Assistive Technology (AT) Handbook for Education Professionals

Guidance for Addressing Compliance Consideration and Provision of Assistive Technology (AT) Devices and Services in Michigan

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Prepared by the AT Guidelines Task Force, a volunteer effort of AT professionals across Michigan, based on a review of AT research literature, guidelines and current practices across the United States, with the goal of supporting improved access to AT for students with disabilities across the State of Michigan.

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CHAPTER ONE: INTRODUCTION

§1--STATEMENT OF PROBLEM

The impetus for convening the AT Guidelines Task Force was the observation that the degree and quality of AT utilization by students with disabilities in Michigan varied significantly from district to district within the state. Further reflection, discussion, and research revealed a number of factors potentially affecting the degree and quality of AT utilization, including:

- Increasingly blurred lines between the instructional technology available to all students and AT for students with disabilities;
- The rapid pace of change in new technology;
- The inaccurate perception that purchase of technology in and of itself fulfills District responsibility for providing AT to students with disabilities under federal special education law;
- Lack of understanding of and/or comfort with operationalizing the AT "process loop" required under IDEA, including interfaces with IEP process consideration of the possible need for AT evaluation of AT needs identification of AT devices, services, and training needed to meet individual student needs during implementation of AT;
- Lack of Michigan Department of Education AT guidelines, and few district guidelines.

§2--TASK FORCE MISSION STATEMENT

NEEDS STATEMENT

The degree and quality of consideration of the need for AT devices and services for students with disabilities vary widely from district to district across the state of Michigan. To address this problem, the Task Force has identified the following needs:

1. A clear definition of the elements of AT consideration for students with disabilities and/or key questions to guide the consideration process in LEAs across the state;
2. Routine monitoring of AT consideration and implementation of AT devices and services (i.e., assisting in the selection, acquisition, and use) to ensure sufficient support for student AT needs;
3. Adequate professional AT-related learning opportunities for all educators;
4. Administrative support for the provision of AT devices and services to assure compliance with IDEA mandates.

TASK FORCE MISSION STATEMENT

The mission of the AT Guidelines Task Force is to **develop an AT Handbook** that Michigan school districts can reference to make informed decisions about the following:

- Adoption of and training on a sequential collaborative process for AT consideration that supports compliance with legal mandates, including examining possible need for AT for all students undergoing initial special education evaluation and those already eligible for an IEP, AT evaluation, AT selection, AT implementation and AT progress monitoring;
- Education of IEP participants on the continuum of AT device and service options for students with disabilities; and
- Progress monitoring templates that support fidelity implementation of data collection to assess the efficacy of AT devices and services on student target behavior identified in IEP goals or supplementary aids and services.

TASK FORCE VISION

All children provided services under IDEA should have **equal access** to AT devices and services and use them to increase their functional capabilities so they can access, participate in, and progress in the general curriculum and in their role as a student.

IMPLEMENTATION NOTE

This handbook references both laws and regulations, and practice suggestions. Any laws or regulations that are cited set forth legal mandates that must be obeyed. Practice suggestions, on the other hand, are not mandates. Rather, they reflect practices recommended by members of this Task Force based on experience, AT research/review of the literature, guidelines from other states, and other AT information resources. All resources are referenced in Chapter 12 and 13 of this handbook. It is the hope of the Task Force that stakeholders will use the resources and information in this handbook to develop local, regional and state AT guidelines and policy to support both the degree and quality of legally compliant AT utilization by students with disabilities in Michigan.

CHAPTER TWO: BACKGROUND INFORMATION

§1--LEGAL REQUIREMENTS & DEFINITIONS RELATED TO AT

INTRODUCTION

Several important laws mandate and guide the provision of AT devices and services in the educational environment. Federal laws include the Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act of 1973(Section 504), the Americans with Disabilities Act (ADA), and the Technology-Related Assistance Act (Tech Act), as well as their respective implementing regulations. The Michigan Administrative Rules for Special Education set forth the manner in which the Michigan Mandatory Special Education Act is implemented in conjunction with IDEA.
Another source of law, called case law, stems from court decisions addressing questions/disputes related to AT at various levels of the judicial system, including the United States Court of Appeals and the United States Supreme Court.

FEDERAL LAWS

THE INDIVIDUALS WITH DISABILITIES EDUCATION ACT (IDEA)

IDEA defines AT as including both “AT devices” and “AT services”.
AT is one of several items on a “special factors” checklist in IDEA which requires that Individualized Education Program (IEP) teams consider the need for AT at least annually for every student with an IEP. AT devices and services determined necessary by the IEP team are to be provided for student use/benefit at no cost to the family, to support a free appropriate public education (FAPE) in the least restrictive environment (LRE).
IDEA mandates that school-purchased AT devices may be taken home if the IEP team determines that the student would need access to such technology in order to continue to progress in the general education curriculum in order to receive FAPE.
IDEA also mandates the provision of materials in an accessible format for students with print disabilities.

IDEA REGULATIONS

For the reader’s reference, the text boxes below contain the actual regulatory language promulgated by the US Department of Education to implement IDEA’s AT mandates.

ASSISTIVE TECHNOLOGY 300.105

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

(1) Special education under §300.39

(2) Related services under §300.34; or

(3) Supplementary aids and services under §§300.42 and 300.114(a)(2)(ii).

On a case-by-case basis, the use of school-purchased AT devices in a child's home or in other settings is required if the child's IEP Team determines that the child needs access to those devices in order to receive FAPE.

AT devices range on a continuum from simple, low-tech solutions to more complex, high tech solutions. As such, AT devices can include a pencil grip or a keyboard, a paper-based communication board or a computer-based augmentative communication system, and a plastic, colored overlay or a device that scans text and reads it aloud. AT devices are considered along the continuum for each student, and a given student may use a variety of technologies for different tasks. Usually, LEAs are not required to provide surgically implanted medical devices (such as cochlear implants, eyeglasses, hearing aids or braces). However, if a student needs a specific device to receive FAPE, then the LEA must provide the device at no cost to the parents. An example of this exception would be eye glasses used for glare reduction.

SEC. 300.5 ASSISTIVE TECHNOLOGY DEVICE

AT 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.

IDEA and its regulations also mandate that students be considered for, and provided with, AT service to support the exploration and implementation of appropriate AT devices. The implementing IDEA regulations do not specify a particular position or profession that is required to provide this service but it may be inferred from the obligation itself that evaluation and/or IEP team members should, on a collective basis, have a level of AT knowledge sufficient for the consideration at hand in order to fulfill this requirement for all students with IEPs.

AT SERVICE 300.6

AT service means any service that directly assists a child with a disability in the selection, acquisition, or use of an AT device. The term includes

a. The evaluation of the needs of a child with a disability, including a functional evaluation of the child in the child's customary environment;
b. Purchasing, leasing, or otherwise providing for the acquisition of AT devices by children with disabilities;
c. selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing AT devices;
d. coordinating and using other therapies, interventions, or services with AT devices, such as those associated with existing education and Rehabilitation plans and programs;
e. training or technical assistance for a child with a disability or, if appropriate, that child's family; and
f. 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.

IDEA regulations also include a specific provision on "access to instructional materials" that interfaces with AT. 34 CFR §300.172 requires each State to adopt the National Instructional Materials Accessibility Standard (NIMAS) for the purpose of providing instructional materials in a timely manner to persons who are blind or have other print disabilities. For example, a person who is blind may require access to text in a Braille format, or a person with a learning disability may need to have text in a format that can be read aloud by a text to speech program.

A State Education Agency (SEA; in Michigan, this is the Michigan Department of Education) has the option of choosing to coordinate with the National Instructional Materials Access Center (NIMAC) in order to timely provide print instructional materials in an accessible format, but the duty of the LEA for timely provision remains irrespective of its coordination decision. To this end, the SEA is to ensure that local education agencies (LEAs) take all reasonable steps to provide print instructional materials in accessible formats to children with print disabilities at the same time as other children receive their instructional materials. AT professionals can help LEAs to consider the necessary technologies for the reading of materials in a specialized format.

ACCESS TO INSTRUCTIONAL MATERIALS 300.172

(a)(1) The State must adopt the National Instructional Materials Accessibility Standard (NIMAS)…for the purpose of providing instructional materials to blind persons or other persons with print disabilities, in a timely manner…
(d) AT. In carrying out this section, the SEA, to the maximum extent possible, must work collaboratively with the State agency responsible for AT programs.

SECTION 504 OF THE REHABILITATION ACT OF 1973

Section 504 of the Rehabilitation Act of 1973 prohibits discrimination based on disability. It requires that otherwise qualified students with disabilities have equal access to participate in and benefit from all programs and activities operated by educational institutions receiving federal financial assistance. Section 504 requires federally funded educational institutions to provide qualified students with disabilities accommodations and/or services to support access to and provide equal opportunity to benefit from programs, facilities, activities, and services. These accommodations/services may include the use of AT.

NONDISCRIMINATION UNDER FEDERAL GRANTS AND PROGRAMS 29 U.S.C. 794

a. No otherwise qualified individual with a disability in the United States, as defined in section 7(20), shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service…
b. For the purposes of this section, the term ‘‘program or activity’’ means all of the operations of—
(2)(A) a college, university, or other postsecondary institution, or a public system of higher education; or
(B) a local educational agency (as defined in section 8101 of the Elementary and Secondary Education Act of 1965), system of vocational education, or other school system;

FREE APPROPRIATE PUBLIC EDUCATION 34 CFR 104.33

(a) General. A recipient that operates a public elementary or secondary education program or activity shall provide a free appropriate public education to each qualified handicapped person who is in the recipient’s jurisdiction, regardless of the nature or severity of the person’s handicap.
(b) Appropriate education. (1) for the purpose of this subpart, the provision of an appropriate education is the provision of regular or special education and related aids and services that (i) are designed to meet the individual educational needs of handicapped persons as adequately as the needs of non handicapped persons are met and (ii) are based upon adherence to procedures that satisfy the requirements of Secs. 104.34, 104.35, and 104.36.
(2) Implementation of an Individualized Education Program developed in accordance with [IDEA] is one means of meeting the standard established in paragraph (b)(1)(i) of this section.

TECHNOLOGY-RELATED ASSISTANCE ACT 1994, 1998, 2004, AND 2010

The Technology-Related Assistance Act (Tech Act) is intended to increase individuals' awareness of and access to AT devices and services. It provides states with financial assistance to support programs designed to maximize the ability of individuals with disabilities and their family members, guardians, advocates, and authorized representatives to obtain AT devices and AT services. This act provides resources for people with disabilities of all ages, all disabilities, and all environments (early intervention, K-12, post-secondary, vocational rehabilitation, community living, aging services, etc.).

TECH ACT 29 U.S.C. SEC 3000

AT means technology designed to be utilized in an AT device or service (29 U.S.C. Sec. 3002).
Device: An AT device is any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve the functional capacities of an individual with a disability (29 U.S.C. Sec. 3002(4)).

MICHIGAN LAW

State law includes the Michigan Mandatory Special Education Act (MMSEA), which is implemented by the Michigan Administrative Rules for Special Education (MARSE) R340.1781.
This rule (and other rules for teachers of students with a variety of specific disabilities) is intended to ensure that teachers of students with disabilities meet specific endorsement requirements. Teachers must have sufficient knowledge and understanding in the area of AT so they can assist the IEP process in making effective decisions on AT devices and services to increase or maintain students' capabilities and allow them to have appropriate access to the general curriculum.

MARSE 340.1781 Rule 81

Teachers of students with disabilities; endorsement requirements.
(1) A teacher seeking an endorsement or full approval by the department shall meet all of the following requirements, in conjunction with those of R 340.1782, R 340.1786 to R 340.1788, R 340.1790, R 340.1795 to R 340.1797, and R 340.1799 to R 340.1799c, before being employed by an intermediate school district, local school district, public school academy, or other agency operating special education programs and services:
(a) The requisite knowledge, understanding, skills, and dispositions for effective practice related to all of the following…
(iv) Using AT devices to increase, maintain, or improve the capabilities of students with impairments.

BRAILLE LITERACY LAW
SECTION 380.1704 OF THE REVISED SCHOOL CODE, ACT 451 OF 1976

(http://www.legislature.mi.gov/(S(a1psmqw13xh1hcnev5f03t0q))/mileg.aspx?page=GetMCLDocument&objectname=mcl-380-1704)
This section sets standards for teachers of blind and visually impaired pupils, provides information advocating for braille instruction, supports the creation of electronic file format versions of textbooks or braille versions, considers students with some remaining vision, mandates that instruction for blind students be consistent with goals and standards for all students, and provides key definitions.

§2 RESEARCH IMPLICATIONS

STATUS OF AT RESEARCH

As a professional field, AT is relatively new. Edyburn (2015) points to the passage of the Technology-Related Assistance Act for Individuals with Disabilities in 1988 as the beginning of AT as a professional field within Special Education.
IDEA was amended in 1990 to add AT, expressly noting that it could be a component of an IEP as special education, a related service, or as a supplementary aid and service. In 2004 IDEA was again amended, adding a requirement that IEP decisions regarding special education, related services, and supplementary aids and services be based on scientifically based research to the extent practicable. In discussion accompanying its issuance of the 2006 implementing regulations for IDEA 2004, the US Department of Education explained that “practicable” meant available.
While the availability of AT has expanded exponentially in recent years as a result of a steady decline in the cost of technology, an acceleration in mobile access to technology and an explosion in the availability of apps, research on the efficacy of AT in advancing student access to and progress in the general curriculum has lagged far behind. For an overview of the latest AT Research, we recommend the National Assistive Technology in Education Network (http://www.gpat.org/). The selection of research articles for the following sections in no way reflects an exhaustive review of AT literature. Instead, the articles were selected based on their relevance to the topics to be addressed in this Handbook.

RESEARCH ON THE BENEFITS OF AT

In the final analysis, Congress made a determination in 1990 that the benefits of AT justified an amendment of IDEA to include the consideration of the need for AT devices and services for all students with IEPs.

As the following paragraphs are reviewed, it should be noted that research reports typically describe results for groups of children, and do not and cannot ensure that an individual child would experience the same result. That is why IDEA requires a comprehensive individual evaluation, ongoing progress monitoring, and at least annual review of IEP efficacy for each student with a disability.

Watson, Ito, Smith, and Anderson (2010) found evidence of improvement in progress toward IEP goals and objectives when AT was used as an intervention strategy and that AT outperformed nine other interventions. Ruffin (2010) went further and concluded that AT to support reading not only benefited students with disabilities, it also benefited non-disabled students with more moderate reading problems. Maor, Currie, and Drewry (2011) found that the majority of the fifteen empirical research articles they reviewed indicated that AT was beneficial in increasing literacy and speech abilities and that the students increased their skills in the areas tested. In addition, Browner and Spooner (2011) indicated that research supports the use of AT for all of the following: mobility, positioning, daily living, hearing, vision, communication and instruction.

While Edyburn (2015) has stated that most research studies assessing the impact of AT lack enough empirical controls to be of predictive value. Off-setting this is the value of research on the individual child, where hypotheses regarding the enhanced impact of AT decisions can be maximized by quality attention to the IDEA process of AT consideration, AT evaluation, AT identification and collection of progress monitoring data on AT implementation, i.e., response to AT intervention. In addition, Penny Reed has responded in a review of this Handbook that "there are certainly critical things that have been proven by research, such as the fact that the use of AAC does not delay or prevent the acquisition of speech and language. These finding are important and shouldn't be played down."

Lacking rigorous research studies, educators have found other ways to learn about promising AT and enhance the potential benefits of AT. Professional networking is one example. Wojcik (2015) notes that "communities of practice provide opportunities for members to share knowledge, test ideas, and, through discussion, generate new knowledge."

RESEARCH ON AT CONSIDERATION

"Consideration" is a term with multiple meanings in the IEP context. Consideration is specifically required when evaluations are presented to the IEP. Consideration of the need for AT is specifically required when the IEP Team reviews the list of "special factors" in the context of IEP development. Finally, it is an umbrella term for the deliberative process that the IEP Team engages in as it reviews and interfaces the constituent parts of the IEP.

In the context of "special factors," Bausch et al. (2015) found that only half of the teachers in their study used a narrative explanation to explain AT consideration on the IEP form, and 33% of teachers used the checkbox only to document consideration.

Etshcheidt (2016) states that the critical factor underlying all AT considerations is whether or not AT is required to provide FAPE. The failure to appropriately consider the student's need for AT has been found through case law to be a denial of FAPE under IDEA. Therefore, it is important that school district teams understand the importance of AT Consideration and carry it out.

Lenker and Paquet (2003) have identified nine models as possible frameworks for AT consideration. One of these, Joy Zabala's SETT framework, is familiar to most AT professionals in Michigan and guides IEP teams to consider AT based on the student's needs, learning environment, required educational tasks, and technology options.

RESEARCH ON AT SELECTION AND USAGE

Okolo and Diedrich (2014), Bouck and Flanagan (2015), and Bouck (2016) reported low rates of usage of AT for students with disabilities. Okolo and Diedrich identified lack of access to technology, insufficient funding, and inadequate training as three significant barriers to AT implementation, although it appears that these barriers are interrelated.

RESEARCH ON IMPLEMENTATION

Bausch et al. (2015) have asserted that AT implementation plans are frequently overlooked in IEPs. Unfortunately, ineffective implementation can sabotage what might otherwise be an effective AT device. Bausch et. al. reported that ineffective implementation is most often caused by:

- Student perception of feeling stigmatized by use of AT
- Lack of student training
- The mismatch of AT to student needs.

Bouck, Flanagan, Heutsche, Okolo, and Englert (2011) have described other barriers such as time constraints, the challenge of working with technology devices and the need for support to sustain its use. Coleman (2011) spotlights the high rate of abandonment of AT and recommends that implementation planning should include training to related services personnel, parents and the student, in addition to teachers. Implementation planning should also include consideration of psychosocial, cultural and environmental factors as well as motivation and effort. Coleman includes a comprehensive implementation checklist that IEP teams should find useful in developing implementation plans.

RESEARCH ON ACCESSIBLE INSTRUCTIONAL DESIGN

IDEA 2004 requires that local education agencies (LEAs), in a "timely" manner, provide students with disabilities learning materials in an accessible format. Timely is defined as, at the same time as non-disabled students. It is a misconception that digital learning materials are by default accessible. For example, some pdf documents posted on publisher websites cannot be used by text reading software or apps. Also, many websites are inaccessible to visually impaired learners and audio resources on the web may be inaccessible by hearing-impaired learners. In recent years' consumers and disability advocates have filed an increasing number of complaints under the Americans with Disabilities Act (ADA) alleging violations of the "effective communications" provision in the ADA Title II implementing regulations. Resources to check website accessibility are readily available and should be utilized in planning and revising websites.

Edyburn (2015) summarizes recent research findings, which show that accessible instructional design can help students access the curriculum better. However, there are challenges in providing accessible materials. Accessibility depends on the unique interaction between the learner, task, and instructional design. That is, while instruction may be "universally" designed, the outcome may vary with the student. In situations where student progress is not satisfactory, an AT assessment may be necessary to suggest ways to modify the instructional design for the unique needs of the student. The other challenge is that the creation of accessible educational materials from scratch is both time consuming and problematic when teachers or paraprofessionals, who are not content area experts, create instructional material outside their area of expertise.

Many publishers are now offering digital text as part of curriculum product offerings. But rubrics to rate the accessibility of digital instructional learning materials have not been the focus of educational researchers. The Task Force is unaware of any research that rates and compares the accessibility of digital learning materials created by different publishers. A numerical accessibility rating scale might very well stimulate competition among publishers to create more accessible digital materials, which would ultimately benefit far more students with disabilities than would attempts to create accessible materials for individual students from scratch. In the meantime, reading Edyburn's book (2015), *Accessible Instructional Design*, is highly recommended to become current with the research on this important topic. Another resource for educators is the PALM (Purchase Accessible Learning Materials) (http://aem.cast.org/navigating/palm.html#.WntGbujwaUk) initiative, which provides guidance for school districts in selecting accessible materials.

NEED FOR AT GUIDELINES

In 2009, Bausch et. al. found that only 34% of teachers in their study were aware of AT-specific guidelines. Six years later Bausch, Ault, and Hasselbring (2015) concluded, "Schools need a framework that guides the provision of AT services to their students. Therefore, school districts must develop AT policies and procedures to ensure that regulations are carried out in compliance with federal law and that students obtain the services they need."

Despite the need for guidelines, Task Force research located only 22 State AT guidelines online, which vary in scope and length. The Michigan Department of Education (MDE) Low Incidence Outreach project has developed AT Guidelines for Blind/Visually Impaired (https://mdelio.org/blind-visually-impaired/expanded-core-curriculum/technology/assistive-technology-guidelines), but the MDE Office of Special Education does not currently have AT Guidelines for all disabilities. There are currently no data available to indicate how many LEAs in Michigan have AT guidelines, but an informal survey of the members of this Task Force suggests that very few LEAs have AT Guidelines.

One of the most comprehensive of existing state guidelines is the Connecticut AT Guidelines (https://portal.ct.gov/SDE/Publications/Assistive-Technology-Guidelines-Section-1-For-Ages-3-21) (2013), consisting of 243 pages written by a staff of 32 educators. The Forward of this document states, "AT guidelines help to define the process for considering, implementing, and evaluating technologies that equalize the learning experience for students of all abilities...The AT guidelines facilitate a review of the process, give structure to different stages of development, offer examples of best practices on the AT continuum, clarify misconceptions, and give direction to ensure that accommodations that are needed to meet goals are attainable."

IMPLICATIONS FROM SELECTED RESEARCH ARTICLES

QUALITY INDICATORS OF AT (QIAT)

While numerous research studies describe general benefits for the use of AT with students with disabilities, the Task Force is aware of no research that studies the impact of the total AT process on student access to the curriculum, including consideration, assessment, evaluation, implementation, and transition. The Task Force agrees with Bausch et. al (2015), who concluded that the most valid tool currently available to assess the entire AT process is the Quality Indicators of AT (QIAT). QIAT was developed by a leadership team that includes nationally recognized AT professionals, Gayl Bowser, Joan Breslin-Larson, Diana Carl, Kelly Fonner, Terry Foss, Jane Korsten, Kathy Lalk, Scott Marfilus, Susan McCloskey, Penny Reed, and Joy Zabala. The QIAT includes a self-assessment tool, which contains rubrics for LEAs to determine both weaknesses and strengths in their delivery of AT devices and services to students with disabilities.

While current AT research has its limitations, that fact should not be an excuse for failing to meet IDEA AT requirements. IDEA requires that IEP decisions on special education, related services, and supplementary aids and services be informed by scientifically based research to the extent "practicable", defined by the US Department of Education as "available." In counteracting the reported lack of available quality research, LEAs should consider such proactive steps as creating local AT teams and building AT capacity among all staff with potential implementation responsibilities.

DISTRIBUTED EXPERTISE MODEL OF PROFESSIONAL DEVELOPMENT

The low rates of AT usage reported in numerous studies should be a concern to all educators. Numerous studies, including Okolo and Diedrich (2014), suggest that teacher training is the key to raising the rates of AT usage and that the best way to do that is to create a model of "distributed expertise" within LEAs. This raises the question of how best to develop distributed expertise. The train-the-trainer model only works if there are AT specialists available to help build local AT capacity and AT professional development time is provided by LEAs. Yet, declining budgets have resulted in AT specialist positions being cut.

The Task Force recommends the creation of a State plan to ensure that enough AT specialists are available in all regions of the State to provide PD support to LEAs in building local capacity.

AT COMMUNITIES OF PRACTICE

Even with the availability of AT specialists to train staff in LEAs, planning for ongoing professional development is critical. One-time AT training sessions are insufficient to build capacity. Wojcik (2015) calls for LEAs to build local AT networks or communities of practice with AT contacts in each building to "share knowledge, test ideas, and, through discussion, generate new knowledge." Parents and students should be included in local networks because they are sometimes the first to learn about new apps to help students with disabilities. Building local capacity can be accelerated when AT contacts participate in curriculum material selection committees. Purchasing accessible materials up front is far preferable to retroactively modifying materials to make them accessible.

CREATION OF LOCAL AT GUIDELINES

A key component of building local capacity is the creation of AT guidelines so that IEP teams can have continuous access to a process model and best practices. The Task Force believes that the absence of state AT guidelines plays a significant role in the scarcity of local AT guidelines. Bausch, Ault, Quinn, Behrmann and Chung (2009) reviewed 10 state guidelines and, from these guidelines, identified 12 important features:

1. Require IEP team Meetings include a person knowledgeable about AT when AT decisions are being made.
2. State that AT decisions involve a collaborative process and indicate who should be involved.
3. Include a list of AT consideration factors.
4. Stipulate the full continuum of devices and services are considered.
5. Include a resource guide about AT in the IEP.
6. Stipulate that IEP teams thoroughly document the need or lack thereof for AT.
7. Offer specific recommendations on how to document AT devices and services.
8. Include guidelines of when and how AT should be written into goals.
9. Provide sample forms that explain to professionals the need to identify specific tasks or skills for which AT is to be considered.
10. Require IEP teams to consult with an AT specialist when they lack the needed expertise to make informed AT decisions.
11. Allow for IEP teams to look to school employees (e.g., speech pathologists, physical therapists, occupational therapists) who may have the needed expertise.
12. Require districts to work collaboratively with external agencies if they lack personnel with adequate knowledge of AT.

CHAPTER THREE: IDEA AT REQUIREMENTS

§1 CONSIDERATION

DEFINITION

"Consideration of AT, in the context of IEP development, review, or revision, is intended to be a collaborative process in which team members determine whether AT devices or services are needed for the student to access the general education curriculum or meet IEP goals. Consideration may be brief or extended, and may necessitate that the IEP team include (or have access to) someone who has knowledge about AT or who can guide the team in considering AT in the context of what they know about the student." PATTAN (2018)

IEP teams generally think of the Special Factors checklist on the IEP form when they hear the phrase AT consideration. That is a very important meaning, and thus the checklist, so teams do not forget to consider the possible need for AT for every child with an IEP. But the use of the term "consider" is more expansive. In fact, AT consideration occurs:

- in initial and post-initial IEPs, as prompted by the **Special Factors** section of the IEP and by the IDEA requirement that the IEP team **review and consider evaluation results**, which would include AT assessments conducted as part of an AT evaluation or a full and individual evaluation/reevaluation. (Refer to Chapter 3, Section 2 for more details on the difference between AT assessment and evaluation.)
- as part of the **entire IEP deliberative process**, even after the Special Factors section is "completed"
- through **progress monitoring** during the life of an IEP. AT devices and services embedded in goals and objectives as a condition of performance (e.g., "Given the assistance of a text to speech reader, the student will correctly answer comprehension questions on grade level materials with 90% accuracy") will be progress monitored on an ongoing basis, and formally reported with periodic progress reports. As part of progress monitoring, IEP implementers should be comparing actual to target progress and considering whether the IEP is appropriately calibrated to support aggressive but attainable progress targets.

OVERVIEW

The Individuals with Disabilities Education Act of 2004 provides the legal framework for the consideration and adoption of AT in public schools. Aside from definitions of AT, AT devices, and AT services, and a requirement to consider the need for AT as a part of the IEP process, IDEA 2004 mandates that students with disabilities are entitled to instructional materials in accessible formats in a timely manner. In addition, Title II of the Americans With Disabilities Act provides that public agencies must provide "appropriate auxiliary aids where necessary to provide equal opportunity." (28 C.F.R. § 35.160 (b)(1))

Determining whether AT devices or AT services are appropriate for students with disabilities is the function of the AT consideration at the IEP. However, IDEA 2004 only mandates that an AT consideration occur at each Individual Educational Plan (IEP) meeting. Federal law does not specify what an AT consideration should include or how it should be documented. In the absence of guidelines, those IEP teams who lack knowledge of AT may simply check a special factors box with minimal consideration. Since AT monitoring is rare, there is no way to tell how many students with disabilities are not getting the AT they need to receive a free and appropriate public education (FAPE).

In addition, several research studies, Sharp (2010) and Okolo and Diedrich (2014) have concluded that AT is under-utilized for students with disabilities: "The data from this study suggest that, more than 25 years after the passage of the Tech Act, AT has made some inroads in educational settings. A variety of educators have positive attitudes toward and interest in learning more about AT, even in the face of perceived lack of support and knowledge. However, AT seems a minimal consideration in the services allocated to most students with disabilities."

The following guidelines are intended to prompt teachers, administrators, parents and other stakeholders to more vigorously consider AT in the IEP process, and to improve the quality of AT implementation for all students with disabilities receiving AT devices and services.

IEP CONSIDERATION AND SPECIAL FACTOR DOCUMENTATION

In Michigan, IEP teams are required to check in the Special Factors area on the IEP that the following have been considered: "The communication needs of the student" and "The need for AT devices and services for the student." Checking the AT box should be supported with documentation somewhere in the IEP that either establishes the need for AT or justifies the decision that AT is not needed.

IEP DOCUMENTATION OF AT CONSIDERATION

The following list represents examples of what could be entered in various sections of the IEP to document the consideration of AT. Other information could be included in these areas, depending on the unique abilities and needs of the students.

Special Factors: This is the place where the IEP team checks that AT has been considered. Documentation to support evidence of a consideration may be listed here and/or reflected in at least one of the following sections of the IEP:

- **Present Level of Academic Achievement and Functional Performance**: If a student needs AT to access the curriculum or make progress in the curriculum, this is the place to indicate which educational area and how AT will help. This is also the place where IEP teams can document what current AT is used, e.g. "When using text-to-speech software on a tablet or computer, James reads and comprehends at a 5.0-grade level."
- **Supplementary Aids and Services**: Modifications, Accommodations, Supports, AT consultation and assessment requests can be listed here. Also include any AT required when receiving a related service, e.g. a communication device when receiving Social Work support.
- **Transition:** AT should be listed as appropriate where it applies to the following Transition areas: Instruction, Related Services, Community Experiences, Development of Employment, Other Post-School Adult Living Objectives, and/or Acquisition of Daily Living Skills.
- **Assessment:** AT accommodations for State and district-wide assessments should be listed here (and should be parallel to what is recorded for classroom assessment in Supplementary Aids and Services).
- **Goals/Objectives**: Here is where AT may be required as a method to complete a curricular or IEP goal. It is also the place where a goal could be added to support the development of proficiency in the use of AT.
- **Notice for Initial Provision of Programs and Services:** This notice is generally appended to the IEP and is a separate document.

QUALITY INDICATORS OF AT CONSIDERATION (QIAT)

Source: http://www.qiat.org/indicators.html
The Task Force recommends that all AT considerations should be guided by the following Quality Indicators for Consideration of AT needs.

1. **AT devices and services are considered for all students with disabilities regardless of type or severity of the disability.**
   Intent: Consideration of assistive technology need is required by IDEA and is based on the unique educational needs of the student. Students are not excluded from consideration of AT for any reason. (e.g., type of disability, age, administrative concerns)
2. **During the development of an individualized educational program (IEP), every IEP team consistently uses a collaborative decision-making process that supports the systematic consideration of each student's possible need for AT devices and services.**
   Intent: A collaborative process that ensures that all IEP teams effectively consider the assistive technology of students is defined, communicated, and

consistently used throughout the agency. Processes may vary from agency to agency to most effectively address student needs under local conditions.

3. **IEP team members have the collective knowledge and skills needed to make informed AT decisions and seek assistance when needed.**
   Intent: IEP team members combine their knowledge and skills to determine if assistive technology devices and services are needed to remove barriers to student performance. When the assistive technology needs are beyond the knowledge and scope of the IEP team, additional resources and support are sought.
4. **Decisions regarding the need for AT 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.**
   Intent: As the IEP team determines the tasks the student needs to complete and develops the goals and objectives, the team considers whether assistive technology is required to accomplish those tasks.
5. **The IEP team gathers and analyzes data about the student, customary environments, educational goals, and tasks when considering a student's need for AT devices and services.**
   Intent: The IEP team shares and discusses information about the student's present levels of achievement in relationship to the environments, and tasks to determine if the student requires assistive technology devices and services to participate actively, work on expected tasks, and make progress toward mastery of educational goals.
6. **When AT is needed, the IEP team explores a range of AT devices, services, and other supports that address identified needs.**
   Intent: The IEP team considers various supports and services that address the educational needs of the student and may include no tech, low tech, mid-tech and/or high tech solutions and devices. IEP team members do not limit their thinking to only those devices and services currently available within the district.
7. **The AT consideration process and results are documented in the IEP and include a rationale and supporting evidence for both options selected and options rejected.**
   Intent: Even though IEP documentation may include a checkbox verifying that assistive technology has been considered, the reasons for the decisions and recommendations should be clearly stated. Supporting evidence may include the results of assistive technology assessments, data from device trials, differences in achievement with and without assistive technology, student preferences for competing devices, and teacher observations, among others.

A CHECKLIST TO PREPARE FOR AN AT CONSIDERATION

While the AT consideration takes place at the IEP, teams should prepare for consideration by collecting Present Level of Performance data and determining readiness to address the following questions in the AT Consideration Checklist:

AT Consideration Questions	Yes	No
1. Is the student demonstrating **sufficient progress** in the curriculum with current special education, related services, supplementary aids and services, program modifications and supports?	Y	N
2. Can this student adequately **access** the curriculum with the instructional materials currently available to the student?	Y	N
3. Is the student communicating effectively without AT?	Y	N
4. Is at least one member of the IEP team knowledgeable about current AT devices and services that have been shown to be helpful to address needs similar to those of this student?	Y	N
5. If the team determines no AT is needed, has the reason for this decision been documented somewhere in the IEP**,** such as the PLAAFP or the Notice for Initial Provision of Programs and Services? **"Child does not need AT" is insufficient documentation - see #1 & #2**	Y	N
6. If the team determines that AT is needed, has the student's need for AT been documented in the IEP?	Y	N
7. If the need for AT has been identified, has the team determined what AT device(s) and service(s) meet the student's needs?	Y	N

After completing the Preparing for AT Consideration Checklist above, please consult with the **AT Consideration and Assessment Flow Chart** **(**https://drive.google.com/file/d/1NHLL0viGx5TBIftGXIx6UHr-Sh2cG_0p/view?usp=sharing) which compares and contrasts the differences between consideration and assessment with assessment tools and strategies.

EFFECTIVE CONSIDERATION PRACTICES

1. Unless the student is currently using a specific device at some level of proficiency, a product name or vendor name should generally not be used to describe the technology that will be provided to the student. For examples of descriptive statements of AT function versus brand name, see **Generic AT statements for the IEP**
2. Avoid listing AT devices on the IEP that have not been tool trialed with the student.

3. Considering AT in the Special Factors section of the IEP may start with the threshold question as to whether there is a suspected or identified need for AT. Since IDEA defines AT services as any service that directly assists a child with a disability in the selection or use of AT devices, including evaluation of the needs of the child and a functional evaluation in the child's customary environment, a suspected need for AT often triggers the need for an AT evaluation using AT assessment tools and strategies.
4. If in preparing for an upcoming IEP there is already a suspected need for AT prior to the IEP team Meeting, or it is suspected that additional information is needed to address AT consideration in the IEP process, an AT evaluation should be initiated prior to the IEP process. Tool trials could be a component of an AT evaluation conducted prior to the IEP, the results of which are considered by the IEP Team. If extended time is needed for this assessment strategy, the evaluation timelines can be extended by mutual agreement of the parent and the district. (NOTE: An annual review IEP team Meeting must occur in a timely manner so that there is no gap in FAPE.)
5. Another option for an extended evaluation timeline would be to list continued tool trials on the IEP as an AT service for a specified duration ("Student is undergoing tool trials with (word prediction software"). This AT service would be progress monitored on a scheduled basis as part of the IEP.
6. Tool trials incorporated into the IEP must be implemented with fidelity and cannot be a blank check for avoiding a decision on selection of AT for the course of the IEP. At the conclusion of the AT service of functional evaluation with AT tool trials in the child's customary environment, the IEP would reconvene the IEP process to consider the results of this evaluation.
7. AT consideration should include input from parent/guardian, the student, special education teachers, general education teachers, and paraprofessionals, if assigned.
8. Create an inventory of digital resources for curriculum materials to know what is available and what is needed in advance of an IEP.
9. The least complex solution that will remove barriers to achievement should be the first consideration as the IEP team attempts to fulfill its obligation to provide FAPE in the least restrictive environment.
10. Once AT has been determined, consider how devices and services will be obtained.

11. Specify a plan for maintaining devices.
12. Develop a plan for replacement should the device fail.
13. Periodically, districts should be encouraged to do a self-assessment with QIAT matrices to identify systemic strengths and weaknesses.
14. Use the self-assessment to set annual goals to improve delivery of AT equipment and services.
15. Include AT professional development in building improvement goals.

ERRORS TO AVOID

1. AT is considered for students with severe disabilities only.
2. No one on the IEP team is knowledgeable regarding AT.

3. The team does not use a consistent process based on data to consider AT.
4. Consideration of AT is limited to those items that are familiar to team members or are available in the district.
5. Team members fail to consider whether a student has sufficient access to the curriculum to receive FAPE.
6. If AT is not needed, the IEP team fails to document the basis of its decisions.

WISCONSIN ASSISTIVE TECHNOLOGY INITIATIVE CONSIDERATION

WATI (2004, 2017) offers a packet entitled AT Consideration to Assessment, available for free at http://www.wati.org/free-publications/assistive-technology-consideration-to-assessment/. This package includes a number of resources that support effective AT considerations. They include the AT Decision Making Guide, a Classroom Observation Guide, a Consideration Guide Form, a Procedure Guide for Consideration, a Student Info Guide, and a Tool Identification guide.

§2 AT ASSESSMENT

The Federal Register (July 10, 1993) provides the following definitions:
Assessment - "group of activities conducted to determine a child's specific needs"
Evaluation - "a group of activities conducted to determine a child's eligibility for special education."
In the field, AT Assessment and AT Evaluation have been used interchangeably. However, the task Force adopts the position taken by Penny Reed, the original director of the Wisconsin AT Initiative, in the WATI Assessment Package (2004).

> "We believe that assessment is a more accurate and descriptive term for what needs to occur. It has long been our philosophical belief that there is no "eligibility" criterion for AT. IDEA '97 supports that philosophy with its requirement that each IEP team "consider" the student's need for AT."

Even though an AT evaluation is mentioned in IDEA as a service that a school district must provide, we believe that the use of the term AT Evaluation has caused confusion in the field and, therefore, we instead use the term AT Assessment in this handbook. The Task Force defines the AT Assessment as a collaborative process which considers student concerns, the tasks the student is expected to perform, the student's learning environment, and previous technologies and interventions tried. Based on this information, the AT Assessment offers recommendations for new technologies and other interventions to be tried. In contrast, an evaluation is specific to the determination of eligibility for special education.

QUALITY INDICATORS OF AT ASSESSMENT (QIAT)

The QIAT provides an excellent model for guiding IEPs to conduct a quality AT Assessment.
(Source: http://www.qiat.org/http://www.qiat.org/indicators.htmlindicators.html)

1. **Procedures for all aspects of AT assessment are clearly defined and consistently applied.**

Intent: Throughout the educational agency, personnel are well-informed and trained about assessment procedures and how to initiate them. There is consistency throughout the agency in the conducting of assistive technology assessments. Procedures may include-–but are not limited to–initiating an assessment, planning and conducting an assessment, conducting trials, reporting results, and resolving conflicts.

2. **AT assessments are conducted by a team with the collective knowledge and skills needed to determine possible AT solutions that address the needs and abilities of the student, demands of the customary environments, educational goals, and related activities.**
   Intent: Team membership is flexible and varies according to the knowledge and skills needed to address student needs. The student and family are active team members. Various team members bring different information and strengths to the assessment process.
3. **All AT assessments include a functional assessment in the student's customary environments, such as the classroom, lunchroom, playground, home, community setting, or workplace.**
   Intent: The assessment process includes activities that occur in the student's current or anticipated environments because characteristics and demands in each may vary. Team members work together to gather specific data and relevant information in identified environments to contribute to assessment decisions.
4. **AT assessments, including needed trials, are completed within reasonable timelines.**
   Intent: Assessments are initiated in a timely fashion and proceed according to a timeline that the IEP team determines to be reasonable based on the complexity of student needs and assessment questions. Timelines comply with applicable state and agency requirements.
5. **Recommendations from AT assessments are based on data about the student, environments and tasks.**
   Intent: The assessment includes information about the student's needs and abilities, demands of various environments, educational tasks, and objectives. Data may be gathered from sources such as student performance records, results of experimental trials, direct observation, interviews with students or significant others, and anecdotal records.
6. **The assessment provides the IEP team with clearly documented recommendations that guide decisions about the selection, acquisition, and use of AT devices and services.**
   Intent: A written rationale is provided for any recommendations that are made. Recommendations may include assessment activities and results, suggested devices and alternative ways of addressing needs, services required by the student and others, and suggested strategies for implementation and use.
7. **AT needs are re-assessed 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.**
   Intent: An assistive technology assessment is available any time it is needed due to changes that have affected the student. The assessment can be requested by the parent or any other member of the IEP team.

AT ASSESSMENT ERRORS TO AVOID

(Source: **Quality Indicators Matrices** (http://www.qiat.org/indicators.html)

1. Procedures for conducting AT assessment are not defined or are not customized to meet the student's needs.
2. A team approach to assessment is not utilized.
3. Individuals participating in an assessment do not have the skills necessary to conduct the assessment and do not seek additional help.
4. Team members do not have adequate time to conduct assessment processes, including necessary trials with AT.
5. Communication between team members is not clear.
6. The student is not involved in the assessment process.
7. When the assessment is conducted by any team other than the student's IEP team, the needs of the student or expectations for the assessment are not communicated.

THE SETT FRAMEWORK

Joy Zabala's SETT Framework is a model that can be helpful in preparing for effective AT assessment. According to Zabala, "The SETT Framework is intended to promote collaborative decision-making in all phases of AT service design and delivery from consideration through implementation and evaluation of effectiveness." For more information, see http://www.joyzabala.com/

The SETT Framework explores four areas including gathering information about the student (concerns and needs), the learning environments (the places where the student will use the technology), the tasks a student is expected to do or learn to do (functional demands for each learning environment), and, finally, the tools the student will need (technology, services, and strategies) to work toward mastery of the tasks in the customary places where they occur.

To assist in the documentation of these steps, Dr. Zabala has created several SETT Scaffolds.

http://www.joyzabala.com/uploads/Zabala_SETT_Scaffold_Consideration.pdf.

MULTIPLE USES OF AN AT ASSESSMENT

While the AT Assessment can be used as part of a Review of Existing Evaluation Data (REED) for a Multidisciplinary Evaluation Team, information from the AT Assessment may be included in the present level of academic achievement and functional performance (PLAAPF) of an IEP and recommendations from the AT Assessment may also be considered by an IEP team for inclusion into Supplementary Aids and Services or, in some cases, as an IEP goal.

More broadly, elements of an AT Assessment, e.g. the SETT Framework, may be used as an informal problem-solving tool. American inventor and engineer, Charles Kettering

once said that “a problem well stated is a problem half solved.” By using the SETT Framework to record concerns, tasks, current accommodations, and continuing challenges, learning problems can become better defined and understood, leading to informal problem-solving activities.

AT is often abandoned or simply unused. Sharp (2010) spotlighted the high rate of AT abandonment and acknowledged that there are multiple explanations including lack of training, too much teacher time needed, student/parent refusal and lack of need. The absence of a comprehensive AT assessment can result in AT being inappropriately designed and/or selected, leading to disuse and, significantly, a wasted opportunity.

WATI ASSESSMENT RESOURCES

In 2004, WATI produced an AT Assessment packet. In 2017, WATI published an update, *AT Consideration to Assessment*, available for free at http://www.wati.org/free-publications/assistive-technology-consideration-to-assessment/. This package includes a number of resources that support effective AT considerations. These include AT Decision Making Guide, a AT Technology Trial Use Summary, AT Continuums, a Classroom Observation Guide, a Consideration Guide Form, a Procedure Guide for Assessment, a Procedure Guide for Consideration, a Student Info Guide, a Tool Identification guide, a Tool Identification Guide Form, a Tool Identification Guide Form, a Trial Use Guide and a Trial Use Guide Form. This package is highly recommended for building capacity in all phases of the AT process.

§3 IMPLEMENTATION

Credit for graphic: Maryland Assistive Technology Network

OVERVIEW

AT implementation pertains to the ways that AT devices and services, as set forth in the IEP (including goals/objectives, related services, supplementary aids and services and accommodations or modifications) are delivered and integrated into the student's educational program. AT implementation involves people working together to support the student using AT to accomplish the expected tasks necessary for active participation and progress in customary educational environments.

The implementation plan, developed collaboratively, should provide detailed information regarding how the AT should be used in specific environments and for specific tasks, what needs to be completed for successful implementation, and who will do what tasks (QIAT, 2009). The implementation plan should ensure that AT is integrated into the student's curriculum and daily activities, and across applicable environments. The primary focus of AT in the plan is to facilitate the student's access to the curriculum, but it also may facilitate active participation in educational activities, assessments, extracurricular activities, and typical routines (QIAT, 2009). This plan should also enable team members to share responsibility and be accountable for the implementation of the plan. Team members should know their responsibilities, roles, and expectations. Additionally, implementation includes the management and maintenance of materials

and equipment. The team should delineate who is responsible for the organization of equipment and materials; for acquisition, set-up, repair, and replacement in a timely fashion; and for ensuring that equipment is operational (QIAT, 2009). Included within a student's implementation plan should be statements of training as necessary for the student, team, and family. Training should be determined by how the AT will be used in each environment and implemented as part of an ongoing process based on the changing needs of the student and the environment (QIAT, 2009).

QUALITY INDICATORS FOR AT IMPLEMENTATION

1. **AT implementation proceeds according to a collaboratively developed plan.**
   Intent: Following IEP 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.
   Caution: Sometimes in the process of creating an AT implementation plan there are implications for supports that should be included/reflected in the IEP as a part of FAPE. Should this occur, the IEP should be amended accordingly, either by agreement of the district and the parent or by convening an IEP team meeting. An alternative may be to create a draft implementation plan in preparation for the IEP, which would help identify supplementary aids and services for curriculum and daily activity integration points as described in item 2 below.
2. **AT is integrated into the curriculum and daily activities of the student across environments.**
   Intent: AT is used when and where it is needed to facilitate the student's access to, and mastery of, the curriculum. AT may facilitate active participation in educational activities, assessments, extracurricular activities, and typical routines.
3. **Persons supporting the student across all environments in which the AT is expected to be used share responsibility 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 AT, and are expected to do so.
   "Persons responsible" are also often identified in the supplementary aids and services section of the IEP.
4. **Persons supporting the student provide opportunities for the student to use a variety of strategies–including AT– 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 AT, other supports, or modifications to the curriculum, task or environment. Again this same array of interventions may be reflected in various parts of the IEP.
5. **Learning opportunities for the student, family and staff are an integral part of the implementation.**

Intent: Learning opportunities needed by the student, staff, and family are based on how the AT will be used in each unique environment. Training and technical assistance are planned and implemented as ongoing processes based on current and changing needs.
All of these learning opportunities fall within the ambit of AT services, the provision of which should be reflected in the IEP.

6. **AT implementation is initially based on assessment data and is adjusted based on performance data.**
   Intent: Formal and informal assessment data guide initial IEP decision-making and planning for AT implementation. As the IEP is carried out with fidelity via the implementation plan, student performance is progress monitored and the IEP is reviewed at least annually for such adjustments as are necessary and appropriate to support student progress.
7. **AT implementation includes management and maintenance of equipment and materials.**
   Intent: Maintaining, repairing, or replacing AT devices is a component of AT service. 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, setup, repair, and replacement in a timely fashion; and assurance that equipment is operational.

COMMON AT IMPLEMENTATION ERRORS

1. Implementation is expected to be smooth and effective without addressing specific components in a plan. IEP Team members assume that everyone understands what needs to happen and knows what to do.
2. Plans for implementation are created and carried out by one IEP team member.
3. The IEP team and/or the implementation team focus on device acquisition and do not address AT services.
4. An implementation plan is developed that is incompatible with the instructional environments.
5. No one takes responsibility for the care and maintenance of AT devices and so they are not available or in working order when needed.
6. Contingency plans for dealing with broken or lost devices are not made in advance.

GUIDING QUESTIONS FOR IMPLEMENTATION OF AT

The guiding questions on AT implementation should be reviewed by:

1. AT evaluation team members, when seeking information and making recommendations regarding AT;

2. IEP Team members, when reviewing AT evaluation reports and making decisions about IEP AT-related content;
3. Implementation planning teams, when reviewing the IEP for their instructions on the delivery of FAPE in the LRE, including special education, related services, supplementary aids and services, and program modifications and supports.

THE GUIDING QUESTIONS REGARDING AT IMPLEMENTATION INCLUDE THE FOLLOWING:

STUDENT RELATED QUESTIONS

- What aspects of student performance are expected to change?
- What are the specifics of how the student should use AT (what tasks, under what conditions, where, when, how, and with whom)?
- What may need to be changed (use of AT, educational strategies, accommodations, and modifications)?
- What supports and cues will the student require to be successful (auditory, visual-tactile, least to most, most to least, etc.)?
- What training does the student need for effective implementation?
- Are there any changes in the physical environment that need to be made to support student success (physical, sensory, availability of technology, access to technology)?

ADULT RELATED QUESTIONS

- Who are the adults actually involved in implementation (teachers, administrators, paraprofessionals, family, administrators, etc.)?
- What tasks do the adults need to accomplish to assist with supporting the student's effective use of AT (make available the technology, provide supervision or support, take data, assist with maintaining equipment)?
- What training do the adults need (device, strategies, how to get help when needed, troubleshooting, etc.)?
- What resources are needed by the adults to assist with implementation and training (AT practitioners and training from outside agencies, administrative support, vendor support, time)? (TATN, 2013)

AT EFFECTIVENESS

After the IEP supports have been identified, the implementation plan should incorporate all IEP-based data collection strategies related to AT effectiveness. The answers to these questions will form a platform for considering AT effectiveness.

- What evidence will be collected to document whether AT is supporting the expected change in student performance (achievement, functional capabilities, progress in goals and objectives)?
- What will be measured to determine if changes in performance occurred (quality, quantity, independence, accuracy, spontaneity, speed, frequency, duration, latency)?
- What strategies will be used for data collection (interview, discussion, observation, subjective reporting, student work review, video, etc.)?
- When and for what reason will data be reviewed and analyzed (frequency during implementation, periodically scheduled reviews, formative or summative evaluation)?
- What are we looking for when we analyze data (changes in student achievement or performance, expected results, unexpected results, barriers removed, continuing barriers, emerging barriers)?
- What IEP changes should be made to improve student performance? (Consider if the student is not progressing, if expected results are not being achieved or criteria are not being met, and if there are changes in student needs, in the environment, and task demands).

BIG PICTURE OF AT IMPLEMENTATION

- Includes devices, services, and strategies promoting access and progress
- Focuses on functional areas of concern when and where they occur.
- An ongoing process involving the student, IEP, and IEP implementers
- Requires a collaborative plan by all stakeholders (TATN, 2013).

WATI IMPLEMENTATION RESOURCES

The WATI package (http://www.wati.org/free-publications/assistive-technology-consideration-to-assessment/) previously cited also features a number of resources that support effective AT implementation, including the AT Technology Trial Use Summary, a Trial Use Guide and a Trial Use Guide Form.

§4 IDEA AT REQUIREMENTS

DATA COLLECTION

According to Mandinach and Jackson (2012), data-driven decision-making (DDDM) in education arose in the wake of the No Child Left Behind legislation in 2001 as a way to improve accountability and compliance. Since then, DDDM has not only become central to the monitoring of overall school performance, but it has played a critical role in the evaluation and identification of students with disabilities, progress monitoring, and the development of progress reports. Most recently the US Department of Education has focused on systemic data-driven decision making for students with disabilities from the perspective of Results Driven Accountability (RDA).

In addition, increased attention and monitoring have been paid to data collection in regards to the implementation of accommodations. Since AT devices and services are frequently listed as accommodations in the supplementary aids and services section of IEPs, the development of guidelines for the collection of data in regards to AT would be helpful to the general and special education teachers, related service providers and paraprofessionals who serve as the primary AT implementers.

The scope and impact of AT data collection, however, goes far beyond IEP documentation. Data collection plays a critical role in AT consideration, student evaluation (including a selection of assessment tools and strategies), implementation, and evaluation of the effectiveness of selected AT in meeting identified student needs. Without data, AT may be assigned inappropriately and ineffectively. Districts need to assist staff in developing effective data collection systems that are both pragmatic and efficient.

BASICS OF AT DATA COLLECTION

How Do You Know It? How Can You Show It? (Reed, Bowser, & Korsten, 2002, 2004) provides a complete guide to AT and data collection. This resource offers a data collection guide that should be considered by all IEP teams during all phases of the AT process. The following is a summary of the key points. Click the link to access more comprehensive information.

The AT data collection process includes six steps:

1. Identify difficulties and what may be causing difficulties
2. Gather baseline data.
3. Review problem and generate possible solutions.
4. Conduct functional tool trials and collect data
5. Decide on one or more AT devices
6. Write AT into the IEP.

There are four types of data:

1. Student interview

2. Review of student products
3. Student observation
4. Videotaping

There are five variables to consider measuring:

1. Speed
2. Accuracy
3. Spontaneity
4. Duration
5. Latency (time to begin an action)

And last but not least is the schedule for collecting data.

DECIDING WHAT DATA SHOULD BE COLLECTED

(Evaluation, PLAAFP, Goal and Supplementary Aids and Services Development)

Can the student communicate the needed information?
Is there a finished product to review?
Does that finished product provide all of the needed information? If there is no finished product or it does not provide enough information, can the needed information be captured with an audio or video tape?
If observation is required in order to gather the needed information, is the target behavior numerical (i.e., frequency-based) or time related (speed-based)?
If the target behavior is numerical, is it expected to occur at a low, moderate, or high frequency? Based on that answer, will the teacher be able to collect data during instruction, or will someone else need to do it?
If the target behavior is time related, is it important to measure the time before the child initiates the action or the time elapsed during performance of the action?
Should data collection be ongoing, or can it be episodic? If episodic data is sufficient, how often and when does the data need to be collected.

PLANNING FOR DATA COLLECTION -- QUESTIONS TO CONSIDER

1. What is the goal for the AT?
2. What IEP goal(s) will be addressed through use of AT?
3. What question(s) should be answered through data collection?
4. What can be measured and/ or how can it be measured that will show not only whether criteria is achieved, but if not, why not?
5. How can the data best be collected?
6. What will it take to conclusively show the student is ready to move on? Progress Report/Annual Review/ PLAAFP Outcome Considerations

1. The IEP team may find that there is clear data that shows that implementation of certain AT devices and services has supported improved access to, participation in, and progress in the general curriculum, thereby suggesting the need for their continued use.
2. The IEP team may find that there is clear data that shows that implementation of certain AT devices and services does not support improved access to, participation in, and progress in the general curriculum. In this case the IEP team may choose another way of solving the problem such as teaching the child new skills or changing the kinds of tasks which are required.
3. The IEP team may find that there is not yet enough data to make a decision and more data should be collected.
4. The IEP team may find that the data collected uncovered unexpected information. When this occurs, the IEP team may need to frame a new question.

BEST PRACTICES IN AT DATA COLLECTION

1. In initial evaluations and reevaluations involving AT considerations, review existing records for prior AT utilization and any related data collection regarding efficacy.
2. Establish a baseline of performance without the use of AT.
3. When an IEP includes the provision of an AT device, the IEP should also identify the purpose to be served. This can often be accomplished and reflected in accompanying data collection parameters, e.g., the data collection tracks biweekly assignment completion rates when the student uses text to speech software.
4. Establish a start and ending date for the data collection.
5. Assure that IEP implementers are aware of their AT data collection responsibilities and the purpose(s) for which the data is being collected.
6. Develop a data collection form and share with data collectors for feedback.
7. Consider various data collection methods (e.g. hard copy vs. digital) and identify a method that is manageable for the data collectors.
8. Consider a trial run before the actual data collection begins.
9. Conduct progress monitoring, analyze data for trend line and compare with goal line. Determine if rate of progress is on pace with goal completion by the end of the IEP year. Share data collection results with parents and IEP implementers.
10. Whenever possible, data collection results should be recorded and shared digitally

ERRORS TO AVOID IN DATA COLLECTION

1. Focusing on a tool rather than a specific student need. For example, track data for the use of a Chromebook instead of focusing on speech to text to address a student's expressive writing problem.
2. Lack of a timeline that includes the starting and ending dates of the data collection period.
3. Choosing a data collection method that is difficult to manage in a classroom setting. For example, a digital spreadsheet is selected when the teacher does not have convenient access to a computer.
4. Insufficient advance notice to staff with data collection responsibilities. The best practice is to consult with staff before assigning responsibilities.
5. Failure to share the goal(s) of the data collection with the data collector. The lack of a purpose for data collection may diminish its importance.
6. Failure to share data collection results with the IEP team. This result is more likely when data is limited to hard copies.

CONSIDERATIONS IN DATA COLLECTION

Until a short time ago, most data collection forms were available only in a print format. Even now, most templates for AT data collection are still in a print-based format. Sometimes, print-based data collection methods still make sense, due to lack of access to computers, the unavailability of mobile devices, or unreliable wifi networks. However, the trend is clearly for data collection to become increasingly digital.
Now, many online special education data systems include a data-tracking component. For example, Wayne County RESA's MISTAR Connect system includes both an Accommodations Log and an Objectives Service Log. Continued field testing will assist in working out implementation issues, e.g., pull down menus slowing down data entry, and stand-alone computers are required, which are sometimes inconveniently situated in instructional settings.
In response to these implementation issues, teachers are developing alternative digital data collection systems. Teachers fluent in Google tools are experimenting with Google Forms and Sheets to enter data. See Appendix for examples. With Google Forms, data entry can occur on a Chromebook. Google Sheets is accessible both on a Chromebook and on mobile devices. The significant advantage to data entry with Google Forms is that multiple data entry events can be summarized on a single spreadsheet and then shared immediately with multiple staff, thereby eliminating the duplication and distribution steps involved in sharing data in print-based forms. Also, the sharing of data collection templates is much simplified with Google Apps. However, the use of Google tools in schools is dependent on ready access to technology and a reliable wi-fi network.

§5 AT AND TRANSITION SERVICES

DEFINITION OF TRANSITION

As used in this Chapter, “transition” takes two forms. The first reflects legal obligations triggered by transition points specifically referenced in IDEA Part C (covering ages birth to 3) and IDEA Part B (covering ages 3-21). The second recognizes “passages” within K-12 education from elementary to middle to high school. Collectively these transition points reflect movement of students with disabilities from one level or service to the next at key benchmark points, including:
“Birth to 3” to Preschool or other programs
Preschool/other programs to Elementary School
Elementary to Middle School
Middle School to High School/Secondary Programming
High School/Secondary Programming to adult living, training, education, employment, etc.

FEDERAL STATUTES RELATING TO TRANSITION

The Individuals with Disabilities Education Act (IDEA) and the Rehabilitation Act of 1973 (Rehabilitation Act), as amended by Title IV of the Workforce Innovation and Opportunity Act (WIOA) are Federal statutes interfacing with various child/student transition points. This Guidance document, however, will primarily focus on IDEA transition requirements as reflected in the following sections of the US Department of Education’s implementing regulations for IDEA:

IDEA-PART C

The Part C program of IDEA applies to infants and toddlers with disabilities. Part C implementing regulations require certain transition procedures when infants and toddlers age out of Part C.
Sec. 303.209 Transition to preschool and other programs

The stated purpose of this Part C implementing regulation 303.209 is to provide a smooth and effective transition from Part C Early Intervention (serving birth through two) to preschool and other programs.
Implication: If AT is a component of the Part C Individualized Family Service Plan it should also be considered when planning transition to post-C programs.

IDEA PART B

Sec. 300.305 (e) Additional requirements for evaluations and reevaluations
For a student whose eligibility terminates due to graduation with a regular high school diploma or aging out of eligibility for special education, a public agency must provide the child with a summary of the child's academic achievement and functional performance, which shall include recommendations on how post-exit third parties may assist the student in meeting the child's postsecondary goals

Sec. 300.320(b) Definition of Individualized Education Program-Transition services.

"Beginning not later than the first IEP to be in effect when the child turns 16, or younger if determined appropriate by the IEP Team, and updated annually, thereafter, the IEP must include—

1. Appropriate measurable postsecondary goals based upon age appropriate transition assessments related to training, education, employment, and, where appropriate, independent living skills; and
2. The transition services (including courses of study) needed to assist the child in reaching those goals."

Sec. 300.43 Transition services (beginning at age 16)

"Transition services means a coordinated set of activities for a child with a disability that—
Is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child's movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;
Is based on the individual child's needs"

Implication: Where AT is essential in "improving the academic and functional achievement of the child," then AT should be included in Transition planning.

QUALITY INDICATORS OF AT (QIAT) AND TRANSITION

Source: http://www.qiat.org/indicators.html

1. **Transition IEPs address AT needs of the student, including roles and training needs of team members, subsequent steps in AT use, and follow-up after transition takes place.**
   Intent: The comprehensive transition plan required by IDEA assists the receiving agency/team to successfully provide needed supports for the AT user. This involves the assignment of responsibilities and the establishment of accountability.

2. **Transition planning empowers the student using AT to participate in the transition planning at a level appropriate to age and ability.**
   Intent: The comprehensive transition plan required by IDEA assists the receiving agency/team to successfully provide needed supports for the AT user. This involves the assignment of responsibilities and the establishment of accountability.

3. **Advocacy related to AT use is recognized as critical and planned for by the teams involved in transition.**
   Intent: Everyone involved in transition advocates for the student's progress, including the student's use of AT. Specific advocacy tasks related to AT use are addressed and may be carried out by the student, the family, staff members or a representative.

4. **AT requirements in the receiving environment are identified during the transition planning process.**
   Intent: Environmental requirements, skill demands and needed AT support are determined in order to plan appropriately. This determination is made collaboratively and with active participation by representatives from sending and receiving environments.

5. **Transition planning for students using AT proceeds according to an individualized timeline.**
   Intent: Transition planning timelines are adjusted based on specific needs of the student and differences in environments. Timelines address well mapped action steps with specific target dates and ongoing opportunities for reassessment.

6. **Transition IEPs address specific equipment, training and funding issues such as transfer or acquisition of AT, manuals and support documents.**
   Intent: A plan is developed to ensure that the AT equipment, hardware, and/or software arrives in working condition accompanied by any needed manuals. Provisions for ongoing maintenance and technical support are included in the plan

The QIAT community also provides a self-assessment tool called the matrix which can be used to identify strengths and weaknesses in the implementation of AT during the transition process.

AT AND TRANSITION (BIRTH-AGE 26)

OVERVIEW

Behnke and Bowser (2010) provide a compelling justification for transition planning quite separate from the legal mandate:

> "If teachers want their students to be successful AT users after they move on to new settings, they need to conduct systematic transition planning that includes the teaching of skills related to transition. Without a focus on transition, the hard work that teachers and students with disabilities have completed in a particular

school setting is in danger of being lost when that student moves to a new environment."

According to the Pacer Center's **Parent Tips for Transition Planning (2007)** (http://www.asec.net/Archives/Transitionresources/Parent%20tips%20for%20transition.pdf), "A truly successful transition process is the result of comprehensive team planning that is driven by the dreams, desires and abilities of youth. A transition plan provides the basic structure for preparing an individual to live, work and play in the community, as fully and independently as possible."

Unfortunately, studies have indicated that students with disabilities at the secondary level and in postsecondary settings are being underserved with the AT supports they need to be successful. For example, Bouck and Flanagan (2015) reported:

- A likely under-utilization of AT for secondary students and adults with severe disabilities;
- A need for improved collaboration between professionals in rehabilitation and professionals in schools to ensure continuation of needed services or aids, such as AT.
- A need for additional research to better understand the adult life (or post-school) outcomes of individuals with severe disabilities, factors from PK-12 schooling or post-school services that positively and negative impact those outcomes.

In addition, Bouck (2016) found "higher rates of AT for secondary students with more low-incidence disabilities than with more high incidence disabilities" and, alarmingly, only 5.1% of students with high incidence disabilities reported receiving AT during the last year of secondary school. If such a low percentage of students with high incidence disabilities are receiving AT in the final year of school, this likely means that only a small percentage of students with high incidence disabilities have AT included in Transition IEPs for post school settings.

At a time when the cost of AT has steadily declined, especially with the emergence of low cost or no cost apps, mobile devices and the increased availability of digital text from publishers, the opportunity has never been better for students with disabilities to access AT in high school and in the post school environment. However, without properly documenting AT in transition IEPs for those students who use it and informing students about the AT supports available to them in post school settings, students may be unaware of the AT options available to them. Training both special education and general education teachers in current and emerging assistive technologies is key to increasing the use of AT at the secondary level and helping students prepare for post school environments.

TRANSITIONS FROM BIRTH TO AGE 16

When students move from one program to another up to age 16, and when AT equipment and services are listed as supports in IEPs for sending programs, AT equipment and services should be also be considered for the receiving program.

Baker (2018) stated that the following AT information should be considered in inter-program transition IEPs:

- a description of the student's current technology use;
- a statement of the AT requirements in the receiving environment (i.e., the school / setting he or she will be moving to);
- information concerning the transfer of equipment, including user manuals and support documents;
- identification of key personnel involved in training, accessing funding options, and providing ongoing support;
- steps for using and maintaining the AT;
- an outline of the roles and training needs of team members;
- follow-up activities including assessment and evaluation;
- an individualized timeline for implementation.

AGES 16 TO 26 -TRANSITION TO POSTSECONDARY PROGRAMS: PRE-EXIT TRANSITION PLANNING AND EXIT SUMMARY OF PERFORMANCE

Although the entire K-12 curriculum is about preparing students for transition to post-secondary life, IDEA requires that no later than age 16, the IEPs of students with disabilities must specifically address transition to adult life. This IEP development should include age-appropriate transition assessments, the identification of measurable postsecondary goals, a description of the student's course of study, appropriate goals and objectives, and needed secondary transition services to prepare for the transition from secondary to post-secondary life. In addition, when AT is documented in the current IEP and a student will ultimately be exiting special education, then AT should also be considered in the recommendations to meet post-secondary goals section of the Summary of Performance.

AT Transition planning varies depending on the type of postsecondary programs. For example, for adult students who leave school, transition planning may include providing information about applying for financial assistance for AT equipment and services through government programs or private agencies. For college-bound students, transitioning planning may include providing information about disability offices at various institutions which often provide AT. For non-college bound students entering the working world, contacting nonprofit or government agencies may be an appropriate step in transition planning. In addition, AT Transition planning for these students may

include information about free or low-cost alternatives for AT that may not be available to them in post-school settings.

AT AND SELF DETERMINATION

According to Field and Hoffman (1994), self-determination is the "ability to identify and achieve goals based on a foundation of knowing and valuing oneself." For those students who have depended on AT to achieve goals within a school or agency setting, self-advocacy for the use of AT should continue and grow as students become more independent in the post-school setting whether that be in the working world, a trade school, college, or an adult community program.

By law, all LEAs are expected to provide students exiting special education due to graduation or exceeding age of eligibility with a Summary of Performance that includes a description of AT and other supports that has been used to achieve success in a secondary program.

While the Summary of Performance is one tool available to support self-determination, Canfield and Reed (2001) have developed other tools such as: The Student Information Guide for Self Determination and AT Management, AT Goal Setting Worksheet, and Student Portfolio for Successful Transition with AT, and the AT Emergency Plan. Other self-assessment tools include the **Guide to Assessing College Readiness** (http://www.asec.net/Archives/Transitionresources/Parent%20tips%20for%20transition.pdf) from Landmark College and the **Student Self Evaluation Matrix** (http://qiat-ps.org/students/) for post-secondary students.

Finally, the emergence of digital portfolios, particularly in secondary schools, provides an effective option for self-determination. Digital portfolios for student with disabilities exiting secondary education contain a description of AT needs, including both equipment and services, along with adult service providers. A digital portfolio makes it relatively simple for students to share their AT needs in a variety of post school settings.

IEP DOCUMENTATION OF AT FOR TRANSITION

In any IEP, including Transition IEPs, AT may be embedded in any of the following areas: Assessment, Special Factors, Present Level of Academic Achievement and Functional Performance, Goals/Objectives, Supplementary Aids and Services, and Program Modifications and Supports.

Beginning at age 16, or earlier if appropriate, Transition Planning becomes a mandatory IEP consideration. At that time, AT may also be included in the student's Transition Plan in one or more of the following Transition Services areas: Instruction, Related Services, Community Experiences, Development of Employment, Other Post-School Adult Living Objectives, and/or Acquisition of Daily Living Skills.

If AT is listed as a necessary component for FAPE to ensure access to and participation in the curriculum and extracurricular activities, then AT should also be considered in at least one of the Transition Services areas.

THE TIMING OF TRANSITION PLANNING

From birth to Age 16, transition planning should take place whenever a change in program is anticipated with enough lead-time to ensure that AT equipment and services in the sending program are in place when the student enters the new program.

Beginning at age 16, transition planning takes place at every annual review IEP team meeting, when a student moves from one program to another, or when a student exits from special education with a Summary of Performance.

AT AND TRANSITION DATA COLLECTION

IDEA Sec. 300.320 indicates that the determination of postsecondary goals be based on "age appropriate transition assessments related to training, education, employment, and, where appropriate, independent living skills." The selection of an age appropriate transition assessment protocol is left to LEAs. A variety of commercially available transition assessment are available on the market. To guide districts, we recommend consulting the Age Appropriate Transition Toolkit (https://transitionta.org/system/files/toolkitassessment/AgeAppropriateTransitionAssessmentToolkit2016_COMPLETE_11_21_16.pdf) available at the National Technical Center on Transition-NTACT (https://www.transitionta.org). The Toolkit lists the following informal data collection methods including interviews/questionnaires, direct observation, environment or situational analysis, curriculum based assessments, school performance measures, and transition planning inventories. The Toolkit also names formal assessment methods including achievement tests, adaptive behavior and independent living, aptitude tests, interest inventories, intelligence tests, personality or preference tests, career development measures, on the job or training evaluations, and self-determination assessments.

When AT is included in transition planning, data should be collected to document its use and past effectiveness. Commercially available transition assessment measures may or may not include AT. But a free AT Assessment tool that can be used is WATI's AT Consideration to Assessment (http://www.wati.org/free-publications/assistive-technology-consideration-to-assessment/.) Other Transition resources from WATI are available at: http://www.wati.org/free-publications/other-materials/.

Customized Google data collection tools are beginning to replace conventional data collection methods for collection of IEP data. For example, Google surveys and spreadsheets can be used to satisfy state monitoring requirements in documenting accommodation implementation and activity toward completing objectives. An excellent presentation on the subject can be accessed at: http://www.careertechpa.org/Portals/0/PACTESP%20Handouts/2016%20Materials/Frey%20-%20Strategies%20PPT.pdf?ver=2017-06-09-092933-32

A TRANSITION IEP CHECKLIST FOR AT

Transition IEP Questions	Yes	No
1. Is at least one member of the IEP team **knowledgeable** about current assistive technologies that have been shown to be helpful to address needs similar to those of this student?	Y	N
2. For students **16 years or older**, if AT has been listed as accommodation in the IEP, has it been considered in the Transition Plan?	Y	N
3. If AT has been documented in **previous transition plans** about AT, has AT been considered in the current IEP?	Y	N
4. Has the receiving agency or program been contacted in advance of the IEP to discuss **the AT needs of the student?**	Y	N
5. Have the **training needs** of the staff in the receiving agency or program been considered?	Y	N
6. Has the **funding** of AT in the receiving agency or program been considered?	Y	N

If the answer to one of these questions is no, IEP teams should consider further action prior to a Transition IEP. For example, if no team member is knowledgeable about AT, the team should consult with an AT specialist to learn about AT options that may be appropriate for the student. Once action has been taken to address all the considerations in the checklist, the team is prepared for the Transition IEP.

SPECIAL AT CONSIDERATIONS FOR LOW INCIDENCE STUDENTS EXITING SPECIAL EDUCATION

1. The professional performing AT evaluation/assessment must have working knowledge of Medicaid requirements and funding related to AT.
2. The Transition Plan should address connecting the family/student to an advocacy organization to assist the family/student in navigating the mental health system and accessing the funding and services for AT.
3. The IEP team should discuss and identify a specific timetable for training and capacity building for the individual, the family and those staff and care providers within the circle of support for the individual. The training timeline should identify specific training activities when they will be completed and by whom.
4. In Michigan, students at age 26 (low incidence) should leave with a comprehensive portfolio which describes in text and picture their AT needs and

how they were being met within the school setting. In addition to AT, other topics for the personal portfolio include nursing, speech, OT/PT, social work, academic and behavioral services provided to support the student within the school setting. This portfolio helps document the need for such services and helps adult service providers, new to the student, know where to begin regarding AT and other relevant services.

ERRORS TO AVOID IN TRANSITION PLANNING*

1. Lack of self -determination, self-awareness and self-advocacy on part of the individual with a disability (and/or advocate)
2. Lack of adequate long range planning on part of sending and receiving agencies (timelines)
3. Inadequate communication and coordination
4. Failure to research funding opportunities
5. Inadequate evaluation (documentation, data, communication, valued across settings) process
6. Philosophical differences between sending and receiving agencies
7. Lack of understanding of the law and professional responsibilities
8. Lack of AT documentation in the Transition IEP
9. Waiting until the last year of school to look at AT needs for transition. Early adoption of AT and self-determination skills are the best practice.

(*Source: http://qiat.org/docs/6%20QIs%20for%20Transition.pdf)

OBSTACLES TO IMPLEMENTATION OF AT IN TRANSITION PLANNING

1. Lack of understanding with how to document AT in transition
2. Lack of knowledge of AT options
3. Rapidly changing technology
4. Lack of coordination with receiving program or agency
5. Insufficient funding of AT
6. Lack of training time
7. For parents of low incidence students who exit special education at age 26, the complexity of applying for funding of technology and services from Federal agencies.

AGENCIES AND AT FUNDING STREAMS

Note: The key agency and funding stream, especially for low incidence and low-income students who tend to be underserved in the area of AT, is the Mental Health System (funded by Medicaid) in the county in which the person lives. For descriptions of the following agencies, see Chapter 11: Resource Index.

ARC Michigan (http://www.arcmi.org)
Autism Society of Michigan (http://www.autism-mi.org)
Bureau of Services for Blind Persons (http://www.afb.org/directory/profile/bureau-of-services-for-blind-persons-michigan-department-of-licensing-and-regulatory-affairs/12)
Centers for Independent Living (http://www.ilusa.com/links/ilcenters.htm)
Department of Health and Human Services / Centers for Medicare and Medicaid (http://www.cms.hhs.gov/)
Medicaid Provider Manual (http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html)
Michigan Department of Community Health (http://www.michigan.gov/mdch)
Michigan Disability Rights Coalition (http://www.mymdrc.org/assistive-tech)
Michigan Rehabilitation Services (http://www.michigan.gov/mrs)
Michigan Transition Services Association (http://www.michigantsa.com/)
National Technical Assistance Center on Transition: NTACT (https://transitionta.org/)
Quality Indicators for AT in Post-Secondary Education (QIAT-PS) (http://qiat-ps.org/)

ASSISTIVE TECHNOLOGIES FOR TRANSITION

AT that has been available for students with disabilities has dramatically changed in the last few years. With the free and low cost apps now available for mobile devices, Google Chrome, and Windows systems, the significant challenge is no longer cost. The challenge now is keeping current with the new technology and providing staff development. It should, therefore, be no surprise that there is currently a significant variability in the presence of AT in Transition plans. When Transition staff are aware of the latest assistive technologies, AT is more likely to be included in Transition plans. When Transition staff are unaware of the options, staff should consult with an AT Specialist. Another excellent source for information for current AT options is the Tech Matrix.

CHAPTER FOUR: GUIDING PRINCIPLES IN AAC CONSIDERATION

AAC AS AT

Augmentative and alternative communication is a subcategory of AT, meaning many of the processes and procedures outlined in this AT Handbook apply to communication supports for individuals with complex communication needs. For example, communication needs should be reflected through a consideration/assessment process, using a dynamic implementation plan, and documented within the IEP.

AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC)

Supporting the selection and implementation of an individual's AAC system is a complex and dynamic process. A multitude of factors must be considered including communication for multiple purposes with variety of partners, use across all environments, and support for continuous language and literacy learning. Here is a snapshot of important considerations to the AT/AAC process along with accompanying resources for review.

AAC DEFINED

Augmentative and alternative communication (AAC) as an area of clinical practice, includes all forms of communication that are used to express thoughts, needs, wants, and ideas when oral speech is not available for functional communication. We all use forms of AAC when we use facial expressions, gestures (unaided), use symbols and pictures, or write (aided) (USSAAC). AAC is considered **augmentative** when used to supplement existing speech, and **alternative** when used in place of speech that is absent or not functional (ASHA) . An AAC system is an integrated group of components, including the symbols, aids, strategies, and techniques used by individuals to enhance communication, (ASHA), It is a language system which supports individuals with complex communication needs in developing, rebuilding, or sustaining communicative competence to express needs and wants, develop social closeness, exchange information, participate in social etiquette routines and to communicate with oneself or conduct an internal dialogue. (Drager et al., 2010; Light & McNaughton, 2014; Beukelman and Mirenda, 2013)

SLP ROLE

AAC is an important area of practice for Speech-language pathologists as they have unique training in typical and disordered language development and communication. When considering AAC, the AT team should include an SLP skilled in the area of AAC throughout the AT/AAC assessment, consideration and implementation process.

AAC SYSTEMS AND IMPLEMENTATION CONSIDERATIONS

The belief that communication is everyone's right, that it is necessary for social connectedness, and is the essence of human life, creates a unique lens when implementing systems and supports for AAC due to the nature and role of communication in learning and life.

Considerations:

- There are no prerequisites to begin use of AAC. This means that there are no required cognitive skills, physical abilities, behavioral skills, minimum age, or communicative intent, needed to begin use of AAC supports. (ASHA, Romski & Sevcik, 2005)
- AAC does not delay or prevent acquisition of verbal speech and language development. (ASHA, Romski & Sevcik, 2005)
- Communication pervades all aspects of education (Calculator, 2009).
- AAC is multimodal, using and supporting all the individuals' modes of communication, recognizing the needs of the individual using AAC and the communication partners.
- AAC systems can support varying degrees of natural speech use including lack of intelligible speech or reduced verbal expression.
- AAC systems should represent a robust vocabulary including academic language to access literacy learning and full participation in the curriculum.

Considerations for AAC implementation include:

- A team approach involving those who support all aspects of communication, language and learning for the student.
- Use of AAC and language is learned during engaging daily communication activities and interactions in the natural environment.
- Communication partners are trained to provide augmented input (otherwise known as "aided language input" or "partner augmented input") to support and increase symbol comprehension and expressive production.

In summary, the determination and implementation of AAC systems and supports is an ongoing, dynamic process which ultimately establishes the foundation for communicative competence and self-advocacy for individuals with complex communication needs. Leading and/or participating in this process is a vital role of the speech-language pathologist as a member of the AT team.

AAC RESOURCES

American Speech-Language-Hearing Association AAC Practice Portal (ASHA)

- Communicative Competencies: Social, Linguistic, Operational, Strategic and Psychosocial (Light et al., 2003, ASHA).
- Participation Model Description (ASHA)

National Joint Committee for the Communication Needs of Persons With Severe Disabilities (NJC). Retrieved from https://www.asha.org/njc/.

Pennsylvania Training and Technical Assistance Network- Power AAC (PaTTAN - POWER:AAC). Retrieved from https://www.pattan.net/assistive-technology/at-for-communication/power-aac/

Praactical AAC founded by Dr. Carole Zangari (PrAACticalAAC). Retrieved from http://praacticalaac.org

Project Core: A Stepping-Up Technology Implementation Grant directed by the Center for Literacy and Disability Studies at UNC Chapel Hill (Project-Core). Retrieved from http://www.project-core.com.

International Society for Augmentative and Alternative Communication (ISAAC). Retrieved from https://www.isaac-online.org/english/home/

US Society for AAC (USSAAC) Retrieved from https://www.ussaac.org/

Chapter Five:
AT & STUDENTS WITH 504 PLANS

WHAT IS SECTION 504?

Section 504 refers to a portion of the Rehabilitation Act of 1973. It is a civil rights law prohibiting disability discrimination by any entity receiving federal financial assistance. It states in pertinent part:
"No otherwise qualified individual with a disability shall, solely by reason of his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."
The US Department of Education has promulgated regulations to assist recipient schools in understanding their obligations under Section 504. These regulations explain that no student in any school receiving federal financial assistance may be kept from participating in any program or activity operated by that school solely because of his/her disability and that such student may not be discriminated against at school or at school activities because of his/her disability. Because Section 504 is a civil rights statute, schools do not receive additional funding under Section 504 for complying with its non-discrimination requirements.
Non-discrimination under Section 504 bars adverse treatment based on disability and may require special treatment in the form of regular or special education and related services that are designed to meet the individual educational needs of students with disabilities as adequately as the needs of nondisabled students are met. If the student has a disability under IDEA, implementation of an IEP meets this standard. If the student is not eligible under IDEA, but is eligible under Section 504, a 504 Plan may be required to meet this standard.

WHO IS AN INDIVIDUAL WITH A DISABILITY UNDER SECT. 504?

An individual with a disability under Section 504 includes any student who:
Has a physical or mental impairment that substantially limits (imposes an important and material limitation) a major life activity (including, but not limited to, caring for oneself, sleeping, standing, walking, lifting, bending, hearing, seeing, speaking, working, breathing, reading, thinking, communicating, etc.); or
Has a record of such an impairment; or
Is regarded as having such an impairment.
NOTE: All three prongs of this definition provide protection against adverse treatment on the basis of disability. Eligibility for special treatment such as afforded under student 504 Plans requires substantial limitations stemming from active impairments under prong 1, or active presentations of intermittent impairments under prong 2.

WHAT IS AT UNDER SECTION 504?

AT is not explicitly referenced in, or defined by Section 504, but may be included in the 504 term “free appropriate public education,” i.e.,” the provision of regular or special education and related services designed to meet the individual educational needs of students with disabilities as adequately as the needs of nondisabled students are met.” AT is any device or support that helps a student to be more independent, productive and efficient in the performance of major life activities at school. Examples of AT include but are not limited to highlighters, organizers, talking calculator, audiobooks, text-to-speech supports, apps and extensions to increase accessibility (on a compatible device).
AT does NOT...

- address barriers outside of the school environment, unless that environment is “school” for the time in question, as, e.g., a field trip;
- include any medical device that is surgically implanted or that needs replacement;
- serve to cure the underlying physical or mental impairment.

HOW IS AT SUPPORT REQUESTED UNDER SECTION 504?

Implementation of Section 504 is the responsibility of general education and is not supported by IDEA funding. Before decisions are made regarding eligibility and development of a 504 Plan, evaluations must be conducted by trained personnel, must draw upon information from a variety of sources, and must be tailored to address specific areas of educational need.
Eligibility and 504 planning decisions must be made by a group of persons knowledgeable about the child, the meaning of evaluation data, and placement options. Depending on LEA or ISD policy, an AT specialist hired to serve IDEA eligible students may serve in an advisory capacity to 504 teams but generally does not get involved directly in AT considerations, evaluations or implementations unless that service is specifically contracted. That being said, the AT screening instruments and process used for special education students may be adapted for use by 504 teams. Therefore, LEAs and ISDs should develop a policy for processing AT requests for students with 504 plans. An AT specialist may be consulted in the development of this policy.
The Task Force recommends that any 504 team that considers AT as a possible support for a student should first complete the 504 Plan Interactive AT Checklist (https://docs.google.com/document/d/1Wh6z5ylE9PTYx7G0hIFbgqClGgnClxwhRVrgTmNOuE4/copy) , which provides a list of interventions that may be considered. Note that some of the strategies involve no technology, some involve inexpensive technology and some involve technology that involves considerable expense. It is suggested that strategies selected from this checklist should be tried for a period of 6-8 weeks and results documented.

HOW DOES A SCHOOL DISTRICT IMPLEMENT A 504 EVALUATION, ELIGIBILITY DETERMINATION, AND 504 PLANNING?

The 504 process unfolds very much like IDEA. Section 504 implementing regulations require Child Find, initial evaluations and periodic reevaluations, and consideration of evaluations in making eligibility and FAPE decisions.

AT PROCESS

The Task Force recommends that 504 evaluation teams adopt the SETT Framework, used by many AT specialists in Michigan, to evaluate, identify and determine AT needs and recommendations. The SETT process requires consideration of barriers the student is facing in their academic setting. To that end, the staff considers the student, the student's learning environment, tasks required and finally the tools needed for task completion. The result of the SETT framework is a set of recommendations that may include interventions listed on the 504 Plan Interactive AT Checklist (see above for link). The results of the 504 evaluation, including, as appropriate for the student, recommendations for AT, should be communicated to the family in a 504 meeting of persons knowledgeable about the child, the evaluation data, and intervention options. Subsequent changes to AT would be recommended at a follow-up 504 meeting, following review of the continuing adequacy of the 504 Plan in meeting student needs, including re-evaluation if needed.

IMPLEMENTATION OF AT IN 504 PLANS

When AT is provided in a 504 Plan, the team should identify the objective(s) for the use of the AT. For example, if text to speech is included as a learning support, the target might be that reading assignments are completed 90% of the time. Once the AT objective is determined for a 504 Plan, the use and impact of the AT should be documented over a period of time as set forth in the 504 Plan. At the end of the time period, the 504 teams should review the results and determine the next steps, e.g. continuing the use of AT or trying a different plan.

WHO PAYS FOR AT INCLUDED IN A 504 PLAN?

AT determined necessary for FAPE and included in a student's 504 Plan are provided by the school district at no cost to the parents.

WHAT ARE EXAMPLES OF AT (AT) SUPPORTS IN A 504 PLAN?

The list in the table below* is not exhaustive, but contains a compilation of the most commonly encountered presenting problems, potential AT-related supports, and related resources:

*This table was compiled by Heather Weaver and Stacey Banks, AT Consultants with Plymouth-Canton Community Schools.

AT TOOLS: ADDRESSING BARRIERS TO SUCCESS FOR STUDENTS WITH A 504 PLAN

IF A STUDENT STRUGGLES WITH...	THEN, TRY THIS RESOURCE:	TUTORIAL VIDEO AND ADDITIONAL resources:
Handwriting Legibility	Allow student to "write"/annotate on a PDF file digitally.	Kami: A Quick Introduction (video) Using Kami & Genius Scan (gSlideDeck)
Typing	Google Voice Typing (available in gDocs and gSlides)	Google Voice Typing: An Introduction (video) Using Voice Typing to Format in gDocs (video)
Handing in homework on time	Utilize a shared folder system Google Drive (student & teacher)	gDrive Tutorial: Sharing Files and Folders (video)
Reading Comprehension	Use of text to speech	Read & Write for Google BASIC (video) (free TTS only)
The writing process	Use of graphic organizers	Readwritethink.org Interactive graphic organizers for students. To access, go to classroom
Organization	Use of a planner (paper or digital)	Digital Google Calendar (video) Google Keep w/Category Tabs (video)
Remembering to take home necessary materials to complete homework, i.e. textbooks.	Extra copy of textbooks at home (or digital access to textbooks, if available)	Journeys Curriculum: Thinkcentral.com
Retaining information for	Provide study guide that directly	Use Quizlet.com to build an

IF A STUDENT STRUGGLES WITH...	THEN, TRY THIS RESOURCE:	TUTORIAL VIDEO AND ADDITIONAL resources:
an assessment	correlates to the material being assessed, and an opportunity to review prior to the test	interactive study guide for students.
Listening Comprehension/Note taking	Provide a copy of classroom notes (teacher or peer), if available. Share classroom notes via Google Classroom	Google Classroom tutorial (video) classroom.google.com
Difficulty writing on worksheets	Kami (allows student to type on top of PDF's)	Kami: A Quick Introduction (video) Using Kami & Genius Scan (gSlideDeck)

QUALITY INDICATORS FOR ASSISTIVE TECHNOLOGY WITHIN SECTION 504 PLANS

Marsters and Bowser (2018) developed a set of Quality Indicators for AT within Section 504 Plans, which districts may find helpful in developing local 504 guidelines. The QIAT-504 covers the following areas:

- Awareness of Reasonable 504 AT Accommodations
- Determination of AT Needs as an Accommodation
- Plan and Implementation
- Evaluation of Effectiveness
- Administrative Support
- Professional Development and Training
- Student Instruction about AT

See Appendix for access to the QIAT-504.

CHAPTER SIX: ADA AND AT

(Source: Connecticut AT Guidelines for Ages 3-21, p. 130-131)
The Americans with Disabilities Act of 1990 (ADA), amended in 2008 as the ADA Amendments Act (ADAAA) (P.L. 110-325), went into effect on January 1, 2009. In March of 2011, the Equal Employment Opportunity Commission (EEOC) released the ADAAA Regulations for Titles II and III (29 CFR § 1630) that went into effect on May 24, 2011.The ADA Amendments Act of 2008 and the subsequent regulations prohibit discrimination on the basis of disability. To be protected by the ADA, one must have a disability (a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is regarded by others as having such an impairment) or have a relationship or association with an individual with a disability. The Act also has a civil rights statute to protect the rights of persons with disabilities in almost every facet of their lives, including school, work and recreation. In regard to the area of AT, a student or young child with a disability may also be entitled to AT as a reasonable accommodation to his or her disability under the ADA. Students and young children (0–21) with disabilities who are not eligible for special education under the IDEA may have a right to AT under Section 504 of the Rehabilitation Act, and either Title II or Title III of the ADA.

ADA TITLE II: STATE AND LOCAL GOVERNMENT ACTIVITIES

Title II of the ADA, which reinforces many of the requirements of Section 504 of the Rehabilitation Act of 1973 (as amended, 29 U.S.C. § 794), covers state and local government services regardless of whether these entities receive Federal financial assistance. It prohibits discrimination against qualified individuals with disabilities from discrimination on the basis of disability in services, programs, and activities provided by State and local government entities (28 CFR Part 35). Public entities include school systems and publicly operated preschool programs and other instrumentalities of state and local governments. The regulations of Title II of the ADA state that: “No qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of a public entity, or be subjected to discrimination by the public entity (28 CFR §35.130(a)”. State and local governments are required to follow specific architectural standards and transportation provisions. They are required to make reasonable modifications to policies, practices, and procedures where necessary to avoid discrimination, unless they can demonstrate that doing so would fundamentally alter the nature of the service, program, or activity being provided. In order to comply with the Title II discrimination prohibitions, school systems may be required to make reasonable modifications in policies, practices and procedures or to provide “auxiliary aids and services” to the student with a disability (28 CFR §35.130(b)(7). Auxiliary aids and services” include AT devices such as tape

recorders, computers, and listening devices. In addition, the terminology includes AT services, such as the acquisition or modification of equipment (28 CFR §35.104).

ADA TITLE III: PUBLIC ACCOMMODATIONS

This covers businesses and nonprofit service providers that are public accommodations, privately operated entities offering certain types of courses and examinations, privately operated transportation, and commercial facilities. Public accommodations are private entities who own, lease, lease to, or operate facilities such as restaurants, retail stores, hotels, movie theaters, private schools, convention centers, doctors' offices, homeless shelters, transportation depots, zoos, funeral homes, day care centers, and recreation facilities including sports stadiums and fitness clubs. Transportation services provided by private entities are also covered by Title III. Title III of the ADA prohibits places of public accommodation from discriminating against persons with disabilities. Places of public accommodation are privately owned entities such as a nursery school, or elementary and secondary private schools (42 U.S.C. §1218(7)(J). The general prohibition of discrimination under Title III states that “no individual shall be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation...” (27 CFR §86.201(a). Public accommodations must comply with basic nondiscrimination requirements that prohibit exclusion, segregation, and unequal treatment. Individuals with disabilities may not be denied these goods and services because of disability. They may not be required to accept goods and services that are unequal or separate from those provided to non-disabled individuals.

CHAPTER SEVEN:
THE ROLE OF ADMINISTRATION

The QIAT Indicators for Administrative Support offer the following guidance for the administration of AT services.

1. **The education agency has written procedural guidelines that ensure equitable access to AT devices and services for students with disabilities, if required for a free, appropriate, public education (FAPE).**
   Intent: Clearly written procedural guidelines help ensure that students with disabilities have the assistive technology devices and services they require for educational participation and benefit. Access to assistive technology is ensured regardless of severity of disability, educational placement, geographic location, or economic status.
2. **The education agency broadly disseminates clearly defined procedures for accessing and providing AT services and supports the implementation of those guidelines.**
   Intent: Procedures are readily available in multiple formats to families and school personnel in special and general education. All are aware of how to locate the procedures and are expected to follow procedures whenever appropriate.

3. **The education agency includes appropriate AT responsibilities in written descriptions of job requirements for each position in which activities impact AT services.**
   Intent: Appropriate responsibilities and the knowledge, skills, and actions required to fulfill them are specified for positions from the classroom through the central office. These descriptions will vary depending upon the position and may be reflected in a position description, assignment of duty statement, or some other written description.

4. **The education agency employs personnel with the competencies needed to support quality AT services within their primary areas of responsibility at all levels of the organization.**
   Intent: Although different knowledge, skills, and levels of understanding are required for various jobs, all understand and are able to fulfill their parts in developing and maintaining a collaborative system of effective assistive technology services to students.

5. **The education agency includes AT in the technology planning and budgeting process.**
   Intent: A comprehensive, collaboratively developed technology plan provides for the technology needs of all students in general education and special education.

6. **The education agency provides access to on-going learning opportunities about AT for staff, family, and students.**

Intent: Learning opportunities are based on the needs of the student, the family, and the staff and are readily available to all. Training and technical assistance include any topic pertinent to the selection, acquisition, or use of assistive technology or any other aspect of assistive technology service delivery.

7. **The education agency uses a systematic process to evaluate all components of the agency-wide AT program.**
Intent: The components of the evaluation process include, but are not limited to, planning, budgeting, decision-making, delivering AT services to students, and evaluating the impact of AT services on student achievement. There are clear, systematic evaluation procedures that all administrators know about and use on a regular basis at central office and building levels. Bowser and Reed (2018) in *Leading the Way to Excellence in AT Services* (http://castpublishing.org/books-media/leading-assistive-technology-services/) extend the guidance of the QIAT indicators to provide an excellent, comprehensive set of best practices for administrators and AT leaders to follow in planning for and implementing AT services for students with disabilities in the following areas: leadership, management, supervision, advocacy and planning.

LEADERSHIP

Leaders can be both assigned (e.g. special education directors or building principals) or emergent (those with an AT background who provide AT services and show an enthusiasm for AT). An emergent leader may come from a number of different positions, including occupational therapists, speech pathologists, physical therapists, teacher consultants, resource room teachers, etc. Ideally, the professional who assumes this role will have the flexibility and time in their schedule to provide AT support. The roles of Administrators and AT leaders in regards to AT may vary according to their respective AT knowledge base, but they should work in consort to oversee AT implementation. The absence of emergent AT leaders in a district is a significant barrier to successful AT implementation, especially when AT specialists from outside agencies are not readily accessible. In this case, it is critically important that administration seeks out and cultivates emergent leaders. Key characteristics of AT leadership include providing a vision for AT delivery, promoting the importance of AT, motivating staff to learn about AT, valuing the use of AT, and recognizing successful implementations of AT in the field.

MANAGEMENT

A key aspect of management is developing written AT procedures and guidelines for providers to address AT consideration, assessment, implementation, documentation and accountability. Input from providers in the field is critical to minimize those procedures that are difficult to implement or conflict with time restraints in the field. Management also involves the allocation of resources for AT devices and services through careful budgeting and working with general education district level and building administrators to assure equity in AT access across the school district. As Baker (2018) points out in the Administrative section of the Connecticut AT Guidelines, an AT team

may include general and special educators, related service professionals, IT professionals, certified AT personnel, paraprofessionals in addition to administrators. AT guidelines will ensure that all AT members have access to clearly articulated expectations.

SUPERVISION

Effective supervision strategies include:

- Incorporating AT capacity in recruitment criteria.
- Being aware of staff knowledge and skills.
- Supporting staff collaboration during all phases of the AT process.
- Providing clear expectations for staff.
- Facilitating capacity building.
- Evaluating the results of AT implementations.
- The AT Leader can be a key facilitator in helping an administrator supervise AT implementation, especially in surveying AT providers in the field to identify implementation issues, determine professional development needs, collect implementation data, and team building.

An AT Leader can also help in professional development, which needs to be much more than single event. Ongoing coaching, whenever possible, should be considered. Even better, an AT leader with administrative support, can initiate and oversee an AT professional learning community (PLC) which can be used to share both successes and glitches with the goal of creating local best practices. The PLC can be also used to conduct district self-assessments using the QIAT indicators.

Administrators should work with AT Leaders to keep abreast of outside PD opportunities including profession conferences. Attendance at these conferences requires careful planning, including budget allocations, the provision for subs as needed and the sharing of conference notes with all AT providers.

ADVOCACY

When general education and special education programs are not seamlessly integrated, it becomes critically important for Special Ed Administration to advocate for improved integration. The separation between the two departments can significantly impact a special education student's access to the curriculum. For example, when accessibility is included as a criterion for the purchase of new curriculum materials, the retrofitting required for students with disabilities decreases significantly. In addition, when AT professional development is not included in general education building improvement plans, finding the time for ongoing AT training and professional development becomes very difficult. Administrative advocacy can take place in multiple venues, including district administration meetings, building meetings, district-wide PD planning sessions, community forums, and professional meetings. Administrators may enlist AT Leaders to present to various groups, including general education staff, to promote and explain the use of AT.

PLANNING AT LEADERSHIP

Bowser and Reed recommend that Administrators and Leaders take a self-assessment to identify areas of strength and areas that require additional attention. A comprehensive AT Leadership Self-Rating scale is available in their publication. They believe that strong Administrators and AT Leaders can play a significant role in building AT capacity in their organizations. We do too. But, Administration alone or AT Leaders alone cannot respond effectively to the rapidly changing field of AT. That is, sometimes news of promising new AT apps comes from students, parents, or general education teachers. Effective AT leadership planning should include input from ALL stakeholders in the AT community and provide a means for sharing new developments in the field.

CHAPTER EIGHT: PROFESSIONAL DEVELOPMENT

OVERVIEW

One of the most difficult tasks districts will encounter in meeting the AT needs of students is developing the competence of staff members. Professional development and training prepares educators to support the use of AT within the learning environment. The goal of professional development and training is to increase the knowledge and skill set of educators in the acquisition and use of AT.

Professional development is essential to providing support in the effective use of AT pursuant to federal law-**IDEA 2004 (20 U.S.C. 1400(2)(E)-(F))** which requires schools to provide AT training for the teachers, child, and family. Well-trained educators can effectively consider the need for AT as required by the mandate in federal law.

In addition, Michigan law requires that teachers of students with disabilities have some skill and proficiency in AT.

MARSE R 340.1781 Teachers of students with disabilities; endorsement requirements.

“Rule 81. (1) A teacher seeking an endorsement or full approval by the department shall meet all of the following requirements, in conjunction with those of R 340.1782, R 340.1786 to R 340.1788, R 340.1790, R 340.1795 to R 340.1797, and R 340.1799 to R 340.1799c, before being employed by an intermediate school district, local school district, public school academy, or other agency operating special education programs and services:

a) The requisite knowledge, understanding, skills, and dispositions for effective practice related to all of the following:
…(iv) Using AT devices to increase, maintain, or improve the capabilities of students with impairments."

Teams need to be familiar with AT that is relevant based upon the needs of their students. They should consider the pros and cons of potential options in deciding how to appropriately support students. This familiarity can only be achieved through AT professional development. By developing staff expertise in AT, districts can increase awareness and develop an environment where AT is regularly considered to meet student needs. Thus, staff are better equipped to identify situations where AT can increase student access, participation, and independence or be a more cost effective alternative to current supports. In *The AT Trainer's Handbook*, Reed, Kaplan and Bowser (2009) state the following:

Increasing teacher knowledge and skills is the most powerful, and effective way to increase student performance. That is because the knowledge and skills of the teacher constitute 44% of the impact on student learning (National Staff Development Center (NSDC), 2006). The ultimate goal of all professional development is improved student performance. Killian and NSDC (2002) state that this is accomplished in three ways:

1. increasing teacher content knowledge,
2. changing teachers' attitudes about the content areas, and
3. expanding the teachers' repertoire of instructional practices.

Applying this research to AT might include:

1. increasing the teacher's knowledge about AT tools needed by his/her students and how to operate them,
2. changing the teacher's attitude about the importance of using AT to overcome barriers to learning, and
3. expanding the teacher's repertoire of instructional practices to include strategies to include the use of AT in meaningful ways throughout daily tasks and assignments.

CHARACTERISTICS OF QUALITY PROFESSIONAL DEVELOPMENT

Michigan Department of Education, Michigan Education Association, Michigan Association of School Administrators, and Michigan Federation of Teachers and School Related Personnel agree that the following criteria should be considered when designing professional development in response to the requirements in the Revised Michigan School Code, Sections 380.1526 and 380.1527.

QUALITY PROFESSIONAL DEVELOPMENT:

- Is for the purpose of enhancing teaching and learning.
- Is consistent with building and district school improvement plans and, when available, AdvanceEd goals and district strategic plans.
- Is part of an ongoing comprehensive professional development plan that addresses the long-term professional needs of the individual as well as the long-term change of practice in the building and district.
- Is characterized by the knowledge of educational needs of students, the study of proven research and inclusive of the best use of new technologies.
- Includes best principles of adult learning that include design by the educators and non-teaching staff for whom the professional development is intended.
- Occurs when educators and non-teaching staff collaborate and share knowledge with each other.
- Requires ongoing reflection.
- Is helpful to all school staff as they work to meet the needs of students who learn in different ways and come from diverse backgrounds.
- Is ***no less than one hour in length***

Source: http://www.michigan.gov/mde/0,4615,7-140-5683_14795_83468-456840--,00.html

AT PROFESSIONAL DEVELOPMENT LINKED TO BUILDING IMPROVEMENT PLANS

One of the Professional Development Characteristics of Quality noted above is that PD is consistent with building and district school improvement plans. Yet, it has been our experience that AT Professional Development has typically been viewed as a special education activity rather than a general education activity. We have observed also that, increasingly, due to shortages of subs, it has been challenging to find the time to do AT Professional Development. Including AT Professional Development in LEA building improvement plans ensures that both special education and general education teachers will receive the AT training required by law. Special education administrators need to take an active role and collaborate with building principals to include AT training in building improvement plans.

ONLINE AT PROFESSIONAL DEVELOPMENT

One excellent resource for online AT professional development is the Assistive Technology Internet Module offered by OCALI, The Ohio Center for Autism and Low Incidence at https://atinternetmodules.org/user_mod.php. Another is the WATI (http://www.wati.org/) collection, including Assistive Technology from Consideration to Assessment, Assessing Student Needs for Assistive Technology and Student Information Guide Process Forms. While online professional development has the advantage of being accessible, 24/7, simply providing links to online PD resources is insufficient. Reed, Kaplan and Bowser(2009) define professional development as "the process of changing and improving the performance of educators through a planned series of training and technical assistance activities." This means that online PD should not be a single event, but rather should be followed up with activities activities among a community of learners who share reflections, technical support and implementation experiences, and linked to building improvement goals. See Chapter 11 for more PD resources.

Funding of AT professional development is challenging. But, before looking at outside funding sources, the best first step then is to embed AT improvement goals into building improvement plans and take advantage of collegial learning opportunities.

For PD funding ideas, Federal grants are an option as described in the following letter written by Joseph South, Director, Office of Educational Technology, for the U.S. Department of Education. (https://tech.ed.gov/files/2017/01/2017.1.18-Tech-Federal-Funds-Final-V4.pdf) However, other opportunities include the NEA Foundation Grant Program (https://www.neafoundation.org/for-educators/), Albert Einstein Distinguished Educator Fellowship (AEF) Program (https://science.energy.gov/wdts/einstein/), the Fund for Teachers (http://www.fundforteachers.org/), and the McCarthey Dressman Education Foundation (https://mccartheydressman.org/teacher-development-grants/).

CHAPTER NINE:
AT AND ITS RELATIONSHIP TO OTHER EDUCATIONAL INITIATIVES

INTRODUCTION

Educators leading systems-wide initiatives designed to provide high quality instruction, while responding to the unique academic and emotional needs of a diverse student population, can greatly benefit from a deeper understanding of AT and its relationship to initiatives such as Universal Design for Learning (UDL) Accessible Educational Materials (AEM), Multi-Tiered System of Supports (MTSS) and Response to Intervention (RtI).

AT AND UNIVERSAL DESIGN FOR LEARNING (UDL)

UDL is an educational framework and set of principles that guide the development of flexible learning environments designed to accommodate individual learning differences. By providing *multiple means of representation*, *multiple means of expression*, and *multiple means of engagement*, students are afforded various and alternative ways to acquire information, demonstrate what they know, and engage with activity that taps into their own interests, providing appropriate challenge and motivation (Meyer, Rose, & Gordon, 2014).

UDL seeks to remove learning barriers by proactively putting into place flexible options for ALL students, including materials, tools, and technologies that address learner variability. Many of the specialized formats and assistive technologies such as digital text, text-to-speech, speech recognition, closed caption, and word prediction that are typically used as AT supports for students with an IEP are also technologies one may find in a universally designed learning environment. While the AT process also addresses learner variability, Edyburn (2010) distinguishes between AT as a flexible option and AT as a necessary accommodation. For example, a student may choose to use speech recognition in combination with keyboarding to complete a writing assignment for any number of reasons, including speeding up the process. However, a student with a physical disability that prohibits the use of her hands may depend on speech recognition as her only means for written expression. In other words, many students who use AT would not be able to complete certain tasks without the AT. The Center for Applied Special Technology (CAST) often makes the distinction between removing learning barriers by *front-loading* the classroom with flexible options for students, versus compensating for learning barriers by *retrofitting* materials and tools for students, as is typically the case in the AT process. Edyburn (2010) expands on the idea:

> *AT devices and services are delivered reactively after a referral and evaluation of an individual student. UDL is given to everyone with the understanding that*

those who need specialized support will use the tools when they need them (i.e., embedded, just-in-time supports). This is a critical paradigm shift that fully acknowledges the impact of peer pressure at the middle and secondary level. To meet the needs of some, UDL is committed to giving the tools to everyone. AT may be preempted by UDL interventions; however, as the example above illustrates, AT and UDL may also co- exist. (p. 39)

AT AND ACCESSIBLE EDUCATIONAL MATERIALS (AEM)

Accessible Educational Materials (AEM) are specialized formats of fully accessible textbooks and other curriculum materials that can be used by and with students with print disabilities. Under IDEA 2004, state and local education agencies are required to ensure that specialized formats of textbooks and related core instructional materials are provided to students with print disabilities in a timely manner. A print disability is a condition related to blindness, visual impairment, specific learning disability, or other physical conditions in which the student needs an alternative or specialized format (i.e., Braille, Large Print, Audio, Digital text) in order to access and gain information from conventional printed materials. Once a print disability has been determined and documented by a student's IEP team, the school district is required to provide AEM.

Providing alternative materials and specialized formats is only part of the equation in the provision of AEM. AT plays a vital role in students' access to specialized formats. For example, a student using a digital textbook may require a text-to-speech program to have the text read aloud, or it may be the case that a student needs a refreshable braille display to read text output. Students who require specialized digital formats and other core instructional materials may also need a variety of digital features such as digital highlighting, note taking, outlining, and talking dictionaries to help comprehension.

AT, MULTI-TIERED SYSTEM OF SUPPORTS (MTSS) AND RESPONSE TO INTERVENTION (RTI)

Multi-tiered System of Supports (MTSS) refers to an integrated, multi-tiered system of instruction, assessment, and intervention designed to meet the achievement and behavioral needs of all learners by ensuring high-quality instruction at varying levels of support (Michigan Department of Education, 2018). At the school level, the implementation of MTSS is rooted in the data informed practices of Response to Intervention (RtI), a general education initiative that uses early identification and a systematic, data-driven method for providing support to students struggling academically. RtI uses a multi-tier approach to provide high quality, scientifically based classroom instruction to efficiently differentiate instruction for all students and incorporates increasing intensities of instruction that offer specific, research-based interventions matched to student needs. Ongoing student assessment and progress monitoring determine the levels of instructional intensity in an RtI framework (Fuchs & Fuchs, 2006). Although MTSS represents a more comprehensive systems approach to addressing student diversity, the terms MTSS and RtI are often used interchangeably.

AT plays an important role in helping schools achieve the goals of MTSS and RtI. Despite the volume of technology we have access to today, Bowser & Reed (2012)

suggest that rather than identify and assign specific assistive technologies to any given instructional tier, it's more productive to think about what features of a particular AT program would be of greatest benefit to students in a particular tier. For example, in a Tier 1 whole class writing activity, a majority of students may benefit from having access to computers and choose to use a keyboard instead of paper and pencil. In a Tier 2 small group targeted intervention, students may need access to speech-to-text and word prediction to provide added support for their writing. In Tier 3 intensive and individualized support, in addition to having access to keyboarding, text-to-speech, and word prediction, a student may also need the added support of writing templates that provide more explicit writing models.

CHAPTER TEN: COMPETENCIES FOR AT SPECIALISTS

INTRODUCTION

The title for educators who are skilled in working with AT has not been standardized in Michigan. Some districts refer to persons with AT expertise as specialists, others as consultants, and still others as coordinators. Regardless of how an AT professional is titled, these competencies are intended to serve as a roadmap to continuous improvement for individuals serving to support a district's AT decision-making capacity. The title AT Specialist will be used throughout this section to indicate educators who have expertise in implementing and evaluating student needs for AT.
In an effort to guide effective practices in AT supports and to improve outcomes for students with disabilities, the Michigan AT Taskforce has identified specific competencies in the area of AT for specialists serving public schools in Michigan. These AT Competencies, when employed collaboratively by Local Education Agency (LEA) educators, administrators, and AT specialists, provide a framework for professional development and services. They may serve as a guide for Intermediate School Districts (ISDs) and LEAs to develop and implement local AT supports and procedures. This document is not intended as a tool for evaluating AT Specialists, but as guidance for skill development and improvement for educational AT stakeholders.

WHAT ARE AT COMPETENCIES?

AT competencies are observable, measurable and contribute to an AT specialist's ability to provide enhanced services for students with identified disabilities and the individuals who are supporting those students.
There are four distinct areas of practice with necessary knowledge and skills delineated for the delivery of effective services by AT specialists and/or professionals. The areas of practice are Knowledge and Application of Federal and State Laws; Information, Training and Technical Assistance; Leadership and Consultation; and Curriculum Integration and Implementation. All four areas are discussed in detail below.

KNOWLEDGE AND APPLICATION OF FEDERAL AND STATE LAWS

AT specialists should be able to demonstrate knowledge of current laws and legal issues that impact consideration of technology applications for a student in his or her customary educational environments. This knowledge should include Individuals with Disabilities Education Act, Sections 504 and 508 of the Rehabilitation Act, the Americans with Disabilities Act, Every Student Succeeds Act, Michigan's Braille Literacy Law and copyright laws (http://www.copyrightuser.org/understand/exceptions/education/). This competency omits mentioning specific laws, however, does address these as well as others that may be promulgated in the future. This competency should be used to ensure that the team

involved in decision-making understands the rights and responsibilities associated when considering AT.

INFORMATION, TRAINING AND TECHNICAL ASSISTANCE

SKILLS NEEDED TO SUPPORT INFORMATION AND TECHNICAL ASSISTANCE

- Demonstrate knowledge of a process for determining the need for AT, including data based feedback for continuous planning and collaboration skills with other members of a transdisciplinary assessment team.
- Know the importance and the benefits of a defined AT service delivery model, with guidelines and procedures, and facilitate collaboration between general educators, special educators, and families.
- Identify, describe, discuss and cite resources for AT tools, accommodations and strategies in a variety of areas.
- Identify, describe, discuss and cite resources for AT tools, accommodations and strategies in a variety of areas.
- Be able to present information about AT using a variety of media.
- Demonstrate knowledge of a continuum of assistive technologies, for low incidence and high incidence students, and major resources that are available for them.
- Know how to determine compatibility, support, and maintenance requirements for a variety of AT devices.
- Identify personnel training needs and develop and/or provide effective training activities to address those needs.

LEADERSHIP AND CONSULTATION

Leadership in its simplest form is the art of motivating a group of people toward achieving a common goal. It is critical that AT specialists are able to provide effective leadership and consultation utilizing a collaborative framework in order to achieve successful AT implementation. The appropriate provision of AT devices and services requires that LEAs have access to capacity-building technical assistance opportunities, including effective team consultation and support, and high quality professional development. The following skills and knowledge table in the area of leadership and consultation provide guidance to AT consultants to enhance and/or evaluate their own leadership and consultation skills.

SKILLS NEEDED FOR EFFECTIVE LEADERSHIP AND CONSULTATION

- Demonstrate knowledge of a process for determining the need for AT, including data based feedback for continuous planning and collaboration skills with other members of a transdisciplinary assessment team.
- Know the importance and the benefits of a defined AT service delivery model, with guidelines and procedures, and facilitate collaboration between general educators, special educators, and families.

- Identify, describe, discuss and cite resources for AT tools, accommodations and strategies in a variety of areas.
- Promote systematic consideration of AT and serve as a resource for information, consultation, training, and assistance in technology.
- Be able to present information about AT using a variety of media.
- Demonstrate knowledge of a continuum of assistive technologies, for low incidence and high incidence students, and major resources that are available for them.
- Know how to determine compatibility, support, and maintenance requirements for a variety of AT devices.
- Identify personnel training needs and develop and/or provide effective training activities to address those needs.

CURRICULUM INTEGRATION AND IMPLEMENTATION

AT specialists should be able to demonstrate knowledge and skills related to providing students with disabilities access to the general education curriculum and to meet their individual goals. AT teams and professionals should strive to reduce obstacles to curricular access including plans for supporting and monitoring AT implementation.

SKILLS NEEDED TO SUPPORT CURRICULUM INTEGRATION

- Know educational standards and the relationship of AT to those standards.
- Know state assessments, AT used/allowed for state assessments and documentation of the accommodations for the state assessments.
- Guide and assist teams in the identification of AT needed and the AT solutions that support goals and progress in the general curriculum.
- Guide and assist teams in the inclusion of AT to the student's educational plan (IFSP, IEP, 504 agreement) and how to write the need for AT in a manner that is descriptive and measurable.
- Know the relationship of AT and Universal Design for Learning (UDL) principles.
- Guide and assist teams with effective practices in the integration of AT devices and services into the curriculum and daily activities of the student across environments.
- Guide districts in acquiring or converting existing educational materials to be made available in accessible formats for students with disabilities.

PROFESSIONAL NETWORKING

An AT specialist needs to keep current with rapidly changing technologies. One means of accomplishing this objective is through participation in technology professional organizations. Michigan opportunities for professional networking include membership in Michigan Association of Computer Users in Learning (MACUL) (https://macul.org/), which has an annual conference in March rotating between Grand Rapids and Detroit, and participation in MACUL's AT special interest group, SIGINC (https://maculcommunity.org/sigs/siginc/). Alt+Shift (https://www.altshift.education/) provides access to numerous AT resources, which includes the AT Contact List

(https://www.altshift.education/resources/contacts), Regional AT Consortiums, and a list of AT specialists from various ISDs across the state. Other professional networks to consider include:

- Innovations in Special Education Technology (ISET) (http://www.isetcec.org/) of the Council for Exceptional Children (CEC)
- Rehabilitation Engineering Society of North America (RESNA) (https://www.resna.org/)

SUMMARY OF THE AT SPECIALIST ROLE

An AT specialist should be able to organize and coordinate a team approach to decision making, and facilitate the participation of team members in the process. This person should have excellent communication skills, be a good listener, and possess effective consulting skills in order to facilitate collaboration through the involvement of all the team members. The AT specialist should be well versed in methods for identifying, providing (or arranging for), and evaluating training activities to support this process.

ACCESS TO AT SPECIALISTS

The Quality Indicators of AT specify, “IEP team members have the collective knowledge and skills needed to make informed AT decisions and seek assistance when needed.” The competencies listed in this section provide a guide for IEP teams to determine what that knowledge base should include. If an IEP team decides that they lack the knowledge to make an informed consideration of AT, then they should consult with an AT Specialist.

When local districts do not have staff with the AT competencies listed above they should contact their ISD AT Specialists. If a team does not have input from an AT Specialist they risk making decisions about AT without sufficient knowledge. In these cases, LEAs should initiate professional development to build local capacity. See Chapter Six, Quality Professional Development, in these Guidelines for recommendations in providing quality AT Professional Development.

CHAPTER ELEVEN: FAQS

§1. DEFINITIONS

WHAT IS AT?

AT is any item that a child uses to increase, maintain, or improve a functional capability. Technology may be used in many ways which do not change a child's ability to function. For example, a computer program which only helps a child to practice math facts would generally not be considered AT because the child would not be able to do the math better as a result of using the technology. A calculator used by the same child would probably be considered AT.

WHAT KINDS OF AT DEVICES ARE CONSIDERED BY THE IEP TEAM?

Many commonly used products can be used as AT supports for students with disabilities. Examples of low-tech solutions include calculators, laminated communication boards, tape recorders, pencil grips, and spell checkers. In addition, there are over two thousand specialized AT devices which are specifically designed to enhance the functional skills of people with disabilities. A full range of AT devices should be considered for each individual. As a rule, the simplest tool that will fill the need is the most effective.

WHAT ARE AT SERVICES?

IDEA specifically lists six AT services. All of these services are actions which are required to help a child with a disability to select and effectively use AT. AT services listed in IDEA include assessment, provision of AT selection and maintenance of devices, coordination with other therapies, training of students and families, and training of professionals.
What is the purpose of AT in special educational programming?

The purpose of AT is to facilitate a student's ability to participate in his or her educational program and enable the student to receive FAPE. AT may provide the student with an alternative means of accessing the curriculum (e.g., such as the use of a digital textbook), an alternative means of demonstrating what has been learned (e.g., speech-to-text software), and increased access to all aspects of the school program (e.g., a motorized wheelchair that allows independent movement throughout the campus).

§2. ELIGIBILITY

WHO IS ELIGIBLE FOR AT?

All students with disabilities, both students who receive services under IDEA and those who need accommodations and modifications under Section 504 of the Rehabilitation Act, are eligible to receive AT if it is needed for the child to meet educational goals. Need is determined if the student cannot receive a free and appropriate public education (FAPE) in the least restrictive environment (LRE) without the use of AT. Infants and toddlers younger than three years of age who are enrolled in Early Intervention Programs are also eligible to receive AT devices and services if they are needed for the child to meet developmental goals.

§3. CONSIDERATION

SHOULD AT BE CONSIDERED FOR ALL STUDENTS WITH DISABILITIES?

Yes. The IEP team, in its consideration of special factors, is required by the IDEA to "consider whether the child requires AT devices and services." IDEA does not mandate how consideration is accomplished, only that it must be done.

IS AT REQUIRED FOR ALL STUDENTS WITH DISABILITIES WHO HAVE AN IEP?

No. IDEA requires AT be considered for all students with an IEP as part of each IEP team Meeting. The IEP team will determine if AT is required by the student based on the results of the consideration process, which may include observations, assessments, file reviews, and trials of AT.

WHAT FACTORS SHOULD AN IEP TEAM TAKE INTO CONSIDERATION TO DETERMINE AN INDIVIDUAL CHILD'S NEED FOR AT?

When a team considers a child's need for AT, team members should first review the child's goals and need for access to the curriculum. If the team identifies an area of performance where progress will be difficult or impossible because of the child's disability, the team should consider AT along with other strategies such as modification of the task (e.g. shortened assignments, dictation of written work) or additional instruction.

WHEN AN OUTSIDE EXPERT RECOMMENDS AT, MUST THE EDUCATION AGENCY PROVIDE IT?

The IEP team is required to consider all available information when planning a child's specially designed instruction. If an outside expert recommends a particular AT device for a child, it is important that the team consider this recommendation along with all other information about the child. IDEA states that an AT evaluation includes a functional evaluation in the child's typical environment. If the student has not used the AT recommended by an outside expert in the typical environment, it is advisable for the

team to plan for this trial before determining the child's need for the recommended device.

DO CHILDREN WITH LEARNING DISABILITIES NEED AT?

IDEA requires that every IEP team consider a child's need for AT. This includes the IEP teams of children with learning disabilities. Students with learning disabilities often use AT to help them read or write. Some common AT tools used by students with learning disabilities include text-to-speech, speech-to-text, word prediction, spell checkers, calculators, and grammar checkers.

WHAT DOCUMENTATION IS REQUIRED WHEN A TEAM CONSIDERS AT AND DETERMINES THAT IT IS NEEDED IN A CHILD'S EDUCATIONAL PROGRAM?

IDEA requires that every IEP team consider a child's need for AT, but the law does not mandate specific documentation regarding that team's consideration. Michigan's standard IEP and IFSP forms provide a checkbox for teams to use during an IEP or IFSP meeting to document that AT was considered. If the team decides that the child needs AT, that technology should be documented in the IEP as special education, related services, and/or supplemental aids and services. While it is not required, teams may also want to document the basis for their decisions when AT is considered but is not needed by the child. This is especially true when one or more team member disagrees with the team decision.

WHAT SHOULD THE IEP TEAM CONSIDER WHEN DETERMINING WHETHER AT IS NEEDED IN THE CHILD'S HOME OR OTHER ENVIRONMENTS?

The purpose of providing AT in the home is to make sure that the child is able to meet the specially designed goals developed by the IEP team. When considering the child's need for AT in the home, the IEP team should review the child's IEP goals and objectives. If AT provided at school is needed at home in order for the child to make progress on those goals, the team should make arrangements for it to be used in the home. In some cases, the team may decide to provide an alternative AT device in the home setting or to provide additional opportunities for the child to complete needed activities at school as an alternative.

IS THE SCHOOL DISTRICT OBLIGATED TO PROVIDE STATE-OF-THE-ART TECHNOLOGY FOR STUDENTS WITH DISABILITIES?

No. The district is not obligated to provide state-of-the-art technology if the student does not require it or if they are unable to utilize it. The determination is made on an individualized basis and should be based on the features of such devices that enable the student to access the general education curriculum in the least restrictive environment. When a district identifies options for devices and services that vary by cost, the district may choose a less expensive option, provided that it assists with accomplishing the student's IEP goals. The district is under no obligation to purchase the most expensive option.

§4. ASSESSMENT

WHEN SHOULD A TEAM ASSESS A STUDENT'S AT NEEDS?

Any time a student seems to have the cognitive skills to complete a task but encounters barriers because of the disability an AT assessment may be indicated. If any member of the team identifies a task or functional life skill for which the student may need AT, the team should examine the strategies and accommodations already in place for the student. If these strategies and accommodations are not sufficient to allow the student to overcome barriers, an AT assessment is warranted.
Credit: Bowser (2003)

WHO IS QUALIFIED TO COMPLETE AN AT ASSESSMENT?

AT assessments should involve all members of the child's educational team. IDEA states that evaluation of the child's AT needs should include a functional evaluation in the child's typical environment. When an AT assessment is conducted, at least one member of the child's team must have knowledge about the AT devices and services which the child could use to complete the tasks identified in the assessment. In some cases, the IEP team may have enough information to complete the assessment without help. When the team requires additional information about AT, the services of an AT specialist or other knowledgeable person may be needed.

WHAT INFORMATION SHOULD BE GATHERED DURING AN AT ASSESSMENT?

During an AT assessment, the team should gather information about the student's present level of educational performance, the tasks the student needs to accomplish and the environments where those tasks need to be done. The assessment should consider tools and strategies to help the student with the identified tasks including low level technology solutions and non-technology strategies, as well as high-tech devices. In most cases, a trial period of use of the most promising technology solution(s) in the child's typical environments should also be implemented. What should an IEP team do when members agree that a child may need AT but are not sure what is available? When the IEP team identifies tasks for which the child may need AT, but does not have enough information to make a decision about what that technology should be, the team may add additional team members who are knowledgeable about technology which can be used for those tasks. An AT assessment may be conducted. When an AT assessment is initiated, the team should develop a plan for how the assessment will be conducted so that it can be completed within the thirty-day timeline required by Michigan Special Education Administrative Rules and Regulations. Once the assessment is complete, the IEP team should meet again to consider the child's needs for AT.

IF A FAMILY REQUESTS AN INDEPENDENT EDUCATIONAL EVALUATION FOR A STUDENT, WHAT STEPS SHOULD THE EDUCATION AGENCY TAKE?

Families have the right to an Independent Educational Evaluation (IEE) when they disagree with the results of the education agency's evaluation. This is true for AT evaluations as well as other IEEs. If a family requests an independent educational evaluation, the agency must provide a list of qualified examiners. The family chooses a person to complete the AT evaluation from this list. The evaluation is provided at the district's expense. If the family of a student with a disability requests an Independent Educational Evaluation, refer the family to the agency's Director of Special Education.

WHO SHOULD BE INCLUDED WITHIN THE TEAM OF PROFESSIONALS TO ASSESS CHILDREN FOR AT?

Those involved in assessments might include: parents, child, early childhood special educator, special education teacher, occupational therapist, physical therapist, speech language pathologist, audiologist, vision specialist, technology specialist, general education teachers, school nurse, paraprofessionals, or any other individuals familiar with the child and invested in his/her success.

§5. IEP DOCUMENTATION

WHERE SHOULD NEEDED AT DEVICES AND SERVICES BE DESCRIBED IN THE IEP/IFSP?

When the IEP team makes the determination that a student needs AT and AT services in order to benefit from his or her IEP, the team indicates that decision in the Consideration of Special Factors section of the IEP document. Additional information about the need for AT or its use should be documented in various sections of the IEP. Present levels of academic and functional performance can include information on AT that is necessary for a student. In addition, AT and AT services may be documented as special education services, as related services, or as supplementary aids and services. Given that AT is considered to be a compensatory intervention, the use of various AT devices may be considered an accommodation that improves access to the general education curriculum in the least restrictive environment. However, keep in mind that not all accommodations are AT. IEP team Meeting minutes can document the discussion of AT and AT services and can be an important element of the documentation process. No matter how AT devices and services are documented in the IEP, it is important that anyone who reads the IEP is able to understand the team's intent in providing AT devices and services.

SHOULD SPECIFIC AT DEVICES BE NAMED IN THE IEP/IFSP (INDIVIDUAL FAMILY SERVICE PLAN)?

In most cases, the features of an AT device rather than the specified device name should be described in the IEP/IFSP. This allows for more flexibility if the student moves to another district or if the IEP team discovers that a device similar to the one initially considered better meets the student's needs. In rare cases, the team may name a specific AT device in the child's plan. This is generally necessary when the child is

required to learn unique ways to operate the device that cannot be generalized to other similar devices. (Bowser, 2003)

WHEN AT IS LISTED AS NEEDED ON THE IEP, MUST THAT TECHNOLOGY BE AVAILABLE IN ALL CLASSES?

Students generally use AT to accomplish specific tasks that they would find difficult or impossible to accomplish without it. The IEP team should describe the conditions under which the child needs AT. This might be done in the statement of Present Level of Academic Achievement and Functional Performance (PLAAFP), as a condition in goals and objectives, or in the description of the child's accommodations and modifications. The AT should then be made available to the student as described in the IEP.

CAN STUDENTS USE THEIR AT WHILE DOING STATE AND DISTRICT PERFORMANCE ASSESSMENTS?

Each IEP team must determine how a child will participate in state assessments and what accommodations and modifications that child will need in order to participate. In some cases, AT may only be used in standard state assessments if it is listed as needed for the assessment on the child's IEP. The IEP team should consult the state assessment administration manual when a child is an AT user.

WHAT IS THE EDUCATION AGENCY'S RESPONSIBILITY IF THE IEP OF A TRANSFERRING STUDENT INCLUDES AT THAT THE DISTRICT DOES NOT OWN?

When a student enters a district with a current IEP from another agency, the receiving district must review the entire IEP to determine whether it is appropriate in the new setting. Any AT devices or services included on the IEP must be reviewed to determine whether they are still appropriate in the new educational environment. If the program designed for the student is still appropriate, then the education agency has a responsibility to provide the AT devices and services listed on the IEP. If a change in the AT portion of the IEP is warranted, the district must reconvene the IEP team and make the appropriate changes in the child's educational program.

HOW DOES ONE DISTINGUISH BETWEEN AT AND PERSONAL ITEMS (E.G., WHEELCHAIRS, HEARING AIDS, EYEGLASSES, ETC.)?

As a rule, public agencies such as schools are not responsible for providing students with eyeglasses, hearing aids or braces that the student would wear regardless of whether or not they attended school. However in rare circumstances, if a student's IEP team specifies that a student requires a specific device in order to receive FAPE, the public agency must provide the device at no cost to the student's parents. One example might be eye glasses that are used for a non-corrective purpose such a magnification or glare reduction.

§6. IEP IMPLEMENTATION

HOW CAN EFFECTIVE IMPLEMENTATION AND CONTINUITY BE ACHIEVED IN THE CHILD'S PROGRAM WITH REGARD TO AT DEVICES AND SERVICES FROM CLASSROOM TO CLASSROOM, TEACHER TO TEACHER, SCHOOL TO SCHOOL, YEAR TO YEAR?

The IEP team needs to discuss how the devices will be used by the child and how it will be integrated into the curriculum and used by the child in the classroom. All members of the team who work with the child and are impacted by the AT device should participate in this discussion. Each child's IEP must be reviewed at least annually. The IEP team should discuss and identify personnel and family training needs as they relate to the child's progression through the school program.

WHAT IF AN AT DEVICE IS SENT HOME AND DAMAGED?

Parents cannot be charged for use and normal wear and tear of AT devices. LEAs should make their own policies regarding the parent's responsibility for equipment damaged due to misuse or neglect.

IF A TEAM DECIDES THAT A CHILD NEEDS AT, WHO IS RESPONSIBLE TO PURCHASE IT?

The Local Education Agency (LEA) has final responsibility to provide all parts of a child's educational program as listed on the IEP. In some cases LEAs make agreements with other programs (e.g. Intermediate School Districts, State Resource Programs) to help provide the AT that a child needs. LEAs may also look to other sources of funding such as insurance, charitable organizations and grants to help provide the AT a child needs.

ONCE AT IS INCLUDED IN A CHILD'S EDUCATIONAL PROGRAM, WHAT ACTIONS SHOULD BE TAKEN TO MAKE SURE THAT AT USE IS SUCCESSFUL?

As with any other educational activity, the inclusion of AT in a child's IEP is only the beginning. The educational team which serves the child must plan for training of the child, the child's family and educators who will need to know how the technology works. Plans must also be developed for assuring the child's regular use of the technology as indicated in the IEP.

IF AN EDUCATION AGENCY PURCHASES AT FOR A SPECIFIC CHILD, WHO DOES THE TECHNOLOGY BELONG TO?

If an education agency purchases AT, the technology is the property of that agency. It is often desirable that a child's technology be the property of the child and family. When this is the case, LEAs may assist the family in obtaining funding from a source such as medical insurance or a charitable organization if such funding is available.

WHO IS RESPONSIBLE FOR MAINTAINING AT DEVICES? WHAT IF THE DEVICE BELONGS TO THE CHILD?

If AT is included on a child's IEP, the education agency must assure that it is available to the child. If AT requires repair or maintenance, the LEA must ensure that an alternative device is made available to the child as described in the IEP. This is true even when the device belongs to the child's family. In some cases, the LEA may choose to repair a device belonging to the child as an alternative to the purchase of a duplicate device.

HOW CAN EDUCATIONAL AGENCIES BUDGET FOR AT WHEN IT IS IMPOSSIBLE TO PREDICT THE NEEDS OF NEW STUDENTS?

District personnel who are responsible for developing a budget which includes funds for the purchase of AT may need to collect information from a variety of sources. Educators who work with AT users may be able to predict the need for future expenditures. Discussion about AT needs should be part of the conversation whenever a child transfers from one educational setting to another and this discussion can help administrators plan for future expenditures. As with any other school expense, a contingency should be planned in the case of unexpected AT needs. (Bowser, 2003)

IS A SCHOOL DISTRICT RESPONSIBLE FOR PUTTING AT IN A PRIVATE SCHOOL SETTING?

If the student has a disability and the IEP team has placed the student in a private school setting and has determined on the IEP that AT equipment and services are indicated, it should be provided at the expense of the sending district and available at the private school.

IS A SCHOOL DISTRICT RESPONSIBLE FOR PROVIDING AT IN THE HOME IF A STUDENT HAS HOMEBOUND INSTRUCTION?

Homebound instruction is described as an employee of the school district entering the home of a student for a prescribed length of time weekly or daily to work directly with the student who requires such service. If the student has a disability that is identified and the IEP team has determined on the IEP that AT equipment and services are indicated, it should be provided at the expense of the sending district and available.

§7. IDEA, SECTION 504 OF THE REHABILITATION ACT, AND TITLE II OF THE AMERICANS FOR DISABILITIES ACT

ARE STUDENTS WHO HAVE PLANS UNDER SECTION 504 OF THE REHABILITATION ACT ELIGIBLE FOR AT? IF SO, WHO IS RESPONSIBLE FOR PROVIDING THIS TECHNOLOGY?

Students with 504 plans may be eligible for AT devices and services if they are required for that student's access to the general education curriculum. When a student with a 504 plan requires AT, it is the responsibility of the school 504 coordinator and the student's general education team to make sure the devices and services are provided.

WHAT IS TITLE II OF THE AMERICANS WITH DISABILITIES ACT AND HOW DOES IT IMPACT THE PROVISION OF AT DEVICES AND SERVICES?

Title II of the ADA requires that schools must, without charge, ensure that communication with students with hearing, vision, or speech disabilities is as effective as communication with students without disabilities. It also gives primary consideration to students and parents when determining which auxiliary aids and services are necessary to provide the effective communication. The provision to give primary consideration to students and parents when determining which auxiliary aids and services are necessary to ensure effective communication is an important aspect of providing AT devices and services. Under Title II, the school must provide the aid or service requested unless it can demonstrate that a different auxiliary aid or service is as effective in meeting the student's communication needs, or unless it can prove that providing such an aid or service would result in a fundamental alteration or undue financial and administrative burdens. Schools are not required to provide aids and services greater than what is needed to ensure effective communication.

DOES AN IEP UNDER IDEA MEET THE REQUIREMENTS OF TITLE II OF THE ADA?

In most cases, an IEP under IDEA will meet the requirements of Title II. However, recent federal court cases have found that, in order to comply with Title II of the ADA, schools may have to provide a student with auxiliary aids or services that are not required under IDEA. The key lies in giving "primary consideration" to the requests of students and parents for particular aids and services. Under Title II, the school must provide an opportunity for the student with a disability (or an appropriate family member or guardian) to request an aid or service the student feels is needed in order to ensure effective communication, as it is the student or a family member who is most familiar with his or her disability and can provide the most relevant information about what aids and services will be most effective.

Under Title II, the school must honor the choice of the student, unless it can prove that an alternate aid or service provides communication that is as effective as that provided to students without disabilities. If the IEP team, when considering the communication needs of students with disabilities gives such "primary consideration" to the requests of students and their families, they move in the direction of the intent of Title II. For more information on IDEA, Section 504, Title II of the ADA, and effective communication for students with disabilities in public schools, see the FAQs at: https://www2.ed.gov/about/offices/list/ocr/504faq.html

§8. AT AND TRANSITION

When moving to a new school district and the new school does not have the AT device indicated in the IEP available, what can be done to ensure that the tools that have worked for the student at the previous school continue to be used in the new school? The technology needs to appear in her IEP under accommodation and modification as well as in her educational goals. If it appears on her established IEP, the school district must convene a PPT/IEP team Meeting and discuss implementation of the IEP. If it is a new referral, the school has 30 days from the date of consent for an evaluation to review the results of referral testing.

Credits

These FAQs were compiled and adapted using material from the Keystone Area Education Agency, the Connecticut AT Guidelines, the North Dakota Department of Public Instruction and the Colorado AT Guidelines. Please see Chapter 13 for source information.

CHAPTER TWELVE: RESOURCES

INDEX

NOTE: STARRED ITEMS ARE CONSIDERED AMONG THE BEST OF AT RESOURCES

A

AAC Intervention (http://www.aacintervention.com/) AAC Intervention Products and Presentations
AAC site - University of Nebraska (https://cehs.unl.edu/aac Links to AAC resources, references, vocabulary, clinics and the AAC CAP project.
Ability Magazine (https://abilitymagazine.com)Publisher of Ability Awareness
ABLEDATA (https://abledata.acl.gov/) National Institute on Disability and Rehabilitation
Ablenet, Inc. (https://www.ablenetinc.com/) Produces switches and simple communication aides.
Adaptivation Inc. (https://www.adaptivation.com/) Designs, manufactures, and distributes AT.
Adaptive Switch Laboratories (http://www.asl-inc.com/) Designs products specifically for those who cannot access their environment through conventional means
Adobe Access Site (https://www.adobe.com/accessibility.html) Resources to provide web accessibility
***Alt+Shift (https://www.altshift.education/)** Michigan AT Resource site
AMDI (Advanced Multimedia Devices Inc.) (http://www.amdi.net/) producer of AAC and AT devices
American Foundation for the Blind, Technology Center (http://www.afb.org) Includes technology resources
American Physical Therapy Association (https://www.apta.org/) Resources for Physical Therapists
American Speech-Language-Hearing Association (https://www.asha.org/) Resources and information about communication disorders for professionals, parents, family, media, and others.
Apple Computer Accessibility Site (https://www.apple.com/accessibility/) Describes accessibility features on various Apple devices
Applied Science and Engineering Laboratories (https://www.asel.udel.edu/) AT Resources including research from Dupont Hospital and the University of Delaware
ARC Michigan (http://www.arcmi.org) The ARC provides advocacy services to assist persons with developmental disabilities obtain services for the Mental Health and Michigan Rehabilitation systems.

AT Internet Modules (https://atinternetmodules.org/user_mod.php) ATIM is designed to provide high-quality information and professional development on AT (AT) for educators, professionals, families, persons with disabilities, and others.
AT Assessment Tools (http://www.tamcec.org/pdf/TIA%20Oct%202008.pdf) A description of the various tools that can be used for AT Assessments.
AT Coalition (https://atcoalition.org/about/) The ATC provides timely information in the form of breaking news on new products to help you clarify your needs and find solutions including access to AT Specialists on the Forum where you can post your questions and get answers and links to free Training to support the implementation of the technology you choose.
AT Industry Association (https://www.atia.org/webinars/) Organization for manufacturers, sellers and providers of AT. Provides Online PD for AT including webinars
AT Presentations (http://www.gpat.org/Georgia-Project-for-Assistive-Technology/Pages/AT-Presentations.aspx) Georgia Project for AT
AT Trainers Handbook (https://www.natenetwork.org/wp-content/uploads/at-trainers-handbook.pdf) Reed, P., Kaplan, M., & Bowser, G. (2009)
Augsburg University, Minneapolis, MN. Assistive Technology. (http://www.augsburg.edu/class/groves/assistive-technology/
Autism Society of Michigan (http://www.autism-mi.org): Their mission is to assure full participation and self-determination in every aspect of life for each individual.
Autism Society of America (http://www.autism-society.org/) Provides information and education about autism

B

Brain Injury Association USA (https://www.biausa.org/) A clearinghouse of community service information and resources
***Bookshare (https://www.bookshare.org/)** The largest library of textbooks, bestsellers, children's books, career resources, and more for people with reading barriers.
Bureau of Services for Blind Persons (http://www.afb.org/directory/profile/bureau-of-services-for-blind-persons-michigan-department-of-licensing-and-regulatory-affairs/12) : Provides training and services to help people who are blind or visually impaired to reach their full potential and achieve their own goals for independence and/or employment.

C

Captioned Media Program (http://www.cfv.org) Source for captioned movies, streamed TV programs and DVDs for qualifying individuals
***CAST (http://www.cast.org/)** CAST is a nonprofit education research and development organization that works to expand learning opportunities for all individuals through Universal Design for Learning. CAST Professional Learning offers many opportunities for educators, teachers, and administrators to enhance their professional

understanding of Universal Design for Learning (UDL).

Centers for Independent Living (http://www.ilusa.com/links/ilcenters.htm): These centers typically provide assistance to individuals with average cognitive functioning but dealing with severe physical challenges, including expressive language and AT.

Cerebral Palsy Foundation (http://yourcpf.org/) Links to resources including AT

Closing The Gap (https://www.closingthegap.com/) Provides webinars, hosts a national AT conference, publishes a magazine and includes an AT product list.

Copyright Free Images (http://guides.lib.uw.edu/c.php?g=341352&p=2298336) University of Washington University Libraries.

Council for Exceptional Children (https://www.cec.sped.org/) Professional organization for special educators

D

Department of Health and Human Services / Centers for Medicare and Medicaid (http://www.cms.hhs.gov/): Source for contact information on funding guidelines for AT.

Disability Information and Resources (https://www.makoa.org/) Includes links to AT

Disability Tek (https://www.disabilitytek.com/) New - An online community sharing experiences with using AT.

DO-IT Program (https://www.washington.edu/doit/) Resources to promote the use of accessible electronic and information technology and universal design.

DREAMMS for Kids (http://www.dreamms.org) Facilitates technology for children with special needs.

E

Edutopia's AT Resource Roundup (https://www.edutopia.org/article/assistive-technology-resources) Links to websites, blog posts, articles, and videos related to understanding, selecting, and assessing AT

Equal Access to Software and Information (EASI) (http://easi.cc/) Produces Interactive Webinars on specific accessibility-related topics to disseminate up-to-date on accessible information to support colleges and universities to keep their information technology systems available to students and faculty with disabilities

ERIC Clearinghouse (http://eric.ed.gov) Educational research articles and abstracts about AT

F

Fairfax County Public Schools AT Services (https://www.fcps.edu/academics/academic-overview/special-education-instruction/assistive-technology-services-ats) A comprehensive collection of AT resources

Florida Alliance for Assistive Services and Technology (FAAST) (https://www.faast.org/) Free access to information, referral services, educational programs, and publications in an accessible format on extensive topics related to disability rights, laws/policies, and funding opportunities for AT.

Free or Low Cost AT for Everyone (http://www.augsburg.edu/class/groves/assistive-technology/everyone/) AT resource site from Augsburg University

G

***Georgia Project for AT (http://www.gpat.org/)** Supports educator knowledge of AT and helps increase student access to appropriate AT devices and services.

I

IDEA Federal Regulations (https://www.michigan.gov/documents/mde/MARSE_Supplemented_with_IDEA_Regs_379598_7.pdf) Includes disability definitions, special ed teacher-competencies, district responsibilities and much more.

International Dyslexia Association (https://dyslexiaida.org Provides a forum for parents, educators, and researchers to share their experiences, methods, and knowledge.

International Society for Augmentative and Alternative Communication (ISAAC) (https://www.isaac-online.org/) A worldwide alliance working to create opportunities for people who communicate with little or no speech.

International Society for Technology in Education (ISTE) (https://www.iste.org/) Provides leadership and service to improve teaching and learning by advancing the use of technology in K-12 education.

Internet Special Education Resources (http://www.iser.com/) Includes links to AT resources

J

Job Accommodation Network (JAN) (https://askjan.org/) Source of free, expert, and confidential guidance on workplace accommodations and disability employment issues

L

LD Online (http://www.ldonline.org/) Provides links for parents, teachers and other professionals on various learning disabilities, including AT information.

LD Resources (http://www.ldresources.org/) A collection of resources, including AT, on various aspects of learning disabilities with comments from community members

Learning Ally (http://www.learningally.org/) Audio-books for qualifying students with disabilities

Learning Disability Association of America (LDA) (https://ldaamerica.org/) A network of parents and educators that provides a range of resources to support students with Learning Disabilities.

M

Math.com (http://www.math.com/) Includes a section on calculators and tools.
MDE - Professional Development Characteristics of Quality (2018) (http://www.michigan.gov/mde/0,4615,7-140-5683_14795_83468-456840--,00.html) Characteristics of quality Professional Development
Medicaid Provider Manual: (**http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html**) Information on funding guidelines for AT.
Michigan AT Contact List (https://www.altshift.education/resources/contacts) List of ISD AT professional staff in Michigan
Michigan Administrative Rules for Special Education (MARSE) With Related IDEA (**https://www.michigan.gov/documents/mde/MARSE_Supplemented_with_IDEA_Regs_379598_7.pd**)

Michigan Disability Rights Coalition (http://www.mymdrc.org/assistive-tech) AT information resources for adults with disabilities, including funding opportunities

Michigan AT Program (http://www.copower.org/assistive-tech) Helps locate AT devices and provides a link to funding resources.
Michigan Transition Services Association (**http://www.michigantsa.com/)** Michigan Transition Services Association is dedicated to providing support to district members who assist students and young adults with disabilities as they transition through school to achieve their post-school goals.
Microsoft Disability Site (http://www.microsoft.com/enable) Provide accessibility guides for a variety of Microsoft products.

N

National Technical Assistance Center on Transition: NTACT (https://transitionta.org/) NTACT's purpose is to assist State Education Agencies, Local Education Agencies, State VR agencies, and VR service providers in implementing evidence-based and promising practices ensuring students with disabilities, including those with significant disabilities, graduate prepared for success in postsecondary education and employment.
***National AT in Education Network (http://www.natenetwork.org/)** A clearinghouse information from the many fields and disciplines that are involved in AT services in educational settings
National AT Act Technical Assistance and Training (AT3) Center (https://www.at3center.net/) A national AT internet site that makes general AT information available to the public and other stakeholders.
***National Center on Accessible Educational Materials (http://aem.cast.org/**) Provides resources and technical assistance for educators, parents, students, publishers, conversion houses, accessible media producers, and others interested in learning more about AEM

National Center for the Dissemination of Disability Research (http://www.ncddr.org) The purpose of the Center on KTDRR is to make it easier to find, understand, and use the results of research that can make a positive impact on the lives of people with disabilities

National Center for Education Statistics (https://nces.ed.gov/)

National Federation for the Blind (https://nfb.org/) Includes information about technology products.

National Spinal Association (http://www.spinalcord.org) Provides support and information to loved ones, care providers and professionals of people with spinal cord injuries or disorders

O

Ohio Center for Autism and Low Incidence (OCALI) (https://www.ocali.org/) OCALI promotes access to opportunities for people with disabilities.

P

Pacer Center: Champions for Children With Disabilities (https://www.pacer.org/) PACER Center enhances the quality of life and expands opportunities for children, youth, and young adults with all disabilities and their families so each person can reach his or her highest potential.

Peckham, Inc. (https://www.peckham.org/) A nonprofit community vocational rehabilitation organization

Pennyslvania Training and Technical Assistance Network (https://www.pattan.net/) Provides a variety of technology resources to support students with disabilities.

Pennsylvania Training and Technical Assistance Network- Power AAC professional development by individuals or groups who are supporting students with complex communication needs and who need or use AAC **(https://www.pattan.net/assistive-technology/at-for-communication/power-aac/)**

Praactical AAC (http://praacticalaac.org) founded by Dr. Carole Zangari, supports a community of professionals and families who are determined to improve the communication and literacy abilities of people with significant communication difficulties.

Professional Development Directory | AT | Oklahoma State Department of Education. (2018) (http://www.sde.ok.gov/sde/documents/2014-02-10/professional-development-directory-assistive-technology) An AT technical assistance guide

Professional Development - AT (AT) Resources (http://sde.ok.gov/sde/sites/ok.gov.sde/files/Professional%20Development%20AT%20Resources%20v2.pdf) Oklahoma State Department of Education Special Education Services. On this site, you will find critical elements of quality professional development and training in AT.

Q

***Quality Indicators of AT (https://qiat.org/)** Provide standards and rubrics for AT consideration, assessment, AT in the IEP, implementation, evaluation of effectiveness, transition, administration, and professional development.

Quality Indicators for AT in Post-Secondary Education (QIAT-PS) (http://qiat-ps.org) Quality Indicators for AT in Post-Secondary education is sponsored by Great Lakes ADA Center and is a collaborative effort of hundreds of professionals from a wide variety of higher education, K-12 schools, and students.

Quality Indicators for Professional Development and Training in AT (https://qiat.org/docs/8%20QIs%20for%20Professional%20Development%20&%20Train.pdf)

On this site, you will find critical elements of quality professional development and training in AT. Professional development and training should arise out of an ongoing, well-defined, sequential and comprehensive plan. Such a plan can develop and maintain the abilities of individuals at all levels of the organization to participate in the creation and provision of quality AT services. The goal of AT professional development and training is to increase educators' knowledge and skills in a variety of areas including, but not limited to: collaborative processes; a continuum of tools, strategies, and services; resource; legal issues; action planning; and data collection and analysis. Audiences for professional development and training include students, parents or caregivers, special education teachers, educational assistants, support personnel, general education personnel, administrators, AT specialists, and others involved with students.

R

Rehabilitation Engineering and AT Society of North America (RESNA) (https://www.resna.org/An organization dedicated to promoting the health and well-being of people with disabilities through increasing access to technology solutions

Research Center on Communication Enhancement (AAC-RERC) (http://aac-rerc.psu.edu/Assists people who rely on augmentative and alternative communication to achieve their goals by advancing and promoting AAC technologies and supporting the individuals who use, manufacture, and recommend them.

S

***SETT Framework Documents: (http://www.joyzabala.com/Documents.html)** Access to SETT Framework publications and scaffolds.

Special Education Resources on the Web (http://seriweb.com/serihome.htm) A collection of Internet accessible information resources of interest to those involved in the fields related to Special Education, including AT

T

***Tech Matrix (https://techmatrix.org/**A database of 400 AT products

Technology and Media Division of the Council for Exceptional Children (TAM) (http://www.tamcec.org) Promotes the availability and effective use of technology and media for individuals with exceptional learning needs

Technology Integration (http://lindaburkhart.com/) Linda Burkhardt's site that focuses on AAC

Texas AT Network (http://www.texasat.net/) A resource that "enables students with disabilities to access the curriculum, increase independence and participate actively in education and life activities."

Trace Research and Development Center (https://trace.umd.edu/about-trace) Apply engineering, computer science, disability studies, public policy, and information science to prevent the barriers to, and capitalize on the opportunities presented by, current and emerging information and telecommunication technologies.

U

Understood Tech Finder (https://www.understood.org/en/tools/tech-finder) A collection of apps and other supports for students by learning issue, grade and technology type.

U.S. Society for AAC (https://ussaac.org/USSAAC is an organization dedicated to supporting the needs and rights of people who use AAC.

V

Vermont AT Program (http://atp.vermont.gov/) AT Resource for individuals with disabilities

Virginia's AT Network (http://ttac-atsdp.gmu.edu/index.asp) Links to resources, documents and training materials for AT considerations and assessment

W

***WATI AT Consideration to Achievement Package (http://www.wati.org/free-publications/assistive-technology-consideration-to-assessment/)** The WATI AT Assessment is a process-based, systematic approach to providing a functional evaluation of the student's need for AT in their customary environment.

Wisconsin AT Initiative (WATI) (http://www.wati.org The mission of the new Wisconsin AT Initiative Development Team is to assist early intervention agencies, school districts, and their partners to provide AT by making training and technical assistance available through our development of new and updated materials related to the provision of AT tools, and services.

Wrights Law (http://www.wrightslaw.com/) Information about special education law, education law, and advocacy for children with disabilities.

Y

Yahoo Accessibility Site (https://accessibility.yahoo.com/) Provides an overview of Yahoo's accessibility resources

CHAPTER THIRTEEN: REFERENCES

CHAPTER 2 REFERENCE LINKS

LEGAL REQUIREMENTS

Americans with Disabilities Act (ADA). Retrieved from https://www.ada.gov/

Great Lakes ADA Center. Retrieved from adagreatlakes.org

The Individuals with Disabilities Education Improvement Act of 2004, 20 U.S.C. §§ 1400 et seq. Retrieved from https://sites.ed.gov/idea/

Michigan Administrative Rules for Special Education. Retrieved from https://www.michigan.gov/documents/mde/MARSE_Supplemented_with_IDEA_Regs_379598_7.pdf

MI-SER Special Education Reference. Retrieved from https://miser.specialedreference.com/

Section 504 of the Rehabilitation Act of 1973(Section 504). Retrieved from https://www2.ed.gov/policy/speced/reg/narrative.html

Technology-Related Assistance Act (Tech Act). Retrieved from https://www.gpo.gov/fdsys/pkg/STATUTE-102/pdf/STATUTE-102-Pg1044.pdf

RESEARCH IMPLICATIONS

Bausch, Margaret E., Ault, Melinda, Jones, Quinn, Briana Stegall, Behrmann, Michael M., Chung, Yoosun. 2009. AT in the Individualized Education Plan: Analysis of Policies Across Ten States. *Journal of Special Education Technology. 22(1).* Abstract Retrieved from https://eric.ed.gov/?id=EJ839509

Bausch, Margaret E., Ault, Melinda, Jones, and Hasselbring, Ted S. (2015). AT in Schools: Lessons Learned from the National AT Research Institute. In Dave L. Edyburn. *Efficacy of AT Interventions*. Bingley, UK: Emerald Group Publishing Limited. p.13-50. Retrieved from: https://books.google.com/books?id=XMbrCQAAQBAJ&pg=PA48&lpg=PA48&dq=bausch+m.E.&source=bl&ots=xEepz9EM9b&sig=ogKEsk8gRsyEwYAGON8PrCLBSfI&hl=en&sa=X&ved=0ahUKEwjD2NrNy8jYAhUB74MKHbUGCgMQ6AEIazAO#v=onepage&q=bausch%20m.E.&f=false

Bouck, Emily C, and Flanagan, Sara M. (2015). Exploring AT and post-school outcomes for students with severe disabilities. *Journal of Disability and Rehabilitation: AT.* Vol.

11, Issue 8. Retrieved from
http://www.tandfonline.com/doi/abs/10.3109/17483107.2015.1029537

Bouck, Emily C. “A National Snapshot of AT for Students With Disabilities.” (2016) *Journal of Special Education Technology*. Vol 31, Issue 1. P. 4-14. Abstract retrieved from http://journals.sagepub.com/doi/abs/10.1177/0162643416633330

Bouck, Emily C.; Flanagan, Sara; Heutsche, Anne; Okolo, Cynthia M.; Englert, Carol Sue. (2011). Teachers' Initial and Sustained Use of an Instructional AT Tool: Exploring the Mitigating Factors. *Journal of Educational Multimedia and Hypermedia*. v20, n3. p.247-266. Retrieved from https://eric.ed.gov/?id=EJ954736

Browner, Diane M. and Spooner, Fred. (2011). Teaching Students with Moderate and Severe Disabilities. Guilford Publications, NY.

Edyburn, Dave. (2015). *Accessible Instructional Design*. Bingley, UK: Emerald Group Publishing Limited

Edyburn, Dave. (2015). *The Efficacy of AT Interventions*. Bingley, UK: Emerald Group Publishing, Ltd. A selection retrieved from Google Books
https://books.google.com/books?id=XMbrCQAAQBAJ&pg=PA48&lpg=PA48&dq=bausch+m.E.&source=bl&ots=xEepz9EM9b&sig=ogKEsk8gRsyEwYAGON8PrCLBSfI&hl=en&sa=X&ved=0ahUKEwjD2NrNy8jYAhUB74MKHbUGCqMQ6AEIazAO#v=onepage&q=bausch%20m.E.&f=false

Etshcheidt, Susan Larson. (2016). AT for Students With Disabilities: A Legal Analysis of Issues. *Journal Of Special Education Technology*. Vol. 31(4), p. 183-194. Retrieved from
http://sonify.psych.gatech.edu/~walkerb/classes/assisttech/pdf/Etscheidt(2016).pdf

Lenker, J.A., & Paquet, V.L. (2003). A review of conceptual models for AT outcomes research and practice. *Assistive Technology*, 15: 1-15. Abstract available at
http://www.tandfonline.com/doi/abs/10.1080/10400435.2003.10131885?journalCode=uaty20

Lenker, J.A., Scherer, M.J., Fuhrer, M.J., Jutai, J.W., & DeRuyter, F. (2005). Psychometric and administrative properties of measures used in AT device outcomes research. *Assistive Technology*, 17(1), p.7-22. Retrieved from
https://www.ncbi.nlm.nih.gov/pubmed/16121642

Lenker, J. A., Shoemaker, L. L., Fuhrer, M. J., Jutai, J. W., Demers, L., Tan, C. H., & DeRuyter, F. (2012). Classification of AT services: Implications for outcomes research. *Technology and Disability*, vol. 24, no. 1, pp. 59-70, 2012. Abstract retrieved from
https://content.iospress.com/articles/technology-and-disability/tad00334

Maor, Dorit; Currie, Jan; Drewry, Rachel. (2011). The Effectiveness of Assistive Technologies for Children with Special Needs: A Review of Research-Based Studies,

European Journal of Special Needs Education, v. 26, n3. P. 283-298. Abstract retrieved from https://eric.ed.gov/?q=assistive+technology&pg=5&id=EJ953033

Okolo, Cynthia M., and Diedrich, Jeff (2014) Twenty-Five Years Later: How is Technology Used in the Education of Students with Disabilities? Results of a Statewide Study. *Journal of Special Education Technology*, Volume 29, Number 1. Retrieved from http://journals.sagepub.com/doi/abs/10.1177/016264341402900101?journalCode=jsta

Ruffin, Tiece M. (2012). Assistive Technologies for Reading. *The Reading Matrix*. Vol. 12, Number 1. Retrieved from http://www.readingmatrix.com/articles/april_2012/ruffin.pdf

Vincent, Claude, and Routhier, Francois. (2012). Designs in AT Research: Usefulness for therapists in clinical practice. *Technology and Disability*, 24, p. 49-58. Abstract retrieved from https://content.iospress.com/articles/technology-and-disability/tad00333

Watson, A. H., Ito, M., Smith, R. O., & Andersen, L. T. (2010). Effect of AT in a public school setting. *American Journal of Occupational Therapy*, 64(1), p18–24. Retrieved from http://dx.doi.org/10.5014/ajot.64.1.18

Williamson-Henriques, Kendra M. (2013). Secondary Teachers' Perceptions of AT Use for Students with Learning Disabilities (Doctoral Dissertation) The University of North Carolina at Greensboro. Abstract retrieved from ERIC https://eric.ed.gov/?q=assistive+technology&pg=2&id=ED565593

Wojcik, Brian W. (2015). Learning from Experience: Understanding AT Knowledge and Skills Through An Online Community of Practice. In Dave L. Edyburn., *Efficacy of AT Interventions*. Bingley, UK: Emerald Group Publishing Limited. p.203-228. Retrieved from http://www.emeraldinsight.com/doi/pdfplus/10.1108/S2056-769320150000001008

Zabala, J. 1999. Get SETT for Inclusion and Successful Transition. Retrieved from http://www.ldonline.org/article/Get_SETT_for_Successful_Inclusion_and_Transition/6399.

CHAPTER 3 IDEA AT REQUIREMENTS

Assistive Technology Consideration to Assessment. (2017). WATI. Retrieved from http://www.wati.org/free-publications/assistive-technology-consideration-to-assessment/

Assistive Technology in the IEP: A Guide for IEP Teams. 2018. Pennsylvania Training and Assistance Network. Retrieved from: https://www.pattan.net/publications/assistive-technology-in-the-iep-a-guide-for-iep-te

A Transition Guide to Postsecondary Education and Employment. 6 Jan. 2017. Retrieved from https://www2.ed.gov/about/offices/list/osers/transition/products/postsecondary-transition-guide-2017.pdf

Baker, J. (Ed.) (2018). Connecticut Assistive Technology Guidelines - Section 1: For Ages 3-21. Retrieved from: https://portal.ct.gov/SDE/Publications/Assistive-Technology-Guidelines-Section-1-For-Ages-3-21

Bowser, Gayl; Carl, Diana Foster; Fonner, Kelly S.; Foss, Terry Vernon; Korsten, Jane Edgar; Lalk, Kathleen M.; Larson, Scott Marfilius; McCloskey, Susan R.; Reed, Penny R.; Zabala, Joy Smiley (2016). Quality Indicators for AT: A Comprehensive Guide to AT Services. CAST. Retrieved from http://castpublishing.org/quality-indicators/

Bowser, G. and Reed, P. (2000) Considering Your Child's Need for AT. *LD Online*. Retrieved from http://www.ldonline.org/article/6246/

Behnke, K.D., & Bowser, G. (2010) Supporting transitions of AT users. *Journal of Special Education Technology*, 25(10) p. 57-62. Retrieved from http://journals.sagepub.com/doi/pdf/10.1177/016264341002500104

Bouck, Emily C, and Flanagan, Sara M. (2015). Exploring AT and post-school outcomes for students with severe disabilities. *Journal of Disability and Rehabilitation: AT.* Vol. 11, Issue 8. Retrieved from http://www.tandfonline.com/doi/abs/10.3109/17483107.2015.1029537

Bouck, Emily C. A National Snapshot of AT for Students With Disabilities. (2016) *Journal of Special Education Technology*. Vol 31, Issue 1. P. 4-14. Abstract retrieved from http://journals.sagepub.com/doi/abs/10.1177/0162643416633330

Canfield, T & Reed, P. AT and Transition. (2001) *Wisconsin AT Initiative.* Retrieved from https://www.transitioncoalition.org/wp-content/originalSiteAssets/files/docs/attransitionpacket1224259340.pdf

Center for Parent Information and Resources. A checklist for IEP teams: Considering AT. Retrieved from http://www.parentcenterhub.org/wp-content/uploads/repo_items/legacy/d9.pdf

Center of Technology and Disability. AT and the IEP. Retrieved from http://www.ctdinstitute.org/sites/default/files/file_attachments/AT-IEP-English2_0.pdf

Coleman, Mari Beth. (2011) Successful Implementation of AT to Promote Access to Curriculum and Instruction for Students with Physical Disabilities. *Physical Disabilities: Education and Related Services*. v30, n2. P2-22. Retrieved from https://files.eric.ed.gov/fulltext/EJ955444.pdf

Connecticut State Department of Education. Assistive Technology and Educational Transition (2014). https://portal.ct.gov/SDE/Publications/Assistive-Technology-Guidelines-Section-1-For-Ages-3-21

Day, Sheryl L. and Edwards, Barbara J.(1996) AT for Postsecondary Students With Learning Disabilities. *Journal of Learning Disabilities*, Volume 29, Number 5, Retrieved from http://www.c3schools.org/MHEC/WebCT/AssistTechPostSecondary.pdf

Enderle-Severson Transition Rating Scale. ESTR Publications. Retrieved from http://www.estr.net/

Field, S., & Hoffman, A. (1994). Development of a Model for Self Determination. *Career Development for Exceptional Individuals*, 17, 159-169.

Haven, Shelley. AT Assessment - Find the Right Tools. Retrieved from http://www.techpotential.net/assessment

Lenker, J.A., Fuher, M.J., Jutai, J.W., Demers, L., Scherer, M.J., & DeRuyter, F. (2010). Treatment theory, intervention specification, and treatment fidelity in AT outcome research. *Assistive Technology*, 22(3), p.129-138. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/20939422

Mandinach, Ellen B.and Jackson, Sharnell S. 2012. *Transforming Teaching and Learning through Data-Driven Decision Making.* Thousand Oaks CA: Corwin Publications. Chapter 1 retrieved from https://www.corwin.com/sites/default/files/upm-binaries/48142_chap1.pdf

MICHIGAN TRANSITION 2020- INTERAGENCY COLLABORATION (2015) MDE, Office of Special Education. Retrieved from http://slideplayer.com/slide/9045891/

Okolo, Cynthia M., and Diedrich, Jeff (2014) Twenty-Five Years Later: How is Technology Used in the Education of Students with Disabilities? Results of a Statewide Study. Journal of Special Education Technology, Volume 29, Number 1. Retrieved from http://journals.sagepub.com/doi/abs/10.1177/016264341402900101?journalCode=jsta

OCALI (Ohio Center for Autism and Low Incidence). AT Consideration in the IEP. (2013). Retrieved from http://www.ocali.org/up_doc/AT_Resource_Guide_4.pdf

Pennsylvania Department of Education. AT in the IEP: A Guide for IEP Teams

Robinson, Allyson. Considering the Need for AT in the IEP. Oklahoma ABLE Tech Retrieved from https://www.youtube.com/watch?v=i6GdvR_pAI4

Quality Indicators for AT. Retrieved from http://www.qiat.org/indicators.html
QIAT- Quality Indicators for AT and Transition. Retrieved from http://qiat.org/docs/6%20QIs%20for%20Transition.pdf

Sharp, Michael Edward (2010) AT Attrition: Identifying Why Teachers. Abandon Assistive Technologies. Doctor Dissertation. Nova Southeastern University. Retrieved from http://nsuworks.nova.edu/cgi/viewcontent.cgi?article=1300&context=gscis_etd

Reed, Penny. (2004) WATI Assessment Package. Retrieved from https://dpi.wi.gov/sites/default/files/imce/sped/pdf/at-wati-assessment.pdf

Reed, Bowser, and Korsten. 2002, 2004. How Do You Know It? How Can You Show It?. Wisconsin AT Initiative. Retrieved from https://dpi.wi.gov/sites/default/files/imce/sped/pdf/at-know-it-show-it.pdf

Texas AT Initiative. 2013. AT Implementation: Working Together to Make a Measurable Difference. Retrieved from http://www.texasat.net/Assets/implementation-slides.pdf

TATN (Texas AT Network). Assistive technology implementation: working together to make a measurable difference. Rev. 2013. Retrieved from: http://www.texasat.net/training-modules/implementation-module

Virginia Department of Education. Assistive Technology: A Framework for Consideration and Assessment. 2008. Retrieved from http://www.doe.virginia.gov/special_ed/iep_instruct_svcs/assistive_technology/framework_assistive_technology.pdf

Ware County AT. Assistive Technology in the IEP. Retrieved from http://warecountyassistivetechnology.weebly.com/uploads/3/8/2/9/38296113/consideration_of_assistive_technology_in_iep.pdf

Zabala, Joy. AT: Big Ideas and Guiding Principles.

Zabala, J. 1999. Get SETT for Inclusion and Successful Transition. Retrieved from http://www.ldonline.org/article/Get_SETT_for_Successful_Inclusion_and_Transition/6399.

CHAPTER 4 GUIDING PRINCIPLES IN AAC

Beukelman, D., & Mirenda, P. (2013). Augmentative and alternative communication: Supporting children and adults with complex communication needs (4th ed.). Baltimore, MD: Brookes.

Stephen N. Calculator (2009) Augmentative and alternative communication (AAC) and inclusive education for students with the most severe disabilities, International Journal of Inclusive Education, 13:1, 93-113. Retrieved from https://doi.org/10.1080/13603110701284656

Drager, K., & Light, J., & McNaughton, D. (2010). Effects of AAC interventions on communication and language for young children with complex communication needs. Journal of pediatric rehabilitation medicine. 3. 303-10. Retrieved from https://doi.org/10.3233/PRM-2010-0141

Light, J. & McNaughton, D. (2014) Communicative Competence for Individuals who require Augmentative and Alternative Communication: A New Definition for a New Era of Communication?, Augmentative and Alternative Communication, 30:1, 1-18, Retrieved from https://doi.org/10.3109/07434618.2014.885080

Romski, M., & Sevcik, R. A. (2005). Augmentative communication and early intervention: Myths and realities. Infants & Young Children, 18(3), 174-185. Retrieved from https://depts.washington.edu/isei/iyc/romski_18_3.pdf

CHAPTER 5 SECTION 504 AND AT

Marsters, Aaron and Bowser, Gayle. Quality Indicators for Assistive Technology Within 504 Plans. (2018). Retrieved from https://www.natenetwork.org/forms-and-tools/
Rehabilitation Act of 1973 retrieved from https://www2.ed.gov/policy/speced/reg/narrative.html
504 Plan Interactive AT Checklist developed by Heather Weaver and Stacy Banks. Retrieved from

https://docs.google.com/document/d/1Wh6z5ylE9PTYx7G0hIFbgqClGgnClxwhRVrgTmNOuE4/copy

CHAPTER 6 ADA AND AT

Connecticut AT Guidelines for Ages 3-21, (p. 130-131). Retrieved from https://portal.ct.gov/SDE/Publications/Assistive-Technology-Guidelines-Section-1-For-Ages-3-21

U.S. Department of Justice and U.S. Department of Education (2014a). Dear Colleague Letter from the Acting Assistant Attorney General for Civil Rights, U.S. Department of Justice, the Acting Assistant Secretary Office of Special Education and Rehabilitative Services, U.S. Department of Education, and the Assistant Secretary, Office of Civil Rights, U.S. Department of Education on effective communication-November 12, 2014. Retrieved from: www2.ed.gov/about/offices/list/ocr/letters/colleague-effective-communication-201411.pdf

CHAPTER 7 THE ROLE OF ADMINISTRATION

Baker, J. (Ed.) (2018). Connecticut Assistive Technology Guidelines - Section 1: For Ages 3-21. Retrieved from: https://portal.ct.gov/SDE/Publications/Assistive-Technology-Guidelines-Section-1-For-Ages-3-21

Bowser, Gayl and Reed, Penny R. 2018. *Leading the Way to Excellence in AT Services.* Wakefield, MA: CAST Professional Publishing

Quality Indicators for Administrative Support of AT Services. Retrieved from http://www.qiat.org/

CHAPTER 8 PROFESSIONAL DEVELOPMENT

Creating Quality Professional Development on AT for Educators. 2018. Rehabilitation Engineering & AT Society of North America. Retrieved from: https://www.resna.org/professional-development

CAST: Professional Learning. (2018). http://www.cast.org/our-work/professional-learning#.WpmwuJMbOT9

MDE - Professional Development Characteristics of Quality. (2018). http://www.michigan.gov/mde/0,4615,7-140-5683_14795_83468-456840--,00.html

Michigan Administrative Rules for Special Education (MARSE) With Related IDEA Federal Regulations. Retrieved from: https://www.michigan.gov/documents/mde/MARSE_Supplemented_with_IDEA_Regs_379598_7.pdf

Modules, A. T. I. (2018). AT Internet Modules. http://www.atinternetmodules.org/

Professional Development Directory | Assistive Technology. Oklahoma State Department of Education. (2018). http://www.sde.ok.gov/sde/documents/2014-02-10/professional-development-directory-assistive-technology

Reed, P., Kaplan, M., & Bowser, G. (2009). *The Assistive Technology Trainer's Handbook*. Oregon: The NATE Network. Retrieved from http://www.natenetwork.org/manuals-forms/at-trainers-handbook

AT Industry Association. Webinars (2018). Retrieved from: https://www.atia.org/webinars/

Wrights Law. (2018). Retrieved from http://www.wrightslaw.com/

CHAPTER 9 RELATIONSHIP TO OTHER INITIATIVES

Bowser, Gail, and Reed, Penny. 2-14. RTI and Technology (A presentation). Retrieved from https://www.lcsc.org/cms/lib6/MN01001004/Centricity/Domain/21/BowserReedChartingTheCs.pdf

Bowser, G. & Reed, P. (2012). *Education Tech Points: A Framework for AT (3rd Edition)*. Roseburg, OR: Coalition for AT in Oregon, http://www.educationtechpoints.org

Edyburn, D. L. (2010). Would You Recognize Universal Design for Learning if You Saw it? Ten Propositions for New Directions for the Second Decade of UDL. *Learning Disability Quarterly*, 33(1), 33-41.

Fuchs, D., & Fuchs, L. S. (2006). Introduction to responsiveness-to-intervention: What, why, and how valid is it? *Reading Research Quarterly*, 4, 93–99.

Meyer, A., Rose, D.H., & Gordon, D. (2014). *Universal design for learning: Theory and Practice*. Wakefield, MA: CAST Professional Publishing.

Michigan Department of Education. Multi-tiered System of Supports (retrieved March 12, 2018). Retrieved from http://www.michigan.gov/mde/0,4615,7-140-28753_65803-322534--,00.html

CHAPTER 10 AT SPECIALIST COMPETENCIES

MATR/TAM/MACUL/Regional AT Committee. Competencies for AT Specialist" drafted in 2002

Pennsylvania AT Consultant Competencies. 2012. Retrieved from https://www.qiat.org/docs/resourcebank/PA_AT_Competencies_Aug12.pdf

Quality Indicators of AT. Retrieved from http://www.qiat.org/indicators.html

RESNA STANDARDS OF PRACTICE for AT Professionals. Retrieved from https://www.resna.org/sites/default/files/legacy/certification/Standards%20of%20Practice%20%28final%2010.10.08%29.pdf

CHAPTER 11 FAQS

Bowser, Gayl. (2003). Assistive Technology Model Operating Guidelines. Retrieved from https://douglasesd.k12.or.us/sites/douglasesd.../at-model-operating-guidelines.pdf

Colorado AT Guidelines. Retrieved from https://www.cde.state.co.us/early/atech

Connecticut AT Guidelines (2013). Frequently Asked Questions. Retrieved from https://portal.ct.gov/SDE/Publications/Assistive-Technology-Guidelines-Section-1-For-Ages-3-21

Keystone Area Education Agency, IA (2011). AT Operating Guidelines. P.48-53
North Dakota Department of Public Instruction. (2015) Guidelines for the Provision of AT to Students with Disabilities under IDEA Part B**.** P.36-45 Retrieved from https://www.nd.gov/dpi/uploads/60/ATGuidelines.pdf

STATE GUIDELINES REFERENCED IN THE HANDBOOK

Colorado AT Guidelines. Retrieved from https://www.cde.state.co.us/early/atech
Connecticut AT Guidelines. (2013). Retrieved from https://portal.ct.gov/SDE/Publications/Assistive-Technology-Guidelines-Section-1-For-Ages-3-21
Georgia. Retrieved from http://www.gpat.org/Georgia-Project-for-Assistive-Technology/Pages/Considering-Assistive-Technology-for-Students-with-Disabilities.aspx
Illinois. Retrieved from https://www.isbe.net/Documents/assist-tech-guidance-manual.pdf
Keystone Area Education Agency, IA (2011). AT Operating Guidelines. Nebraska. Retrieved from https://atp.nebraska.gov/sites/atp.nebraska.gov/files/doc/Assistive-Technology-Education-text-only.pdf
https://atp.nebraska.gov/sites/atp.nebraska.gov/files/doc/Assistive-Technology-Education-text-only.pdf
North Dakota Department of Public Instruction. (2015) Guidelines for the Provision of AT to Students with Disabilities under IDEA Part B. Retrieved from https://www.nd.gov/dpi/uploads/60/ATGuidelines.pdf
Oklahoma AT Guidelines 2016.

CHAPTER FOURTEEN: APPENDIX

Appropriate Transition Assessment Toolkit. Retrieved from https://transitionta.org/system/files/toolkitassessment/AgeAppropriateTransitionAssessmentToolkit2016_COMPLETE_11_21_16.pdf. Provides a variety of transition assessment tools.

Assessing Students' Needs for AT Process. 2009, Retrieved from http://www.wati.org/wp-content/uploads/2017/10/Ch1-ATAssessment.pdf

Assistive Technology Consideration to Assessment. (2017). WATI. Retrieved from http://www.wati.org/free-publications/assistive-technology-consideration-to-assessment/

AT Consideration Checklist. Retrieved from: https://drive.google.com/open?id=1x1yJH1dF8L7T6XvNv_XIyPfq0clIhNCq

AT Made Easy developed by Oklahoma Able Tech**.** Retrieved from **https://www.youtube.com/watch?v=BWy0hPggcBc**
Describes the AT process including an assessment.

AT Forms: Marion County, Kansas, Special Education Cooperative. Retrieved from http://www.mcsec.org/vnews/display.v/SEC/Assistive%20Technology%7CForms
Provides a variety of forms for the AT process.

AT Consideration/Assessment Flowchart by Laura Griffith. Retrieved from https://drive.google.com/file/d/1NHLL0viGx5TBIftGXIx6UHr-Sh2cG_0p/view?usp=sharing Laura is a co-leader of the AT Task Force.

AT Presentations. (2018). Retrieved from http://www.gpat.org/Georgia-Project-for-Assistive-Technology/Pages/AT-Presentations.aspx Provides a number of presentations on a variety of AT topics.

AT Checklist for Transition IEPs. Retrieved from https://drive.google.com/open?id=137ZEPVGvbrQANNndAIL_PoyHwUk63R-R

Chromebook Apps and Extensions for Learners with Dyslexia. Retrieved from: https://www.callscotland.org.uk/common-assets/cm-files/posters/chromebook-apps-and-extensions-for-learners-with-dyslexia.pdf

Google AT Data Collection Tools. Retrieved from https://docs.google.com/document/d/1EdH1NZAx_-fTIFtyCv2F8wKOQQ4zpO-XOYK0ifug1Ek/copy

Guide to Assessing College Readiness from Landmark College. Retrieved from https://www.iidc.indiana.edu/styles/iidc/defiles/instrc/webinars/college-readiness_assessment.pdf. To help parents assess college readiness, Landmark College has identified five essential foundations that are particularly critical for students with learning disabilities or AD/HD in order to succeed in a traditional higher education setting

Historical Development of AT. Iowa Center for AT and Research. Retrieved from http://www.continuetolearn.uiowa.edu/nas1/07c187/Module%202/module_2_p3.html Provides a history of developments in the evolution of AT for students with disabilities.

Interactive IEP Checklist. Retrieved from https://docs.google.com/document/d/e/2PACX-1vSWoGjLEx5JqJsZJb611b1mggWqDp7jQvBxT-cm87AaXk9-VyqeIMgbFWW5JaVfHFXO31fTK9dQgxdc/pub

Let's Talk Tech To Reach All Learners. Marotta, Mike (2017) Presentation at the Macomb Intermediate School District on November 10, 2017. Retrieved from https://sites.google.com/view/TalkTech4all/google-slides Provides a comprehensive overview of AT, including AT consideration and implementation, accessibility and a tool overview.

Parent Tips for Transition Planning. Retrieved from http://www.asec.net/Archives/Transitionresources/Parent%20tips%20for%20transition.pdf Designed for parents, this document provides an excellent overview of the AT process.

Part B: Prior Written Notice: Notice for Initial Provision of Programs and Services. Retrieved from https://sites.ed.gov/idea/files/modelform2_Prior_Written_Notice.pdf This required form is a place to document why AT was not selected for an IEP.

Quality Indicators for Assistive Technology Within 504 Plans. Retrieved from: https://www.natenetwork.org/forms-and-tools/

Strategies for Effective Progress Monitoring and IEP Development: Utilizing Google Drive for Data Collection. Retrieved from http://www.careertechpa.org/Portals/0/PACTESP%20Handouts/2016%20Materials/Frey%20-%20Strategies%20PPT.pdf?ver=2017-06-09-092933-320 Provides examples of how a variety of Google tools can be used for data collection and collaboration in IEPs.

Student Self Evaluation Matrix for post-secondary students. Retrieved from http://qiat-ps.org/wp-content/uploads/2017/08/Student-Self-Evaluation-Matrix.pdf This tool is a tool to help students self-assess readiness for post-secondary experiences during the transition process.

Tech Matrix. Retrieved from https://techmatrix.org. The Tech Matrix includes a database of over 400 AT products that can be searched by content area, disability type, and age. Stakeholders can use the same search tool to locate relevant research.

Transition Assessment Reviews from the Transition Coalition (University of Kansas). Retrieved from https://transitioncoalition.org/tc-assessment-reviews/?cat_ID=48. Examples of transition assessments

Understood Tech Finder Retrieved from **https://www.understood.org/en/tools/tech-finder. Understood** is another excellent AT resource that helps stakeholders find appropriate apps and other supports for students by learning issue, grade and technology type.

Transition Planning Resources Retrieved from http://www.resa.net/specialeducation/transitionplanning/ Provides a variety of transition documents used by Wayne RESA.

Wisconsin AT Initiative (WATI) Assessment Package Forms in Form-Fillable Format Retrieved from https://dpi.wi.gov/sped/educators/consultation/assistive-technology/wisconsin-assistive-technology-initiative/form