Differentiated

Learning Styles and AAC

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Universal Design in the classroom is now one of the "hot topics" in the field of education. This model requires a teacher to plan for a variety of ways to reach all students. Many of these plans utilize assistive technology so that lessons can be accessible to all students. Information can be introduced in a variety of ways so that all students are able to express an understanding of the concepts introduced. Teachers often look for ideas that are supported by research, are practical in terms of cost and time, make sense and are appealing for both the students and staff in the classroom. Differentiated Instruction allows for a better use of the UDL model. This model involves the consideration of the learning preferences for each student. Differentiated instruction is also predicated on the idea that the teacher is aware of how they teach. If you only teach the way 'you' learn, you leave many students behind.

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> The student who is developing inner language and is a candidate for AAC requires special consideration for not only input but also verbal expression. Each child is unique in regards to their learning preferences and how they interpret information. It is up to us, as educators, to provide an effective learning environment to meet each student's need. Knowing how your students learn is essential when exploring how to introduce concepts. We also need to focus on how students communicate what they learn using their voice, images or AAC device.
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Understanding the value of this model can be imperative when working with a child with language delays who is learning to use an AAC system.

CHARACTERISTICS OF DIFFERENTIATED LEARNERS

Stop and think about the power of observation and the student centered classroom. We all know that information can be processed in several different ways. The most effective way to teach is to know how each individual student learns. From there, we can combine strategies and pull in other senses. The student who is developing inner language and is a candidate for AAC requires special consideration for not only input but also verbal expression. Each child is unique in regards to their learning preferences and how they interpret information. It is up to us, as educators, to provide an effective learning environment to meet each student's need. Knowing how your students learn is essential when exploring how to introduce concepts. We also need to focus on how students communicate what they learn using their voice, images or AAC device.

Another key factor in this process is being attuned to student progress and collecting data. There cannot be any real individual education plan that does not include documentation of protocol, as well as explicit and

anecdotal data tracking. We are in an era that requires careful consideration of interventions and a wide range of resources. Our primary objective in this article is to focus on differentiating instruction and collecting data that demonstrates student progress for ALL LEARNERS.

FOUR BASIC LEARNING STYLES

There are four basic learning styles: visual learners, auditory learners, tactile learners and kinesthetic learners. Usually literature addresses just three, but among students with special needs, we chose to separate tactile and kinesthetic and focus on four areas. Observation and charting of our students' learning behavior gives a good opportunity to present curriculum in a way that will be most successful. We also need to provide many opportunities for expression aligned with learning styles. It is not just input!!

CHARACTERISTICS OF VISUAL LEARNERS AND TEACHERS

- Draws or doodles
- Wants to look at the pictures accompanying the text
- Needs to make eye contact to listen well
- Closely examines pictures or objects
- Visual teaching strategies include using interactive white boards, charting steps, using photographs and videos

It is estimated that 80 percent of what we learn is through our vision. From an early age, a child acquires valuable information about his surroundings through his or her eyes. Because of this fact, normal schooling makes use of methods that favor visual learners. Children who are primarily visual learners tend to get information through observation and reading books. They are the ones who respond best to picture and word cards. They call up images from the past when trying to remember. They picture the way things look in their heads. They might need to "see" the language pattern in order to integrate it into their vocabulary. They are the ones who engage in patterns and might be drawn to paintings, crafts and other arts. These learners need to see the teacher's body language and facial expression to fully understand the content of a lesson.

One way to engage our visual learners is technology. However, we are focusing on multisensory technology. This will not only tap into your students learning strengths but also support those other senses to increase the effectiveness of instruction. There should also be a huge focus on building independence, as well as collecting data.

Our students did best when the books were brought into the computer. Here are two examples of products that are typically delivered primarily in PDF format. One is from Attainment's Early Literacy Skills Builders and the second is from Unique Learning System from News2You. Many of the books in alternative format can be accessed with the child's AAC device using computer emulation or actually having books on the device in the form of a visual scene.

The stories were copied into Classroom Suite 4. Not only could the students see the pictures, but they could see and hear the text. The students record their own voices and read along with the text. There is no reason an AAC device user couldn't do the same with their system.


Adapting the Unique curriculum into Classroom Suite so students and see and hear text read out loud. They can record voices and re-read as many times and they like.

Using the Primary Skills Builders templates, there is a place for anecdotal teacher reports. Using this combination, we can address the needs of the visual learner while providing additional support for hearing and seeing the language pattern. There is a partnership with Unique, and the monthly lessons are already integrated into Classroom Suite and available for download to classes that participate in the yearly Unique Learning Curriculum.

We have adapted district curriculum so visual learners can participate using the computer with symbolated text using PCS symbols or icons from their communication device. We take advantage of highlighting text functions on screen readers. We supply

Attainment Company's Early Literacy Skills Builders are copied into Primary Skills Builders Template where students can read and teachers can annotate experience for documentation in Classroom Suite
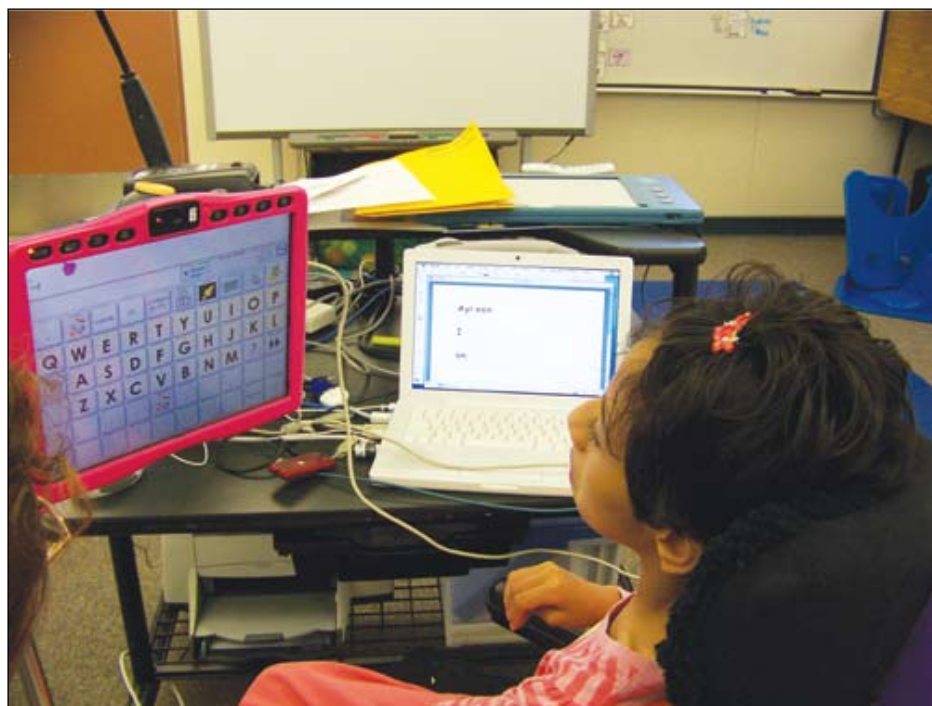
Auditory scanning, auditory feedback and seeing the language pattern support this student as she uses her ECO communication device to express her thoughts. Using headphones maintains the privacy of her work as she independently does her work.

visual schedules, behavior charts and "first/then" that can be used to modify behaviors and transitions. These can also be incorporated easily into AAC devices for consistent reinforcement and carry over.

CHARACTERISTICS OF AUDITORY LEARNERS AND TEACHERS

• Likes to listen to audiotapes

Comprehension is presented with pictures and text. Students can click to hear each word, select an answer and get immediate feedback. This is modeled using the Primary Skills Builders Comprehension L3 in Classroom Suite. Auditory learners benefit from not only hearing but seeing the language pattern.

One easy strategy is to have teachers simply record homework on the class cell phone and send to student's home or parent's email.

• Follows verbal directions well
• Talks to self
• Shows a preference for music and singing
• Auditory teaching strategies are chanting, lectures, songs on computer

Auditory learners learn best through verbal lectures, discussions, talking things through and listening to what others have
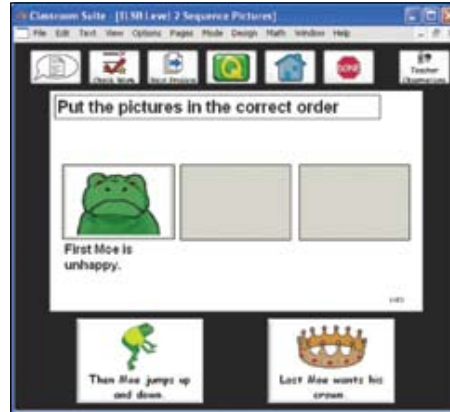
Tactile learners manipulate text and graphics on the screen using a stylus, finger or even a mouse. This sequencing template allows them to place pictures, hear the text and immediately check their work using CS4.

to say. Auditory learners interpret the underlying meanings of speech through listening to tone of voice, pitch, speed and other nuances. Written information may have little meaning until it is heard. These learners often benefit from reading text aloud and using a tape recorder or recording their stories on the computer. These might also be the students who are easily distracted by outside noises and have trouble focusing on one sound. These learners need to learn to filter the right information and might easily get off task in a noisy environment. Songs are included on many AAC systems, as well as the feature that allows you to record in a message. Music and singing can be a powerful tool to teach concepts for these learners. One effective strategy we found is to create chants and songboards on a child's AAC system.

Other ways to present materials to the auditory learner is adapting curriculum using talking text fields or sound bites in various programs that the student can use. This can be done as a recorded sound in power point, Many of the functions that are now available on the iPad/iPod touch systems allow for voice recording or text-to-speech functions for auditory directions. We now have the capabilities for a teacher to voice record homework/instructions on the class cell phone and instantly send it to a student or parents e-mail.

CHARACTERISTICS OF TACTILE LEARNERS:

• Touches objects
• Fiddles with items at their desk
• Carries around small objects
• Chooses to work with manipulatives whenever possible.
• Tactile teaching strategies include putting puff paint on a worksheet, using manipulatives, using alternative keyboards, devices, Velcro boards or Wikki Stix

Tactile students learn best through a hands-on approach, actively exploring the physical world around them. They need to be able to manipulate objects and this can also include manipulating language. They like the computer because they get immediate feedback.

It is useful when the AAC system can interface with the computer and program commands are built into the system. This allows the student the greatest amount of independence.

Students who are tactile learners might like to eat, chew gum or stand up while they work so that their entire body is engaged. An AAC system that teaches through motor patterns is great for child that is a tactile learner. By having icons in the same location throughout the device, a child can develop a

motor pattern when consistently using that message or word. Giving the child many meaningful opportunities to practice core vocabulary throughout the day will allow this motor pattern to develop and blossom. Some other methods we have incorporated to assist our AAC tactile learners include using universal texture cards to adapt static overlays, providing outlines or markers with raised lines/surfaces and providing tactile cues for sequencing or placement in Braille.

CHARACTERISTICS OF KINESTHETIC LEARNERS AND TEACHERS

- Walks around the room
- Stands while working at desk
- Jumps out of their seat
- Volunteers to demonstrate or run errands
- Kinesthetic teacher strategies encourage students to move, work on board or stand at their work table.

These students process knowledge through physical sensations. They are usually highly active and not able to sit still long. They communicate with body language and gestures. These students prefer to show you rather than tell you and they need to touch and feel the world. They are usually good at mimicking others and might be labeled with attention deficient disorder. Physical action is the key ingredient to stimulating this student. While reading, let child chew gum, walk around, rock or ride stationary bicycle. Use numerous hands-on activities and experiments, such as art projects, nature walks or acting out stories, to help them learn a concept. They like to be physically in the middle of an activity. If the child is a device user, be sure to have prompts all around the room for them to utilize. Have icons printed on magnetic paper stuck to the filing cabinet or white board. Use the white board

or smart board in the class to teach an AAC system, allowing the device user to come to the board to answer a question. Kinesthetic

activities also geared toward that learning profile include human song boards, props, random curriculum question on dice or balls,

The SuperHawk Plus from Adamlab enables our tactile learners with visual impairments access by using textured cards and Braille support with auditory feedback.

Kinesthetic teaching engages every student. Here we have the the opportunity for the teacher or student to become the human songboard!
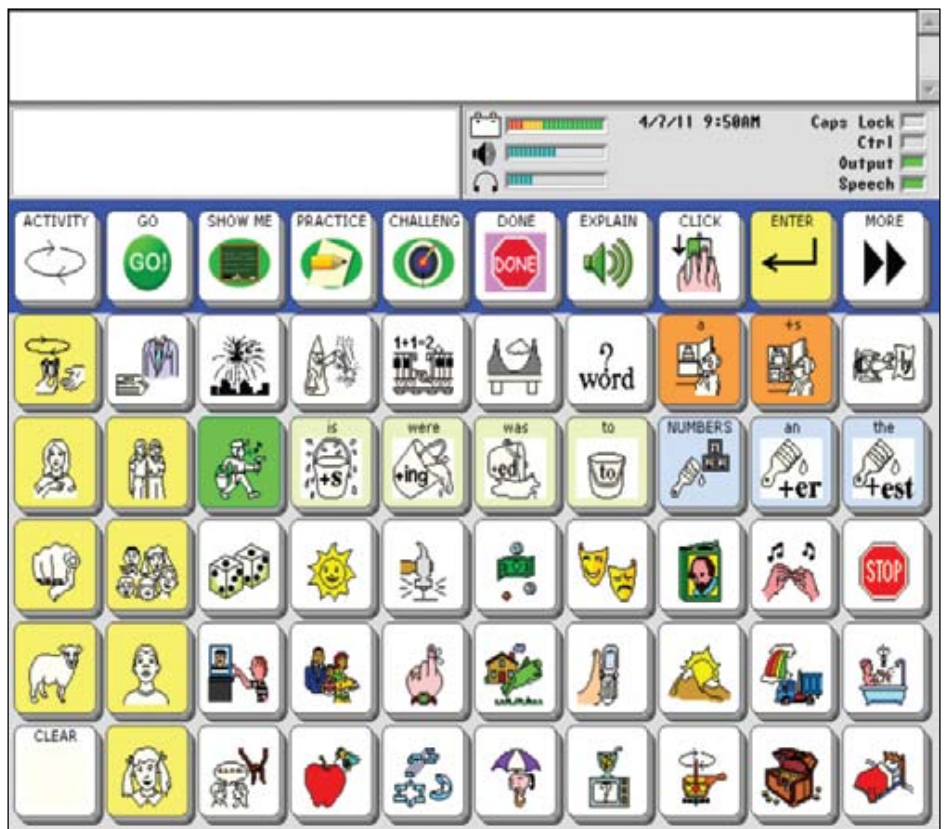
The Vantage Lite ships with an activity row that allows access to Classroom Suite software. Even a student with significant motor challenges might be a tactile learner. All students need to work more independently as their learning styles are integrated and they access the curriculum.

acting out vocabulary and manipulative movement seen in smart notebook activities or interactive internet programs.

COMBINED MULTISENSORY APPROACHES

When applying best practices for a multisensory learner approach, we have found that using a block schedule time with large group, then rotation through learning centers and finally "closing" has been very conducive to engagement of differentiated learners. Centers/rotations can be learning style driven. Using literacy-based themes have proven to be very effective to engage combined learning styles and curriculum standards. A preschool literacy program that lends itself well to this is called "Read It Once Again." This program provides a month's worth of activities in the five domains/learning styles directed to popular preschool literature. Reading and writing about plants followed by growing a garden integrates all learning styles.

Teachers today face many challenges. The bar has been raised and we are now accountable for our student's progress. Understanding our teaching style, as well as a student's learning style, is imperative to allow for the greatest amount of growth. Simple tools can be utilized to do this. We have found that the more you think about how to implement in a way that will work for your class and your students, the easier it will become. Careful planning will be necessary in the beginning, but you will find that it will soon become second nature for you and your staff as you practice the strategies more and more.

RESOURCES/REFERENCES

TURNING BEST PRACTICES INTO DAILY PRACTICES: Simple Strategies for the Busy Teacher – Anne M. Benninghof, Crystal Springs Books © 2010

www.bookshare.org
www.cambiumlearning.com
www.prentrom.com
www.aacintervention.com
http://www.readitonceagain.com
Classroom Suite 4 : http://www.cambiumlearningtechnologies.com/
Unique Learning System : http://unique.n2y.com/ ∎

At the end of the day as we review our schedule, the smart board is always one of the most powerful, visual, auditory, tactile and kinesthetic tool! Everyone can participate, be engaged, and process the information in a classroom that truly integrates differentiated instruction.