Implementing a Multilevel Literacy Program for a Child with Autism

Christine Stylianakis and Cathy Little
Overview

- A rationale for Literacy Intervention
- A Model for Intervention
- Assessment Process
- A closer look at Reading Sub-skills:
  - Phoneme / Grapheme Correspondence
  - Phonological Awareness
  - Sight Words
  - Phonics CVC Words
  - Text Reading and Comprehension
- Results of Intervention
- Implications and Conclusion
- References
Autism Impairments

- **Literacy** encompasses the ability to engage in meaningful communication with others using the skills of reading, writing, listening and speaking (Pierce & Porter, 1996).

- Language and literacy skills are *mutually enhanced by each other* (Sénéchal, LeFevre, Smith-Chant & Colton, 2001).

- To a student with autism and complex communication barriers, exposure to the printed word is like water to the desert (Broderick & Kasa- Hendrickson, 2001, cited in Kluth, 2003)
Students with limited verbal skills have often been regarded as too cognitively impaired or not ready for literacy instruction (Mirenda, 2003).

Students with autism may exhibit an uneven profile in developing the varied sequential skills along the reading progression:

- Difficulties in Phonological Processing (Kluth & Chandler-Olcott, 2008)
- Whole word reading is a relative strength (Nation, Clark, Wright and Williams, 2006).
- Noted strengths in their ability to process information visually (Allday & Pakurar, 2008; Quill, 1997).

The process of learning to read promotes phonological skills and that the relationship between the two is reciprocal (Goswami & Bryant, 1990).

A call therefore exists to “reconstitute the ladder to literacy” (Kliewer & Belkin, 2001).
What would a reconstituted model look like?

A Complex Network of Structures

Phonics/Spelling

Phoneme/Grapheme correspondence

Sight Words

Text Reading

Phonological Awareness creating a reciprocal process whereby newly acquired skills which rely on visual processing, create a vehicle with which to begin exploring the relatively abstract auditory based skills of phonological awareness and phonics.
Assessment Process

- The use of formalised assessments have often been used as the *gatekeepers to literacy*, locking students out of inclusive classrooms (Kluth & Olcott, 2008).

- Students with autism may *not be able to demonstrate what they know in typical ways* (Kluth & Chandler-Olcott, 2008).
Phoneme / Grapheme Correspondence

- Graphophonemic connections are a necessary precursor to decoding (Whitehurst & Lonigan, 2003, cited in Lanter & Watson, 2008)

- A number of people including parents have recommended the use of tactile approaches for teaching grapheme-phoneme connections to students with autism (Eastham, 1992, cited in Kluth and Chandler-Olcott, 2008)
Phonological Awareness

- Students with autism can have difficulties isolating sounds in verbal speech and associating those sounds with symbols (Blackman, 1999; Jackson, 2002; Shore, 2003, Broun, 2004 cited in Kluth & Chandler-Olcott, 2008).

- Individuals with autism may struggle to learn things that cannot be thought about in pictures (Temple Grandin, 1995, cited in Kluth, 2003).

- Initial Sounds:

- Syllabification:
Sight Words

- Several studies have examined the effectiveness of sight word or whole-word instruction with students with intellectual disabilities (Browder & Xin, 1998, cited in Joseph and Seery, 2004).
- For students with autism who possess strengths in visual learning, attention to sight words is reported to yield positive results (Grandin, 1995; Hall, 2001; Mukhopadhyay, 2000, cited in Kluth & Chandler-Olcott, 2008, Broun, 2004).
Phonics – CVC Words

- The use of Phonological Awareness is contextualised through activities matching word with picture and initial sound.

- Phonics instruction which isolates phonemes and sounds without pictures or a meaningful context almost makes it impossible for students with autism to demonstrate mastery (Mirenda, 2003, cited in Laz, 2009).
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Results of intervention

Grapheme Identification

Phoneme-Grapheme Correspondence

- Studies have shown that students with ASD possess strengths in pattern recognition and visual imagery (Broun, 2004; Fontelle & Alarcon, 1982; Patti & Lupinetti, 1993, cited in Infantino & Hempenstall, 2006).
Individuals with severe language impairments may differ in the specificity of their phonological representations due to their own speech production difficulties (Larsson et al., 2009).

Results of intervention

Exposure to graphophonemic connections simultaneously with Sight Word recognition may assist students to move towards a Partial Alphabetic Phase where students begin to form partial alphabetic connections between some of the letters in words (Ehri, 1995).
• Despite auditory processing difficulties, children with various developmental disabilities can benefit from phonics-based intervention (Joseph & Seery, 2004; NIDRR, 2001 cited in Infantino & Hempenstall, 2006).

• The **simultaneous targeting** of a number of reading sub skills allows for areas of relative strength such as those related to visual processing, to create the **vehicle** with which to begin exploring the auditory based skills of phonological awareness and phonics.
Results of intervention
Intangible results

- An increase in the ability to access the classroom literacy curriculum.
- Less reliance on teachers by tackling tasks more confidently and independently whilst working at his desk.
- A notable increase in verbalisations highlighting the notion that language and literacy are simultaneously learned (Koppenhaver et al., 1995, cited in Mirenda, 2003).
- For a student with autism, print provides the visual means with which to organise one’s internal language for thought and can contribute to the development of both academic and communication skills (Broun, 2004, p.40).
Results of intervention

- “Readiness” can be expressed as a motivation to learn and willingness to complete academic tasks, an interest in books and sustained effort, all of which played a significant role in reading progress.

- The use of individualised supports and adaptations, in turn, corresponds to the student’s level of readiness by ensuring that the program is accessible to them rather than expecting them to arrive at the program’s level as in the traditional “readiness” concept (Clay, 1993, cited in Zascavage & Keefe, 2004).
Results of intervention

How many people with autism *might* be able to learn to read and write, but .... are never given the necessary instructional and other supports to do so?

Thank you!

cstylianakis@autismspectrum.org.au


