Students with Mild Intellectual Disabilities: Technology for Success

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What we know about these students...

Limitations in Intellectual Function
- Problem Solving
- Attention
- Abstract Thinking
- Memory
- Generalization
- Motivation

Limitations in Adaptive Behavior
- Conceptual Skills
  - Self-determination, reading, writing
- Social Skills
  - Follow rules, take responsibility
- Practical Skills
  - Daily living skills, work skills, goal setting
- Communication......
What does this mean for the classroom?

- Students must be engaged and motivated to learn.
- Students may need help with “student” skills – reading and writing.
- Students will need concepts to be made concrete – solving problems and drawing inferences are difficult.
- Students will need multiple opportunities to practice skills and learn new information to move it into long term memory; break tasks into smaller parts.
- Students will need help generalizing what they learn to other contexts; natural contexts
- Academic goals must inform larger goals of self-determination and independence.
Survey Results – Where we are now....

We sent a survey to every Special Education Director in Georgia. Here are some of the results....
Q1: In your system, in what ways are students with mild intellectual disabilities are served? (Please check all that apply)
Q2: If you provide co-taught/inclusion classes for your students with mild intellectual disabilities, how are teachers assigned?
Q3: If you provide self-contained classes for students with mild disabilities, what is the primary focus of instruction in those classes?
Q4: What kind of accommodations do you provide for students with mild intellectual disabilities? (Please check all that apply)

<table>
<thead>
<tr>
<th>Accommodation</th>
<th>Bar Length</th>
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<tbody>
<tr>
<td>Screen reader with e-Text</td>
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<tr>
<td>Adult reader to read to</td>
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<tr>
<td>Graphic organizer</td>
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<td>Quiet Room</td>
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<td>Extended Time</td>
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<td>Re-take tests</td>
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<td>Vocabulary supports (without a voice output)</td>
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Q5: What kinds of modifications do you provide for students with mild intellectual disabilities? (Please check all that apply)
Q6: What are the most significant obstacles you face in trying to instruct students with mild intellectual disabilities? (Please rank 1 (most) to 10 (least)).

- Pace, rate of instruction: 7
- Students’ lack of background: 6
- Lack of appropriate...: 5
- Lack of teacher...: 6
- Perception of students - I...: 5
- Social consideration...: 4
- Lack of universal...: 7
- Lack of assistive...: 4
- Lack of accessible...: 3
- Student behavior issues: 5
Q7: In what subjects are students with mild intellectual disabilities struggling? (Please check all that apply)
How would helping students with mild intellectual disabilities become more successful impact your system's graduation rate?

• If an adapted curriculum existed in our state that would have a few less courses and a functional replacement for foreign language. (and Algebra?)

• It would definitely increase our graduation rate and decrease our drop out rate. The greatest impact would be on the quality of life these individuals have in school and thereafter.

• If we could look at LRE differently, our MID students would graduate more successfully and we could target functional skills.

• Greatly. It would also decrease teacher/school frustration with the unknown of how to help.

• Obviously, if these students are successful it will impact graduation rate. As students get older I find that teacher attitude impacts student success.

• therealdeal.com
How would helping students with mild intellectual disabilities become more successful impact your system's graduation rate?

- They need to be served in a separate class, as determined by IEP committee for major content areas that won't affect our LRE or CCRPI determinations.
- It would greatly impact the graduation rate to meeting the goal. Mild intellectual students struggle to complete courses and pass the required assessments.
- It would greatly impact our graduation rate if the students could get the best start with the expectations that are appropriate.
- It would help....but not a significant amount as these are some of the students we actually are able to keep in school and keep trying.
- We do not have a high rate of MI students, but all of our SWD need to become more successful in meeting the graduation rate.
Do you have any other thoughts or questions regarding serving students with mild intellectual disabilities?

• We are often having to decide between work on adaptive skills and participation in the general curriculum. I would love to see "room" be made in the path for SWD with MID to be able to work on both.

• Our students were much more successful when they had the opportunity to obtain a diploma that was more skills driven than totally academically based.

• Serving students with MI is bigger than the components listed. Currently, they do not fit into the typical pacing of curriculum, and they do not fit into the moderate, severe, profound program. It is an overall lack of programming for the students, which embeds the above facets.

• They want to be successful.
Do you have any other thoughts or questions regarding serving students with mild intellectual disabilities?

• I find that as students get older, in middle school and high school, teachers simply do not want these students in their classes. They do not want to use the resources available, or they do not want to provide resources to assist in making students successful. They simply feel that it is not their problem.

• They have to take EOCs or GAAs. They are not elig for GAAs and can't pass EOCs. They need modifications to the testing rules.

• Some of our MI students are reading at the same level as our SLD students (2 to 3 grade) so some of the challenges are the same.
The Brain-Compatible Classroom (Tate, 2001)

- Works for ALL students!!!
- Students are doing the talking – the one talking learns the most
- Students are moving
- Learning has a defined purpose or goal
- Connecting with the material and others – through projects and stories
- Thinking positively – music and humor helps the brain become ready to learn
Implications of Brain Research for All (Tate, 2001)

- Students tend to remember best that which comes first in the learning segment.
- Need, novelty, meaning, and emotion are four ways to engage students.
- True learning occurs when both hemispheres of the brain are engaged.
- Memory is enhanced when a variety of pathways exist for retrieving information.
- Brains grow better in the real world than in an artificial learning environment.
Brain-based Strategies (Tate, 2001)

- Brainstorming and Discussion
- Drawing and Artwork
- Field Trips
- Games
- Graphic Organizers
- Humor
- Manipulatives, Experiments, Models
- Metaphors, Analogies, Similes
- Mnemonic Devices
- Movement
- Music, Rhythm, and Rap

- Project-based or Problem-based Learning
- Reciprocal Teaching and Cooperative Learning
- Role Plays, Drama, Charades
- Storytelling
- Technology
- Visualization
- Visuals
- Work Study
- Writing and Journals
How Can Technology Help?

• Support basic learning competencies – reading, writing, math
• Support vocabulary development through dictionary support or by creating picture-based tables for new vocabulary
• Provide virtual ways to build background knowledge, participate in educational activities
• Access music or rap for certain topics
• Do research on the Internet
• Allow students to build their own Graphic Organizer or work from a Template
• Create project with graphics
How Can Technology Help?

• Create a multi-media story (art, storytelling, visuals)
• Use math manipulatives online or get problem-solving help for higher math
• Provide opportunities for repetition
• Play games for scenarios or motivation
• Work on projects cooperatively on a shared document
• Create virtual timelines and other visuals
• Support independence in learning and sense of competence!!
Examples – Reading

• Screen reading with ability to lower lexile level using AEMs

• Ability to highlight key ideas and extract them

• Ability to look up words, translate

• Preview vocabulary, create vocabulary tables with graphics
Examples – Writing

• Planning to write using GO templates
• Talking word processor
• Word completion or prediction
• Word processing with graphics
• Word processing with alternative access – alternate keyboards, voice recognition
Examples – Math

**IMPORTANCE OF VOCABULARY**

**SOME MISTAKES YOU MAY HAVE NEVER THOUGHT OF**

3. Find $x$.

Here it is

$x + 2 = 5$

$x = 3$

"Just a darn minute! — Yesterday you said that $X$ equals two!"
Examples – Math

• Teach skills in context
• Get online support for problem solving
• Get math vocabulary support
• Use on-screen manipulatives or models
Examples – Internet Resources

• Music – Cell Rap
• Virtual field trips
• Virtual dissection or experiment
• Research on history or science topics
• Sources of e-text
Examples – Notetaking

• Support gathering important information from class activities
Examples - Multimedia

• Demonstrate understanding for assessment
• Create stories
• Support generalization
What we can change!

• Positive attitude toward these students
• Teacher training on how to help these students become successful.
• Teacher training on Universal Design for Learning.
• Request or create accessible and/or modified curriculum materials.
• Request extension of time for students to complete requirements for graduation.
• Provide real world contexts for learning.
• Build self-esteem, work and life skills within the curriculum.
Questions and Comments?