



From Print to Braille:

With Heart and Meaning

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- Student #1: 6th grade middle school boy
- Student #2: 28 years old adult male
- An opportunity to reflect on similarities and differences in learning style, instructional methods, challenges and successes.

Two Students

- 12 years old, 6th grade
- Albinism, no other disabilities
- Moved in from out of state, had been at private school, no recent LMA
- LMA & EFVE indicated braille would be useful
- Using enlarged print, electronic magnification, audio books
- Slow reading speed in print, visual fatigue, disliked reading print but enjoyed audio materials
- IEP written based on need: 2 periods per day, 5 days per week

Student #1

- 27 years old, married, finished bachelor's degree
- Had planned to go to law school then diagnosed with neuromyelitis optika
- Rapid vision loss and unstable condition
- Other physical & health considerations
- Using enlarged print and electronic magnification
- Loves to read, dislikes audio books and speech access
- State rehabilitation agency providing support but not braille instruction (unless he came to center-based program)
- Taught in his home once or twice per week

Student #2

- Both students were highly motivated to learn braille!
- Both students already knew how to read, and were reading "on level" commensurate for their age/education status.
- Expressed a lot of excitement to learn braille—and learning in general.
- Expressed enjoyment during braille instructional sessions.

Motivation

- **Hand movements:** (Mangold, 1978; Wormsley, 1981; Wright, Wormsley, Kamei-Hannan, 2009)
 - use of two hands
 - use of multiple fingers
 - smooth hand movements, minimal backtracking and scrubbing
- **Personal interest:** (Wormsley, 2004)
 - discovering personal interests
 - use of highly motivating materials
- **Use of connected text:** (Ashcroft, 1960; Wall Emerson, Holbrook, D'Andrea, 2009)
 - more practice with phrases and short sentences rather than just single words
 - focus on comprehension and not only reading speed
 - Careful introduction of contractions without “protecting” from them

Informed by research

- **Building fluency while maintaining comprehension:** automatic recognition of words, decoding strategies, vocabulary building, prosody and comprehension
- **Pair with writing:** learning to decode and encode; learning to write what they are reading
- **Use of technology:** mainstream and specialized products for access and efficiency

Best Practices

- Adapted Mangold tactile materials
- *Braille Too: The Next Generation* (brl2.com)
- Taught letter recognition at same time as alphabetic wordsigns
- Taught proper names as soon as possible (including their contractions)
- Started with words as soon as possible:
 - words that didn't happen to have contractions
 - incorporated contractions from names into new words
- Started with connected text as soon as possible, so capitalization and punctuation introduced early.

Approaches & Materials

- Careful sequencing of contraction introduction; no uncontracted or partially contracted words used.
- In general, used the sequence in *Braille Too: TNG* but added shortforms and punctuation much earlier (e.g., as soon as learned a & 1, taught the shortform word “also”).
- Individualized and personalized content added as much as possible:
 - use of family and friend names, likes, & hobbies
 - sense of humor (Braille Task Force, stories about neighbor)

Approaches, cont.

- Many, many teacher-made materials.
 - phrase cards (rather than single words) in ring-bound index card books
 - Bingo games, scrambled sentences, word families
- Age-appropriate content:
 - logic puzzles, scrambled words
 - trivia questions
 - sorting games, Red Herring, word building, matching columns

Approaches, cont.

- Taught writing on Perkins at same time as letter/word recognition
- Introduced slate and stylus (but neither were thrilled)
- Technology introduction as soon as possible **HOWEVER**
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Approaches to writing

- Differences in provision of AT services between K-12 and adult systems
- In addition to a Perkins, use of electronic devices:
 - Portable video magnifier, portable braille device, iPad, iPhone, Chromebook, and a laptop with NVDA, ZoomText, DBT connected to electronic embosser
 - Table-top video magnifier, Kindle, computer with screen magnification, JAWS, iPhone

AT devices used

- Used "Checklist of Literary Braille Skills" by Carmen Willings, www.teachingvisuallyimpaired.com (also on BANA site)
- Used miscue analysis chart by Dr. Mila Truan (in *Communication Skills for Visually Impaired Learners*)
- Used my own data collection sheets that collect miscues, wpm, comments
- Timed readings of words, sentences, and passages
- Tactile graph paper to show progress over time

Progress monitoring

- Quick introduction of contractions, especially wordsigns, allowed immediate access but also for skills to build over time
- Variety of materials that kept lessons interesting and enjoyable
- Use of personally interesting texts
 - jokes and riddles
 - poetry
- Excellent comprehension skills
- Self-satisfaction at own growth: tracking their own progress
- Maintained motivation!

Successes

- Moving from double spaced to single spaced materials
- Building reading speed and fluency
 - fingers "numbing out"
- Finding time to practice:
 - homework
 - frequency and duration of lessons at times (testing, holidays)
- Availability of technology for adult student
- Health challenges for adult student; adolescence for 6th grader
- Finding sufficient ready-made practice materials that were at the correct level of challenge

Challenges

- How can we make braille instruction more available to adult learners?
- How can we fit braille instruction into the busy middle school schedule (along with technology, O&M, etc.)?
- How can we encourage frequent practice in reading and writing?
- What writing methods are most useful to people who acquire braille skills after being print readers?

Questions to consider

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References
