Supporting diverse learners in inclusive settings: Considerations across content areas

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Disclosures

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Learner Outcomes:

1) Participants will be able to describe principles of universal design for learning.

2) Participants will be able to explain how universal design for learning benefits all learners.

3) Participants will be able to describe AAC related considerations for inclusive education.

Augmentative and Alternative Access in the Schools-Kansas City (ACTS-KC)

- A federal personnel preparation project funded by the Office of Special Education Programs
- A collaborative partnership between the Kansas City Kansas Public Schools and faculty and students in the Intercampus Program in Communicative Disorders at the University of Kansas
ACTS-KC values

• Least dangerous assumption
• Using person first language
• Respecting/embracing differences
• Treating all people with dignity
• High expectations

Defining diverse learners:

• 2 groups?
• 3 groups?
• 4 groups?
Inclusive Education

- Mainstreaming- students with disabilities participate in *some* general education activities (e.g. specials)

- Inclusion- “Students with disabilities are supported members of chronologically age-appropriate general education classes [in natural proportions], in their home schools, receiving the specialized instruction delineated by their IEPs, within the context of the core curriculum and general activities” (Halvorsen & Neary, 2009, p. 1)
Special Education is a Program, Not a Place

• More restricted (i.e. separate) environments conflated with increases in support, individualization, and intensity
• Self-contained classrooms found to:
  • Provide students with few opportunities to learn from rigorous curriculum
  • Engage in few effective practices for supporting learning and providing specialized instruction (Kurth, Born, & Love, 2016)
• Placement in the general education classroom is not enough
  • But… Students included in the general education classroom have greater access to the general education curriculum (Soukup, Wehmeyer, Bashinski, & Bovaird, 2007)
Why Inclusion?

Legal
Ethical

Teacher and Peer Outcomes
Student Outcomes

Positive Student Outcomes

• Academic
  • (e.g. Kurth & Mastergeorge, 2012)
• Social
  • (e.g. Fisher & Meyer, 2002)
• Self-Determination
  • (e.g. Hughes, Cosgriff, Agran, & Washington, 2013)
• Communication
  • (e.g. Kleinert et al., 2015)
• Post-School Outcomes
• Improved IEP quality
“Inclusion is a right, not a privilege for a select few.”

(Oberti v. Board of Education of Borough of Clementon School District, 1993)

Barriers to a Successful Inclusion Program

- Classroom structure that marginalizes the focus student
- Staff turnover
- Lack of support from administrators
- Lack of training
- Lack of opportunities for academic participation
- Access to technology
- Caseload sizes

Soto, Muller, Hunt, Goetz (2001)
Providing Effective Instruction

- Using state standards as the expectations for the instructional outcomes; not following a developmental approach
- Make learning accessible to students with a variety of needs
- Teaching content and skills

Universal Design for Learning (UDL)

- What is Universal Design?
  - “design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people”

- Accounts for the diverse learning styles and needs of ALL students
UDL Principles and Guidelines
<table>
<thead>
<tr>
<th>Guidelines</th>
<th>Checkpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruiting Interest</td>
<td>Optimize individual choice and autonomy</td>
</tr>
<tr>
<td></td>
<td>Optimize relevance, value, and authenticity</td>
</tr>
<tr>
<td></td>
<td>Minimize threats and distractions</td>
</tr>
<tr>
<td>Sustaining Effort and Persistence</td>
<td>Heighten salience of goals and objectives</td>
</tr>
<tr>
<td></td>
<td>Vary demands and resources to optimize challenge</td>
</tr>
<tr>
<td></td>
<td>Foster collaboration and community</td>
</tr>
<tr>
<td>Self Regulation</td>
<td>Promote expectations and beliefs that optimize motivation</td>
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<tr>
<td></td>
<td>Facilitate personal coping skills and strategies</td>
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<td></td>
<td>Develop self-assessment and reflection</td>
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</tbody>
</table>

Providing Multiple Means of Engagement

- Start lesson with provocative question or point of information
- Allow students to choose the paragraph/passage they read
- Provide timers, checklists, schedules to increase predictability
- Have students formulate or restate goals
- Encourage learners to evaluate individual and group collaboration
- Provide rubrics with clear expectations
### Guidelines vs. Checkpoints

<table>
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</table>
| Perception (content doesn’t depend on a single sense) | Offer ways of customizing the display of information  
Offer alternatives for auditory information  
Offer alternatives for visual information  
| Language & Symbols                | Clarify vocabulary and symbols  
Clarify syntax and structure  
Support decoding of text, mathematical notation, and symbols  
Promote understanding across languages  
Illustrate through multiple media  
| Comprehension                     | Activate or supply background knowledge  
Highlight patterns, critical features, big ideas, and relationships  
Guide information processing and visualization  
Maximize transfer and generalization  

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### Providing Multiple Means of Representation

- Provide choices of books and audio books  
- Glossaries, dictionaries, word banks  
- Use videos, slides, graphics, graphic organizers (e.g. KWL chart), manipulatives  
- Clarify the symbols in a math equation  
- Provide examples and non-examples  
- Mnemonic strategies
### Guidelines

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Physical Action</td>
<td>Vary the methods for response and navigation</td>
</tr>
<tr>
<td></td>
<td>Optimize access to tools and assistive technologies</td>
</tr>
<tr>
<td>Expression and Communication</td>
<td>Use multiple media for communication</td>
</tr>
<tr>
<td></td>
<td>Use multiple tools for construction and composition</td>
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<tr>
<td></td>
<td>Build fluencies with graduated levels of support for practice and performance</td>
</tr>
<tr>
<td>Executive Functions</td>
<td>Guide appropriate goal-setting</td>
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<td></td>
<td>Support planning and strategy development</td>
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<td></td>
<td>Facilitate managing information and resources</td>
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<td></td>
<td>Enhance capacity for monitoring progress</td>
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</tbody>
</table>

### Providing Multiple Means of Action & Expression

- Provide alternatives for physical response (e.g. using a pencil, the range of motion required to interact with materials)
- Provide choices for how students create work products (slides, videos, posters, 3D models, storyboards, comic strips, etc.)
- Provide tools (e.g. word prediction, calculators, composition planning)
- Support planning efforts by providing prompts and scaffolds to estimate level of difficulty, needed resources, and scheduling
- Ask questions to guide self-reflection and monitoring
How do we develop instructional materials that promote student participation and access to the general education curriculum?

4 Criteria

- Content is academic
- Related to the student’s assigned grade level
- Achievement level is linked to grade-level content (may differ in breadth or depth)
- Differentiation of achievement across grade levels

Browder et al (2007)
Essential Elements

Fourth Grade English Language Arts Standards: Reading (Informational Text)

<table>
<thead>
<tr>
<th>CCSS Grade-Level Standards</th>
<th>DLM Essential Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</td>
<td>EE.RI.4.1 Identify explicit details in an informational text.</td>
</tr>
<tr>
<td>RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.</td>
<td>EE.RI.4.2 Identify the main idea of a text when it is explicitly stated.</td>
</tr>
<tr>
<td>RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</td>
<td>EE.RI.4.3 Identify an explicit detail that is related to an individual, event, or idea in a historical, scientific, or technical text.</td>
</tr>
</tbody>
</table>

Craft and Structure

| RI.4.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area. | EE.RI.4.4 Determine meaning of words in text. |
| RI.4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text. | EE.RI.4.5 Identify elements that are characteristic of informational texts. |
| RI.4.6 Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided. | EE.RI.4.6 Compare own experience with a written account of the experience. |

Integration of Knowledge and Ideas

| RI.4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. | EE.RI.4.7 Answer questions about information presented visually, orally, or quantitatively. |
| RI.4.8 Explain how an author uses reasons and evidence to support particular points in a text. | EE.RI.4.8 Identify one or more reasons supporting a specific point in an informational text. |

Literacy

• Definition from Copeland & Keefe (2018):
  • All people are capable of acquiring literacy
  • Literacy is a human right and fundamental part of the human experience
  • An ever-developing tool for mutual engagement between a person and a community (people, knowledge, and ideas)
  • Literacy includes observation, communication, social contact, internal connection leading to enhanced empowerment
  • Responsibility of members of a community and the community as a whole that every person acquires literacy and develops meaning-making with all human modes of communication
Goals of Literacy

• Make choices
• Manage daily activities
• Safety / communication
• Gain new opportunities
• Recreation and leisure

What do we know about literacy for students with severe disabilities?

**Capable of Learning**
- Phonemic awareness
- Phonics
- Comprehension
- Vocabulary
- Fluency

**But instruction tends to focus on**
- Vocabulary- matching pictures to words, in particular
- (Functional) Sight Words
- Instructional times limited compared to students who do not receive special education services
Literacy Planning Wheel

Copeland & Keefe (2018)
Consider Individual Needs When Planning Literacy Instruction

- Physical needs
  - Stable & comfortable position; Page fluffers; grippers; scanner with switch
- Visual needs
  - Size & spacing; “clutter”; tactile objects
- Cultural considerations
  - Differences about acceptability of AAC, graphic symbols; language spoken (and read to) at home

Accessible Literacy Learning (ALL) Reading Program

- Intended for students with disabilities and complex communication needs
  - Not required to say sounds or words out loud
- Comprehensively addresses:
  - Sound-Blending
  - Phoneme Segmentation
  - Letter-Sound Correspondence
  - Single Word Decoding
  - Sight Word Recognition
  - Shared Reading
ALL Example: Sound Blending

1. Introduce Task
2. Review Symbols
3. Model
4. Guided Practice
5. Independent Practice
6. Feedback for Correct/Incorrect Responses

man - fan - fall - fat

Visual Supports: Why?

• Improve understanding
• Provide control and increase flexibility
• Improve communication and language experience
• Used for a variety of functions
  • Temporal (time, sequence, waiting)
  • Procedural (following rules, procedures, expectations)
  • Spatial (location of self and objects in relation to others in the environment)
Guided Notes

- White out/leave blanks for key words and vocabulary for student to fill in

The book is told from a third-person point of view. The protagonist __________ is followed.

Jonas lives in a standard family unit with his mother (a “law enforcer”), his father (a “Nurturer”) and his seven (later becomes eight) year old sister named _____________.

Jonas is waiting for the last big ceremony for him, the Ceremony of ____________.
Teach Summarizing and Paraphrasing

• Draw a picture or write frequent notes while reading
• Review the pictures/notes before starting to read again next time

Create Story Grammar Envelopes
Create Book Boxes

Items that represent concepts in the book

Adapted Questions

**Original Questions**
1. Which character did you empathize with most? Why?
2. What was the most significant aspect of the story you read today? Reflect on why you selected that aspect.
3. What emotions did you experience while reading today? Reflect on the specific elements of the story that evoked those emotions.

**Adapted Questions**
1. What person in the story do you like the best?
2. What was the best part of the story you read today?
3. How did you feel while reading today? Sad? Happy?
Time Saving Tips

• Get ELL versions
• Get electronic versions of all materials from the publisher
• Share your bank, and take turns
• Set aside prep time
• Utilize your team

On the Spot Adaptations
Social Studies

What social studies should students know?
• Identify sources of information
• Distinguish fact, opinion, and reasoned judgment in a text
• Identify steps in a process (e.g., how a bill becomes a law)
• Vocabulary
• Visual representations (e.g., maps)

Social Studies Content

• Text (reading) intensive; social studies instruction is therefore essentially reading comprehension instruction
Adapting Text

- Change the modality
- Reduce amount and/or complexity
- Add information or other features to make the text more understandable
- Utilize graphic organizers to organize information
- Provide additional support as needed before, during, and/or after reading
Science

- Objective Lenses
  - Red = Low Power (Magnifies a Little)
  - Yellow = Medium Power (In Between)
  - Blue = High Power (Magnifies A Lot)

- Course Adjustment
  - Moves the stage up and down. Use ONLY ON LOW power.

- Fine Adjustment
  - Brings the image into sharper focus.

Draw what you see in the microscope.

- Red = Low Power
  - Name of Slide:

- Yellow = Medium Power
  - Name of Slide:

- Blue = High Power
  - Name of Slide:
Two plants that grew fast were combined to make a plant that grew even faster.

These are the things that fast plants need to grow. These are the variables.

The plant needs light all day and all night. The light gives the plant energy to make food and grow.

The plant needs fertilizer, which is food to help it grow.

The plant needs room to grow. Plants that are too close together compete for light and food.

The plant always needs water.

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Plant Summary

Plants need __________ and __________ to grow. These are called the variables. When variables are changed, it will __________ how the plant grows or how quickly it grows.

If pollen is transferred from one plant to another, the plant can make __________, which is what moves the pollen. This is called pollination.

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Writing a Conclusion

- What was my hypothesis?
- Was it right?

- What did the plant need to grow?
- Did my plant have all of those things?

- Were all of my plants the same? Or were they different?

- Do I have any questions about my plants that I could do another project on to find the answer?
Math Development

• Early Childhood
  – Classification (based on size, shape, color, etc)
  – Comparing based on attributes (e.g., length)
  – Seriation (e.g., shortest to tallest)
  – Relative position (e.g., below, above, near, far)
  – Recognizing shapes

Math Development

• Naming & Writing Quantity:
  – Number sense (understanding numbers as quantity, relationship to other numbers)
  – How do we think of numbers?
    • Initially not as numerals
    • Easier to conceptualize numbers as groups like in dominos (notice how it’s easier for you to see there are 5 dots in example 2)
Math development cont.

- Computation
- Deciphering Vocabulary

**Math**

**Perimeter**

- **Volume**
  - volume
  - 3 D shapes
  - length
  - height
  - width
  - compare
  - hold
  - more
  - pour
  - containers
  - liquid
  - less
  - glass
  - bowl
  - no
  - yes

**words into Math**

**ADDITION**
- Add
- Sum
- Increased by
- Together
- More
- And
- Plus
- Combined

**SUBTRACTION**
- Subtract
- Difference
- Decreased by
- Takes away

**MULTIPLICATION**
- Product
- Times
- Multiple
- Twice

**DIVISION**
- Quotient
- Shared
- Per
- Ratio
- Divided by

**EQUALS**
- IS
- are
- were
- will be
- gives
- totals

**Parenthesis Words**
- Times the difference of
- Twice the sum of
- Plus the difference of

**Turn Around Words**
- THAN
- FROM
- (less than)

**How to find the perimeter**

1. Measure the first side
2. WRITE the number down
3. Measure the second side
4. Write the number down
Math adaptations continued

For his birthday party, Charlie decided to have a costume party. All the boys came as superheroes and some came as the same person!

Directions:
1. Count a superhero
2. Cross them out
3. Make an X on your line graph

Questions:
1. What was the **MOST** popular costume?
2. What was the **LEAST** popular costume?
In summary: a good adaptation...

- Promotes social and instructional participation
- Is only as “special” as necessary
  - The goal is not to conceal individual differences, but to not repeatedly single out the student
- Is related to the activity, IEP goals, and state standards

Outcomes for people who use AAC

- 55% of children with intellectual and developmental disabilities and 70% of children with multiple disabilities are still outside gen ed settings
- Up to 90% of children with CCN enter adulthood without acquiring functional literacy skills
- Less than 5% of individuals with CCN are employed even part time
- 45% of adults report that they have been victims of crime/abuse.
  - 71% have been victimized multiple times
  - 97% knew the perpetrators
  - The majority had no effective way to communicate this

As cited in:
Placements of students with significant disabilities

- Data from annual *Reports to Congress* (2000-2014) for school-aged students considered to have significant disabilities from among the categories of autism (ASD), intellectual disability (ID), multiple disabilities (MD), and deaf-blindness (DB)
Results

Confirmation that for the 14 years examined, irrespective of increased research and federal investments, students with significant disabilities are most often served in separate classrooms and schools.

Considerations for students who use AAC

- Communication systems
- Vocabulary selection
- Supporting students

Restrictive eligibility policies regarding AAC

MANY children are:

- Expected to demonstrate use of lower tech AAC options prior to being considered a “candidate for higher tech options”
- This includes progressing through the PECS levels in its entirety.
PECS PHASES

• PHASE I
  exchange single pictures for items or activities they really want.

• PHASE II***
  Distance and Persistence

• Phase III
  Picture Discrimination

• PHASE IV
  Sentence Structure

• PHASE V
  Answering Questions

• PHASE VI
  Commenting

PECS LEVEL 7: QUEST OF THE AGES
ASHA POSITION ON RESTRICTIVE ELIGIBILITY POLICIES REGARDING AAC

Eligibility determinations based on a priori criteria violate recommended practice principles by precluding consideration of individual needs.

This includes, but is not limited to:

• (a) discrepancies between cognitive and communication functioning
• (b) chronological age
• (c) diagnosis
• (d) absence of cognitive or other skills purported to be prerequisites
• (e) failure to benefit from previous communication services and supports
• (f) restrictive interpretations of educational, vocational, and/or medical necessity
• (g) lack of appropriately trained personnel
• (h) lack of adequate funds or other resources.

THE NEXT CONUNDRUM

The “Oprah approach to AAC”
-STEPHANIE MEEHAN
Information on funding resources for public school students who require a speech generating device.

Lew Golinker (lawyer with the Assistive Technology Law Center) describes the features of four major funding sources:

1) Public schools
2) Health benefit programs (e.g., medicaid, medicare)
3) Vocational Rehabilitation
4) Telecommunications Equipment Distribution Programs

http://aac-rerc.psu.edu/index.php/webcasts/show/id/16
Vocabulary

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<th>like</th>
<th>not</th>
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<td>1.</td>
<td>help</td>
<td>it</td>
<td>more</td>
<td>different</td>
</tr>
<tr>
<td>2.</td>
<td>who</td>
<td>she</td>
<td>you</td>
<td>he</td>
</tr>
<tr>
<td>3.</td>
<td>where</td>
<td>up</td>
<td>on</td>
<td>in</td>
</tr>
<tr>
<td>4.</td>
<td>me</td>
<td>make</td>
<td>get</td>
<td>look</td>
</tr>
<tr>
<td>5.</td>
<td>what</td>
<td>need</td>
<td>are</td>
<td>is</td>
</tr>
<tr>
<td>6.</td>
<td>some</td>
<td>put</td>
<td>all</td>
<td>this</td>
</tr>
<tr>
<td>7.</td>
<td>don’t</td>
<td>that</td>
<td>go</td>
<td>do</td>
</tr>
<tr>
<td>8.</td>
<td>when</td>
<td>finished</td>
<td>can</td>
<td>here</td>
</tr>
<tr>
<td>9.</td>
<td>open</td>
<td>turn</td>
<td>stop</td>
<td>over</td>
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https://www.med.unc.edu/ahs/clds/resources/core-vocabulary

**FIRST 40 CORE WORD GRID**

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</table>

- I like (Comment)
- I want (request)
- Not like (comment)
- Not want (reject)
- I not like (comment)
- I not want (reject)

**I want** | **Ball** | **Bubbles** | **Cookie**
---|---|---|---
- I want ball (request)
- I want bubbles (request)
- I want cookie (request)
Phrases

- Epic fail
- That’s lit
- Sup
- That’s lame
- That’s fire
- They were shook
- They’re the G.O.A.T.
- There’s gold in them hills
  … and countless others

Supplementary Aids and Services

The least restrictive environment (LRE) provision of IDEA stipulates that:

“To the maximum extent appropriate, children with disabilities are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes when the use of supplementary aids and services cannot be achieved satisfactorily” (emphasis added, [Section 612(a)(5)]).

- Impact of the IEP form
Service delivery

- 20 minutes twice a week needed?
- Consider alternatives, such as the 3:1 model. (Direct services for 3 weeks, indirect services provided during the 4th week)
- Indirect services that may be provided during an indirect week include observations (with completion of task analyses and ecological inventories), device programming, training, collaborating with parents, and planning with both general and special education teachers.
- Generating a mock schedule ahead of time of the specific tasks and activities you will be engaged in to support the students

Start with your allies

- Start with the students who have the greatest number of allies to collaborate along with.
- End meetings with actions
- Make it clear
Using service time most effectively

- Team training
- Intervention
- Material generation
- Documentation
ASHA leadership academy

- Assessments
- Entry to advanced
- Many related topics covered

https://community.asha.org/leadershipacademy/home

Summary

“I’m not going to sit at your table and watch you eat, with nothing on my plate, and call myself a diner. Sitting at the table doesn’t make you a diner, unless you can eat some of what’s on that plate”

-Malcolm X
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References


