Technology use as an area of strength for high school students with autism and how it can support independence and learning

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Introduce yourself to someone you don't know!

- Name
- Where you are from
- Your role (educator, parent, researcher, etc.)

Goal for this session

For everyone to walk away with new ideas for things they can do using technology with their students with autism

CSESA
The Center on Secondary Education for Students with Autism Spectrum Disorders

- Research & Development Center
- Funded by the Department of Education (IES)
- **Purpose:** To develop and study a comprehensive high school program for students on the autism spectrum

http://csesa.fpg.unc.edu/

www.facebook.com/csesa.asd

Why focus on high school students with autism?

- Most students with autism leave high school and end up living at home, un- or underemployed and with few social activities (Shattuck et al., 2012)

  EVEN THE STUDENTS WHO GRADUATE WITH

  COLLEGE and CAREER READY DIPLOMAS

- Annual cost of $268 billion in the US (Leigh & Du, 2015)

- Need for more evidence-based interventions for high school age students (Test, Smith, & Carter, 2014)

What we know:

- Many children with autism have affinity with technology (Shane & Albert, 2008)

- Teens with autism love to play video games and watch movies (Kuo et al., 2013; MacMullin, Lunsky, & Weiss, 2015; Mazurek et al., 2012)

What we don't know:

How teens with autism are using technology besides for entertainment?

This study used surveys and interviews

To understand ways students with autism use technology as a support

at school and at home

Who did we ask?

- 243 high school students with autism (with IEPs)
- 30 different high schools
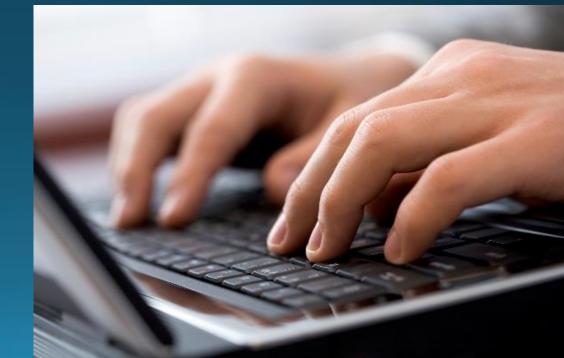- located in North Carolina, Wisconsin, California
- 61% on the standard diploma track

What did we find out?

- 66% bring internet capable device to school, mostly smartphones, but also laptops, iPod touch

- 97% use technology at school, mostly desktops but also laptops and smartphones

How are they using technology at school?

- **Organization > 60%**
- Complete assignments > 90%
- Relax during free time > 80%

Some specific ways they are using it

- Look things up
- Type things up
- Make presentations
- Turn in assignments
- Work with other students
- Calendar
- Camera (take photos of notes on board)
- Type notes
- Timer
- Alarm
- Video or sound recorder

94% use technology to communicate and socialize

- Phone
- Text
- Email
- Social Media
- Video Calls (like skype, google hangout)

How they are using technology at home?

- Check class or school website
- Turn in assignments
- Keep track of homework
- Reminders/calendar/planner
- Communicate with teachers
- Work with other students
- Wake up in the morning

Microsoft Outlook 2016 Office

What do they think are the most beneficial ways they are using technology?

Increase Independence
- Improve organization
- Bypass poor handwriting
- Aid comprehension
- Pursue own interests
- Use for leisure time

Reduce Anxiety/Stress
- Music and games to reduce stress
- Contact friends/family as lifelines

Improve Social Opportunities
- Bridge distance
- Variety of options

What did they think was keeping them from using technology more as a support tool?

Distraction at School
- Can interfere with school work
- Limits to access
  - By individual teachers
  - By administrators blocking specific sites like YouTube
  - and Facebook

Distraction at Home
- Interferes with schoolwork/chores/sleep

Technology as an area of strength

- 95% said they are good at using technology
- 67% said they are considering going to college, and
- 49% said they would choose a technology-related major
- college students w/autism majored in computer science at a rate 2.5 times greater than in the general population

So What!

Take advantage of powerful new technology tools to support independence and success for students with autism, especially:

1) To help with organization
2) To increase independent functioning
3) To aid communication (email your students with autism!!!)
4) To foster a sense of belonging to school community (social media)
5) To relieve stress and anxiety (block out noise, relaxing sounds)

And:

- Give students clear guidelines on technology use (budgeting time, etc.) so that it is not distracting them from what they need to be doing
- Teach and re-teach safe use of the internet

Finally,

Talk to your students about technology that it is not just for entertainment but that it is a powerful tool to help them gain independence and to be successful now and in the future

"I think technology is the best industrial thing in our world because it gives us

joy and curiosity into great things."

high school student with autism

Get in groups of 3-4 people to share ways you have used or observed students with autism use technology

Choose one person to report back to the group and to enter the group's ideas on Today's Meet (requires an internet capable device)

todaysmeet.com/cec

This site will be active for about a month for you to access and print out what has been shared. (click on "Room Tools", then "Transcript")

Check out the handouts for this presentation

- A list of ways high school students said they are using technology
- A handout on Internet safety