Including Matthew: Assessment-Guided Differentiated Literacy Instruction

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Abstract

This article describes the early literacy journey of a multiply handicapped child placed in an inclusive classroom. Matthew was born prematurely and has Cerebral Palsy impacting his arms, legs, facial muscles, and speech. He is visually impaired, has seizures, and uses a wheelchair. Matthew came to school supported by one-to-one aides, special education teachers, teachers of the visually impaired, optometrists, speech, physical, and occupational therapists. Initially, some of those specialists proposed Matthew's teachers should focus on what he could do, such as listening to books and interacting with peers. However, Matthew's parents expected him to learn to read and write. This is a story of the challenges Matthew and his teachers faced. It is also the story of the assessment guided adaptations to programs, materials, and instructional practices that made reading and writing possible.

Keywords

reading, assessment guided instruction, differentiated instruction

Acknowledgments:

Matthew's determined parents and dedicated teachers made reading and writing possible; Matthew continues to work hard every day meeting the ongoing challenges of learning.

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This article describes the early literacy journey of a multiply handicapped child placed in an inclusive classroom. This student, who will be referred to as Matthew, was born prematurely and has Cerebral Palsy impacting his arms, legs, facial muscles, and speech. He is visually impaired, has seizures, and uses a wheelchair. Matthew came to school supported by one-to-one aides, special education teachers, teachers of the visually impaired, optometrists, speech, physical, and occupational therapists. Initially, some of those specialists proposed Matthew's teachers should focus on what he *could do*, such as listening to books and interacting with peers. However, Matthew's parents expected him to learn to read and write. This is a story of the challenges Matthew and his teachers faced during the initial stages of his literacy journey. It is the story of the assessment guided adaptations to programs, materials, and instructional practices that made reading and writing possible.

Today, classroom teachers share the challenges of teaching all children to read through differentiation of assessment, instruction, and materials.

Inclusion

Until recently, students with learning and physical handicaps were typically educated by special education teachers in separate classrooms and schools. However, federal legislation (US Department of Education, 1997; 2004), societal expectations, and parental pressures have fueled movements to include students, like Matthew, in regular classrooms with their peers. Inclusion goes beyond the practice of mainstreaming or placing students with special needs with their peers for social interactions. Teaching students to read is a necessary component of successful inclusion beyond the primary grades (Nixon, 1991) as reading and writing are integrated into content area learning.

In inclusive classrooms, general education teachers coordinate schedules with a host of specialists and therapists. Adapting instruction to students with learning differences was once the sole terrain of special education teachers. Today, classroom teachers share the challenges of teaching all children to read through differentiation of assessment, instruction, and materials.

The district's Committee on Special Education planned for Matthew's inclusion with input from his parents and specialists. A special education consultant teacher pushed into his classroom for one period each day. A full-time aide was assigned to help with physical tasks such as maneuvering the wheelchair, manipulating papers, and assisting with physical tasks. A teacher of the visually impaired met with Matthew and collaborated with his teachers each week. Physical, occupational, and speech therapies were scheduled to support Matthew's development. Matthew was assigned to a classroom with his peers and a general education teacher became his primary teacher.

Frustration

Matthew came to school with a wealth of early literacy experiences. Reading and discussing books with his parents had been a daily part of Matthew's life and he had probably heard a thousand stories before starting school. Matthew had worked on phonemic awareness activities including isolating and articulating sounds in speech therapy sessions for several years. Before he started school, Matthew had learned to recognize

most letters and their sounds. While his articulation was not always clear, Matthew enjoyed discussing texts and always had something to say.

In kindergarten and at the beginning of first grade, Matthew was an eager participant in classroom literacy activities such as shared reading (Holdaway, 1979) and phonemic awareness (Adams, 1990). His relatively strong listening comprehension was evident in his answers to literal and inferential comprehension questions. He could recognize rhyming words and memorized poems and songs. However, in December of first-grade, Matthew could consistently read only two words: *Matthew* and *I.* As he classroom peers started to read longer and more complex texts, Matthew became increasingly frustrated with reading.

His teachers tried a Preventing Academic Failure, a structure phonetic approach (Bertin & Perlman, 1980) which encouraged Matthew to blend letter sounds rather than to memorize specific words. While Matthew could give isolated sounds for all letters, blending two or more sounds into isolated words resulted in entirely new words. Matthew could not physically write letters in order to fully participate in a multisensory (reading, writing, listening, and speaking) approach.

His teachers tried having Matthew read shorter, predictable texts. While Matthew quickly memorized these texts, he could not read the same words out of context. Matthew became increasingly frustrated with reading and began to avoid reading and writing tasks by diverting his teachers' attention with questions. When that diversion failed, Matthew asked to use the bathroom, a process that typically consumed the designated reading period. Midway through first-grade, some members of Matthew's team recommended that literacy instruction should focus on listening; however, Matthew's parents and other members of the team saw reading as possible. It was clear his teachers would need to look beyond the typical curriculum and classroom modifications if they were to teach Matthew to read.

Assessment Guided Instruction

An interdisciplinary team that included Matthew's classroom and special education teacher along with a district literacy specialist decided that it would be valuable to identify Matthew's learning strengths and needs (Hall & Mengel, 2002). As Jackson (2005) observed, students with low incidence special needs may require individualized services and supports at transition points in their educational careers. The team used the Universal Design for Learning Response to Intervention (Hall, 2002) framework that promotes assessment guided, differentiated intervention for students experiencing difficulty learning to read. This model also encourages teachers to observe students as they are engaged in learning and to find instruction that is both diagnostic-prescriptive and research-based. Each member of the team observed, documented, and shared their observations of Matthew as a learner. These observations contributed to proposals that Matthew would benefit from: (1) Individual Instruction; (2) Enlarged Font Texts; (3) Using Multiple Cueing Systems, (4) Repeated Reading, and (4) Adapted Writing Experiences.

Individual Instruction

Observations of Matthew during whole group and small group reading lessons showed that he rarely looked at the text or the pictures and still had strong comprehension of the story. While typically positioned in close proximity to the teacher, Matthew looked

around the room or at his classmates while the teacher read aloud to the class. Yet, he actively participated during the follow-up discussion. During small group reading activities, Matthew would look at his classmates rather than the text. Matthew's teachers concluded that his listening comprehension was a relative strength. The team observed that Matthew was easily distracted by the complex interactions of classmates talking and moving during his classroom's Reading Workshop (Lapp et. al., 2005). Thus, they hypothesized that Matthew might benefit from a one-to-one, pull out teaching model in a separate setting (Wasik & Slavin, 1993).

Matthew's teachers looked to the Reading Recovery (Clay, 1993) model where at-risk readers work individually with teachers every day to practice reading strategies with texts of increasing complexity. This early intervention model is most effective at supporting struggling readers before they fall too far behind their peers. Learning to construct meaning from print was important enough to try a supplemental, pull-out model. Matthew was pulled out of his classroom for 30 minutes each day to practice reading strategies in a one-to-one setting with a literacy specialist.

Every day, Matthew and the literacy specialist participated in a familiar sequence of reading activities: (1) rereading familiar books; (2) working with letters and words; (3) writing sentences and stories; and (4) reading new stories (Clay, 1993). The teacher used a slanted board to make texts more accessible to Matthew. She scribed sentences slowly and deliberately asking Matthew to state the letters he wanted written. Those sentences were saved and reread. While the individual pullout program took Matthew away from his peers, the model forced Matthew to attempt reading and writing tasks he perceived to be challenging. In this one-to-one setting, Matthew focused on making meaning from printed texts rather than from oral language.

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Within just a few months, Matthew was beginning to practice reading in his classroom and at home using a collection of *his* texts. He was also more willing to take risks and to look closely at texts during his daily classroom instruction times.

Enlarged Font Texts

While Matthew's visual acuity was normal, his Cerebral Palsy significantly impacted his head control as well as his visual focusing and tracking. Since Matthew could identify letters but had difficulty reading words, his teachers hypothesized that Matthew might be having difficulty differentiating and interpreting the sequence of letters in texts.

Researchers (Center for Applied Special Technology, 2007) have shown that large font texts support struggling and dyslexic readers. Bloodsworth (1993) concluded that children who struggle with reading, regardless of the reason, benefit from larger font sizes which allow students to track their reading more easily. While the texts typically used by beginning readers often have enlarged fonts, Matthew's teachers wondered if Matthew might benefit from even larger fonts and more white spaces between words.

The literacy specialist enlarged or retyped texts initially using a Comic Sans font

size of 36 to improve readability. Texts were reformatted so that white spaces between words and lines were enhanced. Pages of Matthew's texts were attached to tag board creating booklets held together with rings so Matthew could more readily manipulate his own books. Over time, as Matthew became a more proficient reader, he was able to read short passages with smaller fonts; however, reformatting texts continued to be necessary for reading fluency and stamina.

Matthew's teachers borrowed large font published books (NYS Resource Center for Visually Impaired, 2007) as Matthew became a more proficient, second grade level reader. These texts allowed Matthew to experience the stories everyone else was reading, such as *Balto, Freckle Juice,* and *Amelia Bedelia.*

While enlarged and reformatted texts were important adaptations, it was also necessary to help Matthew learn to track visually across a line of print. To improve his visual tracking, the literacy specialist tried using a reading window strategy (Martin, 2007); however, the varying lengths of words made this just too confusing. Manipulating the plastic window also proved to be challenging and distracting. Instead, the specialist used a yellow or blue index card to mark the reading line. The team also tried using a text enhancer, CCTV (Lightouse for the Blind, 2007) and computer programs, such as Raz Kids (2007), on a Smart Board (2007). While the technology enhanced, large font texts projected were appealing, Matthew was not initially able to visually track on the computer or on the larger Smart Board screen.

Selected Assisted Technology Sites and Supports

Texts primarily for older elementary and intermediate grade readers (3rd up)
http://www.galeschools.com/thorndike/about.htm
http://www.lrs-largeprint.com/individual.asp?id=c

Amazon carries a variety of text with larger fonts
http://www.amazon.com/Water-Horse-Lythway-Large-Childrens/dp/0745116108

Magazines available in large fonts and in Braille
http://www.loc.gov/nls/children/magazines.html

E-text versions of print materials – talking books recorded using the exact words of the written version. - text to speech player is needed, which is provided free with Bookshare membership.
http://www.bookshare.org/web/TeacherRecommended6.html

Recording for the Blind & Dyslexic®, distributes DTBs (AudioPlus) on CD-ROM. AudioPlus books are voice recordings that conform to the DAISY format. These product require specialized hardware for playback.
http://www.rfbd.org/

Computer reading of available texts and student (teacher) generated texts.
http://www.kurzweiledu.com

While computers and assistive technology systems were not instrumental in initially helping Matthew access print, they have become important tools for him and provide readily available, enlarged classroom texts. While Matthew can now read words in texts with much smaller fonts, the larger fonts and increased white spaces appear to reduce his reading fatigue, allowing him to read longer and with less strain.

Using Multiple Cueing Systems

Matthew's limited breath control made the typical beginning reading strategy of *sounding out* unfamiliar words (Pressley, 2006) an arduous task. He tried to blend sounds into words; however, the sounds came out either in a different order or distorted. Matthew's teachers decided to use his strengths, his strong vocabulary and his understanding of syntax, to support his blending of sounds.

While the individual pullout program took Matthew away from his peers, the model forced Matthew to attempt reading and writing tasks he perceived to be challenging.

Many researchers have studied effective readers and cueing systems. Goodman (1967) proposed that cueing systems operate simultaneously, providing the reader with an abundance of information from all multiple sources. Educators typically think of beginning readers relying on grapho-phonetics, or information from letters and sounds. However, even beginning readers use vocabulary, background knowledge and semantics to determine words and construct meaning. Readers also use syntax, the structure of the sentence, and pragmatics, the structure of language, to determine if a text sounds right.

Readers rely on different sources of information depending on the purpose and context for reading. Researchers (Pearson, 1985; Pinnell et al., 1994) who have studied the reading processes of proficient readers conclude that effective instruction should focus on multiple strategies, such as: monitoring for meaning; determining importance; creating mental images; synthesizing; relating new to schema; questioning; and inferring.

Thus, Matthew's teachers taught him to manipulate the sounds in words by focusing instruction on initial sounds, predicting words, recognizing sentence structure, and self-correcting when the meaning was lost. They taught Matthew to recognize predictable rimes and word families (Cunningham & Allington, 1999). To support meaning, picture walks (Holdaway, 1979) and predictions preceded each reading to activate schema and vocabulary. New and unfamiliar vocabulary from the story was introduced prior to reading. Initially, Matthew relied on initial letters supported by meaning and syntax. Within a few months, he began to use the first "chunk" or syllable of words while thinking about meaning (Moustafa, 1997). While 'sounding out words' remained difficult, Matthew learned to recognize some sight words, use initial letters, and chunk multisyllabic words.

Phonetically regular high frequency words were practiced through word sorts where the physical similarity of words contributed to mastery (Bear et al., 2000). Sorting required adult assistance at first, but Matthew enjoyed the challenge of visually scanning words and learned to recognize predictable patterns of letters. Visually sorting words also supported Matthew's reading of longer and unfamiliar words. Matthew learned to use the strategies of effective readers, such as looking

ahead, rereading, and self correcting (Clay, 1993). He was reminded to use the strategies and prompted to 'try again' when the meaning was lost. It wasn't long before Matthew was beaming as he self corrected and reminding his teachers to notice when he did!

Repeated Reading

Beginning readers benefit from multiple presentations of texts (Samuels, 1979). Reading Recovery teachers (Clay, 1993) typically send texts home nightly for students to practice with and read to parents. In addition, students typically put familiar stories in their "reading boxes or bags" in order to have multiple experiences with the words in familiar stories. Matthew, however, needed adult support to pick up and manipulate texts. He could not readily take out and manipulate texts; therefore, his reading teachers created settings to encourage repeated readings in order to build fluency and confidence.

In addition to nightly take home reading assignments, Matthew reread familiar texts at the start of every reading session. He read stories to his one-to-one aide in the classroom every day during a designated time. Familiar stories were "rewritten" to provide extra practice in a familiar context. For example, the *Little Red Hen* might be rewritten to ask Matthew and his friends to help bake a cake or cookies rather than bread. With a new picture and a few new words, the story changed ever so slightly. Abundant repetition contributed to increased reading fluency and confidence.

Matthew also practiced reading and rereading 'sight words.' One or two "new" words from the day's new story were placed on an index card. Holes were punched in each card and the cards were placed on a large ring that Matthew could take with him. When the words appeared to be mastered, they were moved to another ring where review was intermittent. While Matthew read slowly when compared to his peers, his comprehension and enjoyment were both enhanced by opportunities to practice, build fluency, and develop confidence.

Adapted Writing Experiences

Early writing experiences support awareness of both words and story structure (Pressley, 2006); thus, writing is an important element of early literacy learning. While Matthew always enjoyed telling stories, his physical limitations made writing, even with an adapted keyboard, initially frustrating. So, during classroom writing times, Matthew dictated stories that were scribed by an adult. During his individual reading time, Matthew learned to write the words he was learning to read by using magnetic letters (Steps to Literacy, 2008). Later, he began typing words and sentences on an enlarged font keyboard (Ability Hub, 2008). With daily opportunities to practice, Matthew's relatively strong visual memory and syntactical knowledge supported his slow word processing. Within a few months, Matthew chose to write on his adapted keyboard during free times and at home. As he practiced, he became a stronger and faster typist. Within a year, Matthew was typing his own poems, stories, and reader responses. It took him a little longer to craft a response and thus he wrote fewer words than his peers; however, he was able to share his thoughts and ideas in writing.

In Conclusion

Matthew is learning to be a reader and a writer along with his peers thanks to intensive, individualized instruction, and adapted materials. He continues to read more slowly than many of his peers and needs enlarged font texts; yet, his comprehension and enjoy-

ment of reading are strong. As he continues through school, ongoing adaptations and new technologies will be important to assure access to printed texts across the content areas; however, Matthew now has the skills and strategies to be included in both literacy and academic learning.

Vision, hearing, speech, physical, neurological, developmental, and behavioral limitations can make learning to read and write challenging; however, these differences do not preclude literacy learning. Inclusive classrooms can provide a forum for all students to learn; however, supportive classrooms and teachers do not assure learning. Teachers who look beyond traditional programs and use assessment-guided differentiated instruction can begin to meet the diverse needs students, such as Matthew, with multiple special needs.

References

Ability Hub. (2008). *Querty*. Retrieved April 1, 2006 from http://www.abilityhub.com/keyboard/expanded.htm

Adams, M. (1990). *Beginning to read: Thinking and learning about print.* Urbana-Champaign, IL: University of Illinois.

Bear, D. R., Invernizzi, M, Templeton, S., & Johnston, F. (2000). *Words their way: Word study for phonics, vocabulary, and spelling instruction.* Columbus, OH:Merrill.

Bertin, P, & Perlman, E. (2001). Preventing academic failure. White Plains, NY: Monroe Associates.

Bloodsworth, J. G. (2007). *Legibility of print.* South Carolina: ERIC Document Number 335497.

Center for Applied Special Technology. (2007). *An educator's guide to making textbooks accessible and usable for students with learning disabilities*. Center for Applied Special Technology and LD OnLine. Retrieved April 1, 2006 from http://www.ldonline.org/article/16310

Clay, M. (1993). *Reading recovery: A guidebook for teachers in training*. Portsmouth, NH: Heinemann.

Cunningham, M. C., & Allington, R. L. (1999). *Classrooms that work: They can all read and write*. New York, N.Y.: Longman.

Goodman, K. S. (1967). Reading: A psycholinguistic guessing game. *Journal of the Reading Specialist, 6*, 126-135.

Hall, T. (2002). *Differentiated instruction.* Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved April 1, 2006 from http://www.cast.org/publications/ncac/ncac_diffinstruc.html

Hall, T. & Mengel, M. (2002). *Curriculum-based evaluations*. CAST Universal Design in Learning online. Retrieved April 1, 2006 from http://www.cast.org/publications/ncac/ncac_curriculumbe.html

Holdaway, D. (1979). *The foundations of literacy*. Portsmouth, NH: Heinemann.

Jackson, R. (2005). *Curriculum access for students with low-incidence disabilities: The promise of universal design for learning.* Wakefield, MA: National Center on Accessing the General Curriculum. Retrieved January 2, 2007 from http://www.cast.org/publications/ncac/ncac_lowinc.html

Lapp, D., Flood, J., Moore, K., & Nichols, M. (2005). *Teaching literacy in first grade: Tools for teaching literacy.* New York: Guilford.

Lighthouse for the Blind. (2007) CCTB. Retrieved April 1, 2006 from http://www.lhb.org/content.php?fcn=store&subs=cctv

Martin, P. (2007). *The reading window.* Retrieved April 1, 2006 from

http://www.readingwindow.org/free-book.htm

Moustafa, M. (1997). *Beyond traditional phonics: Research discoveries and reading instruction*. Portsmouth, NH: Heinemann.

Nixon, H. (1991). *Mainstreaming and the American dream*. New York: American Foundation for the Blind.

NYS Resource Center for Visually Impaired. (2007). *Alternate format textbook and educational materials resources.* Retrieved April 1, 2006 from http://www.vesid.nysed.gov/specialed/publications/policy/afatt2.htm

Pearson, P. D. (1985). Changing the face of reading comprehension instruction. *The Reading Teacher, 38,* 724 - 738.

Pinnell, G. S., Lyons, C. A., DeFord, D. E., Bryk, A. S., & Seltzer, M. (1994). Comparing instructional models for the literacy education of high-risk first graders. *Reading Research Quarterly, 29*, 8 – 39.

Pressley, M. (2006). *Reading instruction that works: The case for balanced teaching*. NY: Guilford Press.

Samuels, S. J. (1979). The method of repeated readings. *The Reading Teacher, 32*, 403-408.

Raz Kinds. (2007). *Learning A-Z.* Retrieved April 1, 2006 from http://www.raz-kids.com/

Smart Boards. (2007). *Smart Technologies*. Retrieved April 1, 2006 from http://smarttech.com/

Steps to Literacy. (2008). *Magnetic kid ABC's lowercase letters*. Retrieved April 1, 2006 from http://www.stepstoliteracy.com/Products/STL-878.aspx

U.S. Department of Education. (1997). *IDEA regulations, 1997.* Retrieved July 1, 2007 from http://www.ed.gov/offices/OSERS/Policy/IDEA/regs.html

U.S. Department of Education. (2004). *Building the legacy: IDEA 2004.* Retrieved July 1, 2007 from http://idea.ed.gov/explore/view/p/%2Croot%2Cregs%2Cpreamble1%2C

Wasik, B. A., & Slavin, R. E. (1993). "Preventing early reading failure with one-to-one tutoring: A review of five programs." *Reading Research Quarterly,* 28, 178-200.

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