



### AIM

- Many individuals with complex communication needs (CCN) rely on augmentative and alternative communication (AAC) to support their participation in communication and academic tasks (Light & McNaughton, 2012). **Some individuals who require AAC have significant motor impairments, requiring alternative access. Switch scanning is a access option available and although it imposes minimal motor demands, it imposes significant cognitive demands** (McCarthy et al. 2006).
- Participation with such technology supports may be impacted by both intrinsic (e.g., vision, motor) and extrinsic factors (e.g., task, environment). **Extrinsic factors, like the tasks, interventions, and tools available, can be manipulated to support more optimal results.**
- **Individuals who require the use of scanning to communicate or access the curriculum are not taught how to use the technology**, rather the equipment is placed in front of them and it is assumed that if they can select the switch, they will know how to optimally use the support.
- Application of explicit instruction techniques can potentially improve outcomes. Through use of the **Gradual Release of Responsibility Model (Fischer & Frey, 2013)**, interventions can be designed to balance sensory, motor and cognitive demands of a task and allow for greater participation and growth with the technology.



### IMPORTANCE OF CURRICULUM MODIFICATION

- Curriculum modification for AAC requires both creativity and collaboration between professionals to ensure that the student is able to demonstrate his learning using AAC (Calculator & Black, 2010; Soto, Müller, Hunt, & Goetz, 2001).
- **SLPs should be aware of the individual's academic needs in order to better ensure access to the curriculum** (Soto, Müller, Hunt, and Goetz, 2001).
- This discussion should guide the goals and services provided by SLPs, with social and academic participation being at the forefront of service provision.

### GRADUAL RELEASE OF RESPONSIBILITY MODEL

(Fisher & Frey 2007)



### Application to AAC Scanning in Academic Tasks

	Demonstration	Shared Practice	Guided Practice	Independent Practice
<b>Teacher</b>	Teacher <ul style="list-style-type: none"> <li>• Introduces the tasks</li> <li>• Models using switches and displays</li> <li>• Demonstrates the task expectations</li> <li>• Thinks and talks aloud (e.g., <i>I am waiting, I am listening, that's the one I want – I press my switch etc.</i>)</li> </ul>	Teacher <ul style="list-style-type: none"> <li>• Provides explicit instruction</li> <li>• Encourages practice together → Invite the student to participate (take turns: <i>I do one, you do one or I do this part, you finish this</i>)</li> </ul>	Teacher <ul style="list-style-type: none"> <li>• Tries to minimize errors</li> <li>• Guides student</li> <li>• Helps when needed</li> <li>• Provides corrective feedback</li> </ul>	Teacher <ul style="list-style-type: none"> <li>• Provides feedback on performance</li> </ul>
<b>Student</b>	Student <ul style="list-style-type: none"> <li>• Actively attends</li> </ul>	Student <ul style="list-style-type: none"> <li>• Practices with coaching</li> <li>• May participates through engagement in use technology or parts of task</li> </ul>	Student <ul style="list-style-type: none"> <li>• Student practices integrating the technology and tasks together</li> </ul>	Student <ul style="list-style-type: none"> <li>• Works independently</li> <li>• Controls ideas, selection, and information transmitted</li> <li>• Balances task and technology</li> </ul>

The student's level of independence in a skill increases as instructor support decreases (Fisher & Frey, 2007).

### CASE EXAMPLE CURRICULUM MODIFICATION

#### PARTICIPANT

- Name: G
- Sex: Male
- Age: 14 years old
- Diagnosis: Athetoid cerebral palsy
- AAC system: Automatic scanning using a jellybean switch at head, Clicker 7® software, Speaking Dynamically Pro, GoTalk Now
- Established skills: operational competence in automatic scanning in selecting preferred choices
- G is included in history and math at his local high school. Curriculum modifications were required to support independent participation in these classes.
- Due to the cognitive demands of automatic scanning, along with the introduction of new tasks (e.g., sentence formation/completion), as well as complex content (e.g., history) it was important to provide scaffolding support.
- **The gradual release model was used to gradually transfer responsibility from the clinician to the student while he was learning not only how to perform the task and apply the material he was learning.**
- With a strong collaboration between the SLP and general education teachers, the curriculum was modified to support learning and appropriate alternative methods to measure performance.
- Example materials (below), demonstrate how the same task of sentence generation can build in complexity. Yet, the gradual release model can be applied to each of the tasks.

#### EXAMPLE OF MATERIALS:

#### DISCLOSURE STATEMENT

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