MINNESOTA
DEPARTMENT OF

Children, Families & Learning

DIVISION OF SPECIAL EDUCATION

Minnesota Department of Children, Families & Learning

Minnesota Assistive Technology Manual

2003 Edition

Minnesota Manual for the Consideration and Evaluation of Assistive Technology for Students with Disabilities

MINNESOTA DEPARTMENT OF

Children Families & Learning

November 14, 2002

Dear Colleagues:

I am very pleased to present you with this second edition of a Manual for Consideration and Evaluation of Assistive Technology. This is a revision of the Minnesota. Assistive Technology Guidelines, published in 2000.

Since publication of the Guidelines, much more information about evaluation and team process has been gained. That new knowledge was incorporated into this document. There is also information added to assist students in transition planning for the use of assistive technology after K-12 education.

I continue to be grateful for the thoughtful feedback I have received on the MN. Assistive Technology Manual from teachers and other educational professionals in the field, from families and advocates, and from the Minn. State Assistive Technology Leadership Team. This Leadership Team works very hard to provide information and training so that students in Minnesota have access to the assistive technology necessary for them to receive a free, appropriate public education. Their contribution to furthering access to necessary assistive technology in Minnesota is invaluable.

I also want to express my gratitude to the national leaders in assistive technology who share their knowledge so unselfishly. You will see many references in this Manual to practice in other states and programs. The willingness to share and benefit others is rare and appreciated.

Please feel free to provide me with comments or feedback on this work. These comments will be considered as further additions or changes to the Manual are made.

Best wishes;

Joan Breslin Larson
Assistive Technology Specialist
Joan.breslin-larson@state.mn.us

651-582-1599 (voice)
651-582-8201 (tty)

Minnesota Assistive Technology Manual

Support in the Consideration and Evaluation of Assistive Technology for Students with Disabilities

Introduction

This manual was prepared to help all types of special educators to consider the assistive technology (AT) needs of students with disabilities. Perhaps what is most important for all special educators to understand about AT is that the federal requirements are clear—*assistive technology must be considered for all students with disabilities.* The information contained in this manual was developed to lead Individual Education Program (IEP) managers and other team members through this process by using a stepwise approach.

For some special educators, the information contained in this manual will be supplementary. You may have already developed an effective method for the consideration and documentation of AT for students with disabilities. For others, this information will be new and you will find it helpful to follow each step and use the forms designed to facilitate the AT consideration and documentation process. The "consideration" process and forms contained in this manual represent adaptations of some of the recommended practices and information developed by nationally recognized programs. Once planning teams have had an opportunity to use the process a few times, members will quickly find that they have added an important skill to their repertoire of services. You may notice that new forms have been added since the previous manual to provide assistance in evaluation and in transition planning.

While this manual is designed to meet needs at all levels, even many special educators who have acquired some experience in the area of AT can also benefit from a review of its contents to obtain updated information about AT consideration and evaluation issues. For those less familiar with the subject, a working knowledge can be quickly obtained by reviewing this introductory section and the steps contained in the section entitled *Manual for Consideration of Assistive Technology.* Extensive supporting information is also provided in this manual, including a comprehensive description of AT competencies, legal requirements, quality indicators of AT services and various resources that can be accessed at the regional and state levels. In addition to providing this manual, the Division of Special Education will conduct ongoing professional development

training and technical assistance to ensure that consideration of AT becomes a standard feature in the IEP planning process for all students with disabilities.

What is Assistive Technology?

Assistive technology is defined as both a "device" and a "service." As outlined in IDEA 97 (see Appendix B Assistive Technology Concepts as Defined in IDEA 97):

Assistive Technology Device—The term assistive technology device means "any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability." (34 C.F.R. §300.5)

Assistive Technology Service—The term "assistive technology service means any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device. This term includes:

(A) the evaluation of the needs of such child, including a functional evaluation of the child in the child's customary environment;
(B) purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by such child;
(C) selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing of assistive technology devices;
(D) coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;
(E) training or technical assistance for such child, or, where appropriate, the family of such child; and
(F) training or technical assistance for professionals (including individuals providing education and rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of such child." (34 C.F.R. § 300.6)

As described above, a device refers to a specific type of "product" that is used to enhance the functional capabilities of students with disabilities, while service refers to the services necessary to assess needs and support use of the device (see *Appendix A: Assistive Technology Glossary* for a list of commonly used AT terms). Assistive technology devices range in spectrum from very "low tech" (e.g. a pencil with a grip) through a range including simple switches and simple control units to far more sophisticated technologies (e.g. voice activated computer and environmental control). Although such terms as "adaptive technology" or "access technology" appear extensively in the special education literature, the definition in the federal law is intended to cover the broad range of devices and services that can be used by students with disabilities. With an emphasis on enhancing functional capabilities of students as a key part of the definition, the

requirements are clearly intended to provide students with increased access to general education programs, and with that, promote their participation in student assessment programs and standards-based reforms.

Although considered by some as a "new" requirement, references to the use of technology to support the needs of persons with disabilities extends back to the Rehabilitation Act of 1973 (i.e., "Section 504"). With the increasing sophistication of various mechanical and digital technologies since that time, along with a national advocacy movement on behalf of persons with disabilities, the federal government responded with PL 100-407, the Technology-Related Assistance for Individuals with Disabilities Act (i.e., The Tech Act) and the Americans With Disabilities Act (ADA). IDEA 97 currently represents the latest iteration in this evolutionary process (see *Appendix B: Assistive Technology Concepts and Definitions as Defined in IDEA 97* for a more detailed information about concepts and definitions specific to the area of assistive technology.)

Why is Assistive Technology Important?

Even though the 1991 authorization of IDEA included a definition of "assistive technology" along with provisions regarding its application and the consideration of student needs, the IDEA 97 now *requires* student planning teams (e.g., IEP, IFSP, ITP) to consider whether assistive technology devices or services are needed for all students with disabilities and also stipulates that school districts are required to provide for such devices or services to ensure a free, appropriate public education (FAPE). Given this requirement, it is imperative that special educators develop skills and knowledge in this area.

In addition to the federal requirements, Minnesota Statute (see *Appendix C: Minnesota Statutes*) also requires that special educators address assistive technology needs in the planning process, including important information about school district obligations, purchasing guidelines, interagency agreements and the role of third-party payors. This information is essential for special educators who are actively engaged in evaluating, providing and supporting AT and who may be responsible for informing administrators and general education staff about their roles and obligations.

Frequently Asked Questions About Assistive Technology

The following address the most frequently asked questions about assistive technology. Additional information about critical issues involving AT devices and services can also be seen in the policy letters disseminated by the U.S Department of Education which are summarized in Appendix D. These policy letters provide important information about various issues and concerns brought before the department. A number of the questions included in this section were generated from information contained in these letters.

Who must be considered for AT?

IDEA 97 (34 C.F.R. §300.346) mandates that *all* students with an IEP must be considered for assistive technology (AT). To provide a free, appropriate, public education, the IEP team must consider if AT is needed for the student to meet goals and objectives.

Are there particular groups of students with disabilities who should be considered for AT?

The federal requirements are clear — AT consideration must occur for *all* students who have an IEP. It is not based on any preconceived ideas about disabilities. It is also possible that a student with a disability may need several types of AT to meet their educational needs, based on their IEP goals and objectives.

What is meant by "consideration" when discussing AT?

"Consideration" is a process and it should not be confused with an "evaluation." Simply put, consideration is a relatively short process in which IEP team members use information analysis and critical decision making to determine student needs for AT. Although IDEA 97 does not have specific language regarding "consideration," the Minnesota Department of Children, Families & Learning (CFL) has adopted this term to conform with the SETT framework (see Appendix E: SETT Framework). This provides a research-based framework from which planning teams collect information about the: 1) student's strengths, abilities and skills, 2) environments in which the student functions, 3) general education curriculum needs (tasks) to meet IEP goals, and 4) information about possible assistive technology services and devices to achieve these goals (tools).

Who provides consideration for AT?

The IEP team provides consideration for students with disabilities. In the event a team concludes they do not have enough information, they are still required to seek assistance to ensure that informed consideration had occurred.

What are the conclusions an IEP team could make in regard to AT?

Penny Reed of the Wisconsin Assistive Technology Initiative (www.WATI.org) has stated that there are four possible decisions an IEP team can make. These are restated here:

1. AT is not needed. The student is making adequate progress through task modification, skill remediation or other interventions. Nothing new is needed for this student.
2. AT is needed, and is successfully being used. In this case, it is appropriate to state in the IEP that particular AT services and devices have been found to be effective to assure that they are available to the student.
3. AT may be needed, but the IEP team is unsure what service or device would meet the student's needs. The team may decide that new AT should be tried and additional data be collected to determine what an appropriate service or product might be.
4. The team is unsure what AT is, and so must find resources in order to make an informed decision regarding consideration. These resources can be from within the school district or, if there are no resources available, from an outside agency or resource.

Must every student with a disability be evaluated for assistive technology?

No - but it must be *considered* for every student with a disability, hence the need to provide AT consideration. If the IEP team determines that there is a need for an assistive technology *evaluation,* that must occur as well.

What is the school's responsibility for providing assistive technology?

"Each public agency shall ensure that assistive technology devices or assistive technology services, or both, as those terms are defined in §§300.5-300.6, are made available to a child with a disability if required as a part of the child's –

(1) Special education under 300.26;

(2) Related services under §300.24; or

(3) Supplementary aids and services under §§300.28 and 300.550(b)(2)."

(34C.F.R.§300.308(a))

Are schools required to pay for assistive technology services and products?

Not necessarily. Schools have the responsibility to provide the services and products that are included in the IEP. However, the school may utilize a variety of funding mechanisms to pay for them, including accessing medical assistance for items which are medically necessary.

What are schools' responsibilities for customization, repair, maintenance, or replacement of assistive technology devices included in the IEP?

Schools are responsible to provide these services in order for a student to receive FAPE (34 C.F.R. §300.308). This can include the repair, maintenance or replacement of a privately owned device that is included in the IEP. (34 C.F.R. §300.306)

Can students take school owned assistive technology devices home on school nights, over weekends, breaks of over the summer?

"On a case-by-case basis, the use of school-purchased assistive technology devices in a child's home or in other settings is required if the child's IEP team determines that the child needs access to those devices in order to receive FAPE." (34 C.F.R. §300.308.b)

What is the school's responsibility for maintenance or replacement of an AT device that is damaged or stolen while in the child's possession?

The assistive technology devices that are necessary to ensure FAPE must be provided at no cost to the parents, and the parents cannot be charged for normal use and wear and tear. However, while ownership of the device in these circumstances would remain with the public agency, state law rather than Part B of IDEA 97 generally would govern whether parents are liable for loss, theft or damage due to negligence or misuse of publicly owned equipment used at home or in other settings in accordance with a child's IEP. Minnesota currently does not have state law that relates to this issue.

How is an assistive technology tool documented on the IEP if it is available to other students who do not have a disability?

If the assistive technology is necessary for a student with a disability to complete educational goals, it should be included on his IEP. Even if it is available to other students as a useful tool, if it is an essential tool for that student, it should be documented as such on the IEP.

Why do some students refuse to use technology after it is obtained for them?

Frequently, assistive technology products are obtained for an individual and not used. This is product abandonment. There are some reasons frequently given for abandonment listed below. These are not the only reasons, nor are they relevant just for students. However, it would be wise to take them into consideration and try to find ways to help limit the incidences of abandonment among our students.

1. Student was not involved in decision-making.
2. It didn't do what it was supposed to do.
3. It worked, but it was inconvenient or impractical to use.
4. It inhibited some other important function.
5. It couldn't be modified or upgraded to meet changing needs.

6. It was too cumbersome or unattractive.
7. Functional needs of user changed.
8. Medical intervention (surgery, medications) made it unusable.
9. Use of the technology increased medical or safety risk.

Who is considered to be an assistive technology specialist?

There is no required licensure as an assistive technology specialist. There are certifications and degrees issued by several professional organizations and educational institutions, including RESNA (rehabilitation and assistive technology association of North America), RIATT @ NASDSE(Institute For Assistive And Training Technologies @ National Association of State Directors of Special Education), University of Kentucky, State University of New York and others. In many cases, Special Education Teachers, Occupational Therapists, Speech-Language Pathologists, Physical Therapist and other professionals have become local experts on AT issues. Until there is a licensure or certification required, professionals are encouraged to examine their own skills and knowledge, perhaps through a self-examination using the NASDSE and QIAT competencies. Professionals are also encouraged to engage in ongoing learning through conferences, workshops and other opportunities to maintain a current knowledge base.

The Department of Children, Families & Learning sponsors regular opportunities to enhance AT skills. Current information on these can be found on the CFL web site at http://cfl.state.mn.us/SPECED.

What You Should Know About Assistive Technology

Recommended Competencies in the Area of Assistive Technology

Gary Adamson, Ph.D., presented the following competencies to the National Association of State Directors of Special Education (NASDSE) board in a report in April 1998. Subsequently they were distributed to each state education agency by NASDSE. These are not official competencies adopted by NASDSE or by CFL. Teachers are encouraged to use this list of competencies as a tool for self-evaluation.

I. Basic Knowledge of Assistive Technology (AT) Services and Devices

- Understand AT, including legal requirements, its purpose and functional application for the student's educational program.
- Demonstrate awareness of a variety of assistive technology devices and services and the ability to integrate technology into educational programs.
- Demonstrate knowledge in their specialty area of assistive technology (e.g., access, alternative/augmentative communication, computer-based instruction, mobility, positioning, assistive listening and signaling devices, recreation/leisure/play, vision technology, environmental control, and activities of daily living).
- Demonstrate the ability to apply discipline specific knowledge regarding AT.
- Demonstrate the ability to use appropriate AT in a variety of educational settings.
- Demonstrate the recognition of the need for ongoing individual professional development and maintaining knowledge of emerging technologies.

II. Collaboration and Communication

- Understand the transdisciplinary nature of AT application and contribution of a variety of disciplines to the service delivery process.
- Understand skills required to serve as a member of a transdiciplinary team providing services for assistive technology.
- Ability to include parents as team members.
- Ability to listen and respond to input from other team members.

- Demonstrate effective group process skills.
- Know when and where to refer to other resources for assistive technology.
- Utilize resources to meet technology needs for students with disabilities.
- Demonstrate the ability to network with others in the community, including parents and general educators for technical information and problem solving.

III. Assessment, Planning and Implementation Process

Assessment

- Identify appropriate, qualified team members necessary to determine AT needs and strengths.
- Determine, in collaboration with other members of the assessment team, assistive technology needs as part of a comprehensive transdisciplinary evaluation which addresses all areas related to the disability and based on student's strengths, tasks, and expectations.
- Use appropriate data gathering procedures and strategies to conduct an assistive technology evaluation utilizing a team approach to assess the student in customary environments.
- Integrate and discuss, in collaboration with the transdisciplinary team, all evaluation information, including formulating recommendations and preparing a report.

Planning

- Develop a plan utilizing appropriate, qualified team members.
- Identify and design appropriate AT devices, services and strategies in the plan.

Implementation

- Implement the plan using a collaborative approach.
- Evaluate, measure and report on the effectiveness of the plan to meet the student's needs.
- Modify the plan as required to meet the student's needs.
- Identify areas that require further assessment or reevaluation on an ongoing basis.

IV. Resources

- Identify, in collaboration with team members, assistive technology resources at the classroom, building, district, region, community, state and national level:
    - Funding resources
    - Product resources; i.e., augmentative communication, computer access
    - Print and electronic resources, i.e., books, web sites, journals, list serves
    - Human resources; i.e., individuals who can provide assessment, training, customization
    - Problem solving, maintenance and repair
    - Recognize own scope of knowledge and skills and utilize identified resources to augment knowledge and skills represented within team.
    - Serve as a resource for others
    - Identify staff development needs and opportunities which meet needs
    - Participate in staff development opportunities that address identified needs.

Guidelines for Consideration of Assistive Technology

Every IEP Team is now required to "consider" the need for Assistive Technology for every child in special education, as part of the "Special Factors" requirement in IDEA '97. In the federal requirements, Special Factors requires that IEP teams "consider whether the child requires assistive technology devices and services" (34 C.F.R. §300.346).

This requirement leaves us with several questions, such as: What does it mean to "consider?" How will IEP teams demonstrate that consideration occurred? What process can be used to ensure that AT consideration was provided by the team? What is the difference between "consideration" and "evaluation?" All of these questions are addressed in this section.

In thinking about "consideration" it is important to remember that consideration is by nature a *brief* process, one that can take place within every IEP meeting. Secondly, in order to consider the need for assistive technology, at least one person on the IEP team must have some knowledge about assistive technology. Thoughtful consideration of anything can only occur if one knows something about it. Therefore, to facilitate knowledge about AT consideration, a procedure involving a series of steps has been developed to lead teams though this process. Each step is built upon a conceptual framework that involves team collaboration in determining what services and devices best meet a student's needs.

The steps presented in this section are accompanied by a set of forms that can be used at critical points in the consideration process. This process, including all of the forms, was adapted from a variety of sources including Rees (1998), Bowser and Reed (1998) and SETT (1999). The forms contained in this manual are suggestions for how to effectively provide both consideration and extended consideration of assistive technology. IEP team members should note that *these forms are not required*—they are only used to help teams with the AT consideration process. Some teams will find that they prefer some forms to others, or find that some parts are not necessary, depending on their skills and team dynamics. Teams with little experience in the consideration of AT are encouraged to try the forms as they are presented, then modify them based on team needs and increased experiences.

IEP Team Members for Considering Assistive Technology Needs

In most cases, IEP team members engaged in the AT consideration process will be comprised of those individuals required by IDEA 97 (parent, general education teacher, etc). The forms provided in Section 3 were designed to facilitate the

consideration and solutions selection process, even for team members who have had little experience with AT devices and strategies. There may be times when additional personnel will be called on because of their expertise or specialized knowledge in the field of AT. A number of school districts within Minnesota will have one or more "dedicated" AT teams whose role is to provide consultation with complex AT issues or staff development activities. However, a wide range of individual perspective may contribute to the consideration process, ranging from highly trained consultants to the student's peers. Additional members who can provide input into the AT consideration may include any of the following:

- Advocate
- Assistive Technology Specialist
- Audiologist
- Augmentative Communication Specialist
- Interagency Personnel
- Medical/Health Professionals
- Occupational Therapist
- Paraprofessionals
- Peer
- P/HD Teacher
- Psychologist
- Social Worker
- Teacher of Deaf/Hard of Hearing
- Vision Specialist
- Others as needed

Steps for Considering Assistive Technology

Step 1: Prior to the meeting, to aid in practical consideration of assistive technology, a team may choose to observe the student in his customary environment to gain information on current activities and supports, and determine how well they work. This observation may assist the team in making an informed decision regarding whether assistive technology is already in place, what is working well, and potentially give some guidance regarding areas where any additional options may be needed. A form which may be useful is the *Assistive Technology Status Log.* The *Student, Environments, and Tasks Worksheet, Family and Student's Worksheets* in Section 3 can also be used to gather input from team members. Team members should make a point of reporting both successes and accomplishments in addition to areas of difficulty. The *Worksheets* are brought to the team meeting.

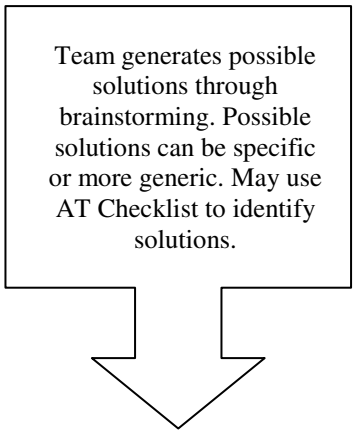
Team members gather information prior to meeting. Use *Assistive Technology Status Log* and *Student, Environments and Tasks , Family and Student Worksheets.*

Step 2: At the team meeting, members conduct a group planning process to review information obtained from the Worksheets. It is recommended that a flip chart or overhead be used so everyone can see all the topics from the worksheet that need to be discussed. A template that can be used for this activity is the *Assistive Technology Group Planning Process* provided in Section 3. Note that the topics on this template directly relate to the information on the *Worksheets.* The primary objective of this group process is to identify tasks the student needs to be able to do in relation to "*student*" factors (e.g., skills, abilities, functional competencies) and environmental circumstances that impact performance. It is recommended that teams quickly move through the information on

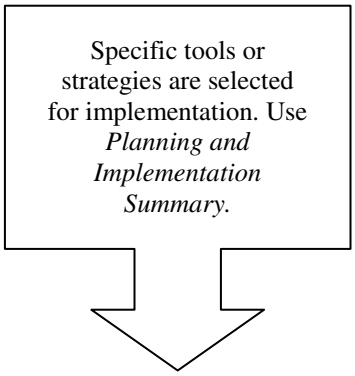
Team meets and conducts group planning process, using information gathered through worksheets.

the *Student, Family, and Environments*, portions of the worksheet, spending only a few minutes per topic if the team is in general agreement with the data that has been gathered. Generally, more attention is paid to the Tasks section (i.e., the naturally occurring activities that take place in the environment that are critical to the student), since the team cannot generate AT solutions until those tasks have been identified. The team should choose from 1 to 3 critical tasks for solution generation.

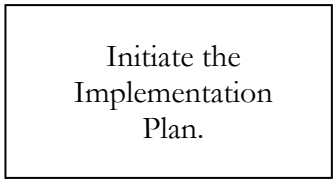
Step 3: Once all aspects of the *Student, Family, Environments, and Tasks Worksheet* have been addressed, the team needs to generate solutions through brainstorming. The details of the solutions will vary, based on the knowledge and experience of the team members. Some team members may be able to name a specific product that they think may assist the student. Others will only be able to list features; for example "says everything while it is typed" or "needs to be portable" or "has only 2 messages." Teams can use the *Assistive Technology Checklist* in Section 3 to review a wide range of AT devices and strategies that can be used to address student needs in such areas as writing, reading, daily living skills and transition. Also, other resources in that can be used include the *Closing the Gap Directory* (as updated) *Trace Resource Book* (as updated), or teams can seek the advice of an AT consultant or any one of the number of state and regional resource persons listed in the *Resources for Assistive Technology* section of this manual.



Step 4: This step involves "solution selection." The team discusses solutions listed, thinking about which ones might be the most effective for the student. Team members may want to identify solutions that can be implemented either immediately, in the next few months, or in the future. At this point, the *Planning and Implementation Summary* can be used to list specific devices, hardware and software. Consisting of two sections, "Planning" and "Implementation," the *Planning and Implementation Summary* is used to help team members consider a wide range of factors (e.g., training, cost, storage) involved in selecting and using assistive technology. Once again, if team members are uncertain about the name or purpose of the devices, you can use the resources included in this manual. It is important to note that in some cases, a strategy rather than a device or product may be identified.



Step 5: Develop implementation plan, which could include extended consideration with any identified devices or products or evaluation. Use the *Planning and Implementation Summary* to assign names, dates and follow-up plan and meeting.



Implement the plan, collect relevant data and conduct follow-up on the planned date.

Extended Consideration

Extended consideration refers to a trial period with one or more assistive technology devices in the child's customary environments. Extended consideration (also know as equipment trials) is an extremely effective tool for determining what, if any, assistive technology might help the child achieve goals as developed by an IEP team.

Completing an extended consideration can provide members of the team with time to make rational decisions based on actual data. It can help with team members who have read or heard about new assistive technology, but who lack information on how use of the device would impact the performance of the student. More than one technology solution may be tried to determine which one is the most effective. The opportunity to collect additional data in the extended consideration process helps the team to consider the need for assistive technology, based on actual performance of specified tasks by the student in the chosen environments. An extended consideration period of any reasonable length can be written into the educational plan to allow for appropriate, well planned and documented trials with a range of potential solutions.

When considering assistive technology, there will be times that the team can agree on a particular feature of a specific device, strategy or service which meets student's needs. The team can also agree to a period of extended consideration of devices matching those features. Because it is essential to determine if a particular assistive technology device is appropriate for a student, it is important to conduct trials prior to incorporating the device into the student's education program. Thus, equipment trials become an ideal strategy to test a device in the customary environment, allowing the team, including the student, time to experience what impact- both positive and negative- the device can have. This extended consideration should be documented in the IEP and a time to review the outcome of the extended consideration should be established. The documentation should include what is to be tried, as well as a general timeline for each item. A period of extended consideration can occur without an AT evaluation if the IEP team agrees that features of a device would assist a student in making educational practice, and they are in agreement about the devices which will be used during the extended consideration. An extended consideration can also be the outcome of an AT evaluation, if, during the evaluation, features of a device(s) which could potentially benefit a student are identified, but the team has not had an opportunity to gain adequate information regarding which device of several which have those features is most appropriate for the student.

Steps for extended consideration:

1. Tools/strategies chosen for trial, based on the features described by the IEP team. The team may choose to use the *Planning and Implementation Summary* from the **Minnesota Assistive Technology Manual.** This Summary form will guide the team in structured actions regarding the extended consideration.

Team defines function of device. Appropriate device(s) are obtained.

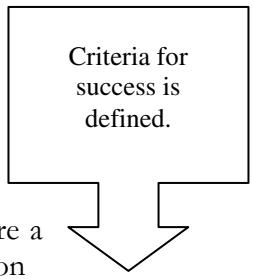
Resources for extended consideration:

It may not be possible to have all devices on hand at all times for extended consideration. Some districts have found it necessary to

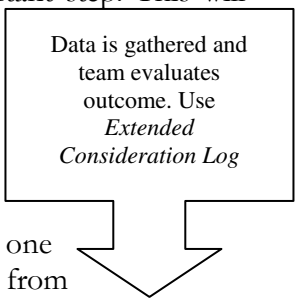
borrow, rent or otherwise obtain devices for extended consideration. There are equipment loan programs in some districts, regions or intermediate districts. Certain community programs, including PACER, PACTT, MATLN and others have equipment loan programs. There may be a fee or membership cost to access these loan programs. See the *Resources* section for more information on programs.

It may also be helpful to contact a manufacturer or distributor of a device to arrange a trial loan. While some manufacturers have free loaner devices, others may require the submission of a purchase order, with the understanding that the device can be returned within a set time frame. Other manufacturers have a loan policy in place, possibly with the cost of the loan being applied to a purchase.

2. Criteria for success are defined. It is helpful to propose a desired outcome for a student. Will the team expect a 50% increase in work production or a 10% increase? Is the expectation for that increase anticipated to be the same as for a student first using AT as for a student with related technology experience? Does the team have reasonable expectations for timelines to learn the technology both for the student and those involved in his activities? Is there a different level of expectation for the time frame of evaluation vs. the expectation for actively using the device? Will other successes with the device be considered? For example, if the criteria for success with a communication device is "Tim will answer 35% more questions in history class," there may be a concern because Tim does not know the answers to questions in history. Based on those criteria only, Tim is not a successful user of AT. However, if the team is open to other successes, the team may hear that Tim is no longer having behavioral outbursts in the lunchroom now that with use of the communication device, he can request a lunch item he wants. The ability to request a desired item is reducing frustration, and reducing resultant outbursts. Although this was not the intended result, it is a desirable result, and should be considered in making a final decision on a device for a student.



3. Data is gathered. The collection of data is an important step. This will allow the team to make an empirical decision, rather than one based on theory. It will allow the team to compare devices using common points, which will be useful if the team is unable to choose among separate devices. If there is delineation in student performance using different devices, a strong case can be made to justify the choice of one device over another. The *Extended Consideration Log* from the **Minnesota Assistive Technology Manual** could be used for this task.

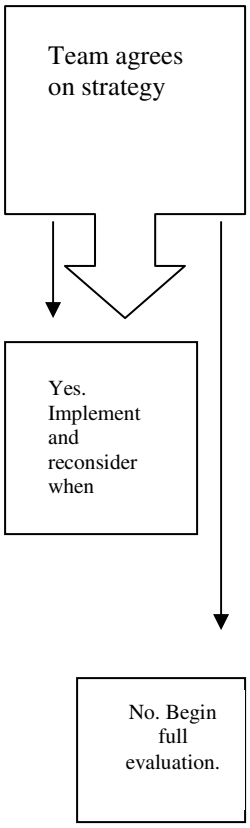


4. A successful strategy/tool is chosen. Using the data gathered, the team comes to consensus regarding an appropriate tool or strategy for the student. It is essential to note the importance of the student's opinion in this process. There are multiple incidences of students choosing not to use an assistive technology device which appears to be ideal for him. The student, for reasons which are valid for him at that point in time, chooses not to use a device. It is important to document the efforts to provide the student with appropriate assistive technology, and also to document the student's comments, behaviors and record of usage with the device as a means to determine his receptivity to the assistive technology.

   4.a If the IEP team agrees on a particular assistive technology device or strategy, it should be added as appropriate to the IEP. It can either be named specifically, or described by feature in such a way that only a device which provides those features would be identified.

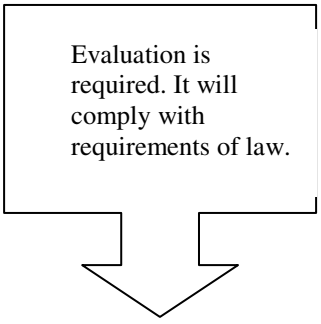
   4.b If the team is not able to choose or agree that one of the previously identified strategies or devices is appropriate for the student, but continues to feel assistive technology is appropriate, there are two potential options.

   The team can agree to a new period of extended consideration, or choose to conduct a full assistive technology evaluation. Evaluation becomes necessary if either requested by the student (if over 18) or family, or if the team is not able to agree on a particular type of device or strategy which would benefit the student. In the event that an assistive technology evaluation is necessary, it is to be conducted in full compliance with due process requirements.



Assistive Technology Evaluation

An assistive technology evaluation is best conducted by a team rather than an individual. No single person will have adequate knowledge of a student, his unique strengths and abilities, the tasks that need to be performed, and the environments in which the student spends his time. Although one person may bring important information regarding assistive technology to the team, other players can provide essential information about how that assistive technology will be useful.



Additionally, no single person is knowledgeable about all areas in assistive technology. The AT field is broad, and there are multiple disciplines involved. An effective assistive technology team will be made up of representatives of those disciplines who are able to provide services for a student based on his individual needs.

An assistive technology evaluation should be conducted to meet a specific need of a student. That is, tasks need to be identified for which an assistive technology solution is sought. The task can be educational (writing, completing assignments, answering questions), a life skill (eating, self-care,

mobility), or vocational (organizing tasks, telling time). You may have to prioritize tasks or find tools that are appropriate across multiple needs. However, it is essential to prioritize the areas for concentration. Otherwise, the broad spectrum of assistive technology possibilities across all areas can be overwhelming for both the student and the team.
An AT evaluation should:

- Be performed in accordance with recognized professional standards;
- Include an analysis of behavior;
- Be conducted within required timelines;
- Be conducted in the student's customary environments;
- Be administered in the student's primary language or mode of communication;
- Be conducted by a multi-disciplinary team including qualified professionals;
- Use information gathered from parents and others;
- Result in an evaluation summary;
- Contain summary results of the evaluation;
- Present the evaluation team's judgement regarding AT;
- Contain all team members' names, titles and date of report.

An evaluation report which is generated as part of an initial evaluation or re-evaluation should include information regarding areas where assistive technology should be considered. If a student already uses a form of assistive technology, this should be made available to them during the evaluation if used to complete a required task. An evaluation report will not necessarily provide information about specific AT devices or services, as this should be based on goals determined during the IEP meeting. It will, however, provide information to assist the team in better consideration of the need for AT when the IEP meeting is held.

Results in evaluation summary report.

This evaluation report should produce information regarding what strategies or features a device could have to meet a student's needs. It can potentially name specific devices, if during evaluation, a particular device becomes obvious as being of benefit to the student. If, however, there are questions about which of several devices can be of value, the team can choose to employ a period of extended consideration as described above. This extended consideration does not need to be completed within the evaluation timeframe, but there should be a reasonable, documented plan listing timelines with which the team is in agreement.

An independent evaluation may be provided at the schools' expense if the team decides it needs additional experience or skills to complete the evaluation. An independent outside evaluation may also be conducted at the request of the

student (if over 18) or the student's family. It is required that these evaluations conform to those requirements included in IDEA (34 C.F.R. §300.502).

Whenever an IEE is at public expense, the criteria under which the evaluation is obtained, including the location of the evaluation and the qualifications of the examiner, must be the same as the criteria which the public agency uses when it initiates an evaluation. (34 CFR § 300.503(e).) The public agency should have criteria for the minimum qualifications of the persons who conduct evaluations.

A Checklist to assist both with generating an AT evaluation report has been added to the Forms in Section 3 of this manual. This form may be helpful to assist in including relevant findings from the evaluation.

Documenting Assistive Technology on the IEP

Assistive technology devices and services must be included if they are identified as being necessary for a student to receive a free appropriate public education. Minnesota's IEP form provides a framework for the development of an Individual Education Program.

The directions included in Minnesota's *State Recommended Due Process Forms* contain guidelines for inclusion of AT in the IEP. These guidelines can be found in the following sections:

1. Notice of Educational Assessment/Reassessment
2. Adaptations in General and Regular Education
3. Special Considerations
4. Appendix B- Special considerations

In addition, the directions also contain information regarding "modifications." These can be found in the following sections:

1. Assessment Summary Report
2. Adaptations in General and Special Education
3. Program Modifications and Support for Staff
4. Basics Standards Testing
5. Review of Existing Data (Optional Form)

There are a number of areas on the forms where it is most appropriate to include AT. These include:

1. Special Education and Related Services
2. Present Level of Educational Performance
3. Transition (as appropriate)
4. Annual Instructional Goals and Objectives
5. Comprehensive Assessment and Standards Assessment
6. Adaptations in General and Special Education

The IEP forms recommended by the Minnesota Department of Children, Families & Learning meet the legal standard of federal and state laws and rules. However, any district may add relevant information to the IEP. Although federal regulations require only that the outcome of consideration of assistive technology be documented if the results in the determination of need for AT,

(34 C.F.R. § 300.346(c)), it is suggested that to show that AT consideration had occurred, a notation or statement on the IEP be added to the IEP such as "Assistive technology has been considered for this student" followed by: (1) "Considered and found to be not needed," or (2) "Considered, and need is addressed in the IEP in the following areas...." Statements of this nature may help to demonstrate that AT consideration was afforded to all students with disabilities.

Indicating yes or no to the above consideration question (and if yes, including the the technology required) is considered minimal compliance to the requirement for considering assistive technology. However, it is best practice to document the decision making process used to consider the student's need for assistive technology. For example a statement regarding the discussion of assistive technology needs may be documented in the minutes of the IEP meeting and may be included in other components of the IEP as described below. For example, a statement such as "An analysis of the required tasks within the relevant instructional areas revealed that Tim can independently accomplish the tasks; therefore, assistive technology is not required." could be used to document that assistive technology was considered but not required. For a student requiring assistive technology, a statement such as "An analysis of the required tasks within the relevant instructional areas revealed that Joe has difficulty completing math calculations; therefore, it is recommended that he have access to a hand held calculator to complete math calculations in all classes." could be used to document the consideration process for a student who requires assistive technology.

When documenting assistive technology as either special education service or supplemental aids and services, list those supports, services or devices which are provided in education related sites that allow the student with the disability to be educated in the least restrictive environment. This should include the training necessary for the student and others for effective use of the technology. The plan should address environments in which the technology is available to the student, including, when decided by the team, access to the technology outside of school. The plan should also include a procedure for occasions when the technology is unavailable.

In the present level of educational performance, include the necessary devices and services that students use to participate in and benefit from education. Examples include: "Joe uses a wheelchair for mobility with a specialized seating system to maintain his posture" or "Cate uses a portable word processor to complete written work in English and history classes. She averages five spelling errors in a 300 word document."

Postsecondary transition planning requires new concerns for students using AT. Students who have used the services from special education professionals to support and maintain assistive technology devices will need to develop new

skills and relationships with adult providers to support their use of AT. Students may need to learn new self-advocacy skills in finding supports for their devices, learning skills to explain the need for or use of a device in a new setting, or requesting access to identified technology needs that are not systematically available in a new setting. As teams supporting students in transition identify future activities, it becomes necessary to plan for technology that may be necessary in a new setting.

Goals in the IEP state what the student should be expected to accomplish in the next year. The use of AT should be a strategy to accomplish a goal. Recalling the earlier discussion regarding Tim and his use of a communication device in history class (p. 15), the goal states, "Tim will answer 35% more questions in history class." An objective for this goal could include "Using his dedicated communication device, Tim will verbally respond to at least one question presented verbally in history class each week." Notice that the goal does not relate to the use of his device. However, the objective provides a strategy for Tim to perform an academic task. If Tim does not know how to use his communication device, clearly an objective would state that Tim must learn to use the device prior to asking him to use it to answer questions in history. However, the end goal remains the ability to answer questions in history class.

The IEP should include in the area of Assessments the tools used to complete the Comprehensive Assessments and Standards Assessment. It is essential to note that use of certain assistive technologies will impact the ability of a student to complete the Assessments on the State level. For example, use of a word prediction package will eliminate the student's ability to demonstrate his abilities in spelling, which is considered to be essential to the task of writing. Accommodations which do not impact the validity of a test are allowable. These would include how a test is administered (e.g. over an extended time frame or in quiet room) while a modification is an adjustment of a test that results in changing the standard for a particular student. Educators are cautioned to examine the role an AT device would play in participating in the standards, determine if it constitutes an accommodation or a modification and document it appropriately.

Many teams prefer to list the AT used by a student in the adaptations and accommodations section of the IEP. This meets the legal standard of practice. This area should include all the adaptations currently being used with a student which may or not have been documented elsewhere. Include all AT devices, including the very low tech ones to reflect what is available to the student.

Assistive Technology and Transition

Students who are transitioning to a post secondary setting face a unique situation in their use of AT. For many students, the supports available through their educational setting made their use of AT successful. Within the school setting, students received support in selecting appropriate devices and strategies, devices were programmed, and some repairs were possible. When the student leaves the school setting, these services are no longer available.

Students moving to post secondary settings need to develop new skills for their new life. Skills and strategies appropriate for the use and maintenance of their AT are part of this. These skills may include being able to advocate for the need of a particular device or strategy in a new academic setting, or asking to have new language added to a communication device. It may also include having an emergency plan in place for times when their technology fails.

As students prepare for transition, they should include planning for the use and support of their assistive technology. Forms to both assist in helping a student learn self advocacy skills related to AT throughout the transition period and to support the use of specific devices are included in Section 3 of this Manual.

Quality Indicators for Assistive Technology Services

developed by The QIAT Consortium

The consideration of assistive technology devices and services is required during the development of every Individualized Educational Program (IEP) and every Individual Family Service Plan (IFSP) for children from birth to school age. The Individuals with Disabilities Education Act of 1997 (IDEA '97) requires that each team which plans for the education of a child with a disability document any assistive technology devices and/or services the child may need. Despite this requirement, there has been no agreed upon description of high quality assistive technology services by which schools can measure their compliance.

Since the summer of 1998, the Quality Indicators for Assistive Technology (QIAT) Consortium has focused its efforts on defining a set of descriptors that could serve as over-arching guidelines for quality assistive technology services. The Consortium has attempted to develop descriptors that are applicable regardless of service delivery models. It is the belief of the Consortium that these descriptors can be used to guide:

- school districts in the development and provision of quality assistive technology services which are aligned to federal, state and local mandates;
- assistive technology service providers in the evaluation and improvement of their services;
- consumers of assistive technology services in the selection of adequate assistive technology services;
- university faculty and professional development providers in the delivery of programs that develop knowledge and skills needed to offer quality assistive technology services;
- leaders in the development of regulations and policies related to the use of assistive technology in education.

When reviewing or using the Quality Indicators for Assistive Technology, it is important to be aware of some basic assumptions that pertain to all areas of QIAT. First, it is essential that ALL assistive technology services developed and delivered by states or districts are legally correct according to the mandates and expectations of federal and state laws and are aligned to district policies. Second, assistive technology efforts, at all stages, involves on-going collaborative work by

teams which include families and caregivers, school personnel, and other needed individuals and service agencies. Third multidisciplinary team members involved in assistive technology processes are responsible for following the code of ethics for their specific profession.

Note: IDEA '97 requires that assistive technology devices and services be provided for all children with disabilities who need them. This applies to children from birth to twenty-one years of age. In the following document, when the term IEP is used, the reader can assume that the indicator also applies to IFSPs unless otherwise indicated.

Quality Indicators for Administrative Support

This area defines the critical areas of administrative support and leadership for developing and delivering assistive technology services. It involves the development of policies, procedures, and other supports necessary to sustain effective assistive technology programs.

1. The education agency has written procedural guidelines that ensure equitable access to assistive technology devices and services for students with disabilities, if required for FAPE.
   Intent: The education agency has clear written procedural guidelines that provide equal access to assistive technology devices and services for all students. Access to AT is the same for the student regardless of abilities, economic status or geographic location. All district personnel are familiar with the procedural guidelines.
2. The education agency has clearly defined and broadly disseminated policies and procedures for providing effective assistive technology devices and services.
   Intent: District personnel in special education and general education are familiar with the policies and procedures in both special education as well as general education. The procedures are readily available at each campus and all school personnel know how to access the procedures.
3. The education agency has written descriptions of job requirements, which include knowledge, skills, and responsibilities for staff members who provide assistive technology services.
   Intent: The education agency has clear written statements of job requirements that address the necessary AT knowledge, skills and responsibilities for all staff members. This includes all personnel from the classroom through central office. This could be reflected in a position description, assignment of duty statement or some other written description.

4. The education agency employs a range of personnel with competencies needed to provide quality assistive technology services within their areas of primary responsibility.
   Intent: The agency employs staff members from the classroom through the central office who have knowledge and skills of AT commensurate with job requirements. Though classroom teachers, supervisors and purchasing agents may need different knowledge and skills related to assistive technology, all must be knowledgeable for the system to work well.
5. The education agency includes assistive technology in the technology planning and budgeting process.
   Intent: Historically, the AT needs of the agency have either been separate or omitted. A comprehensive technology plan provides for the technology needs of all students in both general education as well as special education.
6. The education agency provides continuous learning opportunities about assistive technology devices, strategies and resources for staff, family and students.
   Intent: The training addresses the needs of the student, the family, and all of the staff involved with the student. Ongoing training and technical assistance opportunities are readily accessible to all members of the IEP team. The training and technical assistance includes training on AT devices, strategies and resources to support IEP goals and objectives.
7. The education agency uses a systematic procedure to evaluate the components of assistive technology services to ensure accountability for student progress.
   Intent: There is a clear systematic procedure with which all administrators are familiar and use regularly. This procedure is used consistently across the agency at both central office and the building level. The components of this process include budgeting, planning, delivery and evaluation of AT services.

COMMON ERRORS:

1. If policies and guidelines are developed, they are not known widely enough to assure equitable application by all IEP teams.
2. It is not clearly understood that the primary purpose of assistive technology in school settings is to support the implementation of the IEP for the provision of a free appropriate public education (FAPE).

3. Personnel have been appointed to head assistive technology efforts, but resources to support those efforts have not been allocated. (Time, a budget for devices, professional development, etc.)

4. Assistive technology leadership personnel try to or are expected to do all of the assistive technology work and fail to meet expectations.
5. Assistive technology services are established but their effectiveness is never evaluated.

Quality Indicators for Consideration of Assistive Technology Needs

Consideration of the need for assistive technology devices and services is an integral part of the educational process identified by IDEA '97 for referral, evaluation, and IEP development. Although assistive technology is considered at all stages of the process, the Consideration Quality Indictors are specific to the consideration of assistive technology in the development of the IEP as mandated by IDEA '97. In most instances, the Quality Indicators are also appropriate for the consideration of assistive technology for students who qualify for services under other legislation (e.g. 504, ADA).

1. Assistive technology devices and services are considered for all students with disabilities regardless of type or severity of disability.
   Intent: IDEA '97 is based on a child-centered process. Decisions regarding the need for assistive technology are determined by the unique educational needs of each individual student. Services cannot be determined based on categories.
2. The IEP team has the knowledge and skills to make informed assistive technology decisions.
   Intent: The IEP team members collectively use their skills to recommend assistive technology devices and services needed to remove barriers to student performance. When the assistive technology needs are beyond the knowledge and scope of the IEP team, additional support from other resources is sought.
3. The IEP team uses a collaborative decision making process based on data about the student environment and tasks to determine assistive technology needs.
   Intent: Although IDEA requires that the AT needs of students be considered during the development of the IEP, it does not specify a process. The IEP team uses a state or district determined process to make informed decisions regarding the need for assistive technology. The process is communicated and used consistently across the district.
4. A continuum of assistive technology devices and services is explored.
   Intent: The IEP team considers a range of tools and strategies, including no tech, low tech and high tech to meet the educational needs of the student. Consideration is not limited to the devices and services currently available within the district.

5. Decisions regarding the need for assistive technology devices and services are made based on access to the curriculum and the student's IEP goals and objectives.
   Intent: After the IEP team determines the curricular tasks the student needs to complete and develops the goals and objectives, the team considers whether assistive technology is required to accomplish those tasks.
6. Decisions regarding the need for assistive technology devices and services and supporting data are documented.
   Intent: The IEP team determines whether or not assistive technology devices and/or services are needed. The IEP team uses something more than a check box to document the basis of the decision.

COMMON ERRORS:

1. Assistive technology is considered for students with severe disabilities only.
2. No one on the IEP team is knowledgeable regarding assistive technology.
3. Team does not use a consistent process based on data about the student, environment and tasks to make decisions.
4. Consideration of assistive technology is limited to those items that are familiar to team members or are available in the district.
5. Team members fail to consider access to the curriculum and IEP goals in determining if assistive technology is required in order for the student to receive FAPE.
6. If assistive technology is not needed, team fails to document the basis of its decisions.

Quality Indicators for Assessment of Assistive Technology Needs

Quality Indicators for Assessment of Assistive Technology Needs is a process conducted by a team, used to identify tools and strategies to address a student's specific need(s). The issues that lead to an assistive technology assessment may be very simple and quickly answered or more complex and challenging. Assessment takes place when these issues are beyond the scope of the problem solving that occurs as a part of normal service delivery.

1. Assistive technology assessment procedures are clearly defined and consistently used.
   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.

2. Assistive technology assessments are conducted by a multidisciplinary team which actively involves the student and family or caregivers.
   Intent: The multidisciplinary team conducting an assistive technology assessment is comprised of people who collectively have knowledge about the abilities and needs of the student, the demands of the customary environments, the educational objectives, and assistive technology. Various team members bring different information and strengths to the assessment process.
3. Assistive technology assessments are conducted in the student's customary environments.
   Intent: The assessment process takes place in customary environments (e.g., classroom, lunchroom, home, playground, etc.) because of the varied characteristics and demands in those environments. In each environment, district personnel, the student and family or caregivers are involved in gathering specific data and relevant information.
4. Assistive technology assessments, including needed trials, are completed within reasonable time lines.
   Intent: Assessments are initiated in a timely fashion and completed within a time line that is reasonable as determined by the IEP team. The timeline complies with applicable state and agency requirements.
5. Recommendations from assistive technology 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 the environments, and educational tasks and objectives. It may include trial use of the technology in the environments in which it will be used.
6. The assessment provides the IEP team with documented recommendations about assistive technology devices and services.
   Intent: The recommendations from the assessment are clear and concise so that the IEP team can use them in decision-making and program development.
7. Assistive technology needs are reassessed by request or as needed based on changes in the student, environments and/or tasks.
   Intent: An assistive technology assessment is available any time it is needed due to such changes or when it is requested by the parent or other members of the IEP team.

COMMON ERRORS

1. Procedures for conducting assistive technology 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.

Quality Indicators for Documentation in the IEP

The Individuals with Disabilities Education Act of 1997 (IDEA '97) requires that the IEP team consider assistive technology needs in the development of every Individualized Education Program (IEP). Once the IEP team has reviewed assessment results and determined that assistive technology is needed for provision of FAPE, it is important that the IEP document reflects the team's determination in as clear a fashion as possible. The Quality Indicators for Assistive Technology in the IEP help the team to describe the role of assistive technology in the child's educational program.

1. The education agency has guidelines for documenting assistive technology needs in the IEP and everyone on the IEP team is aware of them.
   Intent: Education agencies give instructions to IEP teams as to how IEPs should be written. These instructions include guidance about documentation of assistive technology needs. Districts give direction to IEP teams about how to document assistive technology as a related service, supplementary aid or service, goal, objective etc.
2. Assistive technology is included in the IEP in a manner that provides a clear and complete description of the devices and services to be provided and used.
   Intent: IEPs are written in such a manner that everyone who attended the IEP meeting and other people who might need to use the information to implement the plan understand what is to be done. IEPs are clearly written with as little "jargon" as possible. They give a clear picture of the devices and services which the IEP team determined were necessary.
3. Assistive technology is used as a tool to support achievement of IEP goals and objectives as well as participation and progress in the general curriculum.
   Intent: There should be a clear relationship between assistive technology devices and services included in an IEP and the goals and objectives developed by the team. Most goals and objectives should be developed before decisions about assistive technology use are made.

4. IEP content regarding assistive technology use is written in language that describes measurable and observable outcomes.
   Intent: At the point of periodic review, the IEP is used to measure whether the district met its commitments and whether the educational goals set for the child were appropriate. Content which describes measurable and observable outcomes for assistive technology allows the team to review the success of the plan.
5. All services needed to implement assistive technology use are documented in the IEP.
   Intent: IDEA lists a variety of services (i.e. evaluating, customizing, maintaining, coordinating services, training for the child and family, technical assistance for professionals) which must be provided to support the child's use of an assistive technology device. IEPs that include assistive technology devices often fail because inadequate services are provided. It is important that the IEP includes services as well as devices.

COMMON ERRORS:

1. IEP teams do not know how to include assistive technology in IEPs.
2. IEPs including assistive technology use a "formula" approach to documentation. All IEPs are developed in similar fashion and the unique needs of the child are not addressed.
3. Assistive technology is included in the IEP, but the relationship to goals and objectives is unclear.
4. Assistive technology devices are included in the IEP, but no assistive technology services support the use.
5. Assistive technology expected results are not measurable or observable.

Quality Indicators for Assistive Technology Implementation

Assistive technology implementation pertains to the ways that assistive technology devices and services, as included 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. Assistive technology implementation involves people working together to support the student using assistive technology to accomplish expected tasks necessary for active participation in customary educational environments.

1. Assistive technology 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 assistive technology

will be used in specific educational settings, what will be done and who will do it.

2. Assistive technology is integrated into the curriculum and daily activities of the student.
Intent: Assistive Technology is used when and where needed to facilitate the student's access to the curriculum, and active participation in educational activities and routines.

3. Team members in all of the child's environments share responsibility for implementation of the plan.
Intent: Persons working with the student in each environment know what to do to support the student using assistive technology.

4. The student uses multiple strategies to accomplish tasks and the use of assistive technology may be included in those strategies.
Intent: Assistive Technology tools are used when needed to remove barriers to participation and/or performance. Alternate strategies may include use of the student's natural abilities, other supports, or modifications to the curriculum, task or environment. At times these alternate strategies may be more efficient than the use of assistive technology.

5. Training for student, family and staff is an integral part of implementation.
Intent: Determination the training needs of the student, staff and family based on how the assistive technology will be used in each unique environment. Training and technical assistance are planned and implemented as ongoing processes based on current and changing needs.

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

7. Assistive technology implementation includes management and maintenance of equipment and materials.
Intent: For technology to be useful it is important that equipment management responsibilities are clearly defined and assigned. Though specifics may differ based on the technology, some general areas may include organization of equipment and materials, responsibility for acquisition, repair and replacement, and assurance that equipment is operational.

COMMON ERRORS

1. Implementation is expected to be smooth and effective without addressing specific components in a plan. 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 team focuses on device acquisition and does not discuss implementation.
4. An implementation plan is developed that is incompatible with the instructional environments.
5. No one takes responsibility for the care and maintenance of assistive technology 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.

Quality Indicators for Evaluation of Effectiveness

This area addresses the evaluation of the effectiveness of the assistive technology devices and services be provided. It includes data collection and documentation to monitor changes in student performance resulting from the implementation. Student performance is reviewed in order to identify if, when, or where modifications and revisions to the implementation are needed.

1. Team members share clearly defined responsibilities to ensure that data are collected, evaluated, and interpreted by capable and credible team members.
   Intent: Each team member is accountable for ensuring that the data collection process determined by the team is implemented. Individual roles in the collection and review of the data are assigned by the team. Data collection, evaluation, and interpretation are lead by persons with relevant training and knowledge. It can be appropriate for different individual team members to conduct these tasks.
2. Data are collected on specific student behaviors that have been identified by the team and are related to one or more goal.
   Intent: In order to evaluate the success of the assistive technology use, data is collected on various aspects student performance. The behavior targeted for data collection is related to one or more IEP goal (s) (e.g. ability to accomplish the task, use of the technology, changes in student behavior).
3. Evaluation of effectiveness reflects the objective measurement of changes in the student's performance (e.g. student preferences, productivity, participation, independence, quantity, quality, speed, accuracy, frequency, or spontaneity).

Intent: Expected changes in student performance are determined by the IEP team. The behavior targeted for data collection must be observable and measurable. Data which captures changes in student behaviors may be either quantitative, qualitative, or both.

4. Effectiveness is evaluated across environments including during naturally occurring opportunities as well as structured activities.
   Intent: The team determines the environments where the changes in student performance are expected to occur and prioritizes appropriate activities for data collection in those environments.

5. Evaluation of effectiveness is a dynamic, responsive, ongoing process that is reviewed periodically.
   Intent: Scheduled data collection occurs over time and changes in response to both expected and unexpected results. Data collection reflects measurement strategies appropriate to individual student's needs. Team members evaluate and interpret data during periodic progress reviews.
6. Data collected provides a means to analyze response patterns and student performance.
   Intent: The team regularly analyzes data to determine student progress and error patterns.
7. The team makes changes in the student's educational program based on data.
   Intent: During the process of reviewing data, the team determines whether program changes/modifications need to be made in the environment, tasks, and tools. The team acts on these decisions and makes needed changes.

COMMON ERRORS:

1. An observable, measurable student behavior is not specified as a target for change.
2. Team members do not share responsibility for evaluation of effectiveness.
3. An environmentally appropriate means of data collection and strategies has not been identified.
4. A schedule of program review for possible modification is not determined before implementation begins.

Additional resources and information on the QIAT Consortium can be found at the QIAT web site at www.qiat.org

SETTing the Stage for Success: Building Success through Effective Selection and Use of Assistive Technology Systems

by
Joy Smiley Zabala

This personal reflection on the SETT Framework shares insights into the development and use of the SETT Framework. It provides considerations for using SETT as a collaborative tool by which groups of people with varying previous experience in assistive technology can effectively build consensus and align expectations in order to: 1) consider and establish the need (or lack of need) of an individual student for assistive technology; 2) work toward developing a system of tools with which a student can use to address identified needs; 3) link assistive technology assessment and intervention; and, 4) align purpose, expected results and evaluation measures when choosing and using a system of assistive technology tools.

Part 1: The Big Questions

Several years ago, as the language of the Individuals with Disabilities Education Act (IDEA, P.L. 101-476) regarding assistive technology became widely known, much attention was focused on school districts and the procedures and practices which school personnel use in arriving at decisions regarding the provision of assistive technology devices and services. Many questions which arose then are still in the forefront. Which students need assistive technology? What kind of technology is needed? Who is involved in making these decisions? What sort of data should be gathered to aid in the decision-making process? Much discussion has been generated about each of these questions. Though there are few quick and easy answers to any of these questions, processes that support critical thinking and problem-solving in the area of assistive technology have emerged. One of them is the SETT Framework - the subject of this paper.

Which students need assistive technology? Those for whom assistive technology is necessary in order for them to receive a free, appropriate public education (FAPE) and to make progress in a program reasonably calculated to confer educational benefit. Though significant due process in recent years clarified this issue somewhat, a big question remains regarding what constitutes need.

What kind of technology is needed? This must be determined on a case by case basis related directly to what is needed for a student to receive FAPE. Effective assistive technology systems may contain no tech (strategies), low tech and high tech tools.

Who is involved in making these decisions? The student's IEP team is the actual decision-making body, with recommendations from members of a flexible multidisciplinary team which promotes participation by the student, family members and/or caregivers, and appropriate educational and related services professionals. This team may also include other people who are significantly involved in the student's education and well-being such as medical personnel and peers. Ideally, some members of this team should be on the IEP team, so that there is a clear understanding of how recommended tools were selected and how they are to be used.

What sort of data should the multidisciplinary team gather to aid in the decision-making and recommendation process? Information about the Student, the Environment, the Tasks, and the Tools. Information on each of these areas must be sought in a collaborative process designed to build consensus as to the direction which intervention is to take, the tools needed to move in that direction and the measures which will be used to evaluate the effectiveness of the tool system and the interventions in supporting the student's progress.

Part II: Establishing the Need for SETT

In the 1993, in the National Council on Disability's report to the President and Congress of the United States, it was estimated that seventy-five percent of children with disabilities could remain in regular classes if supplied with the appropriate assistive technology. Additionally, it was estimated that appropriate assistive technology could lower the level of school related services required by forty-five percent of these children. Long before these figures were published, professionals dedicated to meeting the educational and life goals of students with disabilities worked to identify and provide useful augmentative communication and assistive technology devices with features which matched the student's needs and abilities. Decisions were made, devices acquired, and training provided on operational techniques and strategies for effective use. There were high expectations that, with this approach, positive changes would occur on an increasingly regular basis; however, with frustrating frequency, what continued to be seen was students who were marginally involved and devices which were underutilized or abandoned. Why was this happening?

Over the years I pondered these questions along with people with disabilities, families and colleagues with a variety of personal and/or professional perspectives on the issues. Through our mutual explorations and conversations, insights began to emerge. First, even when the features of devices were well-matched to the needs and abilities of users, the devices were not always environmentally useful for the system operator. Perhaps

there was a question of portability - Perhaps there was no one in the potential system operator's daily life who was able to support the person adequately in using the system effectively - Perhaps there were mixed attitudes and expectations on the part of people around the person using the system - There were any number of possibilities. Second, often the systems were not designed to support the person in using the device for the accomplishment of tasks important to that person. The thought came to mind, "How much time and effort would anyone put toward using a tool that did not fit the task or the environment in a useful, meaningful way?" The clear answer for most of us was, "Not much!"

Though the needs and abilities of students and the features of systems of assistive technology tools were well-matched, systems were frequently developed with insufficient up-front attention to the environments in which the system of tools was expected to be used, and to the naturally occurring tasks in which the person was expected to participate by using the tools within the identified environments. As I began to watch more closely what was being done by my colleagues, it became increasingly clear that those who were getting higher rates of success for users and lower rates of device abandonment were those who routinely considered the person within the context provided by the environments and the tasks. In retrospect, it appears to be an obvious issue, for it would be difficult to choose any tool without a clear awareness of where and how the tool was to be used! Most of us would consider it ridiculous to choose a tool at a hardware store without first considering the task which was to be accomplished with that tool. And yet, assistive technology tools are often chosen in just that way.

The need to develop a clear, easily communicated and understood definition of a student-centered, task-focused, environmentally useful approach to looking at assistive technology was brought to my attention by a new colleague at Region IV Education Service Center. Like most people working in the area of assistive technology, we are regularly asked by our participating districts to make recommendations about what hardware and/or software is the "best" for them to purchase for their students with disabilities. This, of course, is not a readily answerable question without considerable additional exploration. Our new colleague, however, wanted very much to provide helpful information, so he came often to consult with our group about what suggestions he might give to districts seeking assistance. Our answer was consistently, "It depends." Though we had frequent, lengthy discussions about what "it" depended upon, we did not make much headway toward developing a common understanding of assistive technology issues and ways to go about addressing them. Patience grew thin on all parts! "This was NOT new stuff! People have been considering these issues for years!", we said. "OK, then," said he, "Just tell me about it in language I can understand!" Forget the jargon and just help me know what to do and how to think about all this stuff"!

One day, after yet another discussion, I approached my explanation from another angle, "Consider this. To get the best shot at putting together a system of tools, you need to explore the student, the environments in which the student is expected to use the tools, and the tasks which are an inherent part of communicating, participating and being productive in those environments!" It was a big "Ah, ha!" for all of us! He understood and we realized how simple, yet complicated this all was! Later, when I was struggling to put these old, tried and true ideas together in a new and easily-remembered way, this persistent and thoughtful colleague said, "Well, THAT part's easy! It's just the SETT!" And so it is!

Part III: Introducing the SETT Framework

To make effective assistive technology decisions, who should be involved in the decision-making process and what information should be included? Information about the Student, the Environments, the Tasks, must be gathered and thoughtfully considered before an appropriate system of Tools can be proposed and acted upon by a multidisciplinary team with full participation from the person and his/her personal and professional supporters. In order to define a framework around which such a process might occur, the SETT Framework was developed. The SETT Framework considers the Student, the Environments and the Tasks required for active participation in the activities of the environments, before attempting to identify the features of components of the system of tools needed for the student to address the tasks.

It is important to realize that this outline of questions to consider in each area of the SETT Framework was developed as a guideline and a place to start. Teams gathering and acting upon this data may wish to seek answers to numerous additional questions. In virtually every case, however, any questions which arise will relate to one of the areas of the SETT Framework.

The Student

What does the Student need to do?

What are the Student's special needs and current abilities?

The Environments

What are the instructional and physical arrangements? Are there special concerns?

What materials and equipment are currently available in the environments?

What supports are available to the student and the people working with the student on a daily basis?

How are the attitudes and expectations of the people in the environment likely to affect the student's performance?

The Tasks (Be as specific as possible)

What activities occur in the student's natural environments which enable progress toward mastery of identified goals?
What is everyone else doing?
What are the critical elements of the activities?
How might the activities be modified to accommodate the student's special needs?

The Tools

What no tech, low tech, and high tech options should be considered for inclusion in an assistive technology system for a student with these needs and abilities doing these tasks in these environments?
What strategies might be used to invite increased student performance?
How might students try out the proposed system of tools in the customary environments in which they will be used?
Though there are not many questions in each area of the SETT Framework, each of the questions may generate significant conversation and data. It is not uncommon for more than one view of the student to present itself in SETT discussion, just as it is not uncommon for team members to have differing contributions in the other areas as well. It requires time and effort to move toward consensus on which observations are assumptions and which are based on observable data. However, without working toward a common view which can be supported by all members of the team, it is unlikely that alignment in intervention design and system selection can occur. When developing this "commonly held view that can be supported by all", there are some factors to consider as a deeper understanding of the areas outlined in the SETT Framework is invited.

Part IV. Taking the SETT to Task!

The Student:

When considering the Student, these three small questions may yield reams of data. The questions are intentionally broad, so that they do not preclude anyone or any possible solutions at the outset. However, it must be kept in mind that ALL data on a student is not pertinent to choosing and using assistive technology. Meaningful issues must be identified specifically for each individual student.
When first considering what the student needs to be able to do, it is fine to be global. "Talk" or "write" may be appropriate answers, though some elaboration is desirable. Later, in the Tasks section, these issues will be explored more deeply, as it would be useless to pursue "talking" if "about what?" could not be defined. The primary goal of this question is to invite active, nonjudgemental sharing to begin to establish consensus among group members about what it is really important for this student to be able to do.
The question, "What are the student's special needs?" is designed to generate conversation about the barriers which keep this student from

doing whatever needs to be able to be done. When exploring current abilities, it is important to keep in mind that, no matter how great the needs, everyone has abilities which can be built upon and enhanced - and not necessarily replaced.

The Environments:

For every student, multiple environments must be considered, as no student exists in only one environment. Even the rare person who operates primarily in one location experiences a multitude of influences which can greatly alter that single environment. When considering only school environments, the differences are profound among the classroom at different hours of the day, the playground, the cafeteria, the hallway, the bus stop and a variety of other environments a student experiences during a typical day. Add to these the home and the community, and the complexity of choosing and using a system of assistive technology tools which will be environmentally useful for a student, can become daunting without a process to follow.

What is the anticipated arrangement of the environment? Though discussion might include possible placement options, it should also include, when known, the setup. For instance, when considering a mobility system which must be used in a crowded hallway, a classroom with close-set rows of desks, a sand and grass covered playground, and a bus that currently has no lift system, remember that each of these environments must be considered upfront in order to determine the components of a functional mobility system. Environmental issues like those mentioned do not mean that power mobility would not be considered. They just mean that, in order for power mobility to be functional in these environments, other parts of the system would be critical, like: identifying a lift system for the bus; some assistance for the teacher in altering classroom space; training for the student and others in how to manage in crowded situations; and, possible alterations in scheduling so that the student might avoid the halls at the most crowded times. These should be a part of the initial system design, for without them, the system will not meet expectations and will most likely be abandoned in favor of other strategies which , though practical for the moment, may provide fewer opportunities for independence.

The area of attitudes, may be more critical than any other, because attitudes have far-reaching influences on the environment. Within the category of attitudes is expectations. The attitudes and expectations of the people who are responsible for developing environments where learning can take place are crucial, for those attitudes and expectations have much to do with what learning opportunities are offered to students.

An example of this can be seen when examining the attitudes and activities of a typical teacher. During the years that I was a first grade teacher, it was my expectation that all of my students would eventually acquire the skills needed to participate fully in adult society. They would be able to attend

college or engage in whatever activities they chose in order to be productive and happy adults. With this expectation in mind, I set about providing an environment where the necessary skills were readily addressed at an appropriate level. Literacy was the primary focus for all of the students and the classroom setup and activities reflected this focus. Opportunities to build literacy skills were woven throughout the day, regardless of the subject matter being taught. Literacy was never confined to one period of the day or one circumstance. It was far too important for that!

What if, however, there had been some reason to suspect that among my students were those for whom I believed college and adult productivity would be difficult or impossible? Would I have worked as long and hard at developing literacy for those students, suspecting as I did, that it was highly unlikely that they would ever master the art of giving and receiving information in written form? Would I have taken the time and effort to provide a print rich environment and draw attention to its use at every possible moment? Though I would like to think that I would have, I know that this is not likely. I would probably have selected more "meaningful" and "attainable" goals for these students and given the development of literacy the backseat to more "appropriate" goals.

Given my expectations, I would have failed to offer invitations for my students to develop literacy skills. Therefore, whether they were capable of learning to read and write or not, they would not have been able to do so in my classroom. The opportunities for them to learn these skills had not been sufficiently presented and acted upon.

Are attitudes and expectations important? Certainly, but they are tough to deal with. Consider the IEP meeting where Mrs. Jones finds out that John, a student with severe physical disabilities, will be in her classroom. Mrs. Jones is unprepared to deal with John's special needs and the needs of her other students. She protests that John obviously does not belong in her classroom. She doesn't seem to realize that she will have help in supporting John's learning. Though you suspect that fear and lack of understanding are behind her reactions, you recognize that she has a very poor attitude toward John and that this will be the biggest obstacle to John's success in her class! You decide to approach her directly, saying, "Mrs. Jones, it is normal to have concerns, but your attitude is what will hinder John's success in your classroom. The IEP committee has decided that he will be in your class, so you will need to make some adjustments. I will help you all I can."

Will this approach change Mrs. Jones' attitude? I believe that it will. Before she was confronted, Mrs. Jones did not want John in her classroom. Now she doesn't want YOU either! And you were the one who was going to assist her!

Attitudes and expectations! Areas rich with opportunities to invite growth and, yet, fraught with the potential for disaster! Attitudinal differences must be recognized, but must also be dealt with in ways that promote the

opportunity for growth for all so that every student will have the opportunity to learn and grow.

The Tasks:

The purpose of identifying tasks is to determine what opportunities are present that will enable the student to move toward mastery of his/her goals? If the answer is "None" then assistive technology tools will not solve the problem. Assistive technology is just a means to participate in activities which offer the opportunity to build skills. As might have been the case in my first grade classroom, if there are no tasks which provide meaningful practice, mastery cannot possibly be expected.

When considering tasks, it is always important to begin with what "everybody else is doing." Participating in the same activities does not always lead to the same results for all participants. An example which demonstrates this principle is an elementary student with significant mental retardation whose goals include categorizing and sorting, task completion, turn-taking, seeking help when needed and grasping and releasing items appropriately. There is little reason for this student to work on these tasks in isolation. Most of these goals could be addressed by working, for example, with fellow students on an earth science project involving classifying, sorting, and charting various kinds of rocks and the ways in which they were formed. The actual items that would be monitored and measured for mastery would be different, but the tasks would be pretty much what "everybody else is doing." When necessary, move away from "what everybody else is doing," but first determine that it is really necessary.

As the activities in various environments are considered, it is essential to remember that tasks (or activities) are not isolated skills, but clusters of skills which must be used together in order to participate in the activity. (Calculator and Jorgensen) It is difficult to think of any activity in which participants use skills in only one area - motor, social/emotional, communicative or cognitive? With that in mind, consider modifications that can increase participation for students with disabilities while not changing the critical elements of the activity for any student.

As an example, think about an important preschool and early elementary activity - Musical Chairs. For most people, when asked to quickly name two things that are critical elements in the game of Musical Chairs, MUSIC and CHAIRS come to mind

In a classroom I once frequented, there was a student who used a power wheelchair. That student's goals included learning to safely manipulate the wheelchair in crowded situations. The teacher made a modification in the game to include this student in the game and provide opportunities to work toward mastery of that goal. The chairs were removed and mats were place on the floor. This was the only change made in the game and everyone played as before with one exception - the student using the wheelchair played right along with everyone else! Chairs were traded for mats, but,

since that modification did not significantly change the action of any of the students, it would be safe to say that CHAIRS are not a critical element of Musical Chairs.

Later in the year, a student who was deaf joined the class. In order to include this student in Musical Chairs, a light was purchased at a nearby electrical supply store. When the tape recorder used to play the music was turned ON, the light began to flash and continued flashing as long as the tape recorder was in the ON position. With this modification, the student who was unable to hear the music participated fully in the activity. Once the tape was accidentally left out of the tape recorder at the start of the session. The ON button was pushed and there was no music, but the light began to flash. As might be expected, all of the students began to march around the mats as the game began! So we also find that MUSIC - a commonly identified critical element of Musical Chairs, really isn't critical after all.

What are the two critical elements of Musical Chairs illustrated here? First, there must identified spots where students stop and there must be one less spot than there are students. Second, there has to be a signal which indicates when to start moving and when to stop.

That analysis, though aimed at a simple activity, provides more opportunity problem-addressing and problem-solving than would have been possible if action had been taken on what is now seen as inaccurate conclusions. So that this illustration does not lead toward the assumption that this applies only to the games of young children, take some time to explore the critical elements of writing a term paper and how they might be negotiated to enable participation and productivity by a student with severe dysgraphia.

In conclusion, when identifying and analyzing tasks, reviewing George Karlan's work with Environmental Communication Teaching is helpful. Chiefly, most tasks contain a multitude of steps. Once the steps have been identified - as anyone would do them - it is possible to look at what elements of the tasks would be difficult or impossible for a student to do without significant assistance. At that point it is possible to begin developing a system of tools which could be used to address those elements. In order to focus interventions on barriers which need to be removed, the barriers must be clearly identified. Just as it is necessary to work to provide tools which remove barriers, it is important not to spend a student's precious time and energy on areas where barriers do not exist.

The Tools:

Finally, the SETT Framework addresses the area where most people would like to begin! It is hoped, however, that a group who has used the SETT Framework to arrive at this point, does so with a clearer understanding of what tools should be sought. What a difference to begin seeking tools with a clear idea of who is going to use them, where, and for what!

Among all of the questions in the SETT Framework, the most critical one is "What no tech, low tech, and high tech options should be considered when

developing a system of assistive technology tools for a student with these needs and abilities doing these tasks in these environments?" All other questions merely gather and organize the information that is needed to arrive at answers to this question.

As the features of a workable system of tools are sought, participants must keep in mind that tools are not just things - they are both devices and services. They are "no tech" strategies as well as low tech and high tech devices and supports. They are systems of tools working in combination to assist a student in moving forward. More often than we would like to think - even when ongoing training has been provided - a laptop computer may fail to meet expectations because there is no extension cord available when the battery runs low. In a well-thought-out system, the extension cord would have been included.

Part V. Putting the SETT Framework to Work!

The SETT Framework promotes team-building and builds consensus by using clearly understood language, requiring broad-based participation and valuing input from all perspectives. As data is organized and prioritized within the SETT Framework, it promotes logical thinking by all team members and can be an effective consensus-building tool. As environments and tasks are explored, the links between assessment and intervention become strong and clear, as does the need to develop a system of tools which will enhance the student's abilities to address the tasks in which he/she is expected to build competency. In addition to developing a system of tools valuable to the student, participating in a process using the SETT Framework increases the likelihood that the people supporting the student will see the relevancy of the technology and will be more active and persistent in encouraging and supporting the student's achievement through its use.

Using the SETT Framework as a guide, it is possible, from the start, to address and overcome many of the obstacles which lead to marginal student inclusion, general dissatisfaction and device abandonment. When the Student, the Environment and the Tasks are fully explored and considered, laments like "Well, the device is here, now what do I do with it?" or "He has it, but he won't use it!" should seldom be heard. Instead, students, parents, and professionals should all rejoice at the increased opportunities for success which come with assistive technology systems that are well matched to the student's needs and abilities to perform the natural tasks which are part of living and learning in this world.

References:

Calculator, S. & Jorgenson, C. M. (1991). Integrating AAC instruction into regular education settings: Expounding on best practices. Augmentative and Alternative Communication, 7, 204-214.

Karlan, George. Environmental communication teaching training. Field-initiated research grant award No. H023C9005 from the Office of Special Education, U.S. Department of Education. Lafayette, Indiana: Purdue University

National Council on Disability. Study on the financing of assistive technology devices and services for individuals with disabilities. A Report to the President and Congress of the United States. Washington, D.C. 1993.

Zabala, Joy. The SETT framework: Critical issues to consider when choosing and using assistive technology. Introduced in Closing the Gap presentation, 1993.

Current Contact Information:

Joy Zabala, M.Ed.
Department of Special Education and Rehabilitation Counseling
229 Taylor Education Building
University of Kentucky
Lexington, Kentucky 40506-0001
(859) 361-5919
email: zabala@technologist.com

References

Adamson, G. (1998). *Recommended competencies in the area of assistive technology.* Report to the National Association of State Directors of Special Education (NASDE).

Bower G. & Reed, P. (1998). *Education Tech Points: A Framework for Assistive Technology Planning*

Chambers, A.C. (1997) *Has Technology Been Considered? A guide for IEP Teams*, Council of Administrators of Special Education and the Technology and Media Division of the Council for Exceptional Children, Reston, VA.

Dubbels, K, Minnesota Disability Law Center(1999). *Assistive Technology in the Individual Education Plan* [Online] Available http://www.nls.org/atiep.htm

EASI K12, *Adaptive Technology and SPED Glossary (*Equal Access to software and Information) [online] Available: www.rit.edu/~eaasi/ak12/k12glossary.html

Hartsell, Kim., Considering Assistive Technology for Students with Disabilities [Online]
Available: http://www.connsensebulletin.com/artconsider.html

Reed, P., Zabala, J. et al (1999). *Quality indicators for assistive technology services.* Presentation paper for Closing the Gap, October, 1999, Minneapolis, MN.

Rees, L., (1998). *Process and Procedures for Consideration of Assistive Technology,* Intermediate School District 287, Plymouth, MN.

State of Minnesota, *Statutes 1999* [Online] Available: http://www.revisor.leg.state.mn.us/stats/

U.S. Department of Education (1997*) IDEA '97 Final Regulations*

34 CFR Part 300, Assistance to States for the Education of Children With Disabilities (Part B of the Individuals with Disabilities Education Act) [Online] Available: http://www.ideapractices.org/regs/TOC.htm#TOC

Appendix A: Assistive Technology Glossary

The following terms are adapted from the *Glossary of Assistive and Special Terminology*, a product of the Equal Access to Software and Information Project of the TLT Group (Teaching, Learning & Technology)

Aids for Daily Living	Self-help aids for use in activities such as eating, bathing, cooking, dressing, toileting, and home maintenance.
Alternative Access/Input	Refers to a method of entry other than the standard access such as the keyboard on a computer. See also: Touch Screen, Trackball, Voice Recognition System, Scanning, Headwand or headstick, Joystick, Alternative keyboard.
Alternative Keyboard	A keyboard which has keys and/or spaces between the keys larger or smaller than the standard computer keyboard. Many alternative keyboards give the user the option of programming their own locations and sizes of keys. A single key may also be programmed to represent a sequence of keystrokes.
Americans with Disabilities Act	The Americans with Disabilities Act of 1990 (PL101-336) which prohibits employers from discriminating against people with disabilities and makes such discrimination a civil rights violation. Providers of public services, schools, public buildings and public transportation services may also not discriminate. Their facilities and services must be accessible to people with disabilities.
Assisted Keyboard	A keyboard modification driven by software with options such as talking software, sticky keys, slow keys, mouse keys, and programmable keys. See also: Sticky Keys, Slow Keys, Mouse Keys.
Assistive Technology Service	A service related to an assistive technology device that may include evaluating selecting, procuring, designing, fitting, customizing, applying, maintaining, repairing, replacing, coordinating, training of individual or family, and training.
Assistive Technology/Device	Any item, piece or equipment, or product system that is used to increase, maintain, or improve functioning of individuals with disabilities.
Augmentative Communication System	Any system that increases or improves communication of persons with a receptive or expressive communication impairment. The system can include speech, gestures, sign language, symbols, synthesized speech, dedicated communication devices, microcomputers, and other communication systems
Braille	A raised dot printed language which is used by persons with visual impairments. Each raised dot configuration represents a letter or word combination.

Closed Captioned Television (CCTV) see also Closed Circuit TV
Closed Captioned Television (CCTV) provides a written dialog of a television program. The dialog typically appears at the bottom of the screen and will also include descriptions of music or other noises occurring in the television program. New televisions must have the CCTV option built in per Americans with Disabilities Act.

Closed Circuit Television (CCTV) See also Closed Captioned TV
A combination camera and TV- Closed Circuit Television (CCTV) product for the visually impaired. CCTV's are electronic magnification devices which enhance whatever image is being viewed by the camera unit.

Communication device
A device which communicates for a person who may need alternative communication options to supplement existing communication. There is a wide range of communication devices, ranging from single message to unlimited message devices, using either digitized or synthesized speech.

Digitized Speech
Human speech which is recorded onto an integrated circuit chip and which has the ability to be played back.

Direct Selection
Activation of a letter on a keyboard or picture on a communication board by a single method. Pressing a key on a keyboard, eye gazing to a selection, or use of an infrared headpointing beam are examples of direct selection. See: Infrared Beam, Eye Gaze, Communication Board.

Dynamic Screen Display
A communication device option which uses a computer function of changing screens of overlays to produce a message. These systems typically are accessed through a touch screen computer system.

Environmental Control Unit (ECU)
A system that enables individuals to control various devices in their environment through a variety of alternative access methods such as switches, touch windows, and infrared beams. Target devices include lights, door openers, televisions, telephones, CD players, emergency alert systems, and kitchen appliances.

Eye Gaze
Looking at an item to indicate a choice or communication.

Headwand or Headstick
A pointer or extension device that is mounted to a headpiece and extends from the forehead and angles downward. It is usually used in direct selection of an object such as a key on a keyboard or a symbol or word on a communication board. It is for use by persons with good head control and limited upper and/or lower body movement. if the pointer extends from the chin, it is referred to as a chinwand or chinstick, if held by the teeth with an orthotic device, it is referred to as a mouthstick.

Infrared beam
A beam of light which is used to activate a device. Infrared beams can be used to access switches, computers, communication devices, and more. Infrared beams can be mounted on the head or held in the hand and serve as another access method to the environment.

Individuals with Disabilities Education Act (IDEA)
Federal legislation, The Individuals with Disabilities Education Act Amendments of 1997 Public Law 105-17, was signed by the President on June 4, 1997. The purposes of the law is to ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for

employment and independent living.

Keyguard A cover, usually made of plastic or Plexiglas, which fits directly over the computer's keyboard. Holes in the cover correspond to each key on the keyboard and guide a finger, headstick, or mouthstick to facilitate direct key presses. Keyguards can also be designed with a limited number of holes to prevent access to specific keys.

Latch A switch option which keeps a device running after activation of the switch. A second activation of the switch will turn off the device

Linking or Branching An adaptation used with some communication devices and computer software which links one overlay of messages or screen of computer functions to another overlay of messages or computer functions. A linking function which may be used with a communication device might be a key with a picture of food which when pressed links to a new communication overlay which represents all food choices from which a user of the communication device could select.

Moisture guard A soft plastic cover molded to the shape of the keyboard and placed on the keyboard to protect it from moisture.

Momentary The most common switch activation option. When a switch is activated, it will only activate a device for the length of time that the switch is held down. See also: Switch

Mouse Keys A software driven computer adaptation which allows keys on the standard Keyboard to act as the mouse. Mouse keys are an adaptation for one who does not have the fine or gross motor skills to control the mouse or other mouse options.

On Screen Keyboard A software driven computer adaptation which brings the standard keyboard, which is typically used by a two hand typist, onto the computer screen with typing access through the mouse or joystick. Many on screen keyboard software programs can be designed to meet the needs of the user.

Overlay This term usually refers to a communication or keyboard system which uses an overlay or page of communication symbols for communication.

Prosthetics/Orthotics Replacements, substitutions or augmentations of missing or malfunctioning body parts with artificial limbs or orthotic aids such as splints or braces.

Scanning A selection technique which presents groups of items to the user. The user then signals, with a switch press, gesture, or other means, when the desired item is being indicated, The scanning may be performed automatically be an electronic system or manually by the communication partner. See Also: Switch

Seating/Positioning Accommodations to a wheelchair or other seating system to provide greater body stability, trunk/head support and an upright position, and the reduction of pressure on the skin surface.

Slow Keys/Filter Keys A software driven computer adaptation which allows one to set the delay which the computer will use before accepting the input of an individual keystrokes on the keyboard.

Sticky Keys A software driven computer adaptation which allows a single handed or single finger typist to use two key function commands. When sticky keys is turned on the shift key, control key, open apple key, and other two function lead keys remain active after the original strike of the key and then becomes inactive after the second key is struck. Sticky keys allow a user who is disabled to do capital letters, cut, paste, copy, and other two key function commands.

Switch An input device used to control options in a variety of environments. There are a variety of switches including pressure Switches, pneumatic switches, and voice activated switches. Each of these switches can control adapted toys, environmental control devices, communication devices, And a wide range of computers. A switch can be designed for use with almost anyone. See also: Direct Selection, Scanning

Switch Latch Timer A device used to extend the time that a battery operated device will stay on after a switch is used to activate the device, allowing the selection of an interval from zero to sixty seconds for a device to remain operative. A latching option is also available. See also: Switch, Battery, Interrupter, Latch

Switch Mount A device which allows a switch to be mounted in any variety of positions. A switch mount might be attached to a wheelchair and positioned to allow easy activation of the switch. The switch mount may be positioned at the head, knee, chin, foot, elbow,or other switch site. See also: Switch

Synthetic speech Speech which uses computer technology to create a variety of voice options. Although synthetic speech is not a real human voice, the technology that creates the voice can be very similar to the sound of a human voice.

Telecommunication Device for the Deaf (TTD) A Telecommunication Device for the Deaf allows a person to transmit typed messages over phone lines to another person with a TDD. Most TDDS include a keyboard for typing messages to send and a display and/or printer to receive messages.

Toggle Keys Keys that produce tones when specific keys are accessed. This adaptation may serve as a warning or reminder when the computer keyboard is being accessed.

Trackball An input device which contains a visible sphere mounted is a stationary container. It functions similarly to a mouse; however, the sphere is rotated with the fingers to move the cursor to any position on the screen. With a mouse it is the container of the sphere which is moved with the hand.

Voice Recognition System An access system designed to replace the standard keyboard as the method of input. The system is "trained" to recognize the utterances that are spoken into a microphone. The utterances are translated into computer commands or sequences of characters and used to operate the computer software.

Word Prediction A computer software based adaptation which predicts the next letter or word that a typist may type. Word prediction software is available that learns the writing style of a user for more efficient prediction of words. This software feature benefits students with learning

disabilities and fine motor impairments.

Appendix B: Assistive Technology Concepts and Definitions as Defined in IDEA 97

IDEA 97 defines assistive technology (AT) devices and services. It informs us about the scope of AT and helps us to identify the range of services that should be in place to meet student needs. According to these federal requirements, assistive technology device and service are defined as follows:

Assistive Technology Device (34 C.F.R. §300.5) The term 'assistive technology device' means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability.

Assistive Technology Service (34 C.F.R. §300.6)- The term 'assistive technology service' means any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device. Such term includes --

(A) the evaluation of the needs of such child, including a functional evaluation of the child in the child's customary environment;

(B) purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by such child;

(C) selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing of assistive technology devices;

(D) coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;

(E) training or technical assistance for such child, or, where appropriate, the family of such child; and

(F) training or technical assistance for professionals (including individuals providing education and rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of such child.

Free Appropriate Public Education (34 C.F.R. §300.13)- The term 'free appropriate public education' means special education and related services that --

(A) have been provided at public expense, under public supervision and direction, and without charge;

(B) meet the standards of the State educational agency;

(C) include an appropriate preschool, elementary, or secondary school education in the State involved; and

(D) are provided in conformity with the individualized education program required under section §§300.340-300.350.

Assistive technology. (34 C.F.R.§300.308)

(a) Each public agency shall ensure that assistive technology devices or assistive technology services, or both, as those terms are defined in 34 C.F.R.§§300.5-300.6, are made available to a child with a disability if required as a part of the child's -

(1) Special education under (§300.26);

(2) Related services under (§300.24); or

(3) Supplementary aids and services under (§300.28) and (§300.550(b)(2)).

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

Consideration of Special Factors (34 C.F.R.§300.346)

(2) Consideration of special factors. The IEP team also shall

(v) consider whether the child requires assistive technology devices and services.

Appendix C: Minnesota Statutes

Minnesota Statute 125A: School District Obligations

School district obligations. (a) As defined in this section, to the extent required by federal law as of July 1, 2000, every district must ensure the following: (1) all students with disabilities are provided the special instruction and services which are appropriate to their needs. Where the individual education plan team has determined appropriate goals and objectives based on student needs, including the extent to which the student can be included in the least restrictive environment, and where there are essentially equivalent and effective instruction, related services, or assistive technology devices available to meet the student's needs, cost to the district may be among the factors considered by the team in choosing how to provide the appropriate services, instruction, or devices that are to be made part of the student's individual educational plan.

The student's needs and the special education instruction and services to be provided must be agreed upon through the development of an individual education plan. The plan must address the student's need to develop skills to live and work as independently as possible within the community. By grade 9 or age 14, the plan must address the student's needs for transition from secondary services to post-secondary education and training, employment, community participation, recreation, and leisure and home living. In developing the plan, districts must inform parents of the full range of transitional goals and related services that should be considered. The plan must include a statement of the needed transition services, including a statement of the interagency responsibilities or linkages or both before secondary services are concluded; (2) children with a disability under age five and their families are provided special instruction and services appropriate to the child's level of functioning and needs; (3) children with a disability and their parents or guardians are guaranteed procedural safeguards and the right to participate in decisions involving identification, assessment including assistive technology assessment, and educational placement of children with a disability; (4) eligibility and needs of children with a disability are determined by an initial assessment or reassessment, which may be completed using existing data under United States Code, title 20, section 33, et seq.; (5) to the maximum extent appropriate, children with a disability, including those in public or private institutions or other care facilities, are educated with children who are not disabled, and that special classes, separate schooling, or other removal of children with a disability from the regular educational environment occurs only when and to the extent that the nature or severity of the disability is such that education in regular classes with the use of supplementary services cannot be achieved satisfactorily; (6) in accordance with recognized professional standards, testing and evaluation materials, and procedures used for the purposes of classification and placement

of children with a disability are selected and administered so as not to be racially or culturally discriminatory; and (7) the rights of the child are protected when the parents or guardians are not known or not available, or the child is a ward of the state. (b) For paraprofessionals employed to work in programs for students with disabilities, the school board in each district shall ensure that: (1) before or immediately upon employment, each paraprofessional develops sufficient knowledge and skills in emergency procedures, building orientation, roles and responsibilities, confidentiality, vulnerability, and reportability, among other things, to begin meeting the needs of the students with whom the paraprofessional works; (2) annual training opportunities are available to enable the paraprofessional to continue to further develop the knowledge and skills that are specific to the students with whom the paraprofessional works, including understanding disabilities, following lesson plans, and implementing follow-up instructional procedures and activities; and (3) a districtwide process obligates each paraprofessional to work under the ongoing direction of a licensed teacher and, where appropriate and possible, the supervision of a school nurse.

125A.08 School district obligations. (a) As defined in this section, every district must ensure the following: (1) all students with disabilities are provided the special instruction and services which are appropriate to their needs. Where the individual education plan team has determined appropriate goals and objectives based on the student's needs, including the extent to which the student can be included in the least restrictive environment, and where there are essentially equivalent and effective instruction, related services, or assistive technology devices available to meet the student's needs, cost to the district may be among the factors considered by the team in choosing how to provide the appropriate services, instruction, or devices that are to be made part of the student's individual education plan. The student's needs and the special education instruction and services to be provided must be agreed upon through the development of an individual education plan. The plan must address the student's need to develop skills to live and work as independently as possible within the community. By grade 9 or age 14, the plan must address the student's needs for transition from secondary services to post-secondary education and training, employment, community participation, recreation, and leisure and home living. In developing the plan, districts must inform parents of the full range of transitional goals and related services that should be considered. The plan must include a statement of the needed transition services, including a statement of the interagency responsibilities or linkages or both before secondary services are concluded; (2) children with a disability under age five and their families are provided special instruction and services appropriate to the child's level of functioning and needs; (3) children with a disability and their parents or guardians are guaranteed procedural safeguards and the right to participate in decisions involving identification, assessment including assistive technology assessment, and educational placement of children with a disability;

Minnesota Statute, 1999 125A.58: Purchasing Guidelines

Purchasing Guidelines

Subd. 1. Purchasing Guidelines. Rights of districts to purchase school-owned assistive technology. (a) When a child with a disability exits a district and enters a new district, the child's new district may purchase any assistive technology devices that the child's former district has purchased on the child's behalf. The child's new district must notify, in writing, the child's former district of the intent to purchase the device. The child's new district must complete a purchase agreement according to section 125A.36. The child's former district must respond, in writing, to the request to purchase within 30 days. (b) Districts may decline to sell a device if they can demonstrate the technology is a general use device or can be modified for use by other students.

Subd. 2. Liability for used equipment. The child's former district is not liable for any nonconformities in the equipment after it is purchased by the child's new district, or for injuries arising out of the use of the assistive technology device. This section does not foreclose the child's right to bring suit against the manufacturer, assistive device lessor, or assistive device dealer for nonconformities in or injuries arising out of the use of the assistive technology device.

Subd. 3. Third-party payors. Nothing contained in this section may be construed as decreasing the obligation of an insurance company or other third-party payor to provide coverage for assistive technology.

125A.59 Interagency agreement to purchase used assistive technology devices.

Subd 1. Option to purchase by Department of Economic Security. (a) When a child with a disability transitions into a work environment or enrolls in a post-secondary course or program, the department of economic security may purchase any assistive technology device that the child's former district purchased on the child's behalf. (b) The department of economic security may purchase an assistive technology device initially purchased by a district for a child who is currently a recipient of rehabilitation services and who needs the identical assistive technology device as stated on the recipient's individual written rehabilitation plan. The purchase may be made not more than three months before the child exits the district.

Subd. 2. Liability for used equipment. The department of economic security and the department of children, families, and learning are not liable for any nonconformities in the equipment after it is purchased by the Department of Economic Security, or for injuries arising out of the use of the assistive technology device. This section does not foreclose the child's right to bring suit

against the manufacturer, assistive device lessor, or assistive device dealer for nonconformities in or injuries arising out of the use of the assistive technology device.

Subd. 3. Third-party payor. Nothing contained in this section may be construed as decreasing the obligation of an insurance company or other third-part payor to provide coverage for assistive technology.

125A.60 Purchase Agreement

Purchase agreement; price formula. The commissioner must develop guidelines for the sale of used assistive technology including a purchase agreement, a formula for establishing the sale price, and other terms and conditions of the sale.

125A.21 Third party payment.

Subdivision 1. **Obligation to pay.** Nothing in sections 125A.03 to 125A.24 and 125A.65 relieves an insurer or similar third party from an otherwise valid obligation to pay, or changes the validity of an obligation to pay, for services rendered to a child with a disability, and the child's family.

A school district may pay or reimburse copayments, coinsurance, deductibles, and other enrollee cost-sharing amounts, on behalf of the student or family, in connection with health and related services provided under an individual educational plan.

Subd. 2. **Third party reimbursement.** Beginning July 1, 2000, districts shall seek reimbursement from insurers and similar third parties for the cost of services provided by the district whenever the services provided by the district are otherwise covered by the child's health coverage. Districts shall request, but may not require, the child's family to provide information about the child's health coverage when a child with a disability begins to receive services from the district of a type that may be reimbursable, and shall request, but may not require, updated information after that as needed.

Districts shall request, but may not require, the child's parent or legal representative to sign a consent form, permitting the school district to apply for and receive reimbursement directly from the insurer or other similar third party, to the extent permitted by the insurer or other third party and subject to their networking credentialing, prior authorization, and determination of medical necessity criteria.

Subd. 3. **Use of reimbursements.** Of the reimbursements received, districts may:

(1) retain an amount sufficient to compensate the district for its administrative costs of obtaining reimbursements;

(2) regularly obtain from education- and health-related entities training and other appropriate technical assistance designed to improve the district's ability to determine which services are reimbursable and to seek timely reimbursement in a cost-effective manner; or

(3) reallocate reimbursements for the benefit of students with special needs in the district.

Subd. 4. **Parents not obligated to use health coverage.**

To the extent required by federal law, a school district may not require parents of children with disabilities, if they would incur a financial cost, to use private or public health coverage to pay for the services that must be provided under an individual education plan.

Subd. 5. **Informed consent.** When obtaining informed consent, consistent with sections 13.05, subdivision 4, paragraph (d); and 256B.77, subdivision 2, paragraph (p), to bill health plans for covered services, the school district must notify the legal representative (1) that the cost of the person's private health insurance premium may increase due to providing the covered service in the school setting, (2) that the school district may pay certain enrollee health plan costs, including but not limited to, copayments, coinsurance, deductibles, premium increases or other enrollee cost-sharing amounts for health and related services required by an individual service plan, or individual family service plan, and

(3) that the school's billing for each type of covered service may affect service limits and prior authorization thresholds. The informed consent may be revoked in writing at any time by the person authorizing the billing of the health plan.

Subd. 6. **District obligation to provide service.** To the extent required by federal law, no school district may deny, withhold, or delay any service that must be provided under an individual education plan because a family has refused to provide informed consent to bill a health plan for services or a health plan company has refused to pay any, all, or a portion of the cost of services billed.

Subd. 7. **District disclosure of information.** A school district may disclose information contained in a student's individual education plan, consistent with section 13.32, subdivision 3, paragraph (a), including records of the student's diagnosis and treatment, to a health plan company only with the signed and dated consent of the student's parent, or other legally authorized individual. The school district shall disclose only that information necessary for the health plan

company to decide matters of coverage and payment. A health plan company may use the information only for making decisions regarding coverage and payment, and for any other use permitted by law.

Appendix D: U.S Department of Education Policy Letters

United States Department of Education Policy Letters Regarding Assistive Technology for Children With Disabilities

The U.S. Department of Education's Office of Special Education Programs (OSEP) has issued many Policy Letters governing when a school must provide A T to students with disabilities. The key OSEP Policy Letters are summarized below by category.

General Requirements

1. *OSEP Policy Letter to S. Goodman, 16 Educ. Handicapped L. Rep. 1317 (8/10/90)*

a) Cannot preclude provision of AT; rather, must determine need case-by-case.

b) AT may be a special education service, a related service or a supplementary aid or service used to maintain a student in the least restrictive setting.

c) Includes AT devices and services.

d) AT is required if needed to ensure that student receives a free appropriate public education (FAPE).

e) IEP must include a statement of the nature and amount of service.

2. *OSEP Policy Letter to B. Orenich, Educ. Handicapped L. Rep. 213:166 (8/9/88)*

a) When AT is used as a "supplemental aid and service" to educate a student in the regular education environment, it must be included in the IEP.

3. *OSEP Policy Letter to R. Shelby, 21 Individuals with Disabilities Educ. L. Rep. 61 (1/26/95)*

a) When AT (large print books) used as a "supplemental aid and service" to educate a student in the regular education environment, any modifications to the regular educational program must be included in the IEP.

4. *OSEP Policy Letter to D. Naon, 22 Individuals with Disabilities Educ. L. Rep. 888 (1/26/95)*

a) There is no federal "approved list" of AT devices and services covered by IDEA.

b) Students are entitled to AT as necessary to ensure a FAPE.

c) The question is the relationship between the educational needs of the student and the AT device or service.

5. *OSEP Policy Letter to Hon. T. Libous, 17 Individuals with Disabilities Educ. L. Rep. 419, 420 (11/15/90)*

a) Even if AT were considered only a related service, it could be provided as the sole component of a summer program.

6. *OSEP Policy Letter to Anonymous, 13 Educ. Handicapped L. Rep. 213:198 (2/13/89)*

a) The related services list is not exclusive. It includes orientation and mobility training for students who are blind.

7. *OSEP Policy Letter to Hon. W. Teague, 20 Individuals with Disabilities Educ. L. Rep. 1462 (2/15/94)*

a) The related services list is not exclusive. It also includes large print books and adapted spoons.

8. *OSEP Policy Letter to Anonymous, 18 Individuals with Disabilities Educ. L. Rep. 1037 (4/6/92)*

a) AT devices include an FM auditory trainer.

9. *OSEP Policy Letter to C. Lambert, 18 Individuals with Disabilities Educ. L. Rep. 1039 (4/24/92)*

a) Calculators may qualify as an AT device.

Assistive Technology Evaluations

10. *OSEP Policy Letter to J. Fisher, 23 Individuals with Disabilities Educ. L. Rep. 565 (1 2/4/95)*

a) The IEP team must assess "the student's functional capabilities and whether they may be increased, maintained, or improved through the use of AT devices or services."

b) A parent has the right to an independent AT evaluation, at school expense, under the terms of 34 C.F.R. §300.503(b), if the parent disagrees with the evaluation obtained by the school.

11. *OSEP Policy Letter to T. Bachus, 22 Individuals with Disabilities Educ. L. Rep. 629 (1/13/95)*

a) Hearing, vision, communication and motor abilities are properly included in the school's AT assessment.

Personally Prescribed Services

12. *OSEP Policy Letter to J. Stohrer, 13 Educ. Handicapped L. Rep. 213: 211,212 (4/20/89)*

a) If a wheelchair is required as a related service under 34 C.F.R.§ 300.13, the local education agency (LEA) must provide the service at public expense and without charge [see 34 C.F.R. § 300.4(a)], regardless of whether the parents possess a wheelchair or can obtain one through private insurance.

b) Related services include transportation in and around school buildings and can involve specialized equipment, such as a wheelchair.

c) The LEA is not required to provide the wheelchair for personal use while the student is not in school.

13. *OSEP Policy Letter to P. Seiler, 20 Individuals with Disabilities Educ. L. Rep. 1216 (11/19/93); OSEP Policy Letter to J. Galloway, 22 Individuals with Disabilities Educ. L. Rep. 373 (12/22/94)*

a) A hearing aid is covered under the definition of "AT device."

c) Historically, the LEA is not required to provide a personal device which a student would require whether or not in school.

c) However, if the child requires a hearing aid in order to receive a FAPE, the school must provide it at no cost to the child or the parent (s) in accordance with 34 C.F.R. § 300.308.

14. *OSEP Policy Letter to T. Bachus, 22 Individuals with Disabilities Educ. L. Rep. 629 (1/13/95)*

a) If a student requires eyeglasses to receive a FAPE, the school must provide them at no cost to the parents.

Home Use

15. *OSEP Policy Letter to Anonymous, 18 Individuals with Disabilities Educ. L. Rep. 627 (11/21/91)*

a) If IEP team determines that an AT device is needed for home use to ensure a FAPE, it must be provided.

b) Example given: closed circuit TV for student who is blind and needs to use the device at home to complete

FUNDING SOURCES

16. *Office of Special Education and Rehabilitation Services (OSERS) Policy Letter to Rose, 18 Individuals with Disabilities Educ. L. Rep. 531 (9/19/91)*

a) The AT must be at no cost to parent or child.

b) The LEA may access Medicaid or private insurance

i) Use must be voluntary; cannot deny services if parent refuses to authorize use.

ii) Use of other insurance must not result in any cost to parent, such as: (1) co-payment, (2) deductible, and/or (3) reduction of an upper limit on coverage.

17. *OSEP Policy Letter to Dr. O. Spann, 20 Individuals with Disabilities Educ. L. Rep. 627 (9/10/93) and OSEP Policy Letter to W. Cohen, 19 Individuals with Disabilities Educ. L. Rep. 278 (7/9/92)*

a) A parent's use of insurance is voluntary. If the parents refuse to consent to use of insurance, to use of insurance, special education services cannot be denied.

18. *OSEP Policy Letter to Anonymous, 21 Individuals with Disabilities Educ. L Rep. 1057 (89/94) 34 C.F.R.§ 300.6(e)(f).*

a) If parents agree to use family-owned AT to fulfill IEP, school is responsible for maintenance and repair if damaged on school bus or at school.

b) If the school did not use the family-owned device, it would be responsible for providing and maintaining a needed device.

19. *OSEP Policy Letter to Rieser, U.S. Dept. of Educ., Office of Special Education Programs, Policy Letter to Rieser (7/17/86), 2 Educ. Handicapped L. Rep. 211:403.*

a) Under an interpretation of IDEA by the United States Department of Education, some protection is offered to the family that moves and leaves an AT device behind. Under that interpretation, if the new school's IEP committee does not recommend purchase of the AT device and parents request a hearing, the new school must provide the device until the case is resolved. See U.S. Dept. of Educ., Office of Special Education Programs, Policy Letter to Rieser (7/17/86), 2 Educ. Handicapped L. Rep. 211:403.

Resources for Assistive Technology

Although still a relatively new area to many, there have been a number of "behind the scenes" activities that have served to strengthen Minnesota capacity to meet the AT requirements of IDEA 97. For example, the Statewide Assistive Technology Leadership Team has been a resource that has monitored national trends over the past several years in application of AT devices and service. Minnesota educators also benefit from Closing the Gap, an international AT conference that is held annually in Minnesota, Charting the Cs, Up to the MN*AT Summer Institute, as well as local, regional, and statewide trainings.

Minnesota has a number of other resources available that can be used by teams in the AT consideration process for equipment loan. Some resources are outlined in the following section. The list of resources presented here is not intended to be exhaustive. Teachers and others in Minnesota are encouraged to send additional resources to the Assistive Technology Specialist at CFL for inclusion in future Resource Manuals.

Minnesota Resources

Assistive Technology Specialist—Department of Children, Families, & Learning

Joan Breslin Larson, 1500 Highway 36 W., Roseville, MN. 55113
651.582.1599
fax 651.582.8729
TTY 651.634.2739
e-mail joan.breslin-larson@state.mn.us

The Department of Children, Families & Learning sponsors a list serve dedicated to AT topics. To subscribe, send an e-mail to assistive-tech@state.mn.us. In the subject line, type subscribe.

Simon Technology Center

The Simon Technology Center, a program of the PACER Center, offers a lending library of over 1,600 items of commercially available and disability specific educational software and assistive technology devices for preview. Approximately 200 items are devices such as augmentative communication devices, touch windows and alternative keyboards. The library is available to

parents and professionals throughout the state, we will mail items through the postal service. An annual membership is $100 for professionals and $25 for a family. PACER distributes complete catalog listings for the PC and Macintosh free of charge.

PACER Center
8161 Normandale Boulevard
Bloomington, MN 55437-1044
Voice: 952-838-9000
TTY: 952-838-0190
Fax: 952-838-0199
Toll-free 1-800-537-2237

People Achieving Change Through Technology (PACTT)

PACTT services include:

- Equipment loan library
- Referral services to other assistive technology resources

PACTT can be reached at
604 11 Ave NW
Rochester, MN 55901
507-287-2043

STAR Program

A System of Technology to Achieve Results (STAR) was created by the Technology Related Assistance for Individuals with Disabilities Act. It is a program of the Governor's Advisory Council on Technology for people with Disabilities. Activities are currently funded by the Assistive Technology Act of 1998 and the State of Minnesota. Programs funded by STAR include the Regional Assistive Technology Networks (information included below), Minnesota Assistive Technology Loan Network (MATLN- provided by United Cerebral Palsy) and Assistive Technology on MN. STAR also publishes a Directory of Funding for Assistive Technology. Phone: 651-296-2771 or 800-657-3862 (TTY: 651-296-9478 or 800-657-3895).

Regional Assistive Technology Networks

The Minnesota STAR Program makes CAN grants to groups of volunteers who create a plan to deliver assistive technology services and devices to people with disabilities in their region of the state.

Name	Region	Agency	City	Phone
Cassandra Robinson	1	ARC of Bemidji	Bemidji	218-759-0097

Pam Parson	2	Center for Independent Living of NorthEastern Minnesota	Hibbing	218.262.6675
Terry Beck	3	Lake Country Community Resources, Inc.	Fergus Falls	218-739-3011
Kathy Pauly	4	SPOT Rehabilitation	St. Cloud	320-259-4151
Bob Braun	5	SW/WC Service Cooperatives	Marshall	(507) 537-2252
Beth Stewart	6	Owatonna Hospital Auxiliary	Owatonna	507-455-0141

Assistive Technology of MN. (ATMN)

ATMN is a nonprofit organization with a mission to help people with disabilities reach their full potential by developing a statewide, comprehensive, consumer responsive system to provide assistive technology for all Minnesotans with disabilities.

Programs offered by ATMN include :

- Loan Program
  - The purpose of ATMN's financial loan program is to help people with disabilities acquire the assistive technology service or device they need to become more independent, employed, improve their employment situation or receive training in pursuit of employment.
  - A loan form is available on-line at the ATMN web site. Be advised this form is the first part of the loan process. If approved by ATMN Loan Committee, you will be encouraged to apply to their banking partner – Firstar. ATMN reserves the right to change this form at any time.

- Educational Grants

  - The purpose of this grant program is to offer people with disabilities and consumers of AT with financial support in their effort to attend or present at educational conferences and trainings to benefit themselves and others in Minnesota.

  Contact Carol Fury, Executive Director of ATMN at 763-479-8239.

Assistive Technology Information and Referral Service

The Minnesota STAR Program's Assistive Technology Information and Referral Service center is made possible through a grant to PACER Simon Technology Center. The service provides information on all types of assistive technology to help people with disabilities, their family members and the professionals who serve them. This service is available free of charge to any Minnesotan regardless of age or income

PACER Simon Technology Center
8161 Normandale Boulevard
Bloomington, MN 55437-1044
Voice: 952-838-9000
Fax: 952-838-0199
TTY: 952-838-0190
Toll-free 1-800-537-2237
www.pacer.org
contact Janet Peters or Perrine Dailey

Ask for the Assistive Technology Information and Referral Service

Minnesota Assistive Technology Loan Network (MATLN)

The Minnesota Assistive Technology Loan Network (MATLN) is a program of United Cerebral Palsy (UCPM). MATLN provides a lending library of augmentative and alternative communication (AAC) systems. The collection of AAC devices will be listed on the Internet and available for loan through an e-mail process. Devices may be borrowed for long or short term use, depending on availability and demand. The AAC devices included in the database are being made available from a variety of agencies and organizations that have agreed to loan out their equipment. The agency owning the equipment determines the lending policies. Additional equipment has been purchased to enlarge the collection of resources. Funding for this program is provided by the Minnesota STAR Program of the Governor's Advisory Council on Technology for People with Disabilities.

MATLN also provides training and workshops for persons using AAC devices and family members. To increase the number of AAC devices available for loan in MN, MATLN will purchase new equipment for the loan network and accept donations of used AAC systems which will be refurbished and added to the loan network inventory.

MATLN
1821 University Ave Suite 286
So. St. Paul, Minnesota 55104
651.646.7588 1.800.328.4827 ext. 1437 Fax 651.656.3045

Minnesota Statewide Assistive Technology Leadership Team

The following individuals are members of the statewide assistive technology leadership team, sponsored by the Department of Children, Families, & Learning. This committee meets regularly to provide updates on assistive technology activities in their region, provide interagency collaboration and plan for statewide assistive technology projects.

Minnesota Statewide Assistive Technology Leadership Team Members

Name	Region	Agency	Phone	E-mail
Brenda Ackerson	1&2	BRIC	218 745 4441	backers@wao.k12.mn.us
Patricia Bahr	State	Gillette Tech. Center	(651) 634-1911	PBahr@gillettechildrens.com
Loralee Bailey	11/BVI	ISD 196	651 683 6969X5289	loralee.bailey@district196.org
Joan Breslin Larson	State	D of CFL	651 582 1599	joan-breslin-larson@state.mn.us
Mary Brogdon	State	STAR	651 297 7516	Mary.brogdon@state.mn.us
Beth Erickson	10	Brookside Education Center	507 379 4826	eericks@albertlea.k12.mn.us
Carol Fury	State	ATMN	763-479-8239	cfury@worldnet.att.net
Patti Glumack	11W	ISD 287	763-550-7395	pjglumack@int287.k12.mn.us
Amy Hicks	11E	AT Ctr-Mpls Schools	612-668-2792	Amy.Hicks@mpls.k12.mn.us
Joni Jacobson	4	Alexandria Schools	320 762-7900	jjacobso@alexandria.k12.mn.us
Frank Kurkowski	11E	St Paul Schools	651 290 8342	kurkowski@spps.org
Monica Lewis	5&7	Benton Sterns Ed. Dist.	320 257 7367	mlewis@bentonstearns.k12.mn.us
Diane Mutchler	State	Rehab Services	651 296 4245	Diane.mutchler@state.mn.us
Marilyn Nelson	11	Metro ECSU	612 638-1515	manelson@ecsu.k12.mn.us
Risë Nybakke	11E	Mpls Schools	612-668-2792	assistive.technology@mpls.k12.mn.us
Janet Peters	State	PACER Simon Technology Ctr.	612 827 2966	jpeters@pacer.org
Mary Peterson	9	Mankato ISD 77	507 243 4213	mpeter1@mail.isd77.k12.mn.us
Jann Schmidt	7/DHH	Rum River SPED	612 689 3600	jann.schmidt@princeton.k12.mn.us
Rose Spehar	3	NE Service Coop	218 748 7620	rspehar@nesc.k12.mn.us
Marie Swanson	4	Region IV AT Team	218 236 2288	swanson@mhdl1moorhead.mn.us.edu
Dan Stores	6&8	SWWC Service Coop	507 537 2254	dan.stores@swsc.org
Rebecca Tetlie	11E	St Paul Public Schools	651 293-8923	REBECCA.TETLIE@spps.org

Rehabilitation Services

The Minnesota Department of Economic Security/ Rehabilitation Services assists Minnesotans with disabilities to reach their goals for working and living in the community. The agency provides three programs which can assist persons with disabilities in obtaining assistive technology services and products. These programs operate with different funding streams. All can be accessed through local rehabilitation services branch offices throughout Minnesota.

The Minnesota Rehabilitation Services Branch, Vocational Rehabilitation (VR) Program, is funded by the United States Department of Education, Office

of Special Education and Rehabilitative Services, and the State of Minnesota. Basic vocational rehabilitation services to consumers include vocational counseling, planning, guidance and placement, as well as certain customized services based on individual circumstances. These may include academic or skill training, orthotics or prostheses, assistive technology and adaptations, and tools and equipment. All services are provided to assist in the assessment of needs process and/or to support the consumer's Employment Plan. Eligibility is based on a medically documented disability which significantly impacts the ability to obtain or continue employment, and must require vocational rehabilitation services to obtain or continue employment. Vocational Rehabilitation Services gives priority to persons with severe disabilities when resources are inadequate to serve all eligible persons.

Contact:
Paul M. Bridges
Department of Economic Security / Rehabilitation Services Branch
390 North Robert St.
St Paul. MN. 55101
651.296.9981 or 800.328.9095 TTY 651.296.3900

Extended Employment (EE) Program

Extended Employment Programs are 100% state funded. EE Programs provide ongoing employment support services to Minnesotans with severe disabilities or severe impairment to employment who require ongoing support to maintain or advance in employment. The services are provided by thirty Community Rehabilitation Programs located throughout Minnesota.

For further information, contact:

David Sherwood-Gabrielson

Department of Economic Security / Rehabilitation Services Branch
390 North Robert St.
St Paul, MN. 55101
651.296.9150 or 800.328.9095 TTY 651.296.3900

Independent Living

The Independent Living Program is funded through a combination of state and federal dollars. The program provides comprehensive services to persons with significant disabilities to enhance their ability to live independently, function in their homes and with their families, and to participate in their community. There are two components:

A grant program that supports a network of eight community based, cross disability, Centers for independent Living (CILs). Center services include individual and system advocacy, independent living skills training, peer counseling, support groups, information and referral, assistance in obtaining transportation, equipment, personal assistance care, housing, education, recreation, health care, home and work modification, and counseling regarding vocational planning or referral to VR.

An agency based State Independent Living Services program operated cooperatively through VR field offices statewide to provide independent living services including counseling, service coordination and the purchase of equipment. Counselors are liaison coordinators with the Centers for Independent Living and refer consumers to center for additional assistance.

For further information on Independent Living programs or services, contact:

William Bauer
Department of Economic Security / Rehabilitation Services Branch
390 North Robert St.
St Paul. MN. 55101
651.296.5085 or 800.328.9095 TTY 651.296.3900

United Cerebral Palsy Loan Program

United Cerebral Palsy of Minnesota loans augmentative communication devices, switches, and mounting systems to speech language pathologists on a trial basis to assess whether a device is appropriate for an individual. Typically, the equipment is loaned for a one month period, although extensions are sometimes granted in cases where no waiting list exists. There is no fee for borrowing the device, although the borrowing agency is required to pay for return postage. It is assumed by staff of the United Cerebral Palsy Loan Program that speech and language pathologists have the basic skills and knowledge about how to use the device. Contact information:

1821 University Ave Suite 286
So. St. Paul, Minnesota 55104
651.646.7588 1.800.328.4827 ext. 1437 Fax 651.656.3045

National Resources

In addition to the assistive technology resources available in Minnesota, educators, parents and other professionals can also access a wide range of information and support resources through the Internet. This table provides a partial listing of some resources. Please submit your favorite sites to the AT specialist at CFL for inclusion in future Resource Manuals.

Name	E-mail
ABLEDATA	http://www.abledata.com/
DO-IT Program (Disabilities, Opportunities, Internetworking, and Technology)	http://www.washington.edu/doit/
Children, Families & Learning- special education	http://cfl.state.mn.us/speced
Closing the Gap	www.closingthegap.com
Family Center on Technology and Disability	http://www.fctd.info/
Job Accommodation Network (JAN)	http://janweb.icdi.wvu.edu/
Learning Disabilities On-Line	http://www.ldonline.org/
Microsoft Accessibility Information	http://www.microsoft.com/enable/default.htm
National Center to Improve Practice (NCIP)	http://www2.edc.org/NCIP/
National Council on Disability	http://www.ncd.gov/
Resna	http://www.resna.org
Quality Indicators for Assistive Technology Services (QIAT)	http://www.qiat.org
PACER Center	http://www.pacer.org/
Trace Research and Development Center	http://www.trace.wisc.edu/
US Department of Education- Office of Special Education and Rehabilitative Services	http://www.ed.gov/offices/OSERS/
WebAble	http://www.webable.com/
Virtual Assistive Technology Center	http://www.at-center.com/quanda.html
Wisconsin Assistive Technology Initiative	www.wati.org

Assistive Technology Forms and Checklists

- *Student, Environments, and Tasks Worksheet*
- *Parent Worksheet*
- *Student Worksheet*
- *Assistive Technology Group Planning Process*
- *Assistive Technology Checklist*
- *Status Log*
- *Planning and Implementation Summary*
- *Extended Assessment Log*
- *SETT Framework*
- *Transition Planning Checklist*
- *AT Log for Transition*
- *Assistive Technology Evaluation Report Checklist*

Student, Environment, and Tasks Worksheet

Assistive Technology Planning Process

Student Name ……. ..... Grade ..... Date .....

Directions: Complete information about the student, environment, and the tasks prior to the IEP meeting to develop information about assistive technology status and potential needs. This worksheet should be completed by members of the team who are familiar with the student. Please bring the completed *Student, Environment, and Tasks Worksheet* to the planning meeting.

I. Student

1. What does the student need to do, but is currently unable to do?

   …… .....

   .....

   .....

2. What are the student's strengths, abilities, accomplishments, and/or motivators? Any "success stories" you would like to share?

   .....

   .....

   .....

3. What are the student's unique needs?

   .....

   .....

   .....

4. What strategies or accommodations have you used successfully for this student?

   .....

   .....

   .....

5. What are the student's long-range or transition goals?

   .....

   .....

   .....

6. What behaviors (both positive and negative) significantly impact the student's performance?

   .....

   .....

   .....

7. What strengths, learning style, coping strategies or interests should be considered by the team?

   .....

   .....

   .....

Adapted from L. Rees (1999), Intermediate District 287, Plymouth MN.

8. What other issues should be discussed at the team meeting?

.....

.....

.....

II. Environment

What environments are typical for the student to complete IEP related tasks? Select up to three environments where strategies, assistive technology products, or adaptations are necessary.

1. .....

2. .....

3. .....

Complete questions in the table below for each environment. Use additional sheets if necessary.

	Environment 1	Environment 2	Environment 3
1. What materials are currently available to the student?			
2. What is the physical arrangement?			
3. What is the instructional arrangement?			
4. What supports are currently available in this environment?			
5. What resources are available to the team to support the student?			

III. Tasks

Use the table below to identify critical tasks. Use additional sheets if needed for more than three tasks.

	Task 1	Task 2	Task 3
1. What are the naturally occurring activities (tasks) that take place in the environment that are critical to the student?			

2. What are other ways of completing the tasks?			

Notes:

.....
.....
.....
.....

Parent Worksheet

Assistive Technology Planning Process

Child's Name ..... Grade ..... Meeting Date.....

Case Manager ..... Phone ……..

Directions: Please answer the following questions regarding your child's potential need for assistive technology devices or services. As a parent and a member of the planning team, you have important information that can help in making the right decisions about what your child needs to be successful in school. If you have any questions about the *Parent Worksheet,* please contact the Case Manager indicated above. Please bring this form with you to the planning meeting.

1. What are your child's strengths, interests, or motivators? Do you have a "success story" you would like to share?

.....

.....

2. What task (s) is your child currently unable to do, due to his disability?

.....

.....

3. Do you have any suggestions for tools or strategies that could help your child be more successful?

.....

.....

4. Describe any assistive technology devices (simple or complex) used successfully by your child in the home or school.

.....

.....

5. What are your child's feelings about using these devices?

.....

.....

6. How successful do you think these devices have been?

.....

.....

7. What other issues should be discussed at the planning meeting?

.....

.....

Adapted from L. Rees (1999), Intermediate District 287, Plymouth MN.

Student Worksheet

Assistive Technology Planning Process

Name ..... Grade ..... Meeting Date.....

Case Manager ..... Phone ……..

Directions: Please answer the following questions to help determine whether assistive technology devices and/or services might be needed in the school, home, or community. Answer each question as best as you can. If you need help, ask the person listed above as the "Case Manager" or another person you trust. Please bring this form with you to the planning meeting.

1. What tasks do you feel you are unable to complete at school?

.....

.....

.....

.....

.....

2. Name or describe the strategies, technology devices, or assistance that could help you to complete school requirements or tasks.

.....

.....

.....

.....

3. Describe your feelings about using technology at school, home, and/or in the community.

.....

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.....

.....

4. What products have you tried, or have seen that you would like to try out?

.....

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Adapted from L. Rees (1999), Intermediate District 287, Plymouth MN.

5. What other issues would you like to discuss at the planning meeting?

.....

.....

.....

.....

.....

Adapted from L. Rees (1999), Intermediate District 287, Plymouth MN.

Assistive Technology Group Planning Template

Assistive Technology Planning and Evaluation Process

Directions: Each of the topics below should be place on a flip chart or overhead device. Use this template only as a guide for the planning process and for summarizing the information from the *Student, Family, Environments, and Task Worksheet* completed by team members. The resulting information from this template will be transferred to the *Planning and Implementation Summary* form.

Student	Environment	Tasks
Strengths/Abilities/Motivators/"Success Stories": *Needs*: *Successful Strategies*:	What is currently available? What is the physical arrangement? How is the student positioned in the environment? Are there any supports? Are there any barriers?	What does the student need to do? What are naturally occurring activities? Are tasks to be modified?

Options	Prioritized Selections	Implementation Plan
What features of a device or strategy can provide greater participation? Are there strategies to promote this? Note—this is a brainstorming session only. At the conclusion of this session, select and highlight the top 3 options.	Discuss and prioritize the top 3 ideas from the brainstorming session. Decide if outside assistance is needed for product identification or other areas.	*Trial*: What product will be used and for how long? Who is responsible? What criteria will be used to assess the device or strategy? Where will the device be obtained? If assistance from outside consultant is sought, have all of the necessary release forms been signed? *Follow-up*: Who and When? Set a date for the follow-up activity.

Adapted from Lynch and Reed (1997), Wisconsin Assistive Technology Initiative, Incorporation from the SETT Framework, (Zabala 1994)

Assistive Technology Checklist

Assistive Technology Planning and Evaluation Process

MINNESOTA DEPARTMENT OF Children, Families & Learning

Please use this list for planning and ideas only. **This list is not prescriptive** nor is it inclusive of the full spectrum of AT devices.

Student Name ..... Grade ..... Date .....

Writing

Mechanics of Writing

- ___ Pencil /pen with adapted grip
- ___ Adapted paper (e.g. raised lines, highlighted lines)
- ___ Slantboard
- ___ Typewriter
- ___ Portable word processor
- ___ Computer
- ___ Other: .....

Alternate Computer Access

- ___ Keyboard with easy access or accessibility options
- ___ Word prediction, word completion, macros, abbreviation expansion to reduce keystrokes
- ___ Keyguard
- ___ Alternate mouse (e.g. TouchWindow, trackball, trackpad, mouse pen)
- ___ Mouse alternative with on screen keyboard
- ___ Alternate keyboard (e.g. Intellikeys, Discover Board, Tash)
- ___ Mouth stick, head pointer with keyboard
- ___ Switch with Morse code
- ___ Switch with scanning
- ___ Voice recognition
- ___ Other: .....

Composing Written Material

- ___ Word cards, word book, word wall
- ___ Pocket dictionary, thesaurus
- ___ Electronic dictionary/ spell check (e.g. Franklin Bookman)
- ___ Word processor with word prediction (e.g.Co:Writer or TextHelp) to facilitate spelling and sentence construction
- ___ Multimedia software for production of ideas (e.g. PowerPoint, Overlay Maker with talking word processor)
- ___ Voice recognition software
- ___ Other: .....

Communication

- ___ Communication book / board
- ___ Eye gaze board
- ___ Simple voice output product (e.g. Big Mack, CheapTalk, talking picture frame, etc.)
- ___ Voice output device with levels (e.g.Macaw, CheapTalk with Levels, Digivox)
- ___ Voice output with icon sequencing (e.g. AlphaTalker, Vanguard, Liberator)
- ___ Voice output with dynamic display (e.g. Dynavox, laptop with Speaking Dynamically)
- ___ Device with speech output for typing (e.g. Link, Write:Out Loud with laptop)
- ___ Other: .....

Reading/Studying/Math

Reading

- ___ Changes in text size/space/color/background color
- ___ Book adapted for page turning (e.g. with page fluffers, 3 ring binder and folders)
- ___ Use of pictures with text (e.g. Picture It, PixWriter)
- ___ Talking electronic devices for single words (e.g. Reading pen, Franklin Bookman)
- ___ Scanner with OCR and talking word processor
- ___ Electronic Books (e.g. Start to Finish)
- ___ Other: .....

Learning /Studying

- ___ Print or picture schedule
- ___ Low tech aids to find materials (e.g. color tabs, colored paper or folders)
- ___ Highlight text (e.g. markers, highlight tape, ruler)
- ___ Voice output reminders for tasks, assignments, steps to tasks
- ___ Software for manipulation of objects/concept development (e.g. Blocks in Motion, Thinking Things)- may use alternate input device such as Touch Window
- ___ Software for organization of ideas and studying (e.g. PowerPoint, Inspiration, ClarisWorks Outline)

Adapted from P. Reed and P. Walser (2000), Wisconsin Assistive Technology Initiative

___ Other: .....

Math

___ Abacus, Math Line

___ Calculator/calculator with print out

___ Talking calculator

___ Calculator with large keys, large display

___ On screen calculator

___ Software with cueing for math computations

___ Tactile/voice output measuring devices (e.g. clock, ruler)

___ Other: .....

Aids for Daily Living

Eating

___ Adapted utensil/ plates

___ Arm support

___ Automated feeding

___ Other: .....

Dressing

___ Velcro fasteners

___ Button hook

___ Dressing aids

___ Other: .....

Aids for Daily Living (Continued)

Recreation & Leisure

___ Adapted toys and games (e.g. puzzles with handles)

___ Battery interrupters and switches

___ Adapted sporting equipment (e.g. Velcro mitt, lighted or beeper ball)

___ Universal cuff to hold crayons, markers, paint brush

___ Modified utensils (e.g. rollers, stampers, scissors)

___ Articulated forearm support (e.g. ErgoRest)

___ Drawing/graphics computer programs

___ Music or games on the computer

___ Other: .....

Home Living

___ Switch

___ Battery interrupter

___ Control unit

___ infrared sender / receiver

___ X-10 unit and peripherals

___ Other: .....

Transition

Work / School to Work

___ Scheduling aids (calendars, reminders, task analysis)

___ Switch / device

___ Adapted keyboard

___ Communication aid

___ Keyboard emulator

___ Other: .....

Transportation

___ Get in and out of car as a passenger

___ Transfer into vehicle and load mobility device

___ Get into vehicle with ramp or lift

___ Independently arrange transportation

___ Independently utilize public transportation

___ Independently drive self with adaptations

___ Independently drive self

___ Other .....

Tolerance

___ Physically tolerate school/work day

___ Emotionally tolerate full school/work day

___ Medically tolerate full work / school day

___ Environmentally tolerate full work/school day

___ Tolerate with distance adaptations (internet, ITV)

___ Other:

Adaptations

___ Adaptive seating/ positioning

___ Electronic communication

___ Electronic organizers

___ Adapted computer input

___ Environmental control

___ Other: .....

Assistive Technology Status Log
Assistive Technology Planning and Evaluation Process

Directions: Select instructional or access areas in the first column that are appropriate for the student. Leave blank the areas that are not relevant. Specify tasks (e.g. copying assignments from the board) in each area which are needed for this student. Indicate the manner in which the student completes these tasks in the appropriate column, specifying modifications, standard tool or AT tools. If the student is not able to complete the task with modifications, standard tools or AT tools, complete the last column.

Student Name ..... Grade ..... Date.....

Instructional Area Check and only use relevant areas	Modifications	Standard classroom tools	Current AT tools	Additional Solutions Needed, including AT Services
Writing				
Spelling				
Reading				
Math				
Study Skills				
Oral communication				
Aids for Daily Living				
Transition				
Other				
Other				
Other				

Planning and Implementation Summary

Assistive Technology Planning and Evaluation Process

Student Name ..... Grade ..... Date.....

Team members (identify IEP manager): .....

.....

Directions: The *Planning and Implementation Summary* is completed once the group planning process has occurred. Transfer the information compiled during the planning meeting and from *Student, Family, Environment, and Tasks Worksheet* to this form and maintain a copy as part of the student's file.

I. Planning Summary

1. What are the devices or strategies to be tried?

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2. What IEP goals will these devices or strategies support?

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.....

3. What accommodations / supports currently exist for these goals?

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.....

4. How will success be determined?

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.....

5. What level of achievement is reasonable to expect for a trial period?

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.....
.....

6. What staff training will be needed / provided?

.....
.....
.....

7. Who will provide the training?

.....
.....
.....

8. What is the training schedule?

.....
.....

9. Who is responsible for implementation in envrionment1? .....
10. Who is responsible for implementation is environment 2? .....
11. Who is responsible for implementation in environment 3? .....
12. Who else is involved other than those listed (names and roles)?

.....

.....
.....

II. Implementation Summary

Provide information to the following questions about the device(s) used in each environment:

	Environment 1	Environment 2	Environment 3
1. What is the name of the device, manufacturer and technical support number?			
2. Who will order the device?			
3. Is there a cost to the trial usage? If yes, who will pay?[1] (Indicate amount)			
4. Who will set up, troubleshoot, and maintain ongoing support for the device?			
5. Where will the device be stored when not in use?			
6. How will the device be transported?			
7. Who will have access to the device?			
8. Who will provide training to the student and family? Who will pay for the training? [2]			
9. Who will provide training to the school staff. Who will pay for the training? [3]			
10. Who will be responsible for implementation, data collection and reporting?			
11. Indicate start-up date, anticipated ending date, and follow-up meeting date.			

1. Authorized signature of payer of device: .....

2. Authorized signature of payor for student/family training: .....

3. Authorized signature of payor for staff training: .....

Extended Consideration Log

Assistive Technology Planning and Evaluation Process

Directions: Use the Extended Assessment Log to document the type of device that was tried, the environment, timelines, and overall results. The purpose of this log is to help service providers determine whether a device met the student's needs and to assist with future assistive technology planning.

Student Name ..... Grade ..... Date.....

	Device 1	Device 2	Device 3
1. What is the name of the device?			
2. What environment(s) was the device used?			
3. How long was the device used? (include start and ending dates)			
4. How many trials were observed?			
5. What was the criteria used to judge success?			
6. Was the criteria met? (Yes or No)			
7. Will this device be recommended for the student? (Yes or No)			
8. Other comments regarding this device?			

The SETT Framework
Collaborative Consideration of Assistive Technology Devices and Services

Part 1: Consideration of Student Need

Student:_____ Date: _____

Perspective:_____

PART 1: Examining Current Conditions to Consider Educational Need

Student	Environments	Tasks

Circle areas which may present barriers to students progress.

Please provide feedback on effectiveness and suggestions for modifications/revisions by email to zabala@technologist.com

The SETT Framework

Part 2: Consideration of Tool System

System requirements	Required	Helpful	Services or tools to consider (no tech/low tech/ high tech)	Tool availability			Services required for effective use			
				S	P	A	Student	Staff	Family	Other

Availability key-
S= Tools / devices systematically available to all students served
P= Tools / devices programmatically available through special education or other program for which student qualified
A= Additional tools / devices which may be required to address identified needs.

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Assistive Technology

TRANSITION PLANNING CHECKLIST

EARLY STAGE TRANSITION

The youth and family are introduced to the transition process and the youth begins to participate in his/her planning. Skills are supported and practiced at school and at home with the family.

Self-advocacy

☐ Educate the youth in describing their specific use of AT or related strategies to meet IEP goals.

☐ Encourage the youth to explain their use of AT or related strategies to appropriate individuals

Independent Educational Strategies

☐ Discuss the interventions/strategies/devices youth needs regularly, including problems or barriers to use.

☐ Student is able to identify appropriate times to use pre-selected technology interventions

Vocational planning

☐ Talk about youth's responsibilities at home (e.g. chores) and potential ways to use AT or related strategies

☐ Select and implement appropriate technology strategies for home and recreation

☐ Discuss restrictions (real or imagined) on youth's educational or recreational activities.

☐ Explore additional strategies/interventions based on needs

☐ Explore and contact appropriate funding streams

MIDDLE STAGE TRANSITION

The youth and family gain understanding of the transition process and the expectations of the adult system. The youth practices skills, gathers information and sets goals for participating in his/her adult life.

Self-advocacy

☐ Discuss strategies to access information about useful assistive technology and needs (e.g. support groups, Internet, advocacy and peer groups, library, condition-specific health associations)

☐ Discuss choices for services (specialists/providers/community services).

☐ Begin checklist/record book of strategies to independently use and support AT devices

Educational and vocational planning

☐ Focus discussion on school, favorite subjects, plans for post secondary school, ideas for careers.

☐ Have youth visit school counselors to talk about career prep courses or volunteering

☐ Continue encouragement/modeling of youth's appropriate discussion of use of AT devices/strategies in visits and futures planning

Vocational planning

☐ Expand, if possible, youth's responsibilities at home (e.g. chores)

☐ Expand selection and implementation of appropriate technology strategies for home

☐ Discuss restrictions (real or imagined) on youth's educational or recreational activities

☐ Explore additional strategies/interventions needed based on needs

☐ Explore and contact appropriate funding streams

LATE STAGE TRANSITION

The youth and family prepare to leave the secondary school system with confidence; the youth uses independent behaviors (as able) to effectively use AT

Self-advocacy

- ☐ Continue discussion of choices for services (specialists/providers/community services).
- ☐ Assist in choosing services (post secondary placement/ providers/specialists)
- ☐ Formalize checklist of AT strategies and interventions for AT support
- ☐ Youth maintains AT record book to keep track of AT providers, repair and maintenance providers, vendors, (including names and telephone numbers).
- ☐ Youth meets with adult providers before graduation to support continuum of services

Vocational Planning

- ☐ Team members are in agreement of strategies/interventions needed for transition
- ☐ Appropriate service providers are active participants in transition team
- ☐ Appropriate funding is secures for needed strategies/interventions

Based on Transition Planning Checklist
http://www3.bc.sympatico.ca/steeksma/Medical/transition.htm#Your Plan-it
and the work of Project TechTrans, an outreach project, sponsored by OSERS, at Oregon Health Sciences http://www.ohsu.edu/cdrc/at/index.shtml.

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AT LOG for Transition Planning

This form should be filled out for every AT device you will use in your adult life. Not every line needs to be filled out, but there should be planning for everything you will use as an adult.
Keep all forms in one folder or note book so you have a record for all your assistive technology devices.

I have a _____
Serial number _____
Purchased on _____
Warranty good until _____
Purchased from _____
Company name _____
Address _____
_____
Telephone number _____
Customer support phone number _____
Fax number _____
Web address _____
TTY number _____
Was a maintenance contract purchased? _____ (if yes, answer the next question)
It is in effect until _____

Maintenance and repair record _____
_____
_____
_____
_____
_____

My adult service provider for this device is _____
Telephone number _____

If my device breaks down, my back up plan is:
_____
_____
_____
_____
_____

I will call this person for support _____
Telephone number _____

I will get my device in for repair by _____

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Assistive Technology Evaluation Report Checklist:

This checklist contains suggested elements of an assistive technology evaluation report. Use this to assist in the development or review of an evaluation report. Items do not need to occur in the order listed, nor do all of them apply to all students. Mark each area as (0) absent, (1) present in minimal detail, (2) present in moderate detail (3) present in great detail.

EVAL REPORT	(0)	(1)	(2)	(3)
Identifying Information				
Student's name	_____	_____	_____	_____
Age (DOB)	_____	_____	_____	_____
Disabling condition(s),	_____	_____	_____	_____
Significant medical history	_____	_____	_____	_____
Current educational setting				
School	_____	_____	_____	_____
Teacher	_____	_____	_____	_____
Student/family native language	_____	_____	_____	_____
Evaluation Request				
Reason for technology evaluation	_____	_____	_____	_____
Referral source	_____	_____	_____	_____
Areas of concern	_____	_____	_____	_____
Goals for use of technology/ tied to IEP	_____	_____	_____	_____
Areas Considered				
Motor				
Fine	_____	_____	_____	_____
Gross	_____	_____	_____	_____
Mobility	_____	_____	_____	_____
Positioning/seating	_____	_____	_____	_____
Tone, ROM	_____	_____	_____	_____
Sensory				
Vision	_____	_____	_____	_____
Hearing	_____	_____	_____	_____
Other	_____	_____	_____	_____
Cognitive	_____	_____	_____	_____
Communication				
Expressive	_____	_____	_____	_____
Receptive	_____	_____	_____	_____
Social				
Behavior	_____	_____	_____	_____
Personal expression	_____	_____	_____	_____
Daily living skills	_____	_____	_____	_____
Evaluation Resources				
Family input	_____	_____	_____	_____
Educational history	_____	_____	_____	_____

Current education environment/ tasks	_____	_____	_____	_____
Classes	_____	_____	_____	_____
What other students do	_____	_____	_____	_____
Barriers to participation	_____	_____	_____	_____
Related services (OT, PT, SLP, etc.)	_____	_____	_____	_____
History of technology use				
Devices used	_____	_____	_____	_____
Success of each	_____	_____	_____	_____
Effective data kept	_____	_____	_____	_____
Location of evaluation				
Natural environment	_____	_____	_____	_____
Classroom/school	_____	_____	_____	_____
Home	_____	_____	_____	_____
Community	_____	_____	_____	_____
Movement among environments	_____	_____	_____	_____
Evaluation Result				
Strategies/technologies tried	_____	_____	_____	_____
Features of devices/strategy tried	_____	_____	_____	_____
Successful features identified	_____	_____	_____	_____
Strategies/technologies for trial period	_____	_____	_____	_____
Trial period	_____	_____	_____	_____
Timelines for trial	_____	_____	_____	_____
Training needed for trial	_____	_____	_____	_____
Student's opinion of device(s)	_____	_____	_____	_____
Resources to obtain technology	_____	_____	_____	_____
Funding options included for technology	_____	_____	_____	_____
Follow up plan/ next steps	_____	_____	_____	_____
General Considerations				
Multidisciplinary team effort, including parents obvious	_____	_____	_____	_____
Names of team members participating	_____	_____	_____	_____
Evaluator's name	_____	_____	_____	_____

Evaluator's credentials	_____	_____	_____	_____
Evaluator's agency affiliation	_____	_____	_____	_____
Evaluator contact information	_____	_____	_____	_____
Date of evaluation	_____	_____	_____	_____
Report readable, proper grammar, spelling	_____	_____	_____	_____
Report conforms with legal mandates (timelines, etc)	_____	_____	_____	_____
Jargon, acronyms use is minimized	_____	_____	_____	_____

Guide for Third Party Billing
to
Minnesota Health Care Programs

Assistive Technology

The information on the following pages provides information, standards and protocols for receiving payment for health related services for children who are eligible for Medical Assistance (MA) and Minnesota Care (MNCRE). It is a synopsis and combination of the Technical Guide and the Provider Manual both distributed by the MN Department of Human Services.

Specific questions about coverage of assistive technology and assistive technology services should be directed to the MHCP Help Desk at 651/282-5545 or 1-800/366-5411.

For general questions about third party revenue contact:
Cathy Griffin, Third Party Billing Consultant
Special Education
Children, Families & Learning
1500 Highway 36 West
Roseville, MN 55113-4266
Phone: 651/582-8263 Fax: 651/582-8729
cathy.griffin@state.mn.us

10-28-02

Assistive Technology

Assistive Technology Device: A durable item, piece of equipment or system used to increase, maintain or improve the physical or cognitive function of a child with a disability.

Assistive Technology Service: The support of a qualified health related services professional to assist a child with a disability select, acquire or use an assistive technology device. Types of qualified health related services professionals include those that meet the credential standards to bill Minnesota Health Care Programs (MHCP) for services including: occupational therapists, physical therapists, speech-language therapists, audiologists, mental health professionals or mental health practitioners working under the supervision of a mental health professional and licensed nurses.

Eligibility for Reimbursement

Minnesota Health Care Programs will pay for rental, purchase and repair of an assistive technology device. For reimbursement by MHCP as an Individualized Education Program (IEP) Health-related service, the device must be:

1. Provided for a student who is eligible for and receiving special education.

2. Authorized by the IEP/IFSP/IIIP team as necessary for the student to benefit from special education or to support an educational goal.

3. Medically necessary which means the service is consistent with the student's diagnosis/condition and is recognized as the prevailing standard or current practice by the corresponding health care professional's peer group.

   In addition, the service must be delivered because of a life-threatening condition or pain, to treat an injury, illness or infection, to treat a condition that could result in physical or mental disability, to achieve a level of physical or mental function or as a preventive health service.

4. Covered under Minnesota's Medicaid State Plan and intended for use only by the child for whom it is purchased.

5. Generically identified on the child's IFSP/IEP/IIIP as necessary for the child to function and not as part of a curricula.

6. Provided according to appropriate notification, release of information and/or informed consent requirements based on child's public and/or private health care coverage.

7. Documentation of delivering the equipment is made.

Establishing the Need

The Evaluation Summary Report and IEP provides the basis for identifying the need for the device:

1. The child's diagnosis or condition.

2. A description of the child's functional status.

3. The objectives of the device.

4. A description of how use of the device will be evaluated.

Documentation of the specific device provided will be found on the invoice and must include:

1. The date of the purchase, rental or repair.

2. Name of the manufacturer, model number, quantity of items and a brief description of the device.

3. Cost of the item including materials and labor to modify before delivery.

4. Materials and cost of materials including any hours of labor and cost to repair devices.

The health related service provider who delivers the equipment to the student, must note in the student file the date and location of the delivery. It may be appropriate to make this notation on the invoice itself and maintain it in the file for at least five (5) years. If district retention of records policies require longer retention, following the district policy.

Covered Devices

It would be difficult to provide an exhaustive list of the items that may be reimbursed by MHCP. The following list provides basic groups of covered devices:

- Augmentative communication devices
- Hardware and software essential to use a covered device
- Hearing amplification devices
- Mobility, seating and accessory devices
- Positioning devices

- Apnea monitoring devices
- Blood glucose monitoring devices
- Bronchial drainage devices
- Mechanical ventilation devices
- Pressure reducing devices
- Infusion and nutritional pumping devices
- Nebulization devices
- Oxygen therapy devices
- Lifting devices
- Prosthetic and orthotic devices
- Standing devices
- Suction devices
- Purchase, rental or repair on items above

Non-covered Assistive Technology Devices

Assistive technology devices are not eligible for reimbursement from MHCP if the device is:

1. Provided under a 504 plan and not an IEP.

2. Not medically necessary.

3. Not documented in the student's record.

4. Not identified on the IEP/IFSP/IIIP.

5. Not for the purpose of improving or maintaining the functional status of a child with an impairment.

6. Not delivered to the student.

8. The device will be used by more than one student.

9. Equipment that is generally used by the public and not typically considered to be medical such as *personal computers, printers, tape recorders, video recorders, telephone answering machines, telephones and exercise equipment.
   *Do not confuse a "personal computer" with a computer needed as part of an augmentative communication system. This means a PC used in the same manner as the general public.

10. Modifications to vehicles (i.e. lifts, pedals or hand gears) or modifications to buildings (i.e. ramps, widened doors or hand rails).

Authorization for Services

Schools do not need a special authorization to receive reimbursement for assistive technology devices. The IEP team authorizes the reimbursement based on established criteria for Special Education and Minnesota Health Care Programs.

Initial Assessments and Reassessments

Initial assessments and reassessments conducted by health related service providers that result in eligibility or continued eligibility for special education may be reimbursed by MHCP. Qualified health related service providers may bill actual time spent administering tests, interpreting test results and writing reports.

Service Limits

Assistive technology devices purchased by Minnesota Health Care Programs (MHCP) do not affect a child's ability to obtain the same equipment for use outside of school. However, if items can be safely and efficiently used both at home and at school, it is not an acceptable use of public funding to provide duplicate devices. If there is a reasonable reason to have two devices (one for school and one for home) it can be done. This is possible because schools bill for assistive technology devices with a special code that is not available to medical suppliers.

Students who are on MA or MNRE and are required to receive services through a prepaid program administered by HealthPartners, Medica, UCare, etc. have their IEP reimbursed services carved out. This means the school bills IEP services directly to MHCP and not to the HMO. Therefore, no limits that may be applied by the prepaid health plan are affected.

Assistive Technology Service

Part of providing an assistive technology device for a student may also require assistive technology services. Although "assistive technology services" are not specifically covered, there may be instances when those "types" of services may be reimbursed by MHCP. In order for that to happen, the following would need to occur:

- Student is eligible for special education.
- District has provided initial/annual notice or obtained informed consent as required by law.
- Assistive technology service is provided by a qualified provider (OTR, PT, etc.) according to MHCP standards.
- The need for assistive technology service is identified on the IEP and approved by the IEP team.
- The service is provided directly meaning the student is present.
- The service is documented and the documentation:

- Is legible to the person documenting;
- Has the child's name on each page;
- Is dated when an entry is made;
- Includes the date of service, length of service and type of service provided;
- Is signed by the provider; and
- Includes the child's response to the service.

Situations when assistive technology services may be reimbursable include:

- Evaluating the needs of the child;
- Fitting, customizing, adapting, maintaining or repairing the device;
- Trials with devices in an effort to find the most appropriate to purchase for the child;
- Using other therapies, interventions or service with the assistive technology device; or
- Training or technical assistance for the child to appropriately use the device.

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