Chapter 1 – Assessing Students' Needs for Assistive Technology (ASNAT) Process

Overview of the Assessment and Planning Process

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This chapter provides an overview of the assistive technology consideration, assessment and planning process that has been implemented throughout Wisconsin and in hundreds of school districts across the country. The term "assessment" is being used rather than "evaluation," except when specifically quoting IDEA. IDEA states that one of the assistive technology services that a school district must provide is an "assistive technology evaluation". However, throughout this manual, we will use the term "assessment" rather than "evaluation", unless directly quoting the law. This is based on the following definition from the Federal Register (July 10, 1993).

> **Evaluation:** A group of activities conducted to determine a student's *eligibility* for special education.
>
> **Assessment:** A group of activities conducted to determine a student's *specific needs.* (Italics added for emphasis.)

We believe that assessment is a more accurate and descriptive term for what needs to occur. It has long been our philosophical belief that there is no "eligibility" criterion for assistive technology. IDEA '97 supported that philosophy with its requirement that each IEP team "consider" the student's need for assistive technology. This language remains in IDEA '04.

The first page in this section contains the definition of Assistive Technology devices and Assistive Technology Services from IDEA.

Following that is an explanation of the forms and process developed by the Wisconsin Assistive Technology Initiative for both "Consideration" and "Assessment". There are descriptions of the steps for information gathering, decision-making, and trial use. In addition, there are directions on how to use the specific forms for each step of the process.

All products mentioned in this chapter appear in a table at the end of the chapter along with the company that produces them. A list of products and companies is at the end of the each chapter of this manual.

Each of the forms contained in this chapter are included in the appendix as reproducible forms. These may be copied for your use if you maintain the credits as they appear on each page.

Assistive Technology Laws Affecting School Districts

As stated in 300.308, each school district is required to insure that assistive technology devices and services are provided if needed by a student in order to receive a free appropriate public education (FAPE).

Definition of Assistive Technology

300.308 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

(a) Special education under 300.17;
(b) Related services under 300.16; or
(c) Supplementary aids and services under 300.550(b)(2).

Assistive technology devices and services

300.5 Assistive technology device.

Assistive technology device means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability. The term does not include a medical device that is surgically implanted, or the replacement of such device.(Authority: 20 U.S.C. 1401(1))

300.6 Assistive technology services
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 needs including a functional evaluation, in the child's customary environment;
(B) purchasing, leasing or otherwise providing for the acquisition of assistive technology devices;
(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 a child with disabilities, or where appropriate that child's family; and
(F) training or technical assistance for professionals (including individuals providing education and rehabilitation services), employers or others(s) who provide services to employ, or are otherwise, substantially involved in the major life functions of of that child.. [Authority: 20 U.S.C. 1401(2))

The reauthorization of IDEA '04 aligned with laws found in No Child Left Behind (NCLB). One such alignment was in the identification of the need to provide alternative text formats to students who had difficulty interacting with text found in standard core content text books. This law impacts assistive technology tool choice as well as the delivery of services. IEP teams must identify the text format that matches a student's need. Additionally, they must select the compatible file format for the device the student will use and the service needed to support the student in accessing these correct files.

> **300.172(a)(1)**
> Adopt the National Instructional Materials Accessibility Standard (NIMAS), published as appendix C to part 300, for the purposes of providing instructional materials to blind persons or other persons with print disabilities, in a timely manner after publication of the NIMAS in the Federal Register on July 19,2006 (71 FR 41084).

Consideration

IDEA '97 added the requirement that each IEP Team consider the need for assistive technology as part of the Consideration of Special Factors.

> **300.346 (a)(2) Consideration of Special Factors.**
> The IEP Team shall....
> (v) consider whether the child requires assistive technology devices and services.

Lack of Guidelines

Neither the law nor the regulations provided guidelines for school districts in the implementation of these requirements. This may be part of the reason that school districts still struggle to comply with the laws relating to assistive technology. One systematic approach to providing effective assistive technology services is *Education Tech Points* (Bowser & Reed, 1998). This approach uses key questions to help school district staff appropriately address assistive technology throughout the delivery of special education services. *Education Tech Points* provides questions about assistive technology to be addressed during: Initial Referral, Evaluation for Eligibility for Special Education, Extended Assessment, Plan Development, Implementation, and Periodic Review. This manual is available as a free download from the www.wati.org website.

Assistive Technology Roles and Responsibilities

Although school districts have been required since 1990 to specifically provide assistive technology devices and services, we continue to find a range of situations across school districts from:

- No one responsible for AT.
- One person responsible for AT struggling to find time because he or she has little or no reduction in other responsibilities.
- One person responsible for AT with some reduction in other responsibilities.
- A small team (often an SLP, an OT, and a teacher) at the district level responsible for AT with some reduction in other responsibilities.
- A larger, more complete team (usually adds vision and hearing as well at PT and sometimes different types of special education teachers) at district level with some building representation established.
- Well trained AT teams in each building with back up from a district level AT Resource team.

Looking at that list as a continuum, it is easy to understand that educators would struggle to comply with the law in those situations described first. It is nearly impossible to be in compliance in school districts where little or no effort has been made to assign responsibility, honor that responsibility by providing time to carry out duties, and provide training to all who require it.

However, even in the districts where effort has been made to assign responsibility and provide training, there can still be difficulties. What we really must have in every school district is:

A knowledgeable, supportive network of people working together to help every IEP Team choose and provide appropriate AT devices and services.

What does that mean? It means:

1. Every school district employee who works with students with disabilities (including general education teachers) has at least awareness-level knowledge about what assistive technology is and what it does.
2. Every employee who works with students with disabilities and has contact with parents of those students, knows the law about assistive technology, knows district procedures for obtaining assistive technology and assistive technology evaluations, and how to initiate those procedures.
3. All administrators understand and comply with the laws related to assistive technology. They expect assistive technology options to be available in all classrooms.
4. Specific individuals at both the building and district level have been designated with specific responsibilities related to assistive technology and provided the necessary training, resources, and support to carry out those responsibilities.

Even in a small school district, it is possible to identify and train at least one individual in each building to have basic knowledge about assistive technology. That individual can then participate in a network within the district so that he or she is aware of others who have knowledge. It also allows that network of people to collaborate to insure that someone develops greater expertise in specific areas (e.g., augmentative communication, voice recognition, or adapted computer access) and that all know who those individuals are and how to contact them for assistance.

Because IDEA '04 specifically requires each IEP Team to consider the student's need for assistive technology, each IEP Team must have at least one member with sufficient knowledge to appropriately consider that need. In addition to knowing about the assistive technology devices, that individual must also know where to turn for greater expertise when difficult questions arise. This can only happen when there is a district wide effort to create knowledgeable people who are interconnected with each other.

Action Steps

School districts that have not yet done so, must:

1. Provide awareness level training to all employees who work with students with disabilities in any capacity with an expectation of implementation.
2. Provide training on the law to all administrators and monitor their compliance.
3. Designate individuals at the central office and building level to work together to gain more in-depth knowledge.
4. Create learning communities where general education, special education, curriculum, and instructional technology staff continually support efforts to include all students in instruction.
4. Provide resources to keep staff knowledgeable including access to readily available equipment and software. Provide print supports as well as online resources and access to training.
5. Designate specific responsibilities as needed so that everyone clearly understands their role.

It is not so important that a district follow a certain model, but rather that they undertake a systematic course of action, designed to meet the needs of their students with disabilities.

Considering the Need for Assistive Technology

Every IEP Team is required to "consider" the student's need for assistive technology. When the team "considers" assistive technology, that process should involve some discussion and examination of potential assistive technology. It should not be ignored or skipped over. It should not be someone saying, "Assistive technology? No, he doesn't need that." without real discussion. Consideration is defined in the American Heritage Dictionary as "to think carefully about, to form an opinion about, or to look at thoughtfully." We believe that Congress did not choose that word by accident, but clearly intended that there would be some thought about whether a student might need assistive technology.

This "thoughtful look" should certainly include at least a brief discussion of which assistive technology might be useful and whether it is needed. In order to do that, someone on the IEP team will need to be sufficiently knowledgeable about assistive technology to help lead the discussion. That person may bring along specific resource information about assistive technology to help all team members focus on what assistive technology exists for the tasks that are challenging to the student. That information might be books, catalogs, printouts from a website, or actual hardware or software. Whether resources are brought along or not, there should be a brief discussion of assistive technology during which at least one person displays some knowledge about relevant assistive technology.

Because this discussion should be brief, it should last at least a minute or two, but no more than 15 to 20 minutes. Congress intended that we could do this within the confines of an IEP meeting, so it should not add appreciably to the length of that meeting. If understanding and agreement cannot be reached in twenty minutes, then it is possible that there are questions that need to be addressed in another forum such as an assistive technology assessment.

In addition to talking about the assistive technology itself, there should be a discussion about assistive technology services. School districts are required to provide both the devices and the services, and the "consideration" requirement also includes assistive technology services. Specific assistive technology services may include: an evaluation of the student's need for assistive technology; training of the student, members of the family or staff on how to use the assistive technology; technical assistance about its operation or use; modification or customization of the assistive technology; and other supports to the school personnel that might be necessary for the assistive technology to be appropriately used. What these other supports might be is not specified in the law. It could include anything that is needed—for example, training on how to add new vocabulary to an augmentative communication device or scan new materials into a software program that reads the text, or time for planning about how and when these things will happen and who is responsible.

 The Consideration Guide may be a helpful tool for building consultation teams as they consider what instructional approaches and tools to target to support unidentified students who require interventions at the universal and selected levels.

Using the AT Consideration Guide

- Consideration is a brief process, one that can take place within every IEP meeting without unduly extending it.
- It is more than someone saying, "Oh, that doesn't apply to my students."
- At least one person on the IEP Team must have some knowledge about assistive technology, because you cannot "consider" something about which you know nothing.
- In order to think about whether assistive technology would be helpful or not, the IEP team would have to have already developed the bulk of the IEP in order for them to know what it is they expect the student to be able to do twelve months from now.
- The annual goals that the student is expected to accomplish will be the focus of the discussion about what assistive technology, if any, might assist or allow the student to accomplish them.

Some of the problems that a student might experience which would lead the IEP team to consider assistive technology as a solution include, but are not limited to:

- ✓ Print size is too small.
- ✓ A student is unable to hear all that is being said.
- ✓ Difficulty aligning math equations.
- ✓ The student often needs text read to him in order to complete an assignment.
- ✓ Handwriting is so illegible that the meaning is impossible to decipher.
- ✓ The effort of writing is so slow or so exhausting that it is counterproductive.
- ✓ The student has difficulty finding key points on web pages.
- ✓ Current modifications are not working.
- ✓ The effort of decoding reading assignments is so difficult that the student loses track of the meaning.
- ✓ Student cannot organize assignments in a way that brings them to completion.
- ✓ The student is "stuck".

When considering a student's need for assistive technology, there are only four general types of conclusions that can be reached:

1. The first is that current interventions (whatever they may be) are working and nothing new is needed, including assistive technology. This might be true if the student's progress in the curriculum seems to commensurate with his abilities.
2. The second possibility is that assistive technology is already being used either permanently or as part of a trial to determine applicability, so that we know that it does work. In that case the IEP Team should write the specific assistive technology into the IEP if it is being used permanently, and document what AT is being explored or trialed, to insure that it continues to be available for the student.
3. The third possibility is that the IEP Team may conclude that new assistive technology should be tried. In that case, the IEP Team will need to describe in the IEP the type of assistive technology to be tried, including the features they think may help, such as "having the computer speak the text as the student writes". The IEP Team may not know at this point a specific brand or model, and should not attempt to include a product by name, since they do not know if it will perform as expected. Describing the features is the key step for the IEP Team in this situation.

4. Finally, the last possibility is that the IEP Team will find that they simply do not know enough to make a decision. In this case, they will need to gather more information. That could be a simple process of calling someone for help, or going to get some print, digital storage device, or online resources to help them better "consider" what AT might be useful. It could also be an indication that they need to schedule (or refer for) an evaluation or assessment of the student's need for assistive technology.

Many state education agencies have developed a worksheet or form to help IEP Teams insure that they address all of the Special Factors during the IEP meeting. This Special Factors worksheet or form requires the IEP Team to respond to a series of questions, including this one about assistive technology:

> Does the student need assistive technology services or devices? □ Yes □ No
> If yes, specify particular device(s) that were considered.

Because some IEP teams need more guidance than that single question provides, the Wisconsin Assistive Technology Initiative (WATI) has also developed a tool to further guide the IEP Team at this point. It is called the AT Consideration Guide. The AT Consideration Guide leads the IEP Team through a series of questions designed to help them determine whether the student does or does not "need" assistive technology devices or services. Those questions are:

1. **What task is it that we want this student to do, that s/he is unable to do at a level that reflects his/her skills/abilities (writing, reading, communicating, seeing, hearing)?** On the AT Consideration Guide, check each relevant task. Tasks that are not relevant to the student's IEP are left blank.
2. **Is the student currently able to complete tasks with special strategies or accommodations?** If the answer is yes, strategies and accommodations are described in column A for each checked task.
3. **Is there currently assistive technology (devices, tools, hardware, or software) used to address this task?** (If none are known, review WATI's AT Checklist.) If any assistive technology tools are currently being used (or were tried in the past, including recent assessment), they are described in column B.
4. **Would the use of assistive technology help the student perform this skill more easily or efficiently, in the least restrictive environment, or perform successfully with less personal assistance?** If yes, column C is completed.

Column C can also be used to explain briefly why something is not going to be tried, even though it is being considered. For instance, the student may recently have begun receiving new direct intervention and the IEP team wants to wait and see what the outcome is or the student has made recent improvements and they feel nothing different is needed. Documenting what was discussed and why it is not being implemented is often important here for review in the future, if someone does not remember clearly what was "considered."

If it is decided to try assistive technology that has not previously been used by the student, column C provides the place to describe what will be tried. It is important here to plan one or more formal trials. Only a well-designed trial will actually determine what assistive technology will work for a specific student. Only after successful trial use, should the permanent use of assistive technology be written into the IEP.

As noted earlier, one of the outcomes of "consideration" may be the determination that some kind of assessment or evaluation of the student's need for assistive technology is needed.

The Assistive Technology Consideration Guide can be used to document each of these situations for future reference.

WATI Assistive Technology Consideration Guide

Student's Name_____ School_____

1. What task is it that we want this student to do, that they are unable to do at a level that reflects their skills/abilities (writing, reading, communicating, seeing, hearing)? Document by checking each relevant task below. Please leave blank any tasks that are not relevant to the student's IEP.
2. Is the student currently able to complete tasks with special strategies or accommodations? If yes, describe in Column A for each checked task.
3. Is there available assistive technology (either devices, tools, hardware, o software) that could be used to address this task? (If none are known, review WATI's AT Checklist.) If any assistive technology tools are currently being used (or were tried in the past), describe in Column B.
4. Would the use of assistive technology help the student perform this skill more easily or efficiently, in the least restrictive environment, or perform successfully with less personal assistance? If yes, complete Column C.

Task	A. If currently completes task with special strategies and / or accommodations, describe.	B. If currently completes task with assistive technology tools, describe.	C. Describe new or additional assistive technology to be tried.
❒ Motor Aspects of Writing			
❒ Computer Access			
❒ Composing Written Material			
❒ Communication			
❒ Reading			
❒ Organization			

Task	A. If currently completes task with special strategies and / or accommodations, describe.	B. If currently completes task with assistive technology tools, describe.	C. Describe new or additional assistive technology to be tried.
❒ Math			
❒ Recreation and Leisure			
❒ Activities of Daily Living (ADLs)			
❒ Mobility			
❒ Positioning and Seating			
❒ Vision			
❒ Hearing			

5. Are there assistive technology services (more specific evaluation of need for assistive technology, adapting or modifying the assistive technology, technical assistance on its operation or use, or training of student, staff, or family) that this student needs? If yes, describe what will be provided, the initiation and duration.

_____

_____

Persons Present:_____ Date:_____

ASSISTIVE TECHNOLOGY ASSESSMENT

Since the 1990 reauthorization of IDEA with its definition of assistive technology services, which included "the evaluation of needs including a functional evaluation, in the student's customary environment;" there has been a nationwide trend to identify and train staff within each school district to be more knowledgeable about assistive technology. This trend incorporates the following components:

- A change in the **view** of assistive technology assessment: from a one shot, separate event to an **ongoing, continual part of educational planning**.
- A change in **who** conducts the assistive technology assessment: from an expert based at a center to the **local team in the natural setting**.
- Change in the **scheduling** of an assistive technology assessment: from an isolated, one time event to an **ongoing, continual process,** which includes trials with potential assistive technology.
- As a result, there are changes in **support and follow-through**: from limited support and poor follow-through to **meaningful follow-through involving all team members**.

These changes are significant because the research on abandonment of assistive technology indicates that student's feelings about the assistive technology and the support of family, peers, and teachers are critical factors that determine successful use versus abandonment. Other factors that affect abandonment include having the training necessary to use the devices, being able to use it with little or no pain, fatigue, discomfort, or stress, and having it compatible with other tools and technologies used by the student (American Medical Association, 1996).

This change has created a tremendous need for staff development training for service providers in local school districts across the nation. The changes in the 1997 reauthorization of IDEA which require every IEP team to "consider" the need for assistive technology, has created an even greater need for training, so that all IEP teams will have the needed expertise.

What is the difference between "Consideration" and "Assessment"?
The most obvious differences between Consideration and Assessment are those of depth and duration. Consideration is a short discussion that takes place during the IEP meeting using known information and results in the decision to continue something already being used or to try or not to try assistive technology. Assessment goes into much more detail, looking closely at the students abilities and difficulties and the demands of the environments and tasks. Assessment also includes the acquisition of new information.

We believe that assessment has three parts:

- **Information Gathering**
- **Decision Making**
- **Trial Use**

Information gathering may require specific tests to determine a student's functional level on a given task, observation in customary environments to document performance as well as environmental demands, and careful review of what has already been tried. The decision-making requires the use of a clearly defined decision making process understood by everyone. If assistive technology appears to be a viable tool, trials to determine exactly what will work are needed.

Who Provides an Assistive Technology Assessment?

When there is a specific request for an assistive technology assessment or the IEP Team determines that one is needed, an assessment of the student's need for assistive technology must be completed. While school districts may vary in their specific procedures, it is essential that a team of people be involved in any AT assessment.

There are **five basic components** that **must** be represented on every team making decisions about assistive technology. They are:

- A person knowledgeable about the student. That may be **the student** and/or **parents** or other family members.
- A person knowledgeable in the area of **curriculum**, usually a Special Education Teacher.
- A person knowledgeable in the area of **language**, usually a Speech/Language Pathologist.
- A person knowledgeable in the area of **motor**, often an Occupational or Physical Therapist.
- A person who can commit the district's resources, not only for purchase of devices, but to authorize staff training and guarantee implementation in various educational settings, usually an **administrator**.

There can be any number of additional team members from such backgrounds as:

Audiologist	Technology Coordinator
Counselor	Early Intervention Specialist
Instructional Assistant	Nurse
Physician	Rehabilitation Engineer
Social Worker	Teacher of Hearing Impaired
Teacher of Visually Impaired	Vocational Counselor

This is not an exhaustive list. Each student's team should be unique, customized to reflect the student's unique needs. **Anyone who has the potential to contribute to the decision-making or implementation can be invited to participate on the team**.

Procedures Required
Each school district must have in place a procedure for providing assistive technology assessment. This procedure should include the identification of team members to provide the needed expertise to make an informed decision about assistive technology to meet the student's identified needs.

On the following pages information will be provided about the three-step process of Information Gathering, Decision Making, and Trial Use that comprise the AT Assessment process developed by the Wisconsin Assistive Technology Initiative.

The need for an assistive technology (AT) assessment may occur at any time during the provision of services to students with disabilities. It may come up during the official "consideration" during the IEP meeting, or at any time while a student is receiving special education and related services. Generally the need for an AT assessment is brought up by either the parents or the service providers. (We'll use this term to mean any of the therapists, teachers, assistants, or other individuals paid to provide services in the school). It may be a formal request for an "Assistive Technology Evaluation" or more of a specific question and something more is needed.

The question may be broad such as, "Sally struggles with trying to do all of the required reading and writing in sixth grade. She understands the concepts, but decoding the printed word and trying to spell what she wants to write are so difficult that she is feeling overwhelmed and frustrated. Is there any assistive technology that could help with this?" Or it can be very specific, "Bob is not able to understand the graphics in the social studies book due to his vision."

In Sally's case there may be a whole range of hardware (from low-tech to computer-based) and software that will need to be tried for specific reading and writing tasks in her various classes. In Bob's case only one or two things may need to be tried before a workable solution will be found. In either situation, the team of service providers who work with that student need to have a systematic approach to begin to answer the question.

We have found that people who are new to assistive technology or teams new to the role of "assessing" a student's need for assistive technology often flounder. They struggle to figure out where to start, what questions to ask, what commercial tests, if any, they might need to use, etc. The Wisconsin Assistive Technology Initiative developed a set of forms to help the team through these difficulties and to help them focus on the specific issues that need to be addressed. The forms that we use include:

- The WATI Student Information Guide
- The WATI Environmental Observation Guide
- The WATI Assistive Technology Decision Making Guide
- The WATI Assistive Technology Checklist

Assessing A Student's Need for Assistive Technology: Where to Start?

When the question of a student's need for AT leads to an assessment, the first action is to identify a team of people to address that question. If the school district already has an identified team, then a request for their assistance is made. If no one is designated to function as an AT Assessment team, or only one person has been designated, then a team of people with sufficient knowledge to make an appropriate and useful decision must be assembled.

While the number of the team members and their specific expertise will vary with the magnitude and complexity of the question to be answered, there are some specific considerations in selecting the members of the team. It is important that someone on the team understands curriculum. This is often a special education teacher or the regular classroom teacher. If the question involves speech or language, then someone with expertise in language development is needed. This is most typically a Speech/Language Pathologist, but might also be a teacher of the hearing impaired, if that would be appropriate based upon the student's unique needs. Often there are questions about positioning or motor ability. In this case a Physical or Occupational Therapist is needed. And, of course, one or more of these individuals must have knowledge about specific assistive technology that might be appropriate to address the student's needs. There may be any number of other individuals, as needed. For instance if the student has a vision impairment, there would need to be a Vision Specialist involved. If the student has Autism, someone with a background in Autism will be needed. The Wisconsin Assistive Technology Initiative has also developed a manual for addressing the needs of students with AT needs who are on the Autism Spectrum. You may wish to refer to this guide located on the www.wati.org or http://dpi.wi.gov/sped/at-wati-resources.html site. While there may be a core group of people in a school district who routinely address questions about assistive technology, the specific team working together to determine an assistive technology solution will be made up of individuals who collectively can address all of the student's unique needs.

Finally, one or both of the parents, and when appropriate, the student must be active participants in the information gathering and decision-making. If the student can contribute and understand information, then they should participate in meetings along with their parent or parents. Typically a group of three to six or seven individuals will meet to begin the information gathering and decision making stages of the AT Assessment Process. The AT Assessment Directions/Procedure Guide is a basic outline of the steps that need to take place.

WATI
Assistive Technology Assessment
Directions/Procedure Guide

School District/Agency_____School_____

Student_____Grade_____

Team Members_____

	Date Completed	Comments

Gathering Information:

Step 1: Team Members Gather Information

Review existing information regarding student's abilities, difficulties, environment, and tasks. If there is missing information, you will need to gather the information by completing formal tests, completing informal tests, and/or observing the student in various settings. The WATI Student Information Guide and Environmental Observation Guide are used to assist with gathering information. Remember, the team gathering this information should include parents, and if appropriate, the student.

Step 2: Schedule Meeting

Schedule a meeting with the team. Team includes: parents, student (if appropriate), service providers (e.g., spec. ed. teacher, general ed. teacher, SLP, OT, PT, administrator), and any others directly involved or with required knowledge and expertise.

Decision Making:

Step 3: Team completes Problem Identification Portion of AT Decision Making Guide at the meeting.

(Choose someone to write all topics where everyone participating can see them.)

The team should quickly move through:
Listing the student's **abilities/difficulties** related to tasks (5-10 minutes).
Listing key aspects of the **environment** in which the student functions and the student's location and positioning within the environment (5-10 minutes).
Identifying the **tasks** the student needs to be able to do is important because the team cannot generate AT solutions until the tasks are identified (5-10 minutes).

(Note: The emphasis in problem identification is identifying tasks the student needs to be able to do, the relationship of the student's abilities/difficulties and characteristics of the environment of the student's performance of the tasks.)

Step 4: Prioritize the List of Tasks for Solution Generation

Identify critical task(s) for which the team will generate potential solutions. This may require a redefining or reframing of the original referral question, but is necessary so that you hone in on the most critical task

Step 5: Solution Generation

Brainstorm all possible solutions.

Note: The specificity of the solutions will vary depending on the knowledge and experience of the team members; some teams may generate names of specific devices with features that will meet the student's needs, other teams may simply talk about features that are important, e.g., "needs voice output," "needs to be portable," "needs few (or many) messages," "needs input method other than hands," etc. Teams may want to use specific resources to assist with solution generation. These resources include, but are not limited to: the AT Checklist, the ASNAT Manual, *Closing the Gap Resource Directory*, and/or an AT Consultant.

Step 6: Solution Selection

Discuss the solutions listed, thinking about which are most effective for the student. It may help to group solutions that can be implemented 1) immediately, 2) in the next few months, and 3) in the future. At this point list the names of specific devices, hardware, software, etc. If the team does not know the names of devices, etc., use resources noted in Step 5 or schedule a consultation with a knowledgeable resource person (that is the part of the decision-making that should require the most time; plan on 20-30 minutes here).

Step 7: Implementation Plan

Develop implementation plan (including trials with equipment) – being sure to assign specific names and dates, and determine meeting date to review progress (follow-up Plan).
Reminder: Steps 3-7 occur in a meeting with all topics written where all participants can see them. Use a flip chart, board or overhead during the meeting, because visual memory is an important supplement to auditory memory. Following the meeting, ensure that someone transfers the information to paper for the student's file for future reference.

Trial Use:

Step 8: Implement Planned Trials
Step 9: Follow Up on Planned Date

Review trial use. Make any needed decisions about permanent use. Plan for permanent use.

Gathering Information about the Student

The process for assistive technology assessment developed by the Wisconsin Assistive Technology Initiative incorporates the SETT framework (Zabala, 1994) to help organize the often complex task of assistive technology decision-making. SETT stands for **S**tudent, **E**nvironment, **T**asks, **T**ools. By grouping the information into these categories, the task of selecting assistive technology becomes much more logical.

Without the SETT Framework, trying to gather and sort out all of the information necessary for assistive technology decision-making can be an overwhelming task. With it, the simplicity of gathering and grouping information allows the team to effectively use that information for competent decision-making.

Using the Student Information Guide

As you read through the Student Information Guide, the first thing you note is the questions about what assistive technology is currently being used and what has been used in the past. These are important questions. Unfortunately in our busy lives, it is possible for one service provider to be using assistive technology without others being aware of it. For example the Language Arts teacher may have discovered that Samantha writes much better with voice output on the computer. This may occur because all of the computers in her classroom are capable of providing text to speech. Students can choose to use it or not. She observes over the course of several months that Samantha regularly chooses to work using text to speech and that it has improved both the spelling and grammar in her written assignments. The other teachers and therapists may not be aware of this. Both the documenting and the sharing of that kind of information is essential.

The next section requires a file review to determine what assistive technology, if any, has been tried in the past and what the outcome of that use was. Turnover in staff can cause us to lose track of assistive technology use. Perhaps the most extreme example of this is the case of a team who spent several weeks trying to determine what augmentative communication device might work for a non-speaking student. The staff were all new and neglected to thoroughly review the file until early October, when they were startled to learn that a $8000 dynamic display, voice output communication aid had been purchased for the student two years earlier. It was in a box, at the back of the classroom closet, safely stored away. Had someone not reviewed the file, they would have spent money on another device, when they already had a very powerful one available. The parent had told them on several occasions that there “used to be something that talked for him,” but they had not tracked down the critical information.

Now at the bottom of page 21, the team selects the sections that they feel they will need to complete. It is recommended that a team new to assistive technology assessment concentrate on only one area of concern at a time. So if the student has a learning disability and they are most concerned about writing. They would proceed to the section on Writing and answer the questions in that section. If they are concerned about more than one task, they may decide to complete more than one section of the Student Information Guide. It is up to the team to determine how many and which sections of the Guide will be helpful to them.

Each of the 12 content sections of the Student Information Guide contain questions relevant to determining the type of assistive technology and the features that might be necessary for a student to utilize assistive technology in the completion of the task. On pages 28 and 29 there are a series of questions about the student's abilities related to computer access. These two pages are not necessary to complete if the student has normal fine motor ability, but are critical if the student has a physical disability that includes fine motor difficulties that would impact their ability to keyboard. In the Section 4 – Motor Aspects of Writing, the first questions address the student's current writing ability. Because much of the assistive technology used to address writing difficulties involves keyboarding, the next question is about the student's current keyboarding ability. The next question is about any assistive technology currently used. Number five on page 31 is concerned with computer use and computer availability. At the bottom of page 31 there is a place to summarize the student's abilities and the concerns related to writing. .

Once the desired sections of the Student Information Guide are completed, the team moves on to page 44. The questions on this page are general and apply to every student. They include questions about behaviors that might impact the student's use of assistive technology any other significant factors that should be noted such as learning style, coping strategies, or interest that the team should remember and consider as they move on with the assessment process.

Referral/Question Identification Guide

Student's Name_____ Date of Birth_____ Age__

School_____ Grade_____

School Contact Person_____ Phone_____

Persons Completing Guide_____

Date_____

Parent(s) Name_____ Phone_____

Address_____

Student's Primary Language_____ Family's Primary Language_____

Disability (Check all that apply.)

- ❒ Speech/Language
- ❒ Significant Developmental Delay
- ❒ Specific Learning Disability
- ❒ Cognitive Disability
- ❒ Other Health Impairment
- ❒ Hearing Impairment
- ❒ Traumatic Brain Injury
- ❒ Autism
- ❒ Vision Impairment
- ❒ Emotional/Behavioral Disability
- ❒ Orthopedic Impairment – Type_____

Current Age Group

- ❒ Birth to Three
- ❒ Early Childhood
- ❒ Elementary
- ❒ Middle School
- ❒ Secondary

Classroom Setting

- ❒ Regular Education Classroom
- ❒ Resource Room
- ❒ Self-contained
- ❒ Home
- ❒ Other_____

Current Service Providers

- ❒ Occupational Therapy
- ❒ Physical Therapy
- ❒ Speech Language
- ❒ Other(s)_____

Medical Considerations (Check all that apply.)

- ❒ History of seizures
- ❒ Fatigues easily
- ❒ Has degenerative medical condition
- ❒ Has frequent pain
- ❒ Has multiple health problems
- ❒ Has frequent upper respiratory infections
- ❒ Has frequent ear infections
- ❒ Has digestive problems
- ❒ Has allergies to_____
- ❒ Currently taking medication for_____
- ❒ Other – Describe briefly_____

_____

Other Issues of Concern_____

Assistive Technology Currently Used (Check all that apply.)

- ❒ None
- ❒ Manual Communication Board
- ❒ Low Tech Vision Aids
- ❒ Environmental Control Unit/EADL
- ❒ Manual or Power Wheelchair
- ❒ Voice Recognition
- ❒ Low Tech Writing Aids
- ❒ Augmentative Communication System
- ❒ Amplification System
- ❒ Computer – Type (platform)_____
- ❒ Word Prediction
- ❒ Adaptive Input - Describe_____
- ❒ Adaptive Output - Describe_____
- ❒ Other_____

Assistive Technology Tried

Please describe any other assistive technology previously tried, length of trial, and outcome (how did it work or why didn't it work.)

_____ _____
Assistive Technology Number and Dates of Trial(s)

_____
Outcome

_____ _____
Assistive Technology Number and Dates of Trial(s)

_____
Outcome

_____ _____
Assistive Technology Number and Dates of Trial(s)

_____
Outcome

REFERRAL QUESTION

What task(s) does the student need to do that is currently difficult or impossible, and for which assistive technology may be an option? _____

_____

Based on the referral question, select the sections of the Student Information Guide to be completed. (Check all that apply.)

- ❒ Section 1 Seating, Positioning and Mobility
- ❒ Section 2 Communication
- ❒ Section 3 Computer Access
- ❒ Section 4 Motor Aspects of Writing
- ❒ Section 5 Composition of Written Material
- ❒ Section 6 Reading
- ❒ Section 7 Mathematics
- ❒ Section 8 Organization
- ❒ Section 9 Recreation and Leisure
- ❒ Section 10 Vision
- ❒ Section 11 Hearing
- ❒ Section 12 General

WATI Student Information Guide
SECTION 1
Seating, Positioning and Mobility

1. Current Seating and Positioning of Student (Check all that apply.)

❒ Sits in regular chair w/ feet on floor
❒ Sits in regular chair w/ pelvic belt or foot rest
❒ Sits in adapted chair—list brand or describe: _____
❒ Sits in seat with adaptive cushion that allows needed movement
❒ Sits comfortably in wheelchair _____ part of day _____ most of the day _____ all of the day
❒ Wheelchair in process of being adapted to fit
❒ Spends part of day out of chair due to prescribed positions
❒ Spends part of day out of chair due to discomfort – specific or general area of discomfort _____
❒ Uses many positions throughout the day, based on activity
❒ Has few opportunities for other positions
❒ Uses regular desk
❒ Uses desk with height adjusted
❒ Uses tray on wheelchair for desktop
❒ Uses adapted table

2. Description of Seating (Check all that apply.)

❒ Seating provides trunk stability
❒ Seating allows feet to be flat on floor or foot rest
❒ Seating facilitates readiness to perform task
❒ There are questions or concerns about the student's seating
❒ Student dislikes some positions, often indicates discomfort in the following positions_____

_____

How is the discomfort communicated?_____

❒ Student has difficulty using table or desk—specific example: _____
❒ There are concerns or questions about current seating.
❒ Student has difficulty achieving and maintaining head control, best position for head control is_____

_____

How are their hips positioned?_____

❒ Can maintain head control for _____ minutes in _____ position.

Summary of Student's Abilities and Concerns Related to Seating and Positioning

_____

_____

WATI Student Information Guide
SECTION 2
Communication

1. Student's Present Means of Communication

(Check all that are used. **Circle the primary method** the student uses.)

❒ Changes in breathing patterns ❒ Body position changes ❒ Eye-gaze/eye movement

❒ Facial expressions ❒ Gestures ❒ Pointing

❒ Sign language approximations ❒ Sign language (Type_____ # signs_____
combinations _____ # signs in a combination _____

❒ Vocalizations, list examples_____

❒ Vowels, vowel combinations, list examples_____

❒ Single words, list examples & approx. #_____

❒ 2-word utterances ❒ 3-word utterances

❒ Semi intelligible speech, estimate % intelligible:_____

❒ Communication board ❒ Tangibles ❒ Photos ❒Symbols ❒ Visual Scenes

❒ Combination symbols/words ❒ Words

❒ 2 symbol combinations- list examples _____

❒ 3 or more symbol combinations – list examples _____

❒ Communication book/binder – number of pages in book/binder _____

Does student navigate to desired page/message independently? ❒ yes ❒ no

❒ Schedule board(s) – list examples _____

❒ Speech Generating device(s) - please list_____

❒ Multiple overlays or levels – list examples _____

❒ Partner Assisted Scanning – please describe strategies and communication system _____

_____

❒ Intelligible speech ❒ Writing ❒ Other_____

Comments about student's present means of communicating _____

_____

Purposes of Communication

Does the student communicate:

❒ Wants/Needs – list examples _____

❒ Social interactions – list examples _____

❒ Social etiquette - list examples _____

❒ Denials/rejections – list examples _____

❒ Shared information, including joint attention – list examples _____

_____

2. Those Who Understand Student's Communication Attempts (Check best descriptor.)

	Most of the time	Part of the time	Rarely	Not Applicable
Strangers	❒	❒	❒	❒
Teachers/therapists	❒	❒	❒	❒
Peers	❒	❒	❒	❒
Siblings	❒	❒	❒	❒
Parent/Guardian	❒	❒	❒	❒

3. Current Level of Receptive Language

Age approximation _____

If formal tests used, name and scores_____

If formal testing is not used, please give an approximate age or developmental level of functioning. Explain your rationale for this estimate. _____

_____

4. Current Level of Expressive Language

Age approximation: _____

If formal tests used, name and scores_____

If formal testing is not used, please give an approximate age or developmental level of functioning. Explain your rationale for this estimate._____

5. Communication Interaction Skills

Desires to communicate ❒ Yes ❒ No

To indicate *yes* and *no* the student

❒ Shakes head ❒ Signs ❒ Vocalizes ❒ Gestures ❒ Eye gazes

❒ Points to board ❒ Uses word approximations ❒ Does not respond consistently

Can a person unfamiliar with the student understand the response? ❒ Yes ❒ No

(Continued on next page)

Does the student (check best descriptor)

	Always	Frequently	Occasionally	Seldom	Never
Turn toward speaker	❒	❒	❒	❒	❒
Get other's attention	❒	❒	❒	❒	❒
Interact with peers	❒	❒	❒	❒	❒
Show awareness of listener's attention	❒	❒	❒	❒	❒
Initiate interactions	❒	❒	❒	❒	❒
Ask questions	❒	❒	❒	❒	❒
Respond to communication interaction	❒	❒	❒	❒	❒
Request clarification from communication partner	❒	❒	❒	❒	❒
Repair communication breakdowns	❒	❒	❒	❒	❒
Require verbal prompts	❒	❒	❒	❒	❒
Require physical prompts	❒	❒	❒	❒	❒
Maintain communication exchange	❒	❒	❒	❒	❒
Terminate communication	❒	❒	❒	❒	❒

Describe techniques student uses for repair (e.g. keeps trying, changes message, points to first letter etc.).

_____

_____

6. Student's Needs Related to Devices/Systems (Check all that apply.)

❒ Walks ❒ Uses wheelchair ❒ Carries device under 2 pounds

❒ Drops or throws things frequently ❒ Needs digitized (human) speech

❒ Needs device w/large number of words and phrases

❒ Requires scanning

❒ Requires auditory preview

❒ One reliable switch site ❒ More than one reliable switch site

❒ Other_____

7. Pre-Reading and Reading Skills Related to Communication (Check all that apply.)

❒ Yes ❒ No Object/picture recognition

❒ Yes ❒ No Symbol recognition (tactile, Mayer-Johnson, Rebus, etc.) Number of symbols _____

❒ Yes ❒ No Auditory discrimination of sounds

❒ Yes ❒ No Auditory discrimination of words, phrases

❒ Yes ❒ No Selects initial letter of word

❒ Yes ❒ No Follows simple directions

❒ Yes ❒ No Sight word recognition Number of words _____

❒ Yes ❒ No Recognizes environmental print

❒ Yes ❒No Puts two symbols or words together to express an idea

List any other reading or pre-reading skills that support communication _____

_____

8. Visual Abilities Related to Communication (Check all that apply.)

- ❒ Maintains fixation on stationary object
- ❒ Visually recognizes people
- ❒ Visually recognizes common objects
- ❒ Visually recognizes photographs
- ❒ Visually recognizes symbols or pictures
- ❒ Needs additional space around symbol
- ❒ Requires high contrast symbols or borders
- ❒ Looks to right and left without moving head
- ❒ Scans matrix of symbols in a grid
- ❒ Scans line of symbols left to right
- ❒ Visually shifts horizontally
- ❒ Visually shifts vertically
- ❒ Looks at communication partner
- ❒ Benefits from "zoom" feature

Is a specific type (brand) of symbols or pictures preferred?_____

What size symbols or pictures are preferred?_____

What line thickness of symbols is preferred? _____ inches

Does student seem to do better with black on white, white on black, or a specific color combination for figure/ground discrimination?_____

Explain anything else you think is significant about the communication system the student currently uses or his/her needs (Use an additional page if necessary)_____

_____

_____

_____

_____

_____

9. Sensory Considerations:

Does the student have sensitivity to:

- ❒ Velcro
- ❒ Synthesized (computer generated) voices
- ❒ Volume
- ❒ Switch feedback (clicking noise)
- ❒ Tactile sensations
- ❒ Other

Explain student's reaction to any of the checked items _____

_____

What are the communication expectations for the student in different environments?

School (regular and special ed., with peers, formal and informal- such as lunch room settings)

_____

_____

_____

Home _____

_____

_____

Community (stores, restaurants, church, library, etc.) _____

_____

_____

Summary of Student's Abilities and Concerns Related to Communication including past AT used to support student's communication_____

_____

_____

_____

_____

_____

WATI Student Information Guide
SECTION 3
Computer Access

1. Current Computer Access

How does the student currently access the computer?

- ❒ Doesn't access the computer
- ❒ Touch type with two hands
- ❒ Hunt/peck with one hand
- ❒ Touch type with one hand
- ❒ Hunt/peck with one hand
- ❒ Touchscreen
- ❒ Adapted keyboard/mouse_____
- ❒ Specialized Software _____
- ❒ Head _____
- ❒ Speech recognition _____
- ❒ Switch scanning _____
- ❒ Other _____

List current AT_____

_____

_____

What difficulty is the student having with current method? _____

_____

_____

2. Previous Assistive Technology

List any AT tried in the past for computer access and describe how it worked. _____

_____

_____

_____

_____

3. Physical Abilities

Does student have limitations to range of motion? ❒Yes ❒No

Does student have abnormal reflexes or abnormal muscle tone? ❒Yes ❒No

Does student have difficulty with accuracy? ❒Yes ❒No

Does student fatigue easily? ❒Yes ❒No

Describe how physical abilities affect computer use._____

_____

_____

_____

4. Motor Control

Does the student have voluntary, controlled movement of the following? (check all that apply)

❒ Right hand	❒ Left hand	❒ Head
❒ Right arm	❒ Left arm	❒ Eyes
❒ Right leg	❒ Left leg	❒ Mouth
❒ Right foot	❒ Left foot	❒ Voice (Speech)
❒ Finger(s)	❒ Other _____	

5. Positioning

How is the student positioned for computer access?

❒ Regular classroom chair
❒ Regular classroom chair with adaptations _____
❒ Specialty chair _____
❒ Wheelchair _____
❒ Other _____

6. Sensory

Does the student have any issues with hearing? ❒Yes ❒No
Does the student have any issues with vision? ❒Yes ❒No
Describe how sensory issues abilities affect computer use._____

_____

_____

_____

7. Literacy

Is the student working at grade level in the following areas?
Reading ❒Yes ❒No _____
Composition ❒Yes ❒No _____
Spelling ❒Yes ❒No _____
Math ❒Yes ❒No _____
Computer Skills ❒Yes ❒No _____

8. Summary of Students Abilities and Concerns Related to Computer Access

_____

_____

_____

_____

WATI Student Information Guide

SECTION 4
Motor Aspects of Writing

1. Current Writing Ability (Check all that apply.)

- ☐ Writes independently and legibly
- ☐ Writes cursive
- ☐ Writes on 1" lines
- ☐ Writes on narrow lines
- ☐ Uses space correctly
- ☐ Sizes writing to fit spaces
- ☐ Prints a few words
- ☐ Prints name
- ☐ Scribbles with a few recognizable letters
- ☐ Pretend writes
- ☐ Uses adapted pencil or pencil grips
- ☐ Holds pencil, but does not write
- ☐ Copies from book (near point)
- ☐ Copies from board (far point)
- ☐ Copies simple shapes
- ☐ Writing is limited due to fatigue
- ☐ Writing is slow and arduous

2. Current Keyboarding Ability (Check all that apply.)

- ☐ 10 finger typing (functional speed)
- ☐ Multi finger typing (functional or slow)
- ☐ one finger typing (functional or slow)
- ☐ Does not currently type
- ☐ Activates desired key on command
- ☐ Accidentally hits unwanted keys
- ☐ Requires arm or wrist support to type
- ☐ Uses alternate keyboard (list) _____
- ☐ Uses access software(list)_____
- ☐ Uses touch window
- ☐ Uses head or mouth stick
- ☐ Uses switch to access computer
- ☐ Uses Morse code to access computer
- ☐ Other_____

3. Computer Use (Check all that apply.)

- ☐ Uses a computer for word processing
- ☐ Uses a computer for Internet searches
- ☐ Uses a computer for spell check
- ☐ Uses computer at school
- ☐ Uses computer at home
- ☐ Has never used a computer
- ☐ Uses computer for leisure (games, music, IM)_____
- ☐ Uses computer for other (list)_____
- ☐ Has potential to use computer but has not used a computer because_____

_____

_____

- ☐ Uses computer rarely (less than 1x/weekly)
- ☐ Uses computer daily
- ☐ Student uses computer for one or more subjects (list subjects) _____

_____

_____

4. Assistive Technology Currently Used (Check all that apply.)

- ☐ Adapted pencils-pencil grips
- ☐ Adapted papers
- ☐ Writing templates
- ☐ Adapted/portable keyboards
- ☐ Computers with accessibility features
- ☐ Adaptive Software: text to speech; word prediction; voice recognition_____ ____
- ☐ Scanned worksheets
- ☐ Other _____

5. Computer Availability

The student has access to the following computer(s):

☐ PC ☐ Macintosh ☐ Other_____

☐ Desktop ☐ Laptop

Location:_____

Summary of Student's Abilities and Concerns Related to Writing _____

_____

_____

_____

_____

WATI Student Information Guide
SECTION 5
Composition of Written Material

1. Typical of Student's Present Writing (Check all that apply.)

- ❒ Short words
- ❒ Short phrases
- ❒ Complex phrases
- ❒ Sentences
- ❒ Paragraphs of 2-5 sentences
- ❒ Longer paragraphs
- ❒ Multi-paragraph reports
- ❒ Other _____

2. Difficulties Currently Experienced by Student (Check all that apply.)

- ❒ Answering questions
- ❒ Getting started on a sentence or story
- ❒ Adding information to a topic
- ❒ Sequencing information
- ❒ Integrating information from two or more sources
- ❒ Relating information to specific topics
- ❒ Determining when to begin a new paragraph
- ❒ Generating ideas
- ❒ Working w/peers to generate ideas and information
- ❒ Planning content
- ❒ Using a variety of vocabulary
- ❒ Summarizing information
- ❒ Other_____

3. Strategies for Composing Written Materials Student Currently Utilizes (Check all that apply.)

- ❒ Story starters
- ❒ Preset choices or plot twists
- ❒ Templates to provide the format or structure (both paper and electronic)
- ❒ Webbing/concept mapping
- ❒ Outlines
- ❒ Other_____

4. Aids/Assistive Technology for Composing Written Materials Utilized by Student (Check all that apply.)

- ❒ Word cards
- ❒ Word book
- ❒ Word wall/word lists
- ❒ Prewritten words on cards or labels
- ❒ Dictionary
- ❒ Electronic dictionary/spell checker
- ❒ Whole words using software or hardware (e.g., IntelliKeys)
- ❒ Symbol-based software for writing (e.g., Writing with Symbols 2000 or Pix Writer)
- ❒ Word processing with spell checker/grammar checker
- ❒ Talking word processing
- ❒ Abbreviation/expansion
- ❒ Word processing with writing support
- ❒ Multimedia software
- ❒ Voice recognition software
- ❒ Other_____

Summary of Student's Abilities and Concerns Related to Computer/Device Access_____

_____

_____

WATI Student Information Guide
SECTION 6
Reading

1. The Student Demonstrates the Following Literacy Skills.

(Check all that apply. Add comments to clarify)

- ❒ Engages in joint attention with adult caregiver to activities (e.g. songs, stories, games and/or toys)
- ❒ Shows an interest in books and stories with adult
- ❒ Shows and interest in looking at books independently
- ❒ Associates pictures with spoken words when being read to
- ❒ Realizes text conveys meaning when being read to
- ❒ Recognizes connection between spoken words and specific text when being read to
- ❒ Pretend writes and "reads" what he or she has written, even if scribbles
- ❒ Recognizes and reads environmental print
- ❒ When asked to spell a word, gets first consonant correct, but not the rest of the word
- ❒ Demonstrates sound manipulation skills including:
  - ❒ Initial and final sounds in words
  - ❒ Initial letter names/sounds
- ❒ Recognizes, names and prints the alphabet (if motor skills are limited, may use alternative means rather than printing to demonstrate knowledge of the alphabet)
- ❒ When asked to spell a word, gets first and last sounds correct
- ❒ Applies phonics rules when attempting to decode printed words
- ❒ Sound blends words
- ❒ Reads and understands words in context
- ❒ Uses inventive spelling most of the time
- ❒ Uses conventional spelling most of the time
- ❒ Reads and understands sentences
- ❒ Composes sentences using nouns and verbs
- ❒ Reads fluently with expression
- ❒ Reads and understands paragraphs
- ❒ Composes meaningful paragraphs using correct syntax and punctuation

2. Student's Performance Is Improved by (Check all that apply.)

- ❒ Smaller amount of text on page
- ❒ Word wall to refer to
- ❒ Graphics to communicate ideas
- ❒ Bold type for main ideas
- ❒ Additional time
- ❒ Spoken text to accompany print
- ❒ Increased spacing between words/lines
- ❒ Symbol or Rebus supports to text
- ❒ Enlarged print
- ❒ Pre-teaching concepts
- ❒ Text rewritten at lower reading level
- ❒ Reduced length of assignment
- ❒ Being placed where there are few distractions
- ❒ Color overlay or colored text/background (List color_____)
- ❒ Other _____

3. Reading Assistance Used

Please describe the non-technology based strategies and accommodations that have been used with this student

_____

_____

4. Assistive Technology Used

The following have been tried. (Check all that apply. Add comments for clarification)

❒ Highlighter, marker, template, or other self-help aid in visual tracking
❒ Colored overlay to change contrast between text and background
❒ Tape recorder, taped text, or talking books to "read along" with text
❒ Digital Audio files (Mp3, iPod, etc.)
❒ Talking dictionary or talking spell checker to pronounce single words
❒ Hand held pen scanner to read difficult words or phrases
❒ Electronic text from
❒ internet ❒publisher ❒ scanned text ❒ other _____
❒ Computer with text to speech software to
❒ Speak single words ❒ Speak sentences ❒ Speak paragraphs ❒ Read entire document
❒ Handheld device to read electronic books
❒ Electronic books from Bookshare or other digital source

Explain what seemed to work or not work with any of the above assistive technology that has been tried.

_____

_____

_____

5. Approximate Age or Grade Level of Reading Skills_____

6. Cognitive Ability in General

❒ Significantly below average ❒ Below average
❒ Average ❒ Above average

7. Difficulty (Check all that apply. Add comments for clarification.)

Student has difficulty physically accessing the following.

❒Single sheets of paper ❒ Books

Student has difficulty understanding written language based on

❒ English Language Learner ❒ Limited background experiences

Student has sensory difficulties with

❒ Visual clutter ❒ Fluorescent lighting ❒Background noise
❒ Personal Space ❒ Other _____

Student has difficulty decoding the following.

❒ Worksheets ❒Content Textbooks ❒ Trade Books ❒ Tests
❒ Websites or other digital text

❒ Modified Curriculum _____

❒ Recreational text

Student has difficulty comprehending the following.

❒ Worksheets ❒ Content Textbooks ❒ Trade Books ❒ Tests

❒ Websites or other digital text

❒ Modified Curriculum _____

❒ Recreational text

8. Computer Availability and Use

The student has access to the following computer(s):

❒ PC ❒ Macintosh

9. The Student Uses a Computer:

❒ Rarely ❒ Frequently ❒ Daily for one or more subjects or periods ❒ Every day, most of the day

For the following purposes_____

Summary of Student's Abilities and Concerns Related to Reading

_____

_____

_____

_____

WATI Student Information Guide
SECTION 7
Mathematics

1. Difficulties Student Has with Mathematics (check all that apply).

Reading Math

Math related language and vocabulary
- ❒ Interpreting visual representation
- ❒ Switching from one representational format to another, as in complex numbers, fractions, charts and graphs
- ❒ Understanding math concepts like:
  - ❒ Money
  - ❒ Time
  - ❒ Units of Measurement
- ❒ Math Facts
- ❒ Understanding percents/decimals

Organizing

- ❒ Drawing meaning from numbers, shapes and other representational formats
- ❒ Drawing meaning from charts, grids and graphs
- ❒ Applying correct operational step such as addition, subtraction, multiplication or division
- ❒ Drawing meaning and applying action steps from/to a story problem
- ❒ Organizing work on a page
- ❒ Understanding place value
- ❒ Organizing and applying multiple steps
- ❒ Converting mixed numbers
- ❒Applying functions and formulas

Writing and Presentation

- ❒ Writing legible numbers
- ❒ Drawing math figures
- ❒ Aligning steps of a problem
- ❒ Filling in numbers and data in small places graphing
- ❒ Completing simple addition and subtraction
- ❒ Completing multiplication and division
- ❒ Completing complex addition and subtraction
- ❒Representing math concepts in alternate formats such as graphs, charts or geometric shapes
- ❒ Noting points on graphs
- ❒ Writing simple math equations
- ❒ Writing complex math equations
- ❒ Editing work

(Continued on next page)

2. Assistive Technology Tried (Check all that apply.)

- ❒ Adapted manipulatives
- ❒ Adapted number, shape or fraction stamp
- ❒ Adapted time pieces
- ❒ Adapted measuring devices
- ❒ Mathline
- ❒ Adapted paper
- ❒ Enlarged paper
- ❒ Graph paper
- ❒ Onscreen keyboards or calculators
- ❒ Virtual Manipulatives
- ❒ Voice recognition for math notation
- ❒ Alternate calculator
  - ❒ Large print
  - ❒Talking
  - ❒ Graphing
- ❒ Smart chart
- ❒ Math graphic organizer
- ❒ Math specific writing, drawing software
- ❒ Digital Math toolbars for writing equations
- ❒ Math software to help visualize, script visual math concepts

3. **Strategies Used**

Please describe any strategies that been used to help.

_____

_____

_____

_____

Summary of Student's Abilities and Concerns Related to Math

_____

_____

_____

_____

_____

WATI Student Information Guide
SECTION 8
Organization

1. Difficulties Student has with Organization (Check all that apply.)

Self management □ Unable to self regulate behavior and attention □ Easily distracted **Time management** □ Arrives late □ Misses deadlines □ Poor transitions between activities □ Struggles to settle down after transitions or when it is work time	**Materials Management** □ Messy work and storage areas □ Lost papers and projects □ Can't find work tools such as book, scissors or markers quickly **Information Management** □ Breaking a large project into smaller steps □ Organizing notes or review items □ Completing multi-step tasks

2. Assistive Technology tried (Check all that apply.)

Self: □ Fidgets □ Sitting on a therapy ball, bounce or sitz cushions □ Pressure or weighted vest □ Concentration CD's or Mp3's **Information:** □ Folders □ Tabs/Post Its □ Highlighters □ Study guides □ Hand Held Recorders □ Digital Organizers □ Search tools/engines □ Bookmarking tools □ Graphic organizers □ Manipulatives/ Instructional Tutorials □ Animations	**Materials:** □ Folders/ Containers/ Bins/ Boxes □ Checklists □ Coding □ Filing □ Portable electronic Storage □ Computer based electronic storage **Time:** □ Clock analog vs. digital □ Adapted clocks and watches □ Talking readout □ Large numbers □ Visual cue Timed reminder message Schedules □ Picture □ Worded □ Calendar-based □ Digital scheduler □ Digital reminder

3. Summary of Student's Abilities and Concerns Related to Organization

_____

_____

_____

_____

_____

_____

WATI Student Information Guide

SECTION 9

Recreation and Leisure

1. Difficulties Student Experiences Participating in Recreation and Leisure (Check all that apply.)

- ❒ Understanding cause and effect
- ❒ Understanding turn taking
- ❒ Handing/manipulating objects
- ❒ Throwing/catching objects
- ❒ Understanding rules
- ❒ Waiting for his/her turn
- ❒ Following simple directions
- ❒ Following complex directions
- ❒ Communicating with others
- ❒ Hearing others
- ❒ Seeing equipment or materials
- ❒ Operating TV, VCR, etc.
- ❒ Operating computer
- ❒ Other _____

2. Activities Student Especially Enjoys_____

_____

_____

_____

3. Adaptations Tried to Enhance Participation in Recreation and Leisure_____

_____

_____

How did they help?_____

_____

_____

4. Assistive Technology Tried (Check all that apply.)

- ❒ Toys adapted with Velcro®, magnets, handles etc.
- ❒ Toys adapted for single switch operation
- ❒ Adaptive sporting equipment, such as lighted or beeping ball
- ❒ Universal cuff or strap to hold crayons, markers, etc.
- ❒ Modified utensils, e.g. rubber stamps, rollers, brushes
- ❒ Ergo Rest or other arm support
- ❒ Electronic aids to control/operate TV, VCR, CD player, etc.
- ❒ Software to complete art activities
- ❒ Other computer software
- ❒ Games on the computer
- ❒ Other _____

Summary of Student's Abilities and Concerns in the Area of Recreation and Leisure

_____

_____

WATI Student Information Guide
SECTION 10
Vision

A vision specialist should be consulted to complete this section.

1. Date of Last Vision Report _____

Report indicates (please address any field loss, vision condition, etc.)_____

_____

_____

2. Visual Abilities (Check all that apply.)

❒ Read standard textbook print
❒ Read text if enlarged to (indicate size in inches)_____
❒ Requires specialized lighting such as_____
❒ Requires materials tilted at a certain angle (indicate angle)_____
❒ Can read using optical aids; list:_____
❒ Currently uses the following screen enlargement device_____
❒ Currently uses the following screen enlargement software_____
❒ Recognizes letters enlarged to _____ pt. type on computer screen
❒ Recognizes letters enlarged to _____ pt. type for _____minutes without eye fatigue.
❒ Prefers ❒ Black letters on white ❒ White on black ❒_____(color) on _____
❒ Tilts head when reading
❒ Uses only one eye: ❒ Right eye ❒ Left eye
❒ Uses screen reader:_____
❒ Requires recorded material, text to speech, or Braille materials

3. Alternative Output

Currently uses (Check all that apply.)

❒ Slate and stylus
❒ Talking calculator
❒ Braille calculator
❒ Braille notetaker
❒ Electric Brailler
❒ Refreshable Braille display
❒ Tactile images
❒ Screen reader
❒ Braille translation software:_____

Level of proficiency (Check the one that most closely describes the student.)

- ❒ Requires frequent physical prompts
- ❒ Requires frequent verbal cues
- ❒ Needs only intermittent cues
- ❒ Uses device to complete tasks independently
- ❒ Trouble-shoots problems related to device

4. Writing/Handwritten Materials (check all that apply)

- ❒ Writes using space correctly
- ❒ Writes on line
- ❒ Writes appropriate size
- ❒ Reads own handwriting
- ❒ Reads someone else's writing
- ❒ Reads hand printing
- ❒ Reads cursive
- ❒ Skips letters when copying
- ❒ Requires bold or raised-line paper
- ❒ Requires softer lead pencils
- ❒ Requires colored pencils, pens, or paper
- ❒ Requires felt tip pen ❒ Thin point ❒ Thick point

Summary of Student's Abilities and Concerns Related to Vision_____

_____

_____

_____

_____

WATI Student Information Guide

SECTION 11

Hearing

A hearing specialist should be consulted to complete this section.

1. Audiological Information

Date of last audiological exam_____

Hearing loss identified

Right Ear	❒ Mild	❒ Moderate	❒ Severe	❒ Profound
Left Ear	❒ Mild	❒ Moderate	❒ Severe	❒ Profound

Onset of hearing loss _____Etiology _____

2. Unaided Auditory Abilities (Check all that apply.)

❒ Attends to sounds ❒ High pitch ❒ Low pitch ❒ Voices ❒ Background noises
❒ Discriminates environmental vs. non-environmental sounds
❒ Turns toward sound
❒ Hears some speech sounds
❒ Understands synthesized speech

3. Student's Eye Contact and Attention to Communication (Check best descriptor.)

❒ Poor ❒ Inconsistent ❒ Limited ❒ Good ❒ Excellent

4. Communication Used by Others

Indicate the form of communication generally used by others in each of the following environments. (Check all that apply.)

	School	Home	Community
❒ Body language	❒	❒	❒
❒ Tangible symbols	❒	❒	❒
❒ Gestures	❒	❒	❒
❒ Speech	❒	❒	❒
❒ Cued speech	❒	❒	❒
❒ Picture cues	❒	❒	❒
❒ Written messages	❒	❒	❒
❒ Signs and speech together	❒	❒	❒
❒ Signed English	❒	❒	❒
❒ Contact (Pidgin) sign language	❒	❒	❒
❒ American Sign Language (ASL)	❒	❒	❒

5. Level of Receptive Proficiency in Each Environment

	School	Home	Community
❒ Understands single words	❒	❒	❒
❒ Understands short phrases	❒	❒	❒
❒ Understands majority of communications	❒	❒	❒

6. Student Communicates with Others Using (Check all that apply)

❒ Speech ❒ American Sign Language ❒ Body language
❒ Signs and speech together ❒ Gestures ❒ Written messages
❒ Signed English ❒ Picture cues ❒ Contact (Pidgin) sign language
❒ Other_____

Level of expressive communication:

❒ Single words ❒ Combination of words ❒ Proficient

7. Is There a Discrepancy Between Receptive and Expressive Abilities?

❒ Yes ❒ No

If yes, describe further._____

_____

8. Services Currently Used (Check all that apply)

❒ Audiology_____ ❒ Note taker
❒ Educational interpreter using:_____ ❒ ASL ❒ Transliterating ❒ PSE ❒ Oral

9. Equipment Currently Used (Check all that apply.)

❒ Hearing aids ❒ Cochlear implant ❒ Telecaption decoder
❒ Vibrotactile devices ❒ Classroom amplification system ❒ TTY/TDD
❒ FM system ❒ Other_____

10. Present Concerns for Communication, Writing, and/or Educational Materials

❒ Cannot hear teacher/other students ❒ Cannot respond to emergency alarm
❒ Cannot participate in class discussions ❒ Cannot benefit from educational videos/programs
❒ Displays rec./exp. language delays ❒ Cannot use telephone to communicate

11. Current communication functioning (Check all that apply)

❒ Desires to communicate
❒ Initiates interaction
❒ Responds to communication requests
❒ Reads lips
❒ Appears frustrated with current communication functioning
❒ Requests clarification from communication partners ("Would you please repeat that?")
❒ Repairs communication breakdown (Keeps trying, changes message)

12. Current Reading Level_____

Summary of Hearing Abilities and Concerns_____

_____

_____

WATI Student Information Guide

Section 12

General

Are there any behaviors (both positive and negative) that significantly impact the student's performance?

Are there significant factors about the student's strengths, learning style, coping strategies or interests that the team should consider?

Are there any other significant factors about the student that the team should consider?

Does student fatigue easily or experience a change in performance at different times of the day?

Gathering Information about Environments and Tasks

Effective, appropriate decisions about assistive technology can only be made when teams are well informed about the unique characteristics of the environments in which the student spends time and the tasks that are being done in those environments (Zabala, 1994). The Wisconsin Assistive Technology Initiative strongly encourages observing the student in several environments with a specific focus on describing the environment and the activities/tasks in which the target student and other students are engaged. The Environmental Observation Guide is a tool for that purpose.

Consider all customary environments, including the classroom and other school environments, such as the lunchroom, playground, assemblies, etc., the home, and any relevant community sites such as shopping malls, restaurants, church, scouts or other groups. Information to be gathered can be guided by specific questions such as these:

- What equipment and materials, including technology supports, are available in each environment?
- Who are the primary people interacting with the student?
- How is instruction or direction delivered?
- What modifications are typically made in various environments?
- What is the student's position and location in room?
- Where are the things the student needs to see, such as chalkboard, overhead, etc.?
- What is the lighting and sound like in the setting?
- How are transitions accomplished? Are there concerns?

Teams may modify or add to these questions, they are provided only as a starting place.

There are many different types of Environmental or Classroom Observation Guides. This manual includes two versions. Remember that you can adapt either of or both these to fit your needs.

Using the Environmental Observation Guide

The Environmental Observation Guide instructions was developed by the National Assistive Technology Research Institute (2001), modified and used with permission.

The Environmental Observation Guide forms draw the observer's attention to what is going on in the activity and setting. Teams may modify or add to these questions. They are provided only as a starting place.

Prior to the observation:

Clarify the purpose of the observation:
- Record successful assistive technology use in educational environments
- Observe a student using assistive technology in educational environments
- Record characteristics of the educational environments

Select a time and place:
- Review the student's IEP for specifics about the student's AT use.
- First preference – Schedule the observation for the place and time indicated in the IEP as to when AT is supposed to be used during the day.

- Second preference – If it is not specified in the IEP, talk to a teacher to schedule a time and place when the student uses AT the most during the day.

- Third preference – If the student uses the AT across the entire day, observe in the setting where he spends the most amount of his instructional day

Meet with the teacher(s), therapists, and assistants to determine:

- What will happen in the class that day; Is it a typical day?
- What the student using assistive technology will be doing that day.
- Inform them what you will be doing during the observation.

During the observation:

Record observations:

- Complete the environmental assessment checklist.
- Record direct student observation field notes.
- Record impressions and comments.
- Record time markers in the observation notes to determine length of activities.
- Participate in the class only if invited to do so.

After the observation:

Thank the teacher for allowing you to observe.

If time allows in the teacher's schedule:

- Probe for additional information directly related to your observations for clarity.
- Share a brief summary of what you saw.

Provide the teacher with a copy of the observation summary when completed.

Conduct the teacher interview at a mutually agreed upon time.

The observer's role is to capture what is occurring, not to make decisions or even formal recommendations; that comes later in the decision-making part of the assessment process. During the observation(s), the observers are simply gathering information.

Environmental Observation Guide

Student's name:_____

School:_____

Observer:_____

Date of Observation: _____

Type of class: _____

Directions: Complete this Environmental Assessment Checklist before beginning

Describe the environment: Record short responses in the space provided.

Special or general education classroom?	
Specialty classroom (Specify: e.g., P.E., computer lab)	
Therapy room? (Specify)	
Number of teachers in class?	
Number of aides in class?	
Number of volunteers in class?	
Number of students in the class?	
How many days per week is the program?	
How many hours/day?	
Is the atmosphere busy or quiet?	
Are there large open areas or small divided sections?	
How are the desks arranged?	
Is the furniture sized for students?	
Are materials accessible, appropriate, varied, interesting?	
Is special equipment available (i.e., chairs with arm supports)?	
Where is the classroom located in relationship to the cafeteria, therapy, outdoor play areas, etc.?	
Are bathrooms located in or outside the classroom?	

Sensory Stimulation: Judge the level of sensory stimulation and record it with a check in the corresponding box. Enter comments or notes that clarify your responses if needed.

	Excessive	Balanced	Reduced	N/A	Comments
Auditory					
Hallway					
Street					
Other classrooms					
Other students					
Instructional media					
Teacher aides/volunteers					
Other (specify):					

Sensory Stimulation: continued

	Excessive	Balanced	Reduced	Comments
Visual				
Color				
Clutter/busy				
Art/decorations				
Visual information				
Lighting				
Other (specify):				

Persons Present During Observation: For each person on the list, put a check in the appropriate column indicating their level of participation.

Persons	Participating	Observing	Not Present
Student			
Special Educator			
General Educator			
Peer Tutors (How many? _____)			
Instructional Assistant #1			
Instructional Assistant #2			
Instructional Assistant #3			
Personal Attendant			
Speech-Language Pathologist			
Occupational Therapist			
Physical Therapist			
School Psychologist			
Parent			
Volunteer			
Administrator			
AT Specialist			
Other (specify):			

Notes:

Access to Assistive Technology: Record the presence or absence of **EACH TYPE** of assistive technology by placing a check in the corresponding box. Record the AT found in the classroom as a whole, not just the AT used by the target student.

Types	Present-Not Used	Present-Used	Not Present
Communication cards/boards			
Digitally recorded communication devices			
Electronic communication devices			
AT for activities of daily living			
Adjustable seating (not a wheelchair)			
Positioning equipment			
Amplification			
Visual signaling devices			
Brailler/brailled materials			
Magnifiers			
Notetaking devices/keyboards			
Speech output devices/computers			
Handwriting aids			
Alternate/adapted keyboards			
Alternate/adapted mouse			
Computer switch interface			
Touch window			
Talking word processor			
Word prediction			
Text or screen reader			
Portable word processor			
Transfer aids - Hoists/lifts			
Mobility aids (not wheelchairs)			
Adapted environment (e.g., doors, fixtures, furniture)			
Electronic equipment for instruction (calculator, e-books)			
Adapted instructional materials			
Instructional software			
Computer stations			
Adapted art/craft materials			
Adapted sports/recreation equipment			
Adapted toys			
Wheelchair – Manual or Power			
Other (specify):			

WATI Classroom Observation Guide

Classroom(s) _____

Teacher _____

Student _____

Date _____ **Time** _____ **Observer** _____

(J. Gierach, 2009, Wisconsin Assistive Technology Initiative)

Task: Ex. Writing a report, working on SMART Board, aligning mat problems, researching topic in media center. **Directions:** Were they given: Visually Auditorally **Time:** For task completion	**General students response:** How does the rest of the class respond to the directions, how do they complete their work	**Target Student Response:** Do you notice any difference in how the target student handles the directions? How do they begin, maintain, and end the task? Was the time for the activity sufficient?	**Barrier to task completion:** What do you notice about the environment that might affect the target student's work? Ex. Manner that the directions were delivered, time to complete the task, different learning style.	**Potential Adaptations:** What pops into your head as a solution that you might bring to the brain storm session during the ASNAT meeting?	**Questions:** What information do you need? What questions do you have for the teacher/student/parent?
Task: **Directions:** **Time:**					
Task: **Directions:** **Time:**					
Task: **Directions:** **Time:**					

Environmental Observation Summary

Activity/Task(s) observed:
Ways that typical students participated:
Ways the target student participated:
Barriers to target student's participation:

Adapted from:

Wirkus-Pallaske, M., Reed, P., & Stokes, S. (2000). *Wisconsin Assistive Technology Initiative*. Oshkosh, WI: Wisconsin Assistive Technology Initiative.

Center for Instructional Development and Research. (1998). Classroom observation. *CIDR Teaching and Learning Bulletin, 1*(4), Available online: http://depts.washington.edu/ObsTools.htm

Pearson, L. (no date). *Apraxia guide: Classroom observation checklist.* Available online: http://hometown.aol.com/lynetteprs/myhomepage/profile.html

Using the AT Decision-Making Guide

When the members of the team who have been assigned to gather information have completed their tasks, the team is ready to come together for the next step. The information gathering may have included reviewing the files, contacting previous service providers, completing a specific test that someone felt would provide important information, or observing. In decision making this information will be used to guide the direction and content of the decision.

Decision-making takes place at a meeting. The tool to be used is the AT Decision-Making Guide. This guide is a single page that leads the team through a five-step decision making process. Using an effective decision-making process requires team members to acquire and use a variety of skills that are separate from the technical skills they may have needed during the data gathering stage. These include communication skills and group process skills. The communication skills include, but are not limited to active listening, negotiation, providing non-threatening feedback, and accepting criticism without becoming defensive. The last skill area is group process. It includes following a schedule, reaching consensus, and a variety of tasks that become important when working as part of a team, one of the most important being the effective use of a formal group decision making process.

The key elements or steps of an effective decision making process include:

1. **Problem Identification:** The identification and definition of a specific problem
2. **Solution Generation:** The suggestion of possible solutions
3. **Solution Selection:** The evaluation of suggestions and choosing of a solution to create an action plan
4. **Implementation:** The carrying out of the plan
5. **Follow up:** Meeting again to evaluate the solution

It may sound strange to suggest that various members of the team might be on different steps of the process. However, it is not unusual for team meetings to be conducted in an informal manner with information presented verbally and with little attention paid to focusing on the specific steps of the decision-making process. When this occurs, individual styles of thinking and communicating can lead to one team member seeking very specific and minute details of the problem. At the same time another team member may be thinking of great solutions and still another is wondering how soon the meeting will be over or what to serve for dinner that night. There are several very simple, but effective strategies for improving and formalizing the decision-making process being used by a team when making assistive technology decisions. The AT Planning Guide provides a structure for doing so.

Throughout the Decision Making Process:

Present information in written as well as spoken format where everyone on the team can see it. This requires that the key facts be written on a board, flip chart, overhead projector or butcher paper in large print that is visible to all participants. Some team members may feel that this takes unnecessary effort to write every idea up on a board, but it is an extremely effective way to keep each person focused on which step the team is addressing. As information is shared, it is written on the board or chart visible to all. If one of the team members is distracted by something they have forgotten to do, or is called out

of the meeting for a telephone call, they can quickly "catch up" on what was said when they are able to refocus on the discussion. At the same time, if a group member contributes a solution before the team has finished contributing all the information necessary to identify the problem, the recorder can quickly note the "suggested solution" under **Solution Generation**, and redirect the entire group back to completing **Problem Identification**.

Create a shared group memory. Recording what is being said where it is visible to all adds visual memory to auditory memory and doubles the likelihood that everyone will remember in the same way the information that was discussed. This helps create a shared group memory, one that is very similar across all members of the group. It greatly increases the likelihood of follow through from team members.

Share roles and responsibilities. Team members may be hesitant to take a leadership role in conducting team meetings. Rotating roles from one meeting to the next is an effective way to share this responsibility. At each meeting one team member can serve as **facilitator**, while another is **recorder**, and still another acts as **timekeeper** to keep the group moving through the discussion. It is important that the team move at a pace that will allow the most time at the most important discussion points and keep the team from getting side tracked or bogged down (Fox & Williams, 1991). In addition, this rotation of roles helps insure that each team member recognizes and respects the contribution each of these participants makes to effective decision-making.

During Problem Identification:

Address not only the characteristics of the student, but also of the environments in which the student functions, and the tasks that need to be done. Many times when technology is abandoned, it is because only the physical, psychological, and social characteristics of the student are addressed, with little or no attention paid to the settings in which the device will be used or the specific tasks that the student really needs to address (Cook & Hussey, 1995). The SETT framework (Zabala, 1994) helps team members to focus on the **student** (their personal characteristics and interests), the **environment** (including physical characteristics of the setting as well as instructional activities and arrangements), and the **task** (which are the specific activities that the target student needs to be able to do in each environment). This focus is helpful in clearly identifying and defining the problem so that the team has a clear focus to guide them as they generate appropriate alternatives and solutions.

During Solution Generation:

When generating solutions, use brainstorming rules to create a climate of trust. An important factor in generating a variety of useful alternatives during Solution Generation is to create a climate of trust by following brainstorming rules. This means that all suggestions are written on the board or chart, no comments are allowed and no judgments are passed. The goal is to generate as many ideas as possible. As the flow of ideas slows, it is a good idea to persevere a little longer. Often the second wave of ideas is the most innovative. If everyone is feeling sluggish and suggestions are few, energy may be increased by putting a two-minute time limit in place to get things started. This short time limit combined with writing everything where it can be seen increases the creativity and allows the group to explore as many options as possible. Additional time can be added if the group agrees, but the short time period helps bring that creative, right side of the brain into action.

If the solutions generated by the team do not include assistive technology, or include only a very few items, the team may need to utilize additional resources. Additional resources can provide an overview of the types of assistive technology solutions that would be appropriate for the student and task for which they are problem solving. Resources may include a person, as mentioned earlier or print, digital, or online resources. In the next section **Using the AT Checklist and other Resources**; several resources that might be helpful are discussed.

During Solution Selection:

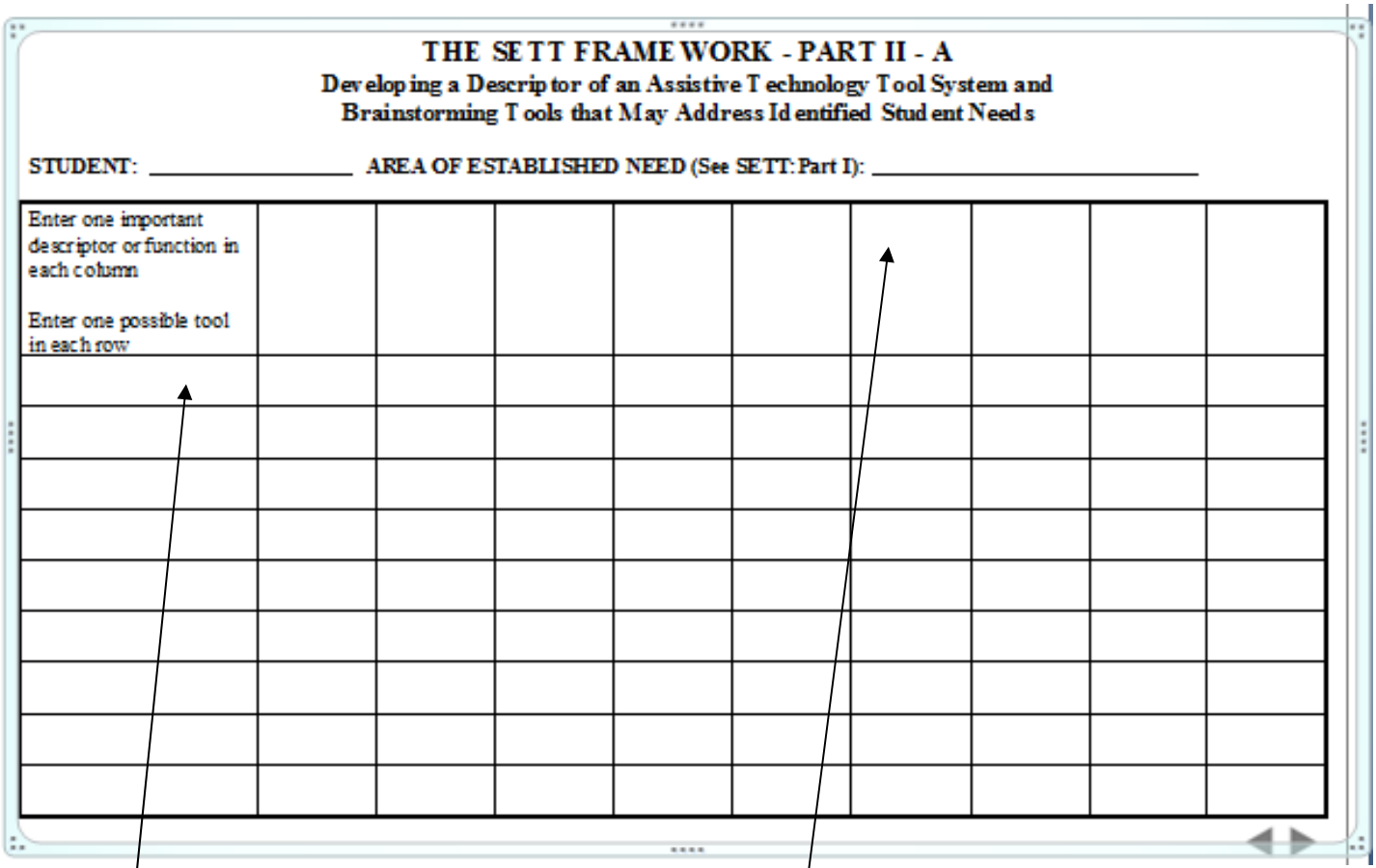
During Solution Selection, encourage combining, sequencing and prioritizing. As alternatives are discussed and evaluated, it may become apparent that some items are the same thing in different words or that others make an excellent sequence of steps. New suggestions may be added at any time. This is the place for the team to really discuss the value and relationship of the many suggestions. As individual suggestions are discussed, it is often helpful to group them into "Things we can do tomorrow," "Things we can do in a month," and "Things we may want to consider later." The Action Plan is then created to include a timeline and persons responsible for each of the solutions or steps that were selected.

Obtain consensus from all participants before adjourning meeting. When several people work together to reach a decision, there will be many different ideas presented. In ideal situations, the Solution Selection will result in a unanimous agreement about what specific suggestions should be selected for the action plan. However, life is far from ideal. When unanimous agreement is not reached, it is critical that the team arrive at consensus about the action plan that will be implemented. In order to assure consensus, the facilitator must poll individual team members, asking them if they will support this plan even though they may have personally preferred another solution. When the facilitator fails to poll members for consensus, they may believe they have unanimous agreement, but actually have **majority rule** (a few team members dominating the discussion, while others strongly disagree, but do not speak up), **minority rule** (one team member dominating the discussion, while others disagree and do not speak up), or **authority rule** (no one questioning what the administrator suggested, even though they disagree). When one of these occurs, the chances of successful implementation are decreased.

During Implementation:

When implementation takes place, follow the plan completely. For that to happen, everyone on the team needs to be aware of the plan and his/her role in it (Prentice & Spencer, 1985). Unfortunately this does not always happen if teams do not utilize the strategy of writing down important information during each step of the process. Without that "group memory" important details and key responsibilities are easily forgotten or overlooked while meeting the myriad demands of work in school districts. Implementation is the step of the decision making process that tells us whether the solutions we selected are good ones.

One planning tool we have found useful is Joy Zabala's *The SETT Framework Part II A* and *Part II B*. This is a guide that allows a team to compare the potential effectiveness of selected tools using the same criteria.



THE SETT FRAMEWORK - PART II - A

Developing a Descriptor of an Assistive Technology Tool System and Brainstorming Tools that May Address Identified Student Needs

STUDENT: _____ AREA OF ESTABLISHED NEED (See SETT: Part I): _____

Enter one important descriptor or function in each column Enter one possible tool in each row									

List one tool on each line.

Name one observable skill that you would see in each square if the tool was supportive during the task. Ex., increase in complex sentences, less spelling errors, longer written assignments, more novel thoughts expressed.

Use a numerical system to match the tasks the team wants supported by the technology to the technology that has most of those features. SETT IIB is the place to document the selected tools and how they can be obtained, as well as the training required to utilize them. It must be remembered that for a tool to be integrated, it must first be learned and integrated into the student's curriculum.

For example, use 1 = not effective to 5 = very effective. The team can decide on how many numbers to use and must define what they represent. At the end of the trial period, all rows are added to determine which tool was most effective.

SETT SCAFFOLD for TOOLS SELECTION- Part II A

Develop Descriptors of an Assistive Technology Tool System that Addresses Needs and Identify Possible Tools

STUDENT: _____ **AREA OF ESTABLISHED NEED (See SETT: Part I):** _____

STEP 1: Based on S-E-T data, enter descriptors or functions needed by the student across the shaded top row - 1 descriptor per column
STEP 2: Enter promising tools in the shaded left column - 1 tool per row
STEP 3: For each tool, note matches with descriptors and functions to help guide discussion of devices and services
USE ADDITIONAL SHEETS IF NECESSARY

Descriptors ⇨ / Tools ⇩									

SETT SCAFFOLD for TOOLS SELECTION-PART II B

Establishing Availability and Training Needs for Promising Tools

SHORT LIST OF TOOLS	TOOL AVAILABILITY			SERVICES (training, planning, coordination, etc) REQUIRED FOR EFFECTIVE USE		
JUSTIFY CHOICES WITH SETT DATA AND DESCRIPTOR MATCH	S	P	A	STUDENT	STAFF	FAMILY

KEY: **S= Systemically available tools - Currently available to ALL students served by this system**
P= Programmatically available through special education services or other services for which identified student is qualified
A= Additional tools that need to be acquired for this student.

For Follow up:

Follow up on a planned schedule. At a set interval after implementation, follow-up or monitoring must take place. This is another area where school teams frequently fail. The school year can slip quickly by while one team member waits on another to do something; or bad weather, illnesses, and absenteeism take their toll. If monitoring does not take place according to the original plan, a variety of problems can crop up and be overlooked as each team member focuses on their own assignment, but does not have the opportunity to get the "big picture" that comes from a team discussion.

Using the AT Decision Making Guide will guide the team through the steps of the process. Following these simple, but effective steps can be extremely useful to teams in the schools as they strive to make appropriate and effective assistive technology decisions for the students they serve.

WATI Assistive Technology Decision Making Guide

Area of Concern_____

PROBLEM IDENTIFICATION-(SAMPLE)

<table>
<tr><th>Student's Abilities/Difficulties</th><th>Environmental Considerations</th><th>Tasks</th></tr>
<tr><td>• Writing/use of hands
• Communication
• Reading/academics
• Mobility
• Vision
• Hearing
• Behavior
• Other</td><td>• Classroom
• Playground
• Lunch room
• Home, etc.

In each:
• Technology equipment available
• Room arrangement, lighting
• Sound
• Activities, etc</td><td>• Produce legible written material
• Produce audible speech
• Read text
• Complete math problems
• Participate in recreation/leisure
• Move independently in the school environment</td></tr>
<tr><th colspan="2">Sensory Considerations</th><th>Narrowing the Focus</th></tr>
<tr><td colspan="2">Vision/Hearing/Tactile (hyper/hypo)</td><td>i.e. Specific task identified for solution generation</td></tr>
<tr><th>Solution Generation Tools & Strategies</th><th>Solution Selection Tools & Strategies</th><th>Implementation Plan</th></tr>
<tr><td rowspan="3">Brainstorming Only
No Decision
Review Checklist</td><td rowspan="3">Discuss & Select Idea from Solution Generation</td><td>AT Trials/Services Needed:
Date
Length
Person Responsible</td></tr>
<tr><th>Follow-Up Plan</th></tr>
<tr><td>Who & When
Set specific date now.</td></tr>
</table>

Important: It is intended that you use this as a guide. Each topic should be written in large print where everyone can see them, i.e. on a flip chart or board. Information should then be transferred to paper for distribution, file, and future reference.

Using the AT Checklist

In some cases team members are not fully aware of all the assistive technology that might be available to assist with the task that is of concern. In that case there are several tools and resources that can be used to assist them. One of those tools is the AT Checklist. The AT Checklist is a concise listing of assistive technology arranged by the task for which it would be utilized. Categories are: Seating, Positioning and Mobility; Communication; Computer Access; Motor Aspects of Writing, Composition of Written Material; Reading; Mathematics; Organization; Recreation & Leisure; Activities of Daily Living; Vision; Hearing; and Multiple Challenges.

Within each of these categories suggested assistive technology is arranged in a hierarchy from the simplest, low-tech alternatives to more complex or high-tech items. They are arranged this way because the developers shared a belief that we want to select the simplest alternative that successfully assists the student. Many years ago we had a number of experiences where service providers immediately jumped to the most complex solution without first trying other alternatives. The hierarchical arrangement of the items in the AT Checklist is in response to this type of thinking. For example, just because a student has difficulty with writing, does not mean that the first thing we try would be voice recognition. While voice recognition is exciting and very appealing, there are other, simpler tools that should be tried first to see if they work.

You will note that each section also includes a space to write in new assistive technology. Since many new products are introduced each year, it is important to be able to add new items. The final section of the AT Checklist is a place to write comments that the team has as they utilize the Checklist. These may include something that has been tried or a plan to try a sequence of items. It is always important to capture in writing the discussions that take place as team members works together to arrive at an assistive technology decision.

WATI Assistive Technology Assessment Checklist

SEATING, POSITIONING AND MOBILITY

Seating and Positioning

❒Standard seat/workstation at correct height and depth
❒ Modifications to standard seat or desk
❒ Alternative chairs
❒ Adapted/alternate chair, sidelyer, stander
❒ Custom fitted wheelchair or insert

Mobility

❒ Walking devices - crutches/walker
❒ Grab bars and rails
❒ Manual wheelchair
❒ Powered scooter, toy car or cart
❒ Powered wheelchair w/joystick or other control
❒ Adapted vehicle for driving

COMMUNICATION

❒ Concrete Representation
❒Simple speech generating device
❒Speech generating device with levels
❒ Speech generating device with icon sequencing
❒ Speech generating device with dynamic display
❒ Text based device with speech synthesis

COMPUTER ACCESS

❒ Positioning of student
❒ Standard Keyboard/Mouse with accessibility/access features built into the operating system
❒ Standard Keyboard/Mouse with Adaptations
❒ Rate Enhancement
❒ Alternate Keyboard/Mouse
❒ Onscreen keyboard
❒ Voice recognition software
❒ Eye Gaze
❒ Morse Code
❒ Switch Access
❒ Other: _____

MOTOR ASPECTS OF WRITING

❒ Environmental and seating adaptations
❒ Variety of pens/pencils
❒ Adapted pen/pencil
❒ Writing templates
❒ Prewritten words/phrases
❒ Label maker
❒ Portable word processor
❒ Computer with accessibility features
❒ Computer with word processing software
❒ Alternative keyboards
❒ Computer with scanner
❒ Computer with word prediction
❒ Computer with voice recognition software

COMPOSITION OF WRITTEN MATERIAL

❒ Picture Supports to write from/about
❒ Pictures with words
❒ Words Cards/Word Banks/Word Wall
❒ Pocket Dictionary/Thesaurus
❒ Written templates and Guides
❒ Portable, talking spellcheckers/dictionary/thesaurus
❒ Word processing software
❒ Word prediction software
❒ Digital templates
❒ Abbreviation expansion
❒ Word processing with digital supports
❒ Talking word processing
❒ Multimedia software with alternative expression of ideas
❒ Tools for citations and formats
❒ Voice recognition software

READING

❒ Standard Txt
❒ Book adapted for access
❒ Low-tech modifications to text
❒ Handheld device to read individual words
❒ Use of pictures/symbols with text
❒ Electronic text
❒ Modified electronic text
❒ Text reader
❒ Scanner with OCR and text reader
❒ Text reader with study skill support

MATHEMATICS

❒ Math manipulatives
❒ Low-tech physical access
❒ Abacus/mathline
❒ Adapted math paper
❒ Adapted math tools
❒ Math “smart chart’. math scripts
❒ Math tool bars
❒ On-screen calculator
❒ Alternative keyboards/portable math processors
❒ Virtual manipulatives
❒ Math software and web simulations
❒ Voice recognition math software

ORGANIZATION

Self-Management

❒ Sensory regulation tools
❒ Movement and deep pressure tools
❒ Fidgets
❒ Auditory
❒ Visuals

(Organization continued in next page)

ORGANIZATION *(continued)*

Information Management
- ❒ Tabs
- ❒ Sticky notes, index cards
- ❒ Highlighters
- ❒ Key words
- ❒ Study guide
- ❒ Task analysis
- ❒ Digital highlighters and sticky notes
- ❒ Handheld scanners/electronic extraction
- ❒ Electronic organization
- ❒ Study grid generators/grading rubric
- ❒ Online search tools
- ❒ Online web trackers
- ❒ Online sorting file tools
- ❒ Digital graphic organizers
- ❒ Online manipulatives, interactive, tutorials, animations

Time Management
- ❒ Checklists
- ❒ Paper planners/calendars
- ❒ Schedules (visual)
- ❒ Portable, adapted timekeepers
- ❒ Electronic reminders
- ❒ Digital planners (PDA) cell phones
- ❒ Web-based planning tools

Material Management
- ❒ Low-tech organizers
- ❒ Checklists
- ❒ Container system
- ❒ Coding system
- ❒ Electronic filing and storage
- ❒ Portable electronic storage
- ❒ Computer-based tools

RECREATION AND LEISURE
- ❒ Typical toys/puzzles/balls/utensils/instruments adapted; adjustable equipment; flexible rules; add visual/auditory clarity
- ❒ Specially designed utensils/equipment
- ❒ Electronically/mechanically adapted utensils and equipment
- ❒ Electronic aids – remote controls, timers, CD players, speech generating devices
- ❒ Computer-facilitated and computer-based activities
- ❒ Online and virtual recreational experiences

VISION

Computer access
- ❒ Color scheme
- ❒ Large operating system features
- ❒ Built-in magnification
- ❒ Fully-featured magnification
- ❒ Magnification with screen reader
- ❒ Screen reader
- ❒ Screen Reader with Braille device

VISION *(continued)*

Reading
- ❒ Glasses
- ❒ Color Filter
- ❒ Slantboard
- ❒ Large print
- ❒ Optical Magnifier
- ❒ Electronic Magnifier
- ❒ CCTV
- ❒ Monocular
- ❒ CCTV with distance camera
- ❒ Audio text
- ❒ Computer-based reading software
- ❒ Electronic Braille notetaker

Writing
- ❒ High contrast pen
- ❒ Portable word processing device
- ❒ Typing with audio support
- ❒ Braillewriter
- ❒ Typing with Braille support
- ❒ Electronic Braille note taker
- ❒ Voice recognition

Mathematics
- ❒ Large print measuring tools
- ❒ Large key calculator
- ❒ Tactile measuring devices
- ❒ Abacus
- ❒ Talking calculator
- ❒ Models or 2D and 3D geometric shapes
- ❒ Tiger embossed, PIAF Tactile representation

Pictorial Information
- ❒Enlarged format
- ❒CCTV
- ❒Models or objects
- ❒Tactile graphics
- ❒Tactile-audio graphics

Mobility
- ❒ Cane
- ❒ Monocular
- ❒ Braille/talking compass
- ❒ Electronic travel device
- ❒ GPS device

Note taking
- ❒ Slate and stylus
- ❒ Tape or digital recording device
- ❒ Computer-based recording software
- ❒ Electronic Braille note taker

HEARING

Hearing Technology
- ❒ FM
- ❒ Infrared
- ❒ Induction Loop
- ❒ 1:1 Communicators
- ❒ Personal amplification

Alerting
- ❒Visual or vibrating alerting devices

Communication
- ❒ Telecommunication supports
- ❒ Closed captioning
- ❒ Person to person
- ❒ Classroom/group activities
- ❒ Voice to text/sign
- ❒ Real-time captioning

Additional Tools for the Team as They Select Appropriate Assistive Technology

Closing the Gap Resource Directory and Online Searchable Database
Once the common vendors are known, the next useful tool is the *Closing the Gap Resource Directory.* The Resource Directory is published each spring as the February/March issue of the Closing the Gap newsletter. It is an excellent tool for school teams. The first step in using the Directory is to go to the Producers Section, which is near the back of the directory. In the Producers Section, team members can look at each of the vendors obtained from the Product Description Section of Resource Directory.

In our example, Don Johnston Incorporated was one of the common vendors listed for talking word processors. Looking up Don Johnston Incorporated reveals a long list of products. Scanning that list reveals *Write:OutLoud*®, which sounds like it might be a talking word processing. Turning to the Software section of the Resource Directory provides a description of this talking word processing software, including price, type of computer it runs on, system requirements, and other valuable information.

Closing the Gap also has a searchable database on its website http://www.closingthegap.com/solutions/products/advanced_search.lasso. Annual subscriptions are required to use the online version but there is a free 14-day trial. The same type of information is included there; once the name of a product or the type of product is known, more information can be obtained from the website.

QIAT Listserv
Quality Indicators of Assistive Technology (QIAT) is a voluntary organization of AT professionals from around the world who share both ideas and questions. This group is a wonderful resource when looking at the needs of students with AT needs. They provide a collegial support network of some of the finest minds and pioneers in the field of assistive technology. Post questions to this listserv, or share ideas and resources. The site is hosted on the University of Kentucky website. Dr. Joy Zabala is the creator and moderator of the site. http://natri.uky.edu/assoc_projects/qiat/

AAC TechConnect
AAC TechConnect has created Device Assistant, a resource designed to provide information on nearly 100 AAC devices currently on the market from major manufacturers. (Information is provided in cooperation with all of the manufacturers.) You can use a feature-match tool to search for a device, and also do side-by-side comparisons. A subscription fee is required, but there is a 14-day free trial. The site was created by Debby McBride, MS, CCC-SLP.
http://www.aactechconnect.com/da.cfm

Implementing Trials with Assistive Technology

In order to determine which assistive technology will work effectively for a student, that student must have an opportunity to try the assistive technology. In some cases, a brief trial during a short visit with one of the team members reveals an effective solution. More typically, a longer trial of several days, weeks, or in some cases, months is necessary. Whether the trial is short or long, documenting the student's performance while they try the assistive technology is critical.

Included are two planning tools that can help the team as they prepare for a more extensive trial with one or more assistive technology devices. The Assistive Technology Trial Use Guide is a form that guides the team through a sequence of important questions that must be addressed prior to implementing trial use of assistive technology and after the trial.

WATI Assistive Technology Trial Use Guide

AT to be tried:_____

Student's Name: _____ DOB:_____ Age:__ Meeting Date:____

School/Agency:_____Grade/Placement:_____

Contact Person(s):_____

School/Agency Phone: _____ Address: _____

Persons Completing Guide: _____

Parent(s) Name: _____ Phone: _____

Parent(s) Address: _____

Goal for AT use: _____

ACQUISITION

Source(s)	Person Responsible	Date(s) Available	Date Received	Date Returned

Person primarily responsible to learn to operate this AT:_____

Training

Person(s) to be trained	Training Required	Date Begun	Date Completed

MANAGEMENT/SUPPORT

Location(s)	Support to be provided (e.g. set up, trouble shoot, recharge, program, etc.)	Person Responsible

Student Use

Date	Time Used	Location	Task(s)	Outcome(s)

WATI Assistive Technology Trial Use Summary

Student's Name:_____

Age:_____Date Completed:_____

Person(s) Completing Summary: _____

Task Being Addressed During Trial_____

Criteria for Success_____

AT Tried	Dates Used	Criteria Met?	Comments (e.g. advantages, disadvantages, preferences, performance)

Recommendations for IEP: _____

_____

_____

_____

_____

Products Mentioned in Chapter 1

Product	**Vendor**
AAC Feature Match	Doug Dodgen & Associates
EvaluWare	Assistive Technology Inc.
Write:OutLoud®	Don Johnston Incorporated