

Slide 1:

Perspectives of Four Dual Media Learners, Their TVIs, and Their Parents

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Slide 2:

Study Procedure

We invited triads to participate in telephone interviews.

Student who began learning braille in 4th grade or later

Parent/grandparent of the student

Teacher of students with visual impairments

Individual interviews lasted 20-45 minutes.

Detailed notes were taken.

Slide 3:

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.

Dina's TVI has 10 years of experience and is employed as an itinerant teacher. Dina is her first dual media learner.

Slide 4:

Anna

6th 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.

Slide 5:

Anna's Experience at a Private School

Anna attended private school through 5th grade.

She received services from a TVI twice a year.

In 3rd and 4th grade, the family hired a tutor who was blind and provided 3 hours of braille instruction each week.

Slide 6:

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."*

Slide 7:

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."*

Slide 8:

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."*

Slide 9:

Anna's Experience at a Residential School

In 2016-2017 Anna was enrolled in 6th grade at a school for the blind.

Anna had a class specifically for braille instruction.

For 2017-2018 Anna is repeating 6th grade at the school for the blind with the same teacher.

Anna had a class specifically for braille instruction.

Anna learned all the contractions, rules, and Nemeth code. Braille reading rate 10-12 WPM.

Slide 10:

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."*

Slide 11:

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."*

Slide 12:

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."*

Slide 13:

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."*

Slide 14:

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."*

Slide 15:

Brian

9th grader

Brian was diagnosed with Stargardt's in 6th grade. His current acuity is 20/400 OU.

Brian began learning braille in 7th grade with another TVI who used *Building on Patterns*.

Brian has been working with his current TVI since spring of 8th grade.

Brian is in general education classes.

Brian plays high school football.

Slide 16:

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.

Slide 17:

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."*

Slide 18:

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.

Slide 19:

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."*

Slide 20:

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."*

Slide 21:

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?"

Slide 22:

Chad

6th grader

Chad has a brain anomaly that impacts growth and muscle tone.

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 4th grade.

Chad is mainstreamed in general education classes with 1:1 paraprofessional support.

Chad is being raised by his grandmother.

Slide 23:

Chad's Efficiency with Print

Chad uses magnification but has difficulty visually tracking and easily fatigues.

Chad reading speeds:

Magnification @ 3" = 21-23 WPM

Braille = 10-12 WPM

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."*

Slide 24:

Chad's Use of Technology

Chad uses an iPad with VoiceOver.

Chad uses an app on the iPad to practice braille letters.

Chad averages 15 WPM in Talking Typer.

Chad has a computer, but doesn't use it often.

Chad is learning to use ZoomText. He has difficulty seeing the full document.

Slide 25:

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 print letters on it. When caught say the dots of the letter closest to the thumb.

Bingo

Elevator keypad

Braille Toss

Slide 26:

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?"*

Slide 27:

Dina

11th grader who is gifted

Attends an online school and is dually enrolled in university courses

Dina's mother suspected a visual impairment when she was a preschooler, but a formal diagnosis was not made until she was 8 years old.

Today Dina has light perception in one eye and has a 6 degree field in the other eye.

Dina began learning braille in middle school at age 12.

Dina: I didn't want to learn it [braille] but once I started fatiguing using my eyes, I gave up and I agreed to learn it.

Slide 28:

Dina's Experiences Learning Braille

Dina: [When I was learning braille] my teacher would let me get "dumb little kids books". I would braille them and have to read them back to her. It was perfect for me.

During middle school Dina had a study skills class with the TVI for 3 hours and 45 minutes a week across 3 sessions and ESY for 2 years.

Dina has 2 pen-pals who are braille users. She started writing to them when she was beginning braille instruction.

Slide 29:

Dina's TVI Shares About Teaching Her Braille

Used *Mangold* and Braille *FUNDamentals* in the beginning.

Dina's own organizational skills and goal oriented personality contributed to her success learning braille in a short time.

I introduced her to the BrailleNote and she can fly on it!

She wasn't interested in games or the functional stuff... She was more motivated by how can I [Dina] make my life more simple.

At her best Dina read 28 WPM in braille and never achieved efficiency to the level she has with technology.

Slide 30:

Dina's Use of Braille

Dina has labeled her microwave, oven, and spices in braille.

Dina plays Uno in braille with family.

Dina uses braille in the community for signage.

Dina has brailled the menu of a restaurant her family goes to regularly.

Dina reads 18 WPM and this is the first year since middle school that she is not receiving direct braille instruction.

Dina: When I use auditory I listen to 260 words per minutes. When I read in braille, I read a lot slower.... We tried to get me ready to take a [high stakes] test in braille and it just wasn't working!

Slide 31:

Dina's Use of Print

In the past Dina has used a monocular, hand-held magnifiers, and a CCTV but currently none of these devices "work for me any more."

Dina: It's hard for me to see it so I don't read in print for textbooks or novels at all.

Dina will use her vision to complete math related work, but after 15 minutes has a headache.

Dina: For other subjects [I can read print.] maybe 30 minutes to 45 minutes before my eyes are done.

Slide 32:

Dina's Use of Technology

Dina's family has supported her use of technology and braille, recognizing for her the goal is efficiency.

Dina: I use my BrailleNote to write and then I transfer [the file] to my laptop. I use JAWS and MAGic to edit. I use my computer a lot!

Dina is not an efficient touch typist and is more efficient typing using the BrailleNote.

Dina's mother and TVI will edit her papers for formatting, but not for content.

Her university professor marked Dina down for not using MLA properly. Dina and her father met with the disability center to explain Dina's challenges with formatting.

Dina uses the Read2Go app on her iPad to access books for her courses.

Slide 33:

For Dina: The Importance of Role Model

Dina started attending a weekend program for youth with visual impairments during middle school and reported that she liked going there to meet other students like herself.

Dina now serves as a role model to others who are younger than her.

Dina: I have a friend Joe, we call him the "JAWS Help Desk" because he is so good at JAWS.

Dina's Mom: "It is good that she has people she can call that know the technology and braille because I don't."

Slide 34:

Dina's Plans for the Future

Dina: "I don't see print having any role [in my future]. I think I will have to let print go.... Technology will play a big part for me as I rely on it for my schooling."

Dina wants to be a motivational speaker and/or a journalist.

Slide 35:

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.

Slide 36:

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.

Slide 37:

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 brailier which isn't realistic in high school to take from class to class.

Slide 38:

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!

Slide 39:

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.

Slide 40:

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."

Slide 41:

Is it Time to Change Our Term?

Is the term "dual media" not representative of the population of students such as Anna, Brian, Chad, and Dina?

Would the term "multi-media" or "tri-media" be more accurate terms for the field to use?

Slide 42:

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.

Slide 43:

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

Contact Dr. L. Penny Rosenblum at rosenblu@U.Arizona.edu, 520-621-1223

Each participant will receive a \$25 gift card.

Case Studies of Established Print Readers Learning and Using Braille and Technology in School and Home

Conducted by: Dr. Tina Herzberg, University of South Carolina Upstate
Dr. L. Penny Rosenblum, University of Arizona

We are seeking triads composed of a student with visual impairment, parent/guardian, and teacher of students with visual impairments to participate in an interview and time sampling study to learn about the student's experiences learning and using braille.

Students with visual impairments must:

- Be entering 6th to 12th grade in the 2017-2018 school year
- Began K-12 instruction using print and began learning braille in 4th grader or higher
- Be willing to take part in a 45-60 minute individual interview
- Be willing to take part in a 45-60 minute interview with his/her parent/guardian and teacher of students with visual impairments
- Answer questions about his/her literacy experiences two times between August and October 2017

Parents/Guardians and Teachers of Students with Visual Impairments must:

- Be willing to take part in a 45-60 minute individual interview
- Be willing to take part in a 45-60 minute interview comprised of the student, parent/guardian, and teacher

Steps to Participate in the Study:

- A parent/guardian or teacher of students with visual impairments needs to contact Dr. Tina Herzberg at therzberg@uscupstate.edu or 864-503-5572 for a consent form and demographic form.



For more information contact:

Dr. Tina Herzberg
864-503-5572
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