

Using Visual Supports and Assistive Technology to Augment Lessons and Activities for Students with Autism

Andrea Guy
Fort Clarke Middle School

Introduction

- ESE teacher at Fort Clarke Middle School in Gainesville, FL
- Journey from past to present...



Socialization with Assistive Technology and Visual Support

Ideas on how to enhance and increase socialization:

- Weekend share
- Social Sentences
- Visual Supports during lunchtime
- Utilization of peers
- Social Inclusion Project
- Photo/Sign Dictionary
- Sign Language Wall

Weekend Share

- A social way for students to use their expressive language skills.
- Students participate by using visual supports or bringing in "artifacts" that relate to their weekend experiences.
- Boardmaker visuals posted on the wall are helpful with encouraging everyone's participation.

Weekend Share



Social Sentences

- A strategy used to encourage students to talk about their interests, likes and dislikes.
- Also stimulates socialization, interest and interaction with others.
- An excellent way to work on expressive language skills in a non-academic approach.

Social Sentence Program

- Two adults or student volunteers participate in activity.
- Visuals of nouns, verbs and the participants in the activity are used to construct sentences about things that are of high interest to the student.
- Student is encouraged to interact using the visuals and placing them on a sentence strip.
- Start out small with a two word sentences and build up to three and four word sentences.

Social Sentence Make and Take

- Select a different color for the nouns, verbs and photos of the participants.
- Pictures from Boardmaker or Picture It are great to use for this activity.
- Misunderstanding can be used as a correction method.

Visual Supports during Lunchtime

- Helps to keep the student engaged and involved socially during lunchtime.
- A great way to get other peers involved.
- Provides an opportunity for regular education students to interact with students in self-contained classes.

Utilization of Peers

- Often students respond more effectively when a peer prompts or helps them.
- Provides positive interactions and growth for everyone.
- Using peers as extra support benefits everyone involved.



Social Inclusion Project

- A social program that involves the interaction between regular education students and students with disabilities.
- We started the project at Ft. Clarke with a grant, and since then have continued it each year.

Social Inclusion Project

- | | |
|--|---|
| Benefits for Regular Education Students: | Benefits for Students with Disabilities: |
| <ul style="list-style-type: none">■ Overall understanding and appreciation for students with disabilities.■ Helps to magnify the similarities between the two groups.■ Decreases conflicts that arise from lack of exposure. | <ul style="list-style-type: none">■ A model of age appropriate social interaction.■ Exposure to the general education population.■ Students become familiar with general education students and are more comfortable interacting in the school environment. |

Social Inclusion Project Activities

- Game day
- Picnic lunch
- Make and hand out treats for teachers
- Breakfast
- Distribute cards to the bus drivers
- Field day
- Cook a dessert



Ideas on how to use visuals during social experiences

- Task analysis of the steps to playing a game or cooking a dessert.
- Photo sign dictionary available so that peers can understand student's signs.
- Manual Communication Board available so that student can explore topics to discuss.
- Train social inclusion project volunteers how to prompt student using visuals.



Photo/Sign Dictionary

- A tool created so that the school community can understand and interact with students who use Sign Language to communicate.
- Pictures are taken while student is signing, then printed up and placed in a folder. Description of what the sign looks like and the meaning of the sign is included.
- Copies are distributed to the front office, clinic, media center and cafeteria.

Photo/Sign Dictionary

- Initially used because student's signs were an approximation to the ASL sign; however it's a great tool because many people are not familiar with ASL signs.
- Also encourage parents, teachers, and speech-language pathologists to contribute to the photo/sign dictionary.

Sign Language Wall

- Began with entire class learning 5 new signs a week.
- As a reminder a photo of each sign is taken and posted on our Sign Language Wall.
- Students model the signs and then a Boardmaker picture is included next to the photo, so that anyone can come into class and replicate a sign.



Sign Language Wall

- All students are very eager to learn new signs each week.
- Once learned students are encouraged daily to use the sign.
- Increases communication and understanding among all students.



Sign Language Wall



Implementing Visuals into Instruction

Ideas on how to enhance instruction with Visual Supports:

- Graphic Organizers
- Picture It
- Board Maker
- Picture Schedules
- First, Then
- Calendar Visuals
- Large Cue Cards
- File Folder Activities

Graphic Organizers

- Visual diagrams that helps all students link and gather information.
- Helps students make connections between texts and personal experiences.
- Two type of graphic organizers that we focus on in my classroom: frame of reference and double bubble.

Frame of Reference Graphic Organizer

- Helps students relate new information to previous experiences or lessons.
- An excellent way to activate students' background knowledge of a subject.
- Visual supports help students recall what they know and how they know what they know.
- This strategy can be used before, during or after reading.

Frame of Reference Graphic Organizer

- Now it's your turn!
- Take 5 minutes to complete your organizer on the topic of teaching students with Autism.



Double Bubble Graphic Organizer

- Similar to a Venn Diagram, but is easier for some students to visually organizer the information.
- Compares and contrasts two ideas.
- Use with individual pictures and have students sort where each one belongs.

Picture Schedules

- Picture Schedules can help prepare a student for an entire day of activities.
- Also can be used for individual activities or in various environments.
- Picture Schedules also help students with transitioning independently between activities.
- Can be used as another way of prompting in a more discrete manner.

First, Then

- Helps students visualize an expectation and then what comes after the task, activity or assignment.



First, Then

- Helps to increase student motivation to complete to less-preferred task by planning a preferred one to follow.
- First, Then strategy can also be used during social interactions and activities.

Calendar Visuals

- Implemented so that students can view future planned activities.
- Helps students to visualize when a certain event will occur.
- Decrease anxiety and stress for students who have difficulties with resistance to change.
- Vacations, weekends, days when there will be a substitute, and any changes to daily routine are marked.



Large Cue Cards

- Another form of prompting.
- A less invasive technique for students who are prompt dependent.
- Can be made with Boardmaker pictures.
- An excellent way for other students to assist with reminding or prompting.

File Folder Activities

- A great way to reinforce skills already taught.
- Choose a certain skill or task to be practiced and using a file folder glue visuals and other materials into folder to create activity.
- Students respond by velcroing answers.

File Folder Activities

- Can be used as an independent practice activity or as more of a guided practice activity.
- Sight words, addition, subtraction, counting, colors, telling time, matching, sequencing events are all examples of skills that can be reinforced with file folder activities.

Implementing Assistive Technology into Instruction

Ideas on how to enhance instruction using Assistive Technology:

- PixWriter
- Picture It
- Intellitools
- Utilizing readily available materials

PixWriter

- A software program used during Language Arts instruction.
- Student responds to a prompt or topic by selecting picture on program.



PixWriter

- Allows student to construct meaningful responses without having to type or write.
- Student may start out with very short sentences, however, with time and practice will become more proficient.
- Program can also be used within different subject areas such as math, reading, science, etc.



Intellikeys Keyboard

- An adaptive keyboard that comes with custom overlays.
- Has an ABC overlay and a QWERTY overlay. Either one is good to use, but consider individual student needs.
- Overlay maker is available so that you can create your own overlays.



Intellikeys Keyboard

- The keyboards response can be adapted for individual users. It can be set up for the lightest to heaviest touch.
- An excellent tool for students who have motor or visual difficulties.
- Adaptive keyboard plugs into the computer's USB port and set up of keyboard is very straightforward.

Assistive Technology for Math

Ideas on how to enhance mathematics instruction using assistive technology:

- Large, talking calculators
- Coin-u-lator
- IntelliMathics



Large, Talking Calculators

- Large, talking calculators are great for students who have motor or visual deficits.
- Talking calculators provide the extra auditory support as well.
- A less expensive way to provide extra support.



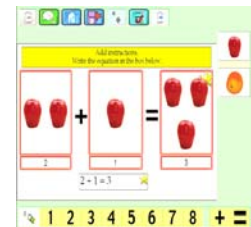
Coin-U-Lator

- A coin-u-lator helps students count and add money.
- The coin-u-lator has realistic coin and dollar bill buttons.
- Add and subtracts money.
- Also has a game option which can be used to assess students' skills.
- A less expensive way to provide extra support.



IntelliMathics

- Teachers can create multimedia representations of math concepts using the IntelliMathics software.
- Students use manipulatives on computer screen to solve math problems.
- Software comes with pre-designed activities.
- Teachers can also customize and create math manipulative activities.
- IntelliMathics is a program that is included in the Intellitools Classroom Suite.



Utilizing readily available materials

- Sometimes getting assistive technology in your classroom takes awhile or it's too expensive.
- Tape recorders, pictures from the internet, magazine visuals, etc. work well too.
- Concrete math manipulatives work well as an alternative.
- Look around your classroom and see what materials might work as a substitute.



Utilizing readily available materials

- Google images is excellent, but isn't always available through school computers.
- Other websites that have excellent, free visual supports:
- www.symbolworld.org has several learning visuals and interactive visual stories.
- www.usevisualstrategies.com printable picture cards are available on this site.
- www.do2learn.com free printable picture cards on a variety of topics, has the capabilities to make visual schedules on this site.
- www.tinsnips.org yes/no boards, response cards, and activity cards all available on this website.



Helpful Resources

- Florida Diagnostic and Learning Resources System (FDLRS) a statewide program with centers that supports school districts.
- By contacting your local FDLRS center you can access information about upcoming trainings and get extra support and assistance with implementing assistive technology.
- Find out more about FDLRS and locate your local center by visiting:
www.paec.org/fdlrsweb/index.htm



Helpful Resources

- Contact your district's assistive technology specialist. They are great at accessing software, materials and letting you know about up-coming trainings.
- Onsite technology specialist can always help out with loading software and programs.
- Consult with CARD and consider participating in their partnership program.
- Always ask for help! So many people are eager and wanting to help out.