

# The Journey to Becoming a Dual Media User: Experiences of Students, Family Members, and TVIs

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# Study Procedure

- ▶ We invited triads to participate in telephone interviews.
  - ▶ Student who began learning braille in 4<sup>th</sup> grade or later
  - ▶ Parent/grandparent of the student
  - ▶ Teacher of students with visual impairments
- ▶ Individual interviews lasted 20-45 minutes.
- ▶ Detailed notes were taken.

# The TVIs



- ▶ **Anna's TVI** has 19 years of experience and is employed at a residential school. She has worked with 5 dual media learners during her career.
- ▶ **Brian's TVI** has 3 years of experience and is employed as an itinerant teacher. She has worked with 3 dual media learners during her career.
- ▶ **Chad's TVI** has 3 years of experience and is employed as an itinerant teacher. She has worked with 3 dual media learners during her career.

# Anna



- ▶ 6<sup>th</sup> grader
- ▶ Anna has learning challenges related to a rare syndrome.
- ▶ Anna spends time with both parents who are divorced.
- ▶ Mother reports that Anna is tactually defensive and has poor fine motor skills.
- ▶ Mother reports Anna has an excellent vocabulary.


# Anna's Experience at a Private School

- ▶ Anna attended private school through 5<sup>th</sup> grade.
- ▶ She received services from a TVI twice a year.
- ▶ In 3<sup>rd</sup> and 4<sup>th</sup> grade, the family hired a tutor who was blind and provided 3 hours of braille instruction each week.

# Thoughts on Learning Braille

*Mother: “Braille wasn’t the problem for me. I would have had her doing it a lot earlier if there was a way for us to do it with staying in the school she was in... I was fine with her having braille even though I wanted her to be a sighted child.”*

*Anna: “At first, I was nervous, [about learning braille] but now I say ‘yeah’ because I do not have to strain my vision.”*



**Mother: “She loved to read books in print. Large print wasn’t even working – reading letters at a time, not even words. She was the one who had an emotional reaction to giving up print. She wasn’t old enough to verbalize it. She did not want to listen to audio books... I think losing print was hard for her. She has an excellent vocabulary and people have praised her for that. For someone who is never going to be the fastest runner or artist, having a good vocabulary was ‘something she could hang her hat on’. [Around age 10 or 11] she verbalized that she was going to lose her vocabulary skills. That was the hardest thing. She is so frustrated because she gets the code and can write it but can’t read it. She [reads] around 8 to 10 words a minute [in braille] and she was a [print] reader. She just wants to read, but not Dr. Seuss.”**

# Anna's Mother Has Learned Some Braille

*Mother: "I have taken braille workshops and I have a rudimentary understanding. I don't know contractions. I understand how braille works and I can read some basic things. I can write uncontracted braille but I can't read what she is reading. It's not like I can look over her shoulder and follow along and correct her when she makes a mistake."*



# Anna's Experience at a Residential School

- ▶ In 2016-2017 Anna was enrolled in 6<sup>th</sup> grade at a school for the blind.
  - ▶ Anna had a class specifically for braille instruction.
  - ▶ Anna learned all the contractions, rules, and Nemeth code.
- ▶ For 2017-2018 Anna is repeating 6<sup>th</sup> grade at the school for the blind with the same teacher.
  - ▶ Braille reading rate 10-12 WPM

# Anna's Efficiency with Print and Braille

**Anna: “I can read braille quicker and for longer periods of time... When I write in braille, I take my time so I don't make braille-o's.”**

- ▶ Outside of school Anna sometimes writes using pen or pencil on paper writing larger than she used to.

**Anna: “I read my own handwriting. It's much easier to write in braille.”**

- ▶ Anna is unable to see print efficiently.

**Anna: “[Unless] it is enormous like in advertisements.”**

# Anna's Use of Technology

*Anna: "I use VoiceOver on my phone and iPad at home. It's my go-to. I use it [VoiceOver] to write text messages because when I use Siri it comes out funky."*

*TVI: "She is faster on the braille than technology. She has a lot of learning to do to be efficient with the technology. She has to learn to problem solve."*

# Anna's Use of Technology

**TVI:** *“She takes her technology home. She was able to do her spelling homework with the iPad and RBD.”*

**Mother:** *“I wish she had more access at home to a RBD. I’m meeting with someone about purchasing one. I feel like if she had a RBD at home she would have more access.”*

# Formulating the “Right” Program for Anna

*Mother: “As much as I love \_\_\_ [TVI] I think sometimes she doesn’t get where Anna is at as far as how can she do her math homework if she can’t read it? She’ll get all her math problems wrong because she can’t even find the page. I’m failing at giving her the support she needs at home. I can’t sit there and do all her math homework with her. I wish she was still getting intensive braille training. It is a very small class [that she is in at the residential school] but Anna does best with 1:1 repetitive instruction for braille. She is not exceling at reading braille so she doesn’t want to do it. You have to really support her with the challenge of reading braille.”*

# Concerns About the Future for Anna

- ▶ Anna's mother is concerned about her tracking health information and other important data she needs to have access to.

***Mother: "She doesn't have a way to get from braille to print for other people."***

***Mother: "I have seen adults who use braille and tech. I would like Anna to be able to do the things these adults do. They are the high end of what you hope for, for your child. I want to see her get there but I'm not sure how to get [her] there."***

# Brian



- ▶ 9<sup>th</sup> grader
- ▶ Brian was diagnosed with Stargardt's in 6<sup>th</sup> grade. His current acuity is 20/400 OU.
- ▶ Brian began learning braille in 7<sup>th</sup> grade with another TVI who used *Building on Patterns*.
- ▶ Brian has been working with his current TVI since spring of 8<sup>th</sup> grade.
- ▶ Brian is in general education classes.
- ▶ Brian plays high school football.

# Brian's Access to Information

**Brian: *"I have a Visio Book but I don't like it as it is big. I use my phone or iPad in the classroom."***

- ▶ Teachers print out Power Point slides and enlarge Brian's assignments.
- ▶ Brian reports that other students turn in assignments digitally, but he opts to turn his assignments in via paper.



# Brian's Access to Information



**Brian:** *“I don’t do audio. I tried it before. [I didn’t like it because] there was music behind the audio.... It put me to sleep.”*

**TVI:** *“I think he would be a more proficient braille writer than a print writer but the teacher is resistant to him making noise in the classroom... I think he would be a better writer with a keyboard than paper and pencil.”*

# Brian is Connecting with Braille

- ▶ The TVI combines the *I-M-ABLE* approach with her university textbook, *Ashcroft's Programmed Instruction in Braille*.
- ▶ The TVI uses flashcards, but not in a game format.
- ▶ The TVI uses texts of interest to him that don't make him feel like he is doing first grade work.
- ▶ So far the TVI has placed little emphasis on writing braille; her emphasis has been on reading braille.

# Brian is Connecting with Braille

- ▶ TVI: *“He may not admit it to you [interviewer], but he is excited about learning braille.”*
- ▶ Mother: *“He actually completed a full [science] report in braille and missed the bus the day it was due. He walked 5 miles to school to turn it in. He was so determined to turn it in because he did it in braille.”*

# Motivation for Brian

- ▶ Racing his first TVI to see who could braille the alphabet faster.
  - ▶ TVI = 20 seconds
  - ▶ Brian = 23 seconds
- ▶ Reading braille to his cousin who is in elementary school.
- ▶ Meeting a student who began braille instruction at age 6.

**Brian: “I like that I’m the only person at school who knows braille. I think it is cool to know a different language.”**

# For Brian It's Not Just About Braille and Technology

- ▶ Perceptions of others:
  - ▶ You play football but you can't see?
  - ▶ The teacher is talking and I can't see her mouth is moving.
- ▶ Follow-up questions to the interviewers:
  - ▶ “Are either of you visually impaired?”
  - ▶ “How do you get around?”

# Chad



- ▶ 6<sup>th</sup> grader
- ▶ Chad has a muscle disease that results in him becoming easily fatigued.
- ▶ Chad started braille instruction for a short time in early elementary school.
- ▶ Chad started braille instruction a second time in summer 2016 when he was repeating 4<sup>th</sup> grade.
- ▶ Chad is mainstreamed in general education classes with 1:1 paraprofessional support.
- ▶ Chad is being raised by his grandmother.

# Chad's Efficiency with Print

- ▶ Chad reads 12-17 WPM in both print and braille.
- ▶ Chad uses magnification but has difficulty visually tracking and easily fatigues.

**Chad: “I only see half of the word [with my electronic magnifier] so I take a longer time to read...I read slower than everybody else.”**

**Chad: “I feel like I read faster in print but the other kids are faster than me. I get tired with print so I get the assistant to read to me a lot.”**

**Chad: “I can see to write on paper.”**

# Chad's Use of Technology



- ▶ iPad with VoiceOver
- ▶ App on the iPad to practice braille letters
- ▶ Has computer, but doesn't use it often.



# What Motivated Chad



- ▶ Racing another student to see who was quicker creating braille letters and contractions using a muffin tin and plastic animals.
- ▶ Throw a beach ball with numbers 1-6 on it. Tell a word that uses the dots of where fingers are touching.
- ▶ Bingo
- ▶ Elevator keypad

# Concerns About the Future for Chad

- ▶ **Grandmother who is diabetic:** *“I am going to get \_\_ [TVI] to come and put braille numbers on the phone. I want him to start learning to use the phone... I want him to learn to call 911 and some other people’s numbers.”*
- ▶ **TVI:** *“Is it reasonable to transition a one-finger, double-space braille reader to reading braille in the classroom when he has magnification, audio format and/or an adult reader for print material? Is it ideal to push forward with braille writing for extended responses in the classroom or push more for typing extended responses?”*

# Question These TVIs Have



- ▶ **Anna's TVI:** How long does it usually take to learn to read braille with fluency when moving from print to braille?
- ▶ **Brian's TVI:** I'd love to know more about how to decide how much time to devote to braille when the student clearly prefers reading print, yet you know there is high chance they will lose vision in the future.

# Take Away Messages

- ▶ The educational team, including the student, needs to think not just about this school year, but also about the student's future braille and technology needs.
- ▶ Families and educators need to design programs to support students in becoming efficient braille readers and writers in a short time span so that they truly can integrate braille as a tool in their literacy toolbox.
- ▶ Students and families need emotional support as the student moves through the transition from print to braille.

# Take Away Messages



- ▶ Students can benefit from meeting role models and having ongoing interactions with them.
- ▶ Students can benefit from intense technology instruction to ensure proficiency and comfort in using technology.
  - ▶ Anna can't use NVDA so she has trouble at home with accessing information on the computer.
  - ▶ Brian's only option for writing braille is a Perkins braille which isn't realistic in high school to take from class to class.

# Advice from Anna's TVI

- ▶ Each student is different. What works for one student may not work for all.
- ▶ Don't forget that the parents are transitioning too and will need to learn about what resources they have access to for books and materials.
- ▶ Find out what books your students most like to read, what genres they are into and then find a way to make sure they still can access their books auditorily at their listening comprehension level while making the transition; it can be frustrating for students to have to read books below their reading level while learning and it's important to keep their love of reading alive!

# Advice from Brian's and Chad's TVIs

- ▶ **Brian's TVI:** Be creative. Just because something works for one [student], doesn't mean it will work for others.
- ▶ **Chad's TVI:** Keep it interesting, make it fun, and incorporate themes and movement into instruction because students need instruction to be meaningful. Don't give up or become stagnate because a student is struggling with a few dot configurations... push through.

# Like Anna's Mother, Look Ahead Constantly

*“I think technology is going to be her way forward but definitely braille too. I am not one of those people who think braille is obsolete. I think she needs both. I do think technology is going to be her day to day tool to really function.”*



# Want to Learn More About TVIs Experiences with Dual Media Learners?

Herzberg, T. S., Rosenblum, L. P., & Robbins, M. E. (2017). Teachers' experiences with literacy instruction for dual-media students who use print and braille. *Journal of Visual Impairment & Blindness*, 111(1), 49-59.

# Are You Part of a Triad That Would Like to Tell Your Story?

- ▶ Contact Dr. L. Penny Rosenblum at [rosenblu@U.Arizona.edu](mailto:rosenblu@U.Arizona.edu), 520-621-1223
- ▶ Each participant will receive a \$25 gift card.