An opportunity is provided for a child to try out assistive technology, instructional technology, or strategies to determine effective solutions. This provides information to the IEP or planning team about the advantages and changes needed to materials or strategies as well as the student's preferences and performance to facilitate further discussions and decisions.

Vocational
Vocational skills address knowledge and skills essential for performing the tasks involved in an occupation including general work skills as well as specific skills related to trade, craft, profession, or role (Skills Portal Skills for Success, 2020). These may include work readiness, interview and job search skills, social and communication skills, career choice, and safety.

Written Composition
Written expression or composing requires the translation of ideas into sentences (Virginia Department of Education, 2017, p. 27). Writing is a complex task that requires several cognitive processes (e.g., planning, working memory) and skills. It requires the ability to read, spell, know the meaning of words, and understand the syntax of the language to compose a written product.