



Guiding Document for Professional Development and Training in AT

It is essential that educational agency staff members are knowledgeable about assistive technology (AT), so that each student's need for AT is appropriately considered and that all staff are aware of and in compliance with federal and state laws about AT. There are no current figures about the percentage of educators who are knowledgeable about AT, but evidence suggests that most educators do not learn about AT in their pre-service programs. Edyburn (2004) reported that general education teacher certification standards in most states require only one course in instructional technology that may or may not include anything about assistive technology. Even for special education teachers, if there is a course on AT, it is an elective rather than a requirement, in the majority of pre-service training programs (Edyburn, 2004).

Studies indicate that educators who were asked to consider the need for AT in the IEP, did not feel confident in their knowledge of AT nor in their ability to make an informed decision about its use (Ashton & Wahl, 2004; Ashton, Lee, & Vega, 2005; Marsters, 2011; Wilcox, Dugan, Campbell, & Guimond, 2006; Wilcox, Guimond, Campbell, & Weintraub Moore, 2006). This may result in students not having their AT needs met (Marsters, 2001). Ashton and Wahl (2004) also found that educators without knowledge of AT placed less importance on access to it.

The goal of AT professional development and training is to increase educators' and families' knowledge and skills in a variety of areas related to AT including, but not limited to: legal issues; collaborative processes; tools, strategies, and services continuum

-; resources; action planning; and data collection and analysis. Audiences for professional development and training include: special education teachers, related services personnel, general education teachers, paraprofessionals, administrators, AT specialists, students, parents or caregivers, and others involved with students with disabilities. When professional development and training is provided for special educators but not for administrators, general educators, and other staff a significant problem occurs. This targeted training leads other educators to believe that they have no role in the provision or support of AT.

The most effective AT professional development and training efforts arise out of an ongoing, well-defined, comprehensive plan. That plan is designed to develop and maintain the abilities to participate in the creation and provision of quality AT services for individuals at all levels of the agency

1. **Comprehensive assistive technology professional development and training supports the understanding that assistive technology devices and services enable students to accomplish IEP goals and objectives and make progress in the general curriculum.**

Intent: The Individuals with Disabilities Education Act (IDEA) requires the provision of a free appropriate public education (FAPE) for all children with disabilities. The Individualized Education Program (IEP) defines FAPE for each student. The use of AT enables students to participate in and benefit from FAPE. The focus of all AT

professional development and training activities is to increase the student's ability to make progress in the general curriculum and accomplish IEP goals and objectives.

Quality AT professional development and training is based on the philosophy that AT is used when needed to eliminate or reduce barriers to student participation and progress in the curriculum. Target audiences include general and special education teachers, administrators, AT providers, related service providers, students, and families. It reaches all staff members that provide services to students with disabilities including general educators and administrators. Effective professional development and training activities include information on the federal mandate to provide AT in order to ensure FAPE for any student who needs it. Learning opportunities include a wide spectrum of training from awareness of the need for AT to specific training on the application and use of identified AT devices.

Throughout the district AT professional development and training includes a focus on eliminating misconceptions about AT (e.g., AT is only computers, is always expensive, doesn't apply to my students, is not my responsibility, gives an unfair advantage). Professional development and training promotes understanding that AT devices are tools that provide students an alternate means of access to complete assigned tasks and achieve IEP goals. Understanding that AT exists for a broad range of activities increases awareness of the need to consider AT as a strategy to support student achievement. Educators who have had 40 or more hours of training about AT are more comfortable with AT and are more likely to believe access to AT is critical for students with disabilities. (Ashton, Lee, & Vega, 2005).

The list of AT services in IDEA includes the provision of AT training for the student, family, and staff. When AT professional development and training is part of the overall district professional development plan, it becomes integrated into training opportunities (e.g., time for training is designated on professional development and training days, substitute teachers are available , importance of knowledge about AT is recognized).

Example:

Mrs. Reynolds saw a program on TV about a tool that she thought might help her son, Mike, process information better and told his teacher she would like Mike to have the opportunity to try it. Mike is identified as being on the autism spectrum. The school district had provided professional development and training on AT decision making. Mike's teacher reviewed her notes and then followed district procedures to request assistance in determining whether this AT tool was needed in order for Mike to accomplish his IEP goals and make progress in the general education curriculum. The team met to plan the specific steps and necessary timelines for determining his need for AT and to identify the tools with the features he needs.

Key Questions
<ul style="list-style-type: none">• How does the district ensure that AT professional development and training reaches all educators who serve students with disabilities including general education teachers and administrators?• How are AT learning opportunities integrated into the overall district professional development and training plan?

- How is AT aligned with and outlined in the continuous improvement plan for special education?

2. The education agency has an assistive technology professional development and training plan that identifies the audiences, the purposes, the activities, the expected results, evaluation measures, and funding for assistive technology professional development and training.

Intent: The opportunity to learn the appropriate techniques and strategies is provided for each person involved in the delivery of AT services. Professional development and training is offered at a variety of levels of expertise and are pertinent to individual roles.

An effective plan for AT professional development and training is aligned to district-wide goals and initiatives as well as the individual needs of students with AT. When developing a AT professional development and training plan, consideration is given to the responsibilities and needs of all adults who support or are involved in the provision of AT services (e.g., administrators, teachers, related services staff, paraprofessionals, and parents).

It is common for educators to believe that their greatest need is to learn primarily about AT devices. However, learning about the devices alone is not sufficient. Knowledge about the processes of consideration, assessment, implementation, and evaluation of effectiveness is equally important.

AT professional development and training activities are based on the roles and responsibilities of individuals involved. Planning the activities that meet the differing roles and responsibilities include clearly identifying the purpose, expected results, and evaluation measures that will be used to determine the extent to which results have been achieved. *The Assistive Technology Professional Development and Training Planner* (Appendix C) [\[link to planner in Appendix C\]](#) may be a useful tool when developing or expanding a program of training. There are many ways to provide training and to foster professional development. The use of social media and online, web based training is growing exponentially. These formats offer greater flexibility than the “traditional” model of face-to-face workshops. Table 9.1 shows the formats included in the Planner.

<p>Format(s) for Training:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Face to face <input type="checkbox"/> Ongoing class <input type="checkbox"/> Online workshop <input type="checkbox"/> Online credit course <input type="checkbox"/> Webinar 	<ul style="list-style-type: none"> <input type="checkbox"/> Online learning module <input type="checkbox"/> Blog or Wiki <input type="checkbox"/> Podcast <input type="checkbox"/> Video training <input type="checkbox"/> Community of Practice
<p>Formats for follow-up:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Coaching <input type="checkbox"/> Mentoring <input type="checkbox"/> Email/phone support 	<ul style="list-style-type: none"> <input type="checkbox"/> Social media <input type="checkbox"/> Professional Learning Community

Table 9.1 Format considerations for training and follow-up

Comprehensive professional development and training incorporates adult learning principles and considers skill level of the participants (e.g., awareness, knowledge, application, and mastery). Conducting needs based assessments to inform the planning improves the quality and utility of the AT learning opportunities.

Example:

Mary was excited when her special education director asked her to provide a workshop on AT for the special education staff during the school's beginning of the year professional development and training days. Mary asked about how the training would fit into the district's technology plan and about the expected results for this session. The director told her that it was a two hour time block and offered a great opportunity to get staff up to speed with AT tools. Mary was not given, nor did she seek, input from the rest of the staff to inform her planning. Mary thought about the AT devices that she used most often with her students with significant physical disabilities as she planned the introductory training for the entire special education staff.

On the training day, Mary delivered a well-prepared session on her chosen AT devices. Some participants found relevance and left excited to try the tools with their students; others were very disappointed in the training because they already knew those tools and needed more advanced knowledge or examples. Others did not understand how the products would apply to their students and felt their time had been wasted. Mary was surprised by some of the feedback she received on the evaluation forms and determined that in the future she would ask her audience about their interests, knowledge, and needs prior to providing training.

When Mary and the special education director debriefed, they recognized that they should have gotten involvement from the staff members. They

developed a plan to get input from district educators representing a cross-section of students with disabilities.

Key Questions

- In what ways are responsibilities and needs of all adults involved in support or provision of AT services reflected in the plan?
- How does the professional development and training plan encompass the variability of participants' knowledge (e.g., basic awareness to mastery)?
- What formats do trainers consider for presentations (e. g., workshops, webinars, podcasts, video stream, other web based resources, just in time, coaching, mentoring)?
- How do evaluation results drive changes in practice?

3. The content of comprehensive assistive technology professional development and training addresses all aspects of the selection, acquisition, and use of assistive technology.

Intent: AT professional development and training addresses the development of a wide range of assessment, collaboration, and implementation skills that enable educators to provide effective AT interventions for students. The AT professional development and training plan includes, but is not limited to: collaborative processes;

the continuum of tools, strategies and services; resources; legal issues; action planning; and data collection.

When a comprehensive professional development and training plan is being developed, all aspects of the provision of AT devices and services are addressed as appropriate for agency personnel and their roles. AT devices and the processes (e.g., consideration, assessment, inclusion in the IEP, implementation and evaluation of effectiveness) necessary for the selection, acquisition, and use of AT are certainly the focus. Additional content might include collaborative processes, legal issues, specific implementation strategies, and other topics identified by target audiences. The overall concern is that the planned professional development and training teaches about and supports performance of critical roles in each indicator area. This includes identification of student needs in the customary environment, identification of features needed in AT devices, matching identified features to AT devices, providing trials and long term use in customary environments, and evaluating effectiveness of AT devices and services in meeting identified needs.

Example:

Staff at Washington Elementary decided that they wanted to expand the use of technology in an attempt to increase student learning in Language Arts. They established a committee to investigate the research about the impact of technology use on student learning. After studying the research, they decided to increase the use of technology in specific settings. They added white boards and projection systems to all upper elementary classrooms and began collecting data on changes in participation and

learning. Regular education staff worked with the Special Education staff to develop a list of software teachers could provide to students as needed. This included text-to-speech, word prediction, and phonics programs which support a range of student needs. They realized it is important to remember that for a student with disabilities, if such technology is required to increase, maintain, or improve functional capabilities, it would be AT for that student, and be included in the IEP.

Key Questions

- How does the overall program of AT professional development and training address all aspects of selection, acquisition, and use?
- How is the need to integrate AT use within the general education curriculum addressed in the plan?
- How does the professional development and training support acquisition of critical knowledge and skills for team members and additional stakeholders?

4. Assistive technology professional development and training addresses and is aligned with other local, state and national professional development initiatives.

Intent: For many students with disabilities, AT is required for active participation in local, state and national educational initiatives. Content of the professional development and training includes information about how the use of AT supports the participation of students with disabilities in these initiatives.

Districts have undertaken a variety of federal, state, and local initiatives (e.g., multi-tiered systems of support, Universal Design for Learning (UDL), core curriculum, literacy, math) to improve educational outcomes of all students. For some children and youth with disabilities, AT is often required to participate in and benefit from these initiatives. Teacher effectiveness is increased when educators understand how AT tools and strategies can be used to support inclusion of students with disabilities in initiatives that are being implemented.

Professional development on selected initiatives provides an excellent opportunity to imbed AT training in those sessions. UDL and Accessible Educational Materials (AEM) have an obvious connection to AT, but it is also critical to help all educators understand how it can be an important part of any academic or behavioral initiative. AT tools and strategies can be used to model ways to include students with disabilities in goals and activities of broader training.

Example:

Mr. Michaels was contacted by Deep River School District and asked to present a half-day training on AT supports for students with complex communication needs in the general education classroom. As an experienced AT trainer, Mr. Michaels was aware that the training would have a much greater impact if it framed the AT supports within typical activities in which AT would be used. Mr. Michaels inquired about the major initiatives in the Deep River SD, looked up the most salient aspects of each of those initiatives and included two of those initiatives in his training. At the opening of the session, Mr. Michaels

engaged participants in discussion of activities and barriers they had encountered when attempting to engage students with complex communication needs when implementing selected initiatives. He modeled AT tools and strategies that could be used to broaden participation of students with disabilities in targeted initiatives.

Key Questions

- How are AT professional development and training activities aligned with and infused in the district's professional development initiatives?
- How does content of AT professional development and training reflect the ways in which AT supports participation of students with disabilities in these initiatives?
- Have the purpose and expected results of each activity been clearly defined?

5. Assistive technology professional development and training includes ongoing learning opportunities that utilize local, regional, and/or national resources.

Intent: Professional development and training opportunities enable individuals to meet present needs and increase their knowledge of AT for use in the future.

Training in AT occurs frequently enough to address new and emerging technologies and practices and is available on a repetitive and continuous schedule. A variety of AT professional development and training resources are used.

Effective AT learning opportunities are provided on an ongoing basis to meet the continual need related to rapid advances in technology and changing needs of staff,

students, and families. In addition, training is needed on an ongoing basis due to staff turnover and the needs of educators and related service personnel supporting students using new or unfamiliar AT.

Local educational agencies often provide training opportunities, if they have staff with the expertise, and there are numerous regional, state, and national resources that can be used as part of a comprehensive plan. Professional development that is valuable and useful includes all levels and types of resources to keep staff members current. Learning opportunities are available in many formats; some are face-to-face and/or hands-on and some are offered via the Internet. Local, state, and regional conferences and workshops are often a source of information and expertise. Many states now offer AT conferences. In addition, there are several national conferences where the primary focus is AT. Currently, these include the Closing the Gap Conference in October in Minneapolis, the Assistive Technology Industry Association Conference in January in Orlando, the Technology and Persons with Disabilities Conference in March in San Diego and the Rehabilitation Engineering and Assistive Technology Association (RESNA) Conference in different locations in June. Attending any of these can become part of an individual's professional development plan.

Other opportunities are available via online courses, self-study modules, webinars, virtual communities of practice, and social networking tools. The Accessible Technology Coalition, <http://atcoalition.org>, provides at no cost a comprehensive collection of free webinars from all over the United States. There are many websites, electronic mailing lists, webcasts, podcasts, blogs, and wikis that can be part of a teacher's available tools

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for training and for technical assistance. The QIAT website, <http://www.qiat.org>, contains resources from multiple state agencies and other AT projects and programs and is a good place to begin. The QIAT Resource Bank contains materials developed by QIAT Community members, and there is a link to the archives of the QIAT list. These searchable archives include many discussions on important topics. From the QIAT website, one can sign-up for the QIAT list, an electronic mailing list with several thousand participants in a community of practice.

Example:

When students using technology moved into the South Washington County district, the teachers identified a gap in their ability to implement the AT components of IEPs. Although there had been a few awareness level training sessions in recent years, the bulk of staff members were not comfortable with their level of knowledge. Teachers asked the director for support in expanding learning opportunities. A staff survey identified specific needs as well as individuals with expertise in specific aspects of AT, including a speech language pathologist with extensive experience in augmentative communication and a teacher who was using a wide variety of AT to support student reading and writing. The director formed a task force to develop a plan to train peers and identify additional sources for ongoing professional development and training using this expertise. They learned that the technology department was willing to include an AT strand in their summer “Tech Camp” and began to identify how to maximize that opportunity and support skilled AT implementation across all

settings. The task force also joined the QIAT electronic list where they asked practitioners for additional suggestions and they requested specific days be set aside throughout the next three years to further develop and implement a comprehensive plan.

Key Questions

- How do staff members, including all of those who serve on IEP teams, learn about professional development opportunities, including those on AT?
- How are ongoing learning opportunities in AT supported and funded?
- How is information obtained in professional development and training about AT shared and disseminated?

6. Professional development and training in assistive technology follow research-based models for adult learning that include multiple formats and are delivered at multiple skill levels.

Intent: The design of professional development and training for AT recognizes adults as diverse learners who bring various levels of prior knowledge and experience to the training and can benefit from differentiated instruction using a variety of formats and diverse timeframes (e.g., workshops, distance learning, follow-up assistance, ongoing technical support).

Effective adult professional development incorporates information from adult education and learning style research. To meet the needs of adult learners, professional development and training plans involve ways for adults to find meaning in what they are

learning, create professional learning communities, implement learning immediately, and establish obtainable goals for their learning. Training strategies may include time for reflection and discussion, small group interaction, hands-on opportunities with AT products, and video vignettes for further study. Training is more successful if it relates to the individual's current role and is immediately applicable.

Unfortunately training alone results in only about 5% of individuals who have received training actually making a change in their practices (Joyce & Showers, 2002). The only support strategy that dramatically increases the implementation of new knowledge and skills is coaching. Coaching has been shown to increase the implementation of information and strategies learned in training to over 90% (Joyce & Showers, 2002). Coaching is a support strategy designed to expand an individual's capacity to create a desired outcome. Rather than telling someone what to do, the coach gives his or her full attention, asking thought provoking questions, and listening carefully (Hargrove, 2000). Coaching is most effective when the person being coached wants to become more resourceful, informed, and skillful in applying the skills learned in training (Reed & Bowser, 2012).

Coaching is not a quick fix. It is a strategy that allows time and support for the coach and the individual receiving the coaching to reflect, discuss, explore, and practice a new way of thinking about and carrying out instructional activities. It includes the coach using positive presuppositions (e.g., assuming the teacher is doing his best), asking powerful questions, and listening carefully, and giving reflective feedback (Chilotes & Reilly, 2010). The coach's role is not be a "buddy" but to be a change agent who guides

without giving directions, asking questions that cause reflection about how AT could be used to help a struggling student, and when and how AT use could best fit in the student's schedule to support accomplishment of difficult tasks.

Changes occur when coaches ask thought-provoking questions, uncover assumptions, have challenging or difficult conversations and engage teachers in dialogue about their beliefs and goals related to AT rather than their knowledge and skills. "The purpose of interaction at the belief and goal level rather than the knowledge and skills level is to facilitate teachers' exploration of who they are as teachers as much or more than what they do as teachers. It is at this level where deep reform can occur." (Killion, 2009, Pg. 24)

Example:

Wild Prairie School System purchased comprehensive scan and read software for all of their secondary schools. In order to ensure that it would be used, they conducted a survey to assess the teachers' knowledge and skills related to the technology. Based on the information received, the agency offered awareness training to all staff and introductory operational training from the sales representative to those expected to use it. Regular follow-up sessions from the agency's AT team were scheduled throughout the year. A professional learning community including coaching relationships with experienced users was formed for ongoing support. Additionally, a web-based refresher tutorial with answers to frequently asked questions was made available for on-demand training. At the

end of the year a post survey was conducted to see what needed to be changed or improved for the coming year.

Key Questions

- How do trainers incorporate adult learning principles and strategies when providing professional development and training?
- How is information presented in multiple formats and at multiple levels of engagement?
- How does training consider the differing needs of digital natives and digital immigrants?

7. The effectiveness of assistive technology professional development and training is evaluated by measuring changes in practice that result in improved student performance.

Intent: Evidence is collected regarding the results of AT professional development and training. The professional development and training plan is modified based on these data in order to ensure changes educational practice that result in improved student performance.

The goal of all AT learning opportunities is to provide staff and families with the knowledge and skills needed to increase student access to the curriculum and make progress toward achievement of IEP goals. In order to determine effectiveness of the professional development and training, evidence is collected about student outcomes.

Data that is collected may include individual and aggregate student data about access, engagement, and participation, implementation of new skills by the people involved in the training, and attitudinal factors.

Serious problems can arise when effectiveness is not measured in terms of changes in professional practice and improvement in student performance. These are the overall goal of AT professional development and training. Changes in practice are measured through use of data collection systems including, the QIAT Self-Assessment Matrices, other innovation configuration matrices, rubrics, self-ratings, aggregate student and agency data, surveys, interviews, observations, etc. The data collected help to determine what will be needed in future learning opportunities to address agency goals for student performance.

Example:

Typically, the Salem school district offered AT professional development and training to all staff and advertised it on the district calendar. When the district evaluated outcomes of AT professional development and training, results indicated that implementation was inconsistent. Analysis indicated that the major factor influencing implementation breakdown was the expectation that staff learn and use many similar software applications. Often teams were required to learn more than one multimedia software program to support students on their caseload. This appeared to be the reason that implementation was inconsistent. Movement of staff between buildings and time constraints were additional factors. The district realized that teachers had to learn so many

skills that they never acquired proficiency in any one software application. To investigate this problem further the district administered a survey, which asked classroom teachers to respond to questions such as: Are you still using the software? For what tasks do you use it? How did you get training? What are the software features that you use to support student learning? and How do these software features address student need?

Examination of the survey data showed that one of the software solutions provided more global access than the others. The district made plans to focus professional development and training primarily on the most universally designed software application while acknowledging that some students might need to use one of the other software applications. Those needs would be addressed on an individual basis. The district would continue to evaluate the effectiveness of professional development and training to build capacity, enable teachers to work with software independently, and improve student outcomes.

Key Questions

- What measures are used to determine the effectiveness of AT professional development and training?
- How is the effectiveness data used to plan for future professional development and training?
- What data is available to show the relationship between professional development and training efforts and student outcomes?

