

Sample Assistive Technology Evaluation Report

Name:

Date(s) of Assessment:

Address:

School:

Phone:

Assessed by:

Primary Medical Diagnosis:

REFERRAL INFORMATION:

John was referred to the SWAAAC team by his special education teacher, in order to determine if he would benefit from assistive technology to improve his functional communication and access of the school curriculum. John attended an initial assistive technology assessment meeting at Silver Elementary school on date. The purpose of this phase of the assessment was to gather information about John's abilities and challenges, to determine goals for AT use for the specific tasks he needs to complete, and to ensure that all members of John's school team were able to contribute pertinent information to the assessment process. John's parents, Greg and Sue were in attendance. In addition, several members of John's school team were present to include: .

On date, the SWAAAC team returned to the school to conduct the second part of the assistive technology assessment. During this phase of the assessment, a variety of assistive technology tools were introduced to John and his family for trial. John attended this meeting with both of his parents and the school team members listed above.

STUDENT PROFILE

John is a delightful, ten year old boy at Silver Elementary School in Moon, Colorado. John has a diagnosis of autism and severe language disorder. He lives in the home with his mother, father, and two older siblings. He is able to make some vocalizations and speaks a few words such as "mom," "dad," and "bo," but primarily uses sign language, gestures, and non-verbal communication to express his wants and needs. He has a limited number of people he can communicate with in the school environment, as many teachers and peers are unfamiliar or unable to interpret his sign language and other nonverbal communication. By report, John's limitations in communication are a source of frustration for him. His family and school team members report that he seems to "understand

everything” that is said to him. His family reports that their primary goal is to find a way to help him communicate more effectively.

John’s team describes him as “very social,” “compassionate,” “persistent,” “patient,” and “a friend to everyone.” His interests include riding bikes, being with friends, movement related activities, sports, cars, music, and video games. His strengths include his ability to be flexible and handle changes in his environment or routine, his friendly nature, his finger dexterity and fine motor abilities, his visual motor skills, his desire to be a leader, and his ability to follow multi-step directions. His challenges include his tendency to lack stranger awareness, his limited ability to communicate with others in the environment and the resulting frustration it causes, a limited attention span, impulsivity, limited self care skills, and difficulty expressing what he knows during literacy and other educational activities.

John attends the general education classroom and has paraprofessional assistance. He attends the special education classroom (ILC) for reading and also receives speech and occupational therapy services in a pull out setting. A typical day for John is as follows:

DAILY TASKS/ACTIVITIES
1. J. works on writing activities, sight word recognition, etc., with paraprofessional support in the general education room. He usually has three tasks to choose from, and typically completes 1 of the 3 tasks.
2. J. participates in a large group activity (paraprofessional is in the room, but does not give one-to-one assistance).
3. Reading Group (center based activities) in the ILC.
4. Lunch
5. Recess
6. Writing Group
7. Music, Art, or PE
8. Math: uses manipulatives, works on 1:1 correspondence, copies numbers
9. Social studies or Science (writing intensive)
10. Options time
11. Return to ILC for end of day wrap up; overview of homework, prepare to go home

ASSESSMENT STRATEGIES

A variety of assessment strategies were utilized to determine John's assistive technology including:

- Team meeting to discuss overall goals and gather information about John's strengths, challenges, environments, tasks, and potential tools for trial.
- AT Assessment: one-on-one observation of John using specific assistive technology tools to include: low tech communication symbols and picture cues; Big Mack communication device; levels-based voice output device; Tango! Voice output system; Vantage AAC system (icon sequencing voice output system); low tech adapted books/classroom materials with picture symbols; Classroom Suite; and Balanced Literacy.
- Dissemination of WATI Information Guide questionnaires to John's team to gather additional information about his communication, reading, writing, and math skills in the classroom.
- Classroom observation of John conducted by the special education teacher and the speech language pathologist.
- Review of John's educational records to include: Individualized Education Plan.

RESULTS OF ASSESSMENT/EDUCATIONAL IMPLICATIONS:

Augmentative Communication

Oral Communication: John communicates primarily by using signs and hand gestures. He knows approximately 150 signs. He makes some vocalizations such as "mom," and "bo." He uses a combination of sign language and non-verbal communication (gestures, pointing, and facial expressions, etc) as well. For example when asked, "Who do you like to wrestle with?" he pointed to his dad. John demonstrates a strong motivation and desire to communicate his wants and needs and appears to have a variety of things he wants to communicate.

During the Phase 2 assessment, John was introduced to a variety of communication systems ranging from low to high tech. He demonstrated the ability to point to picture symbols from a field of four upon request, point to symbols while following along with the words of a song (with prompts from a partner), and make choices by selecting a picture symbol when prompted to "pick one." He appeared to learn the meaning associated with symbols easily given one or two demonstrations.

Using voice output systems, John hit a single switch voice output device (Big Mack) appropriately and without cues to participate in a book reading task. He was also able to locate independently and hit a button from a field of 32 one inch buttons (when approximately 20 buttons were filled) to request "turn the page." Using the Tango! Communication device, John selected buttons easily and showed interest in

exploring the device. He was unable to successfully push buttons to tell a story independently by sequencing, and showed high distractibility during this task.

John demonstrated the ability to initiate communication several times using the devices provided. He communicated protests and requests. For example, when he wanted a turn, he pointed to himself and then to the device. When he wanted to read the book again, he pointed to the symbol that said "read it again". When told to pick only one symbol, he held up one finger and put the second selection back. He appeared to have the ability to understand symbol meaning but would need repeated exposure and training to develop competence with a picture based communication system.

John used the TechScan 2 x 32 levels based AAC system to participate in a singing activity and book reading. He demonstrated the ability to sequence three buttons in a row with prompts and learned operations of the device quickly such as the on/off feature and volume. He used the device to answer questions about a singing activity (ie: he selected the appropriate message to request a clothing item given a visual prompt). He demonstrated a good ability to visually scan the buttons on the array and accessed the system easily using his index finger. It was noted that he needed to push some buttons requiring greater pressure several times to activate them. He was not always aware if a button had been pushed, and may benefit from auditory feedback to cue him when selections are made.

John explored the Vantage 45 location voice output system to determine his ability to sequence symbols to create messages. John demonstrated the ability to select buttons with his index finger, but showed a tendency to drag his knuckles across the screen, selecting messages accidentally at times. After 1 -2 models, John was able to select the back button, clear button, and speaking bar consistently. He was also able to locate the symbol for "I," upon request and recognized sign language symbols such as "help." He did not demonstrate the ability to sequence icons during this observation; however, further exploration of this skill is recommended. John will benefit from an opportunity to use the Vantage while interacting in meaningful activities such as playing a game or reading a book.

Overall, John demonstrated good potential to learn the use of low to high tech AAC systems. He used low tech picture symbols well to engage in activities and also demonstrated good potential to learn the use of mid-tech and high tech AAC voice output systems. He showed impulsivity and decreased attention span during many activities and required visual and verbal prompts to stay on task. However, he did demonstrate the ability to learn symbol associations, manipulate device functions and buttons, and initiate simple messages without prompts. He does demonstrate a tendency to drag his hand across a flat screen and hit buttons repeatedly without recognizing he has made a selection. Decreasing the sensitivity of the symbol array and/or providing auditory cues (such as a beep) to indicate when he has made a

selection may be helpful in the training phase. A keyguard may also be useful if the auditory prompts are not successful.

Computer Based Instruction/Computer Access: John was introduced to several computer based activities during the Phase 2 assessment. He demonstrated an ability to navigate the computer using a standard mouse and opened and closed programs independently with both a single and double-click. John seemed highly motivated by computer activities of all varieties, but also showed impulsivity and a tendency to click buttons excessively. During typing tasks, he was able to locate letters using a hunt and peck method on a standard keyboard. His team indicated that he is able to recognize most letters. He did show a tendency to hit keys accidentally with his knuckles, so an alternative keyboard was introduced.

Using the IntelliKeys alternative keyboard and an ABC overlay, John was better able to select keys without accidental hits. The response rate of the keys was decreased, so that John had to dwell on a key to make a selection. When the response rate was too slow, John demonstrated errors due to impulsivity and would move to another key before a selection had been made. Further trial of this adaptation would be beneficial to determine the best response rate. Additionally, setting the keyboard up so that it gives an auditory cue such as a beep might assist John with recognizing when a selection has been made.

Written Communication: John demonstrated the ability to hand write his name and by report is able to trace letters with hand over hand assistance. By report, he also demonstrates difficulty with finger dexterity and manipulative tasks. For example, during one classroom observation conducted by the speech therapist, John had difficulty holding up three fingers to represent the number 3. In the classroom, John is not currently generating written text by handwriting or typing. Using the IntelliKeys keyboard with an ABC overlay, John was able to type his name with minimal cues. John was introduced to pre-designed writing activities using both low and high tech adaptations. During a book reading/writing activity called "Snowman, Snowman, What do you See?" John selected the appropriate low tech picture symbols (each paired with a word) and inserted them into a sentence strip with independence. Using Classroom Suite and the mouse, he was able to complete an errorless writing activity by clicking on a button titled "I like" and then choosing the sentence ending from a field of six (ie: "football," "playing with friends," "listening to music," "video games," etc.). John demonstrated the ability to choose the appropriate picture symbol when asked to select a specific sentence ending. It is unclear if he was reading the words on the button or using the picture supports to help him make these selections. As he completed sentences, the program read the sentences aloud. John demonstrated an increase in his vocalizations throughout this activity and appeared to be motivated by it.

Using IntelliTalk 3, John practiced typing words such as his name and simple words like "mom," and "dad." Using this talking word processor, John received auditory feedback as each letter was typed and as each word was completed. He appeared motivated by this activity and responded well to auditory feedback. He also appeared to use this tool as a

learning device. He listened to the sounds various letters made and recognized when he had chosen a correct or incorrect letter for the word he wished to spell.

Hearing/Vision: By report, John's hearing is within normal limits. He is slightly near-sighted, but has no need for eyeglasses.

Reading: During the Phase 2 assessment, John was introduced to Balanced Literacy, a phonics based reading/writing software program by IntelliTools. This program teaches literacy skills such as phonemic awareness, phonics, decoding, fluency, vocabulary, and comprehension. It is an achievement based program that tracks student progress. A student is unable to progress to a higher level task until the lower level tasks are completed successfully. Using this program, John was introduced to a guided reading activity and to a quiz activity that prompted him to locate animals discussed in the book. To start the program, John was able to recognize his name from a field of two and select it using the mouse. He listened to the song/story and advanced the pages using his mouse. He demonstrated impulsivity at times during this activity, making selections repeatedly and advancing through more than one page of the book at a time. He did not, however, appear frustrated by the structure of the activity and showed potential to gain an understanding of the program navigation with practice and support.

Math:

Using Classroom Suite and the IntelliKeys keyboard with an adapted overlay, John participated in a "Counting Trucks" activity. John listened to on-screen prompts and selected responses using the adapted keyboard. John again showed impulsivity with this activity and required cueing to slow down his response rate and avoid accidental selections.

By report, John is easily distracted during math lessons in the classroom. According to the speech therapist who conducted classroom observations, he showed good response to verbal redirection paired with sign language; however, his inability to communicate limits his level of participation.

Learning/Studying: John appears to be a bright student who understands much more than he is able to communicate. He also appears eager to please others and responds well to positive reinforcement. He does not seem to become easily frustrated and handles a change in routine or activity well. His impulsivity and high distractibility does create a barrier in performance at times. During the Phase 2 assessment, John appeared to respond well to visual prompts such as a picture symbol paired with the word "stop." This visual prompt was used several times to remind him to wait his turn or to stop making key selections excessively. Further assessment of visual prompts, visual schedules, and reinforcement cards may therefore be beneficial. John also appeared to respond best to simple, one step directions, and carefully guided instructions. Team members working with John may also have to make an effort not to provide too many prompts. Due to his

impulsive nature, excessive prompting from teachers/therapists/family members is likely to occur.

Other Observations:

By report, John's speech language pathologist observed him using the Boardmaker Activity Pad to participate in leisure/family activities such as playing games and story book reading in class. During these activities, John showed success initially, but tended to get bored with the messages over time. He also demonstrated difficulty with single finger selections. John did seem motivated to use the device, especially when his peers were also using it. He appeared to benefit from the picture symbols for receptive language and also appeared to prefer short responses. He was less motivated by book reading activities and according to his family refused the device when they introduced it at home for a book reading task.

RECOMMENDATIONS FOR CONSIDERATION

The following assistive technology strategies are recommended for consideration. In cases where a device, piece of equipment, or low-tech aid is recommended, we suggest a minimum one-month trial. Criteria for success with each device will need to be addressed by the IEP team and determined before implementing the trial. We do not recommend purchasing the products mentioned below until a trial has been completed and data has been collected and the IEP team determines whether the AT resulted in improved educational performance based on the data collected.

We recommend developing data collection strategies prior to the initiation of your trial. The "Trial Use Summary Guide" by the Wisconsin Assistive Technology Initiative may be helpful in establishing the purpose, duration, and goals of a trial and also helps to identify which team members are responsible for assisting with the process and the specific tasks they will each complete. A copy of this form is included with this report.

Augmentative Communication: Due the complexity of John's communication needs and his adaptive nature, a total communication approach that allows him to use a variety of strategies may be an ideal method for providing him functional communication across all environments. A total communication approach combines various strategies to include sign language, low tech AT, and high tech AAC systems.

1. Continue to teach sign language as a component of John's communication system. John uses sign language effectively with his family and some communication partners at school. It is believed he will use the most efficient and effective means of communication for a given partner and at a given time. Therefore, encouraging further development of this skill will be beneficial as a supplement to other systems.
2. Implement low tech voice output systems such as the Big Mack communication device, symbol notepads, and simple voice sequencing systems. These devices allow teachers/therapists/family members to program and reprogram

simple messages quickly and easily. For example, the Big Mack can be used to program repeated story lines of a book, greetings or introductions, and repeated phrases as part of a song or morning activity. The symbol notepads can be programmed with common requests or phrases and placed in common areas within the classroom. For example, a symbol notepad hanging at the door could read a message such as "Hello Mrs. __, how are you today?" or "I need help please." The simple voice sequencing systems such as the One Step by Ablenet, allows students to hit the button to say a series of messages in succession such as "Simon says, stand on your foot....Simon Says clap your hands...etc." Picture symbols representing the message(s) can be attached with Velcro to the top of the devices and interchanged between activities. For more information on ways to implement simple voice output systems in the classroom, refer to the document titled "101 Ways to use a Big Mack" included with this report.

3. Use levels-based devices such as the Tech Talk to create activity related overlays. These devices allow users to store several levels of pre-recorded vocabulary (with up to 32 messages per level) on one device. For example, John enjoys being a leader and may benefit from directing classroom activities. Teachers/therapists can create overlays and pre-program vocabulary for games such as BINGO and Simon Says. In addition, vocabulary can be stored for common classroom activities such as morning circle, book reading, library time, and other repetitive daily activities.
4. Provide trial with high tech system such as the Vantage AAC system. John demonstrates good potential to learn the use of a high tech system with proper support and training. It is highly recommended that team members attend a training specific to this device to become familiar with the best methods for teaching success in its use. It is also recommended that the device be used to engage John in highly motivating activities initially, such as activities that engage him socially with his peers. Playing games (or being the leader during games), interacting during story time, singing songs, and telling jokes are some examples of socially motivating activities that might be appropriate. It may take time for John to develop proficiency using a high tech system, so the lower tech methods can serve as a supplement while he refines his use and knowledge of a high tech system.
5. Limit the number of symbol choices initially for either the low or high tech systems. John will need assistance with understanding the power of a communication device. Turn taking activities with limited choices (about eight messages), and the removal of control panel access will be important. As John discovers the power of communication and the meaning of symbols, additional symbols can be added.
6. Consider decreasing the sensitivity of the symbol array and providing auditory feedback (such as a beep, which is available on some devices) to cue John when he has made a selection and minimize his tendency to make accidental selections. If these methods are unsuccessful, consider using a keyguard, which is available on many devices.
7. Choose vocabulary from specific activities that are extremely motivating for Josh to participate in. The vocabulary should be a combination of activity controlling phrases such as, "do that again," "it's my turn" and fringe activity vocabulary from activities such as "Red Light Green Light," "Simon Says," or "Go Fish."

Written Communication: John demonstrates some handwriting abilities and should continue to work on this skill. However, because he is not currently able to write at a level commensurate with his peers and due to his increased interest in computer based activities, he may benefit from alternative methods to provide him greater independence in writing tasks.

1. Consider providing John with low tech writing supports such as magnetic letters or stamps for spelling activities. For writing composition, consider creating low tech writing environments using picture symbol supports. Programs such as Boardmaker or Pixwriter can be used to create word banks or sentence strips (each paired with pictures and laminated on a card) that John can assemble manually to create sentences or paragraphs. As John learns to read words, the picture symbols can be removed. Likewise, worksheets can be created, and John can complete them by putting the low tech word cards or sentence strips in the blanks.
2. Consider using a talking word processor, such as PixWriter or IntelliTalk 3 (part of the Classroom Suite program) to complete spelling and writing activities. John appeared to benefit from the auditory feedback of a talking word processor while spelling simple words. In addition, these programs can be used to create writing environments, much like the low tech systems described above. John can click on pre-programmed words or phrases to type sentences or complete fill in the blank worksheets.

Computer Based Instruction/Computer Access: John demonstrates proficiency with a computer mouse and keyboard, but does demonstrate accidental hits at times due to his impulsivity and his tendency to rake his knuckles across the keyboard. Some adaptations to assist with improved typing include:

1. Consider decreasing the sensitivity of the computer keyboard by turning on the “filter keys” function located in the Accessibility Options folder within computer’s system utilities. This function can be accessed through the control panel, and will prevent accidental key strokes when John rakes his knuckles across the keyboard. For information on making this adjustment, refer to the document titled “Adjust the Character Repeat Rate” included with this report.
2. Consider trial with an alternative keyboard such as the IntelliKeys. This adaptive keyboard can be programmed so that it is less sensitive to touch and will only accept a key selection if John holds it down for a specified time. In addition, this keyboard can be set up to make a beeping noise each time a key is selected. Using a talking word processor during typing tasks that is set to speak letters as they are typed can also assist John with recognizing when a key selection is made.

Reading: Due to limited time spent in observation with John, it is difficult to accurately assess John’s reading level. John does seem to recognize the sounds of some letters and appears to be a visual learner. Some strategies to assist him with reading tasks include:

1. Consider using a symbol word processing program such as Picture It or Boardmaker to pair words with pictures and provide him comprehension cues.
2. Consider typing text (such as directions or difficult concepts from a Social Studies or Science text) into a talking word processor such as IntelliTalk 3. John can listen as the text is read aloud to increase comprehension.
3. Consider supplementing John's literacy program with a computer based program such as Balanced Literacy, which will teach basic literacy concepts and provide him a means to demonstrate his level of understanding despite his communication limitations.

Math: John is likely to benefit from the use of manipulatives and visual supports during math activities. Consider pairing picture symbols with words to assist John with understanding math instructions. In addition, picture symbols can be laminated and used much like manipulatives are (for example, you can create and laminate pictures of butterflies, birds, and dogs, then use them as part of a counting activity). In addition, IntelliMathics 3 (part of the Classroom Suite program) provides users the ability to manipulate objects on screen while receiving visual and auditory feedback for counting, categorizing, and making charts/graphs.

Learning and Studying: To assist John with staying on task and reduce impulsivity, the following strategies are recommended:

1. Consider implementing the use of visual cues by pairing pictures with words to prompt John to "sit," "wait," "look," "listen," "stop," etc. During the assessment, John responded well to these visual cues and will likely improve his ability to attend given these prompts.
2. Consider implementing the use of a reinforcement board or token board to assist John with staying on task. For example, consider creating an "I am working for" board. On this board, a variety of picture symbols can be created to represent things that are highly motivating to John. At the bottom of the card, space is provided for tokens to be attached to the card. When John completes a specific activity (or attends to a task for a specified time) a token is placed on the board. Once all tokens are received, John receives the desired reinforcer. Team members should determine in advance how many tokens John should work for to receive a reinforcer, and gradually increase the number of tokens required over time.
3. Consider using visual schedules to assist John with understanding the tasks for the day, or sub-tasks within an activity. For example, during a writing task on the computer, the individual steps can be broken down into mini-steps such as "find your name," "type your words," "print the paper," etc. There are many types of visual schedules. A copy of a "Now/Then" visual schedule is provided with this report in addition to the document titled "Visual Schedules."
4. Consider using a visual timer to provide John a more concrete representation of how long a task will take or how long he is expected to work at an activity.

A variety of strategies to assist John in improving his communication and access to the curriculum are included in this report. To prevent John and the school team from

becoming overwhelmed, the team may want to consider carefully choosing which technology to try first. A trial with only two or three technology options at a time may be best. If you have questions or concerns regarding this report or the technology suggested for trial, please contact our office and we will be happy to provide further assistance or explanation as needed.

Signature

Date:

cc: Family
School