Instructional Strategies That Support Academic Engagement of Students with Autism and Related Disabilities

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Objectives:

At the end of the session, participants will be able to:

1. Describe academic engagement.

2. Discuss meaningful ways of promoting academic engagement of students with autism and related disabilities.

3. Incorporate instructional technologies and Universal Design for Learning framework to plan a group instruction for students with autism and related disabilities.
Why is Academic Engagement Important?

- Active engagement is critical for academic and social outcomes for students with and without disabilities (Carter, Sisco, Brown, Brickham, & Al-Khabbaz, 2008; Holifield, Goodman, Hazelkom, & Heflin, 2010; Iovanne, Dunlap, Huber, & Kincaid, 2003; Klem & Connell, 2004).

- Federal legislation of No Child Left Behind (2002) and the Individuals with Disabilities Education Act (2004) emphasize high expectations and active engagement as critical factors for student learning achievement. While other factors influence student outcomes, these two factors are particularly important because supporting students’ academic engagement is critical as it is directly related to learning and, therefore, improved academic and post secondary outcomes (Carter et al., 2008; Iovanne et al., 2003).
What is Engagement?

Engagement is the most critical foundation for LEARNING and therefore POST SCHOOL outcomes.

↑ engagement = ↑ learning
Current Definition of Engagement

- Most research identifies academic engagement as on-task and on-schedule behavior:
  - Attending to learning tasks
  - Staying on task for a predetermined period of time
  - Self-monitoring on-task behaviors
  - Taking turns without prompts
  - Following directions
  - Physical approach: calm body, eye contact, hands down

How Do I Know That My Student is Engaged?

• A student is:
  – Physically oriented towards the task
  – Cognitively involved by responding to directions, providing answers to questions, and completing academic tasks
  – Emotionally invested shown by motivation, happiness, or otherwise expressed pleasure in task

*Video example*
Research-Based Strategies to Promote Engagement

**STUDENT-BASED INTERVENTIONS**

- **Self-Monitoring Strategies**
  e.g. Self-Monitoring of on-task behavior.

- **Choice-Making Strategies**
  e.g. Choice-making in regards to task sequence.

- **Other Strategies**
  e.g. Antecedent physical activity.

**TEACHER-BASED INTERVENTIONS**

- **Literacy-Based Strategies**
  e.g. Interactive reading materials and music during group instruction.

- **Adult Support Strategies**
  e.g. Behavior-specific praise and observation feedback.

- **Visual Support Strategies**
  e.g. Picture schedule.

Engagement of Students with Significant Disabilities

See the last slide for a full list of categorized research-based strategies.
Research-Based Strategies in Practice

- **Individual instruction**
  - Joint attention - the first building block to engagement
  - Structured tasks
  - Structured work times
  - Interaction
  - Imitation
  - Re-thinking traditional ‘work’ times - getting out of your comfort zone.

- **Group Instruction** - to be discussed
Motivation and Reinforcement

- Type and length of activities- 80/20 rule
- Embedding reinforcing items
- Tangible reinforcement
- Pairing
- Thinking outside the box
- Communication- requesting

- Video example
Engagement as an Educational Focus

- Comprehensive curriculum planning
- Talking with parents- Research, Research, Research
- IEP development:
  - Baseline data
  - When to target engagement?
  - Behavioral indicators
  - When to track progress?
  - Getting the team on board
Example IEP Goals and Objectives

• Goal:
  – *(The student)* will increase the amount of time he/she is actively engaged during a variety of learning activities, such as:
    • work sessions (student and teacher directed)
    • small groups
    • independent task completion
    • general classroom functioning

• Objectives
  – During a ____ minute student directed session, *(the student)* will maintain engagement for ___% of the time demonstrated by:
    • initiating requests
    • interacting with teacher through play activities
    • engaging in vocal turn taking
    • joint attention to an activity
    • Imitation
  
on 10 consecutive days.
Example IEP Goals and Objectives (cont.)

- *(The student)* will demonstrate engagement during a **teacher directed work** session by:
  - responding when presented with a task or direction (does not necessarily mean correct response)
  - following directions
  - using materials appropriately
  - keeping eyes on work
  in __/__ trials on __ consecutive sessions.

- *(The student)* will maintain __% engagement during a __ minute small group lesson as demonstrated by:
  - maintaining body and eyes on the teacher or learning materials
  - responding when presented with a task or direction
  for 10 consecutive days.
Example IEP Goals and Objectives (cont.)

- *(The student)* will complete ___/___ steps of a *(left to right/matching/list)* independent work system *(list steps in work system)* with a minimum of ___ tasks at a time in ___/___ documented trials.

- *(The student)* will follow verbal and visual directions within the school environment within ___ seconds in ___/___ documented trials.
Designing Engaging Group Instruction

• **Group instruction**-
  - Differentiating instruction
  - Structuring
  - Repetition/ routine
  - Interactive
  - Based on Universal Design for Learning (UDL) principles
UDL Framework

“The term ‘universal design for learning’ means a scientifically valid framework for guiding educational practice that:

(A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and

(B) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient.” (U.S.C. § 1001)
UDL Framework cont’d

“Universal Design provides **equal access to learning, not simply equal access to information.**”

(Ohio State University Partnership Grants to Improve the Quality of Higher Education for Students with Disabilities, cf. UDL. A Guide for Teachers and Education Professionals (2005), *Council for Exceptional Children*)
### Universal Design for Learning Guidelines

#### I. Provide Multiple Means of Representation

1. **Provide options for perception**
   - Options that customize the display of information
   - Options that provide alternatives for auditory information
   - Options that provide alternatives for visual information

2. **Provide options for language and symbols**
   - Options that define vocabulary and symbols
   - Options that clarify syntax and structure
   - Options for decoding text or mathematical notation
   - Options that promote cross-linguistic understanding
   - Options that illustrate key concepts non-linguistically

3. **Provide options for comprehension**
   - Options that provide or activate background knowledge
   - Options that highlight critical features, big ideas, and relationships
   - Options that guide information processing
   - Options that support memory and transfer

#### II. Provide Multiple Means of Action and Expression

4. **Provide options for physical action**
   - Options in the mode of physical response
   - Options in the means of navigation
   - Options for accessing tools and assistive technologies

5. **Provide options for expressive skills and fluency**
   - Options in the media for communication
   - Options in the tools for composition and problem solving
   - Options in the scaffolds for practice and performance

6. **Provide options for executive functions**
   - Options that guide effective goal-setting
   - Options that support planning and strategy development
   - Options that facilitate managing information and resources
   - Options that enhance capacity for monitoring progress

#### III. Provide Multiple Means of Engagement

7. **Provide options for recruiting interest**
   - Options that increase individual choice and autonomy
   - Options that enhance relevance, value, and authenticity
   - Options that reduce threats and distractions

8. **Provide options for sustaining effort and persistence**
   - Options that heighten salience of goals and objectives
   - Options that vary levels of challenge and support
   - Options that foster collaboration and communication
   - Options that increase mastery-oriented feedback

9. **Provide options for self-regulation**
   - Options that guide personal goal-setting and expectations
   - Options that scaffold coping skills and strategies
   - Options that develop self-assessment and reflection

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Multiple Means of Representation and Expression
Multiple Means of Expression and Representation
Designing Engaging Group Instruction

• When planning, consider the following:
  ✓ How can I make the idea more concrete?
  ✓ How can I arrange for participatory learning?
  ✓ How can I make the lesson more visual?
  ✓ How can I offer an auditory learning experience?
  ✓ How can I use community-based learning opportunities? (Mastropieri & Scruggs, 2007)

A video example of an engaging group activity
Tie in Available Technology

- Videos
- Music
- i Pad/ i Pod games
- Pictures
- Power point: books, social stories,
Resources to use:

- http://www.youtube.com/watch?v=Gnst_mkCEu4
- http://www.youtube.com/watch?v=3icBxO6Wjz0
- School library- find picture books with easy text to use for Language Arts Group
- Use Boardmaker for your visual supports
- Use website resources:
  - www.uniquelearningsystem.com
- Take pictures, print images off Google images and make your own books
- Make Power Point Presentations- watch and/or print out for the books
- Find videos to support your instruction: www.youtube.com, www.teachertube.com
Cool Tools

• A variety of apps:
  – Brain Pop
  – Qwiki
  – Touchy Books
  – NOOK kids
  – MeeGenius
  – Actions
  – Balloons
  – Kids World Map
and many many more..
iTunes U

- Thousands of FREE videos, audio, podcasts.
- Entire college courses
- Multiple platforms
- Parent controls
Wolfram Alpha

• A free search engine that provides for computation and distribution of any systematic knowledge
• Supports different disciplines

http://www.wolframalpha.com
Qwiki

- Additional search tool that provides auditory support

Google earth

- Satellite images from anywhere on Earth.
- Create tours
- Go under seas

http://earth.google.com/
Cast Bookbuilder

- A tool to quickly develop accessible books.
- Provides for scaffolding
- Book sharing
- http://bookbuilder.cast.org/
Visual dictionary

- Visual/contextualized references
- Audio pronunciation
- Multilingual
- http://visual.merriam-webster.com/
Putting it all together:

- Plan for group instruction having each individual student’s needs and skills in mind
- Implement IEP objectives and Standards-aligned teaching
- Utilize technology
- Keep high expectations and always measure for students’ engagement
- Provide multiple means of expression, representation, and engagement
A Full List of Research-Based Strategies (for students with significant disabilities, not only Autism)


Resources and (some)References:

- CAST online modules: http://www.udlcenter.org/implementation/modules
- National Center on Accessible Instructional Materials- http://aim.cast.org/learn/historyarchive/backgroundpapers/differentiated_instruction_udl
- UDL-IRN: http://udl-irn.org/


Questions?