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## The *NCDB* Outcomes and Performance Indicators: Literacy

### **Lisa Jacobs**

*NCDB*  
Hilton/Perkins Program  
Boston, MA

### **Barbara Purvis**

*NCDB*  
Perkins  
Shawnee Mission, KS

### **Nancy Steele**

*NCDB*  
Helen Keller National Center  
Knoxville, TN

### **Ella Taylor, Ph.D.**

*NCDB*  
The Teaching Research Institute  
Western Oregon University

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## NCDB Literacy Outcome and Performance Indicators

According to the National Reading Panel (2000) there are five areas necessary for reading instruction: phonemic awareness, phonics, fluency, vocabulary and text comprehension. In a collaborative effort, the Center for the Improvement of Early Reading Achievement, the National Institute for Literacy, the National Institute of Child Health and Human Development, the U.S. Department of Education, and the U.S. Department of Health and Human Services examined the scientifically-based reading research and published *Put Reading First* (2003) to assist educators and parents in incorporating evidence-based strategies for reading instruction. *Put Reading First* (2003) outlined the following research-based practices within each of the five domains of reading instruction:

1. Phonemic awareness instruction – the ability to notice, think about, and work with the individual sounds in spoken words. Research supports the following strategies:
  - Phoneme blending – putting together sounds to form a word
  - Phoneme segmentation – breaking a word into its separate sounds
2. Phonics instruction – understanding that there are systematic and predictable relationships between written letters and spoken sounds. Evidence supports:
  - Systematic phonics instruction through the direct teaching of a set of letter-sound relationships in a clearly defined sequence
  - Providing ample opportunities for children to apply what they are learning about letters and sounds to the meaning of words, sentences, and stories
3. Fluency instruction – the ability to read a text accurately and quickly. This includes
  - Providing models of fluent reading.
  - Having students read and reread a text a certain number of times or until a certain level of fluency is reached.
  - Increasing oral reading practice through the use of audiotapes, peer guidance, tutors, or other means.
4. Vocabulary instruction – understanding written and spoken words. Methods for increasing vocabulary include
  - Engaging in daily oral language, listening to adults read to them, and independent reading.
  - Explicit teaching of both individual words and word learning strategies (e.g., dictionary).
5. Text comprehension instruction – the ability to understand, remember, and communicate to others about what has been read. The following six strategies have “firm scientific basis for improving text comprehension” (Put Reading First, p. 49).

- Monitoring comprehension – student is aware of what they do understand, do not understand, and use appropriate strategies to resolve problems in comprehension
- Using graphic and semantic organizers which help students focus on the text structure as they read.
- Answering questions which help to guide and focus their reading on what is important.
- Generating questions – students generate their own questions which improves their active processing of text and their comprehension.
- Recognizing story structure – student understands how the content and events are organized into a plot
- Summarizing – helps students determine what is important in a text, to condense the information, and to put it into their own words.

Focusing on early literacy learning, Robyak, Masiello, Trivette, Roper & Dunst (2007) examined 71 evidence sources and found that all agreed that young children must be provided with environments rich with a variety of print-related and language-enriching experiences. Similarly, Trivette and Dunst (2007) examined evidence relating to shared reading experiences between young children and adults. They found that shared, interactive reading resulted in positive literacy outcomes especially related to listening comprehension, alphabet knowledge and text awareness.

In a meta-analysis of research focusing on literacy for students with severe cognitive disabilities, Browder and colleagues (2006b) identified only three strategies supported by rigorous evidence. Each of three strategies dealt with increasing the students' skills in text comprehension and one also addressed improving the students' vocabulary. The three evidence-based practices were as follows: (1) service provider teaches sight words using systematic prompting and fading procedures that incorporate time delay and are conducted in a repeated trail format; (2) teaching sight words in the context of functional activities; and (3) providing opportunities for word to picture matching. Browder and colleagues note that many other instructional strategies appear to have some impact, but that rigorous, research-based evidence does not currently exist to support the strategy.

Continuing this line of research, Browder and colleagues (2007) piloted a model of literacy instruction that incorporated story-based lessons and skill building for the National Reading Panel components of reading. Participants in the pilot project were in grades K – 3, classified as having an IQ below 55, and had enough vision and hearing to respond to verbal instructions and large print material. While the findings are preliminary, the researchers did find that this type of approach slowly increased participants' literacy. Additionally, those children who were pre-symbolic made the greatest learning gains. These findings corroborate the seminal work of Teale and Sulzby (1986) in noting that all children are in the process of becoming literate. They note, "we use emergent to suggest that development is taking place....Growth in writing and reading comes from within the child and as the result of environmental stimulation"

(p. xx). Koppenhaver and Erickson (2003) noted dramatic increases in emergent literacy when introducing preschoolers with severe communication impairments to a literacy rich environment over the course of five months.

Research on the *MEville to WEville* series, published by AbleNet, shows a curriculum including (1) language development lessons, (2) reading and listening comprehension lessons, (3) writing development lessons, (4) reading development lessons, and (5) literacy experience lessons, to be effective for students with severe-profound intellectual disabilities. In addition to dramatic gains on letter identification, print concepts and phoneme blending, Erickson and colleagues (2005) note that students began initiating more communication with each other and with their teachers.

While not exhaustive this brief literature review does demonstrate the importance of combining an emergent literacy focus with the five components of the National Reading Panel when working with students with severe/profound cognitive impairments and severe communication impairments. In addition to the work noted above, the Literacy Focus Group also incorporated the work of Browder, et al. (2006a), Downing (2005) and Miles (2000). The Literacy Focus Group has combined these areas in the development of the accompanying service provider and child Outcome and Performance Indicators for literacy. It is important to note that much of the emergent literacy focus is already included in OPIs relating to communication. For the service provider OPIs this occurs in OPI #7 (Communication) for the child OPIs this occurs in multiple OPIs. We have included these multiple child OPIs in italics within the Literacy OPI for the child.

## **References**

Browder, D.M., Courtade, G., Ahlgrim-DeLzell, L. & Lee, A. (2007). An emergent literacy intervention for students with autism and significant cognitive disabilities. Paper presented at the annual CEC Convention in Louisville, KY.

Browder, D.M., Courtade-Little, G., Wakeman, S., & Rickelman, R.J. (2006a). From sight words to emerging literacy. In D. M. Browder & F. Spooner (Eds.), *Teaching language arts, math & science to students with significant cognitive disabilities* (pp. 63 – 91). Baltimore: Paul H. Brookes Publishing.

Browder, D.M., Wakeman, S. Y., Spooner, F., Ahlgrim-DeLzell, L., Algozzine, B. (2006b). Research on reading instruction for individuals with significant cognitive disabilities. *Exceptional Children*, 72(4), 392 – 408.

Center for the Improvement of Early Reading Achievement. (2003). *Put reading first: The research building blocks for teaching children to read*. Washington, D.C.: Office of Educational Research and Improvement.

Downing, J. E. (2005). *Teaching literacy to students with significant disabilities*. Thousand Oaks, CA: Corwin Press.

Erickson, K. A., Clendon, S., Abraham, L., Roy, V., and Van de Carr, H. (2005). Toward positive literacy outcomes for students with significant developmental disabilities. *Assistive Technology Outcomes and Benefits*, 2(1), 45 – 54.

Koppenhaver, D.A. & Erickson, K. A. (2003). Natural emergent literacy support for preschoolers with autism and severe communication impairments. *Topics in Language Disorders*, 23(4), 283 – 292.

Miles, B. (2000). Literacy for persons who are deaf-blind. *DB-Link Fact Sheet*.

National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Pub. No. 00-4754). Washington, DC: U.S. Department of Health and Human Services.

Robyak, A., Masiello, T., Trivette, C. M., Roper, N., & Dunst, C. J. ( 2007). Mapping the contemporary landscape of early literacy learning, *Cellreviews* 1(1), 1-11.

Trivette, C. M., & Dunst, C. J. ( 2007). Relative effectiveness of dialogic, interactive, and shared reading interventions, *Cellreviews* 1(2), 1-12.

## **CHILD OPIs**

**C.09: The child's/youth's literacy skills have increased.**

***NOTE: Pre-emergent literacy skills can be found in other Child OPIs which are included in italics.***

### ***Listening performance indicators (Receptive communication skills)***

- C.01.b Uses auditory skills, such as localization to presented sounds, discrimination and/or auditory comprehension*
- C.01.e Uses other sensory skills, such as smell, taste or movement to gather information*
- C.02.b Attends and/or responds to instructional stimuli*
- C.03.a Uses anticipation skills*
- C.09.a: Demonstrates attention to objects; stories or music (spoken, recorded or signed); and/or communication partner
- C.09.b: Increases duration of active engagement with objects, stories, music and/or communication partners
- C.09.c: Increases receptive vocabulary (number of words, objects, pictures, signs and/or symbols)
- C.09.d: Understands new vocabulary (words, objects, pictures, signs and/or symbols) in a variety of contexts

### ***Communication performance indicators (Expressive communication skills)***

- C.02.b Attends and/or responds to instructional stimuli*
- C.03.b Responds to informational cues*
- C.03.c Responds to others*
- C.09.e: Demonstrates joint attention and expresses response to literacy opportunities (e.g. joint storybook reading, picture menu, object schedule) using his/her preferred communication mode
- C.09.f: Increases duration of active engagement with literacy activities
- C.10.b Demonstrates interactive social behavior (e.g. aware that communication partner is present, able to access communication partners, expresses information/emotions/feelings)*
- C.03.d Uses pre-linguistic forms of communication, such as touch, objects, gestures and/or cues*
- C.04.c Uses multiple forms of communication*
- C.09.g: Begins to name letters and words; signs or says alphabet and/or words

- C.09.h: Demonstrates beginning reading skills when supported by a literacy partner (e.g. uses familiar sight words to form sentences, dictates words to a partner to make a list, creates and maintains a scrapbook or journal, reads with a partner)
- C.09.i Increases expressive vocabulary (number of words, objects, pictures, signs and/or symbols)
- C.09.j Uses new vocabulary (words, objects, pictures, signs and/or symbols) in a variety of contexts (e.g. communicates using his/her preferred method across all environments)
- C.04.l *Increases number of communication partners*
- C.09.k Answers questions about the text using his/her preferred communication method
- C.09.l Expresses feelings/attitudes/opinions using his/her preferred method of communication

### **Reading/writing performance indicators**

- C.01.a *Uses visual skills, such as fixation, gaze or visual shift, tracking of presented objects and/or object permanence*
- C.01.c *Uses tactile skills for sensory input*
- C.02.b *Attends and/or responds to instructional stimuli*
- C.02.f *Participates (partial or full) in instructional activities*
- C.03.b *Responds to informational cues*
- C.03.d *Uses pre-linguistic forms of communication, such as touch, objects, gestures and/or cues*
- C.03.e *Uses emergent symbolic forms, such as pictures and/or line drawings*
- C.03.g *Imitates simple motor tasks*
- C.08.b *Understands spatial and positional relationships*
- C.08.d *Understands representations (i.e. pictures, symbols, objects)*
- C.08.g *Recalls verbal and non-verbal events*
- C.10.d *Requests assistance or clarification when needed*
- C.09.m Understands the concept of print (e.g., knows that a book is for reading; identifies front, back, bottom, top of book; knows that pictures and words are related; recognizes the difference between words and pictures; knows where to begin reading; reads from left to right)
- C.09.n: Understands the concept of words (e.g., knows what a word or sign is; demonstrates one-to-one correspondence between picture, sign and/or word; reads own name)
- C.09.o: Understands the concept of letter, whether presented in print or tactile representation (e.g., discriminates letters from symbols and from each other; begins to name letters; signs or says alphabet; scribbles; uses alternative pencils or assistive technology)

- C.09.p: Demonstrates turn-taking (vocalization or action) with a literacy partner within a variety of literacy interactions (e.g. storybook, family pictures)
- C.09.q: Demonstrates symbolic understanding of written forms (recognizes logos, follow text with finger or gaze, matches objects to symbols)
- C.09.r: Demonstrates beginning writing skills when supported by a literacy partner and using alternative pencils and/or assistive technology (e.g. uses familiar sight words to form sentences, creates a list, creates an experience book or maintains a journal)
- C.09.s: Increases written vocabulary (number of words/symbols written independently or through use of assistive technology)
- C.09.t: Increases reading vocabulary (e.g. number of words/symbols understood in print and/or Braille; uses context clues to determine meaning of new words or symbols)
- C.09.u: Demonstrates text comprehension skills (e.g., understands sequenced events, uses sentence starters; follows a recipe/instruction card; answers questions about the text using his/her preferred communication method)
- C.09.v: Reads independently with ongoing support for new tasks or contexts (e.g. completion of book reports, related activities that can be found in literacy kits, responding to an employment ad by completing and submitting an application, reading a menu at a new restaurant)
- C.09.w: Reads for information/acquisition of knowledge (e.g. school newspaper, adapted textbook, classroom calendar, grocery ads)
- C.09.x: Reads to experience new feelings/attitudes (e.g. utilizes language learning activities, experience books and journals)
- C.09: Demonstrates ability to analyze reading; think critically about ideas presented in text (e.g. initiates and executes an independent activity tied to something that has been read; creates a presentation/report/project based on what's been read)
- C.09.z: Demonstrates ability to synthesize multiple writers' works; form own opinion based on facts; invent point of view different from those read (e.g. using story starters to finish a story, performs/reads an original speech or presentation)
- C.09.za: Other (please describe):

## **SERVICE PROVIDER OPIs**

### **SP.12: The service provider's use of strategies to promote literacy in reading/writing has increased.**

***NOTE: For encouraging use of residual hearing and pre-linguistic communication development, go to SP.07 (Communication).***

- SP.12.a: Engages in interactive storybook reading in which both service provider and student interact with the text (print, Braille, sign, tactile representation, object, picture, symbol, etc.)
- SP. 12.b: Uses the student's preferred cues to draw attention to the text and shape the response to and/or interaction with the text.
- SP. 12.c: Increases duration of active engagement with literacy activity
- SP. 12.d: Models the behaviors of reading and writing using the students' preferred communication such as the use of symbols (e.g., objects, pictures, tactile representations) or words (i.e., sign, print, Braille)
- SP. 12.e: Provides multiple opportunities for student to interact with text
- SP. 12.f: Provides natural opportunities for emergent literacy learning throughout the classroom and throughout the day
- SP. 12.g: Provides opportunities to increase fluency through repeated and monitored reading practice (e.g. student-adult reading, tape-assisted reading, peer tutors, readers' theater, choral reading)
- SP. 12.h: Teaches new vocabulary through the use of symbols (e.g., objects, pictures, tactile representation) and words (i.e., sign, print, Braille) through a variety of activities (i.e., singing songs, rhyming exercises, coactive movement)
- SP. 12.i: Provides word to symbol matching and/or symbol to meaning matching
- SP. 12.j: Teaches sight words using systematic prompting and fading procedures
- SP. 12.k: Embeds the use of symbols (e.g., objects, pictures, tactile representations) or words (i.e., sign, print, Braille) throughout the student's day (e.g., daily calendar, name/picture on book, name/picture on locker)
- SP. 12.l: Embeds the use of symbols (e.g., objects, pictures) or words (i.e., sign, print, Braille) within functional activities
- SP. 12.m: Embeds the use of symbols (e.g., objects, pictures) or words (i.e., sign, print, Braille) within activities that provide access to the general education curriculum
- SP. 12.n: Provides opportunities for multiple re-readings of the text to encourage comprehension
- SP. 12.o: Uses symbols (e.g., objects, pictures, tactile representation) or words (i.e., sign, print, Braille) to outline story

SP. 12.p: Checks for student comprehension through the use of symbols (e.g., objects, pictures, tactile representations) or words (i.e., sign, print, Braille)

SP. 12.q: Uses appropriate response time for student to demonstrate text comprehension (i.e., incorporates time delay)

SP. 12.r: Provides corrective feedback and praise to facilitate text comprehension

SP. 12.s: Incorporates appropriate fading techniques in order to provide the student maximum independence (e.g., providing fewer cues, fading pictorial information)

SP.12.t: Provides writing opportunities that incorporate the student's preferred communication and AAC devices

SP.12.u: Other (please describe):

## **FAMILY OPIs**

### **F.12 Family member's use of strategies to promote their child's literacy skills has increased:**

*For encouraging communication, social interaction and awareness of child's environment, go to F.06 (Communication) and F.10 (Learning and Development)*

- F.12.a. Participates in activities that promote communication and awareness of sounds, symbols, letters, words (throughout the home and in the community).
- F.12.b. Participates in activities that promote awareness of print, Braille, signs and symbols (books, labels, magazines, menus); models reading and writing behaviors; provides opportunities throughout the home and in the community.
- F.12.c. "Reads" to child using spoken language, sign, tactile sign or a combination of communication methods; encourages interaction with the text.
- F.12.d. Encourages exploration of books adapted to individual child needs (e.g. tactile, Braille, high contrast, interactive, includes symbols).
- F.12.e. Provides multiple opportunities to interact with favorite books, stories, rhythm and music games
- F.12.f. Participates in turn-taking activities with child during book reading, storytelling, rhythm and music games.
- F.12.g. Provides opportunities for shared storybook reading with a communication partner
- F.12.h. Participates in activities to help child learn about books (front/back, open/close, books convey information, provide entertainment); uses child's preferred cues and method(s) of communication.
- F.12.i. Participates in activities to help child learn the relationship between objects and words/signs/symbols.
- F.12.j. Provides activities to help child learn new vocabulary through the use of symbols (e.g. objects, pictures, tactile representation) and words (i.e. sign, print, Braille).
- F.12.k. Participates in activities to allow child to demonstrate understanding of text (use of symbols, actions or words)
- F.12.l. Participates in activities to help child recognize his/her name in print or an adapted format (such as raised letters, Braille)
- F.12.m. Provides writing opportunities that incorporate the child's preferred communication and AAC devices
- F.12.n. Other (Please specify)

