PEER-REVIEWED

Every? Child Ready to Read

A Model of Successful Programming for Deaf Children

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Children's librarians are challenged to provide inclusive programming in today's public libraries. Sensory and American Sign Language (ASL) storytimes are often common offerings.

However, many librarians are not given the tools to modify storytimes to fit special needs populations. This research focuses on how Every Child Ready to Read (ECRR) might apply to deaf and hard of hearing (D/HoH) children who visit US public libraries.

ECRR second edition states that hearing children practice five pre-literacy skills prior to learning to read—talking, singing, reading, writing, and playing. Singing, talking, or any skill that focuses on rhyming may be difficult for D/HoH children. Using grounded theory research to explore programs, services, and storytimes implemented and modified for D/HoH children in US public libraries, this study will review ECRR's pre-literacy skills to determine how they might or might not apply to D/HoH children.

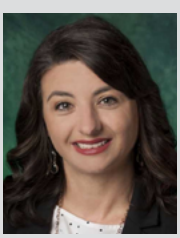
The average deaf adult reads at a fourth-grade level. This statistic has been true since 1975, when the average reading age increased from the previously held third-grade reading level.[1] In contrast, the average reading level for all American adults is ninth grade and most public health and safety information is printed at a fifth-grade reading level. The average newspaper is written at an eleventh-grade level.[2]

Public libraries can play a vital role in providing early literacy programming and education to D/HoH children and their families by offering pre-literacy instruction, access to leisure reading materials for D/HoH children (such as ASL books, graphic novels, and DVDs with closed captioning), and a physical space to hold ASL classes, support groups, and other events for D/HoH children and their families.

Literature Review

At the Safety Harbor Public Library in Pinellas County (FL), librarians offered ASL classes for family members of D/HoH individuals and people wanting to learn a new language[3] and their storytimes offered a place for both D/HoH and hearing parents and children to interact.[4] The library also offered homework assistance and language modeling for hearing children of D/HoH adults, and hosted a deaf literacy center with programs for D/HoH adults and children.[5]

Africa Hands and Amy Johnson reported that several libraries facilitated sign language storytimes for D/HoH and hearing families; taught early literacy workshops for parents of D/HoH children; offered outreach programs for D/HoH family members; and added ASL videos to library collections.[6] Steve Nail reported that Canadian libraries purchased a series of DVDs called ASL Tales, which offered children's books with accompanying DVDs featuring stories told in ASL and web-linked learning tools.[7] The Argo Library/School Media Center in Colorado reported carrying a large number of books with D/HoH characters, a video collection with ASL instruction, information on deaf culture, and books with stories told in ASL.[8]



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A librarian at the Springfield (MA) City Library responded to a D/HoH child attending their programs by purchasing books with ASL, paying the librarian to take ASL courses, and providing outreach at a local school for D/HoH children.[9] The Cleveland Heights-University Heights Public Library in Ohio hired staff with basic ASL knowledge, paid for additional ASL classes, offered paid interpreters increased D/HoH materials, and offered computer classes for D/HoH individuals.[10]

Christine Wixtrom of Alexandria (VA) founded ASL Access, a nonprofit, volunteer-run organization to supply public libraries with ASL resources. ASL Access began offering videos featuring ASL instruction and storytimes and deaf culture information and continues to offer these services to libraries to date.[11]

Librarian Harley Hamilton of the Georgia Institute of Technology created *My Sign Link,* a free online dictionary that shows a video of the sign for the word typed into the dictionary prompt. Hamilton created the 17,000-word dictionary with only a $500 budget.[12] Today, there are many of these free online dictionaries available, such as ASL Pro, Life Print, and Hand Speak.

In 1987 The Child's Place, at the Brooklyn Public Library in New York, began offering drop-in programs in English, Spanish, and ASL storytimes and continues to offer such programming today.[13] The Monroe County (NY) Library System received $99,150 in Library Services and Technology Act (LSTA) grant money to train staff in ASL and offer ASL programming, which is still ongoing today.[14]

According to Judith Mounty, Concetta Pucci, and Kristen Harmon, it is critical that ASL is the foundational language for D/HoH children, both at school and at home.[15] There is a positive correlation between ASL knowledge and literacy abilities for D/HoH children.[16] This is most evident for D/HoH children born to D/HoH parents, who outperform D/HoH children born to hearing parents in ASL fluency and reading skills.[17] This difference in ASL and reading skills in D/HoH children of deaf parents and D/HoH children of hearing parents demonstrates the importance of early language acquisition in the early literacy development of D/HoH children.[18]

Further, Thomas Allen et al. found that visual language (like ASL) benefits D/HoH emerging readers by helping them develop their visual attention, learn new words, and develop cognition, language, and literacy skills. Use of visual language for D/HoH predicts early literacy skills, including print knowledge and letter and word identification from the age of three years into adulthood.[19] Hannah Dostal and Kimberly Wolbers confirmed that children who focused on learning ASL and English simultaneously made significant progress in the acquisition of both.[20] Parents play a crucial role in developing the early literacy skills of their D/HoH children by teaching the child early meaningful communication.[21] Graphic novels assist D/HoH children who are "faced with challenges in reading comprehension, students who are D/HoH can benefit greatly from the use of words and pictures together to convey information."[22] Researchers speculate that D/HoH readers are more easily able to comprehend graphic novels due to the visual nature of sign language.[23]

It is important for deaf children and parents or caregivers to be able to share experiences, discuss ideas, and engage in linguistic and cognitive activities in both ASL and English.[24] One way is to model leisure reading to children. Judith Mounty, Concetta Pucci, and Kristen Harmon, found that seeing their parents read was as important for D/HoH children as was being read to by their parents.[25] Overall, parents can enhance their D/HoH child's chance for reading success by:

- establishing a language-rich culture in the home;
- using fingerspelling (ASL letters to spell out unknown words) as much possible; and
- investing time in reading, both as a hobby for themselves and to their child.[26]

ECRR and D/HoH Children

ECRR is a pre-literacy system designed to guide librarians in educating parents and caregivers about the importance of early literacy development for children.[27] The first edition of ECRR suggested that all children need the following pre-reading skills to support the early literacy development of children birth to age five: print motivation, print awareness, phonological awareness, narrative skills, vocabulary, and letter knowledge.[28]

The second edition of ECRR focuses on talking, singing, reading, writing, and playing.[29]

This research will use the more technical terms of the first edition, as they are more closely aligned with the research.

Print Motivation

ECRR first edition describes print motivation as being interested in and enjoying books.[30] ECRR recommends teaching print motivation by making the reading experience positive with loving and nurturing behavior, using interactive books, choosing books on topics the child enjoys, letting the child choose their own books, reading a book as often as a child requests it, and making time for reading by shutting off the TV.[31] Print motivation can be a struggle for D/HoH children as they are read to less frequently than their hearing peers.[32]

Unlike spoken language for hearing children, reading is not a natural phenomenon that children will typically acquire without instruction. Without repeated access to and explanation of printed materials, school-age children (D/HoH or hearing) will not acquire the necessary reading readiness skills

nor will they progress to being proficient readers later in life.[33] Storybook sharing and interactive books are two ways that D/HoH children can experience print motivation.

In a story-sharing study, D/HoH children wanted to continue the story when mutual dialogue took place about the text.[34] Using this dialogic reading, the parent signed the story for the child and pointed out key phrases and words, the child asked questions and made comments throughout the story. When dialogic reading was encouraged, the story's vocabulary was enriching for the D/HoH children in the same way that dialogic reading is for hearing children.[35] The shared reading and dialogue have also been found to accelerate proximal development and induce feelings of security for the D/HoH child in the same way as it occurs for hearing children.[36] Thus, D/HoH children in this study developed print motivation with no accommodations made other than the use of ASL and dialogic reading.

Sometimes children do not enjoy being read to. For children with language impairment (which includes D/HoH children), the number of children who resist storybook sharing is even higher.[37] Joan Kaderavek and Lori Pakulsk found that manipulative books (interactive books such as pop-ups) were as well received by D/HoH children as toys, thus helping to introduce books to children who might otherwise be reluctant readers.[38] Interactive books can also help children stay engaged in reading activities longer.[39] Interactive books can be introduced as toys, and dialogic reading further reduces pressure on parents because they do not have to read the book perfectly (know all the words in ASL) from beginning to end. Therefore, interactive books can help D/HoH children experience positive associations with books or print motivation.

Phonological Awareness

Phonological awareness includes rhyming, alliteration, and understanding syllables[40] and also that words are broken up into smaller parts.[41] ECRR first edition defines phonological awareness as being able to hear and play with the smaller sounds in words.[42] ECRR suggests children build phonological awareness by singing songs, rhyming, reading poetry, and playing with words.[43]

Storytimes often include singing songs, demonstrating fingerplays, and reciting nursery rhymes. Many children seem to naturally enjoy rhyming and rhyming activities.

Fiona Kyle and Margaret Harris report that phonological awareness and reading appear to be positivity correlated as the child ages.[44] Although some D/HoH children do seem to develop phonological awareness, it is thought that rather than understanding phonological coding before becoming proficient readers, D/HoH proficient readers are the select few who develop phonological awareness.[45]

Among deaf teachers and researchers, many believe that it is unnecessary to teach phonological awareness to a D/HoH child.[46]

In a case study, Andrea Smith and Ye Wang found that visual phonics might be a good substitute for traditional heard and spoken phonological awareness.[47] Visual phonics is a system of teaching deaf children phonics by teaching forty-six signs that each represent a sound in English.

Visual phonics uses special hand cues to represent sounds, while speech reading is signing and mouthing the word simultaneously.[48] Speech reading is a less commonly used way to teach phonological awareness, although it is highly successful as speech reading significantly predicts growth in word reading for D/HoH children between the ages of seven and eight.[49]

Vocabulary

ECRR first edition defines vocabulary as "knowing the names of things."[50] ECRR suggests reading lots of books, using unusual and specific words, labeling feelings and concepts, and speaking to children in the parent's native language as effective ways to build a child's vocabulary.[51] Since 96 percent of families with D/HoH children have a native language that is verbal, speaking to their children in their native language is not likely to be heard or understood by the D/HoH child and thus is not the best option.[52] Hearing parents must acquire ASL or another form of communication before they can teach their child language. Since new language acquisition can take years, this delay in parent language learning undoubtedly affects the child's language acquisition and vocabulary. Parents with slower rates of ASL acquisition may be hesitant signers who feel unqualified to read books to their children. This may be the reason D/HoH children are read to less frequently than their hearing peers.[53]

While hearing children are exposed to language from overheard conversations, verbal language on TV, radio, etc., D/HoH children often only have one language source since in most families with D/HoH children, only one family member becomes proficient in sign language, exposing the child to significantly less language than hearing.[54] The more ASL a mother knows, the larger the vocabulary of her D/HoH child will be.[55] However, many parents who use sign language do not become fluent in it.[56] Additionally, most hearing mothers only sign a small portion of what they say, further limiting opportunities for a D/HoH child to build vocabulary.[57]

Vocabulary building at school can prove difficult for the D/HoH child. Although D/HoH children are usually provided with a sign language interpreter in the classroom, only 60 percent of educational interpreters in the US were found to have adequate skills to provide full access to classroom information.[58] Additionally, communication can be further limited by being unable to be in the line of sight of the interpreter, teachers, or classmates.[59]

To learn vocabulary, D/HoH children need intense daily instruction using rich and varied words, combined with multiple exposures to picture representations of those words being signed.[60] Because D/HoH children typically start learning vocabulary later than hearing children, their vocabularies lag behind those of hearing children.[61] This is an issue made worse when those students with a bigger vocabulary read more, thus expanding their vocabulary, while students with a smaller vocabulary read less, resulting in differences in vocabulary that grow wider.[62] This is unfortunate, since vocabulary is the single strongest predictor of reading success over time and reliably predicts continued reading achievement until age eleven in D/HoH children, and school readiness for D/HoH children has been interpreted to primarily mean a large vocabulary at an early age.[63]

Although today ASL is the language most D/HoH children use to build vocabulary, it was not used in deaf education until 1960; thus, prior to 1960, oral methods were the sole form of D/HoH instruction.[64] Though ASL was founded in the early 1800s, there is not the same body of research related to it and its acquisition as there is for other languages. Though other methods are used for D/HoH individuals to communicate, signing skills are still the best predictor of reading skills.[65] Because ASL and English are not exact (word for word) matches, sharing a story with a D/HoH child can be confusing, causing further delay in language and reading development.[66] ASL also does not promote the same kind of vocabulary building as English, largely due to a lack of synonyms. In ASL, one sign can be used for many different English words. For example, in English, a child might know the word automobile, vehicle, car, truck, van, SUV, etc. while a D/HoH child may only know the sign that mimics someone holding a steering wheel. Further, a hearing child might know that you drive, operate, steer, etc. a motor vehicle, a D/HoH child conveys this information by taking that same sign that mimics steering a car and move it forward.

ASL does not use prefixes and suffixes in the same way, nor does it use articles, conjunctions, or punctuations in its common use.

Manually Coded English (MCE) attempted to resolve the issues with ASL-to-English translations by matching the English language exactly; thus it is used to teach grammar and other school subjects that require language precision. However, MCE is not usually taught until a D/HoH child enters school. Because of MCE's specific usage, D/HoH students usually do not master MCE and do not choose to use it outside of the classroom. When students are forced to use MCE in the classroom, they often modify it to more closely resemble ASL.[67]

Dialogic reading expands vocabulary for D/HoH children as demonstrated by Susan Easterbrooks, "The child may say, 'Mmm. Vanilla. That my best ice cream.' And the teacher may respond, 'Mmm. You like vanilla ice cream. It's your favorite flavor.'"[68] Dialogic reading with D/HoH children works best when the signer is proficient in ASL and MCE, which is a system for signing exact English with possessives, articles, pronouns, and similar parts of speech that are omitted in ASL.

Narrative Skills

ECRR first edition defines narrative skills as describing and telling stories and suggests teaching narrative skills to children by helping them understand that stories have a beginning, middle, and end by expanding upon what a child says, asking more questions, encouraging detail, being patient while the child talks, talking about your day, and telling stories.[69] Lynn Robertson, Gina Dow, and Sarah Hainzinger found that although D/HoH children often have weaker language skills, they seemed to experience storytelling in the same way as hearing children.[70] However, D/HoH children likely need to be told a story more frequently to accurately retell it,[71] likely due to the D/HoH not splitting their visual time between the storybook and the signer (as opposed to a hearing child who is processing the verbal story simultaneously with the written story).

Print Awareness

Print awareness is defined in the ECRR first edition as noticing print, knowing how to handle a book, knowing a book is read from front to back, and knowing how to follow the written words on a page.[72] ECRR recommends teaching children print awareness by allowing them to turn the pages in a book, following words with your finger, and pointing out printed words in a child's day to day life.[73] There is no reason to believe that print awareness develops any differently for D/HoH children than it does for hearing children.[74]

Letter Knowledge

ECRR first edition defines letter knowledge as learning the names of letters, knowing they have sounds, and noticing them everywhere.[75] Some ways that ECRR suggests teaching this to children is by playing with shapes, playing with puzzles, playing with letters using different senses (for example, tracing letters in a sandbox), singing the alphabet song, reading ABC books, and pointing out letters in your environment.[76] Letter knowledge seems to develop similarly for D/HoH children as it does for hearing children. D/HoH children can learn the ASL alphabet and there is an exact letter match for each ASL letter sign. Writing letters was found to be an effective way to enhance letter knowledge for D/HoH children.[77]

Methodology

The incentive for this grounded theory research was derived from the researcher's experience as a children's librarian attempting to apply ECRR to D/HoH children. A review of the

literature exposed both the lack of knowledge and existing models for providing ECRR modified storytimes to D/HoH children. This led to this grounded theory research to provide an explanation or a model where none is present.[78] The goal of this study was to learn how librarians deliver programming to D/HoH children, which modifications they make to accommodate D/HoH children, and how they decide which services to offer to D/HoH children and their families. John Creswell's qualitative research procedures[79] were followed as well as those for grounded theory from Anthony Bryant and Kathy Charmaz.[80] The mode of data collection was semistructured interviews conducted in 2014. (The questions can be found in the sidebar to the right.) Eleven interviews were conducted, each approximately thirty minutes. Interview questions were designed to begin a dialog with the librarian to learn about starting and maintaining a program for D/HoH children. The interview questions were designed after conducting similar research on the broader topic of library services to children with diverse needs.[81] Some questions were also generated based on personal experience with ECRR, D/HoH individuals, and the review of literature.

Interview questions were pre-tested with a librarian at a D/HoH school and an early literacy expert for D/HoH children. Both pre-test interviewees were recruited through snowball sampling via an initial contact made with a principal at a school for the deaf. Preliminary interviews were conducted, transcribed, and coded to determine if the questions were appropriate to the topic and the audience. These interviews were not included in the final data. The pre-test interviews consisted of about seven initial questions with followup questions, as needed. Each preliminary interview resulted in approximately five pages of transcribed text and included the topics of program planning, staff attitude, implementation, successes, failures, and obstacles. These pre-test interviews helped to identify gaps in knowledge and to refine the final interview questions.

Grounded theory emphasizes the use of open, axial, and selective coding when using the systematic design.[82] Interviews were coded to distill and sort data as described by Kathy Charmaz, and to make comparisons and recognize overarching themes.[83]

There are two primary ways of validating a coding scheme (or methodology) in qualitative analysis. The first method is to compare the scheme against the raw data, doing the high-level analysis; and the second method is to tell the story to participants and obtain feedback via member checking.[84] For this research, both methods were used. Interviews were cross checked with secondary sources such as library websites served and the final model was shared with three interviewees to indicate whether the model reflected their experiences and, if not, to add anything that was missing from the model. Only one participant responded, but she reported that she thought the model was "excellent" in explaining the process of providing services to D/HoH children.

Semi-Structured Interview Questions

1. Describe the deaf population at your library.
2. How did you begin serving this deaf population?
3. How did you decide what programming to provide for deaf children?
4. Is your programming "mainstreamed"? That is, do all children participate in programming regardless of hearing ability? Or is it specific to only deaf children?
5. Can you tell me about your experience serving deaf adults? How does this relate to library services to deaf children?
6. Describe the implementation of your deaf programming.
7. Tell me about the training you have related to deaf literacy.
8. Does your library use Every Children Ready to Read or a similar "reading readiness" program? If so, which one? Where can I get a copy or more information about the reading readiness program your library uses?
9. How well do you find that this "reading readiness" program applies to deaf children?
10. Tell me about a program for a deaf child at your library that was a great success.
11. Tell me about a time when you tried to provide a library program for deaf children and encountered difficulties or failure.
12. Have you partnered with any other facilities, early educators, schools, libraries, etc., in order to serve deaf children?
13. Is there anything else you would like to add? Do you have feedback about things I should have asked or should not ask?

Participants

Library information was obtained from the data file for the 2010 Public Libraries Survey from the Institute of Museum and Library Services (IMLS) website, which contained 9,308 records.[85] Only libraries with service populations greater than 100,000 people across the US were selected, and the list was

narrowed down to 544 medium- and large-sized public libraries. Email addresses were obtained from library websites for 499 librarians, who were sent recruitment scripts and surveys. Of those, fifteen indicated that they would be willing to be interviewed and only ten of those were interviewed; one more interviewee was added through snowball sampling. As a result, eleven participants (ten women, one man) were interviewed.

Six of the participants were children's librarians; others had the titles youth services coordinator, deaf literacy coordinator, early literacy specialist, youth services manager, community engagement coordinator, and adult services coordinator.

Although demographic information was not collected, statistics are available for librarians who are members of the American Library Association (ALA). As of January 2017, a survey of 37,666 ALA members indicated most (66 percent) fall between the ages of 35 to 64, are white (86.7 percent), hold a master's degree (87.5 percent), are female (81 percent), and do not identify as having a disability (only 2.91 percent do).[86]

Results

The Model of Successful Library Services for D/HoH Children explains how librarians are serving these children in US public libraries in the absence of existing systems to serve D/HoH children. This model explains which services, early literacy instruction, staff training, and programs public libraries offer to children who are D/HoH and the four stages of providing those services.

1. The first stage highlights staff attitude as being warm and welcoming, taking initiative, and not seeing D/HoH as a disability.

2. The second stage describes the impetus for providing services as encountering a D/HoH patron in the library, knowing someone with a disability personally, or encountering a nearby agency that serves D/HoH individuals.

3. In the third stage, librarians made accommodations by providing inclusive programming, customizing programming, and involving the target audience.

4. In the fourth and final stage, this model demonstrates outcomes such as educating both hearing and D/HoH individuals and creating a sense of community.

Staff Attitudes

Being Warm and Welcoming

Librarian 4 noted that they are "trying to say that we're warm and welcoming and we want you here," and Librarian 3 concurred that their programs are "always open" to anyone. Similarly, Librarian 8 emphasized, "All of our programs are inclusive and welcome children of all different developmental needs," which was echoed by Librarians 1, 5, and 11. Librarian 4 also noted that they "make sure [to] have an interpreter available to make the [D/HoH] community feel comfortable and to let the parent know that they are welcome in our storytimes."

Seeing Differences, Not Disability

Librarians consistently reported not viewing individuals with hearing impairment as disabled. As stated by Librarian 6, "Differences are celebrated" and "[Deafness is] communication, which isn't a disability." Librarian 9 echoed, "We just don't really make a big deal about it. We just help every child to the best of our abilities." Deafness is often considered a culture rather than a disability since deaf people speak their own language and have their own norms as stated by Librarian 7. Librarian 6 described how her library perceives deafness as simply a group who speaks another language. "We offer storytimes in Somali, Spanish, etc., so having an ASL storytime was just a natural offshoot" (Librarian 6).

Taking Initiative

Staff initiative was a vital component in successfully providing D/HoH programming. Librarians reported feeling a personal responsibility to ensure that programming and accommodations were available for D/HoH children. Many times, librarians reported doing this without consulting supervisors or other staff members; as Librarian 9 describes, "I just took a chance and said, 'Yes. I commit to doing this.' And then I went to my manager. If I'd gone to my manager first, I don't know that it would've happened." Another librarian reported that the reason that a program occurred is, "There was a staff member who really took the reins" (Librarian 10).

Librarian 7 stated, "It's really hard to reach [D/HoH] children. That's why I go into the school. These parents are overwhelmed between doctors' appointments and the fact that you just found out that this child is deaf and you have speech therapy and 500 other things. The last thing you think of is bringing your deaf child to the library to storytime. So, whatever program we do we bring it there."

Impetus

Utilizing Staff Passions

Librarians who served deaf children reported feeling responsible to the D/HoH population, often due to knowing someone with a disability in their personal life. Librarian 9 described a fellow librarian who had "passion for deaf children and their education," while she, herself, felt passionate about D/HoH programming because she had a "profoundly deaf nephew."

Librarian 4 reported coworkers who also worked at a school with developmentally delayed children, which made "staff members who feel this is a personal thing for them" (Librarian 4). Librarian 9 described her passion as saying that the opportunity to serve the D/HoH population "came to the right person."

Encountering a Patron with an Unmet Need

Librarians reported that a common reason for beginning to offer a D/HoH library service is that they encountered a D/HoH child at the library. Anticipating or reacting to the needs of those D/HoH children was an impetus for a library to offer the programming. For example, Librarian 5 reported they began offering programming because, "We had a child who was deaf who came in and wanted to participate." Librarian 6 said, "If we have a child who's deaf and needs support in a program, we hire interpreters." Similarly, Librarian 8 said, "If we see a child that is not responding to what we're doing, we modify."

Librarians 2 and 11 reported that a deaf family made their needs known and the librarian responded. Librarian 8 had a baby start coming to their programming who was deaf and blind and took it upon herself to "learn her language."

Partnering with Nearby Agencies

Libraries often partnered with a school for the deaf, employer for the deaf, or other deaf community agency to provide D/HoH programming. Librarian 7 described how she sought out volunteers, "I went to the college and talked to the program director [of deaf studies] and said, 'I understand your students need contact hours. They need to be out there with the deaf. I have the deaf and I have nobody with them." The same librarian reported getting different volunteers from a local company that employs the deaf. That company pays its employees to volunteer up to twenty hours a year. Librarian 9 began a program that relied exclusively on volunteers for the first three years to read stories in ASL and provide translation services for the library.

Employing Diverse Staff

There were several examples of how hiring D/HoH or ASL knowledgeable staff led to increased D/HoH programming. Librarian 8 thinks they have more D/HoH children coming into the library due to their HoH children's librarian because "her presence reassured parents that we consider it normal and it's not a big deal." Librarian 10 also noticed D/HoH children coming in to talk to their staff member who has hearing loss and knows sign language. Likewise, librarians 5, 8, 9, and 10 reported employing staff who knew sign language, had a cochlear implant, or were HoH as an impetus for offering D/HoH programming.

Modifications/Accommodations

Provide Inclusive Programming

The majority of the librarians interviewed reported efforts to provide inclusive programming and services. Librarian 1 revealed that she gave away a free book as the prize for completion of their summer reading program and participants could choose to receive a printed book, a Braille book, or an audiobook. Librarian 2 brought in a sign language translator for the children's performer they hired. Librarian 6 used a projector for hands-free storytelling to help the storyteller communicate via sign language.

Customizing Programs

Making accommodations specifically for D/HoH individuals such as restructuring storytimes, changing policies, and purchasing items or services were some examples. Several librarians reported writing or exchanging notes with their D/HoH patrons. One librarian kept a dry erase board behind the front desk as a practical communication tool for staff unfamiliar with sign language. A library that served deaf/blind patrons requested one interpreter per deaf/blind individual so that each interpreter could sign into each deaf/blind patron's hand.

At one library, a deaf boy came to a year-long program that consisted of children reading to service dogs. The boy had verbal outbursts which, of course, he could not hear. As a result, the service dogs became afraid and uncooperative. To customize this program for the child, the librarian spoke to his mother and they made a plan to ask the service dog provider to offer their most tolerant dog to the boy and to offer a separate room (away from the other children and service dogs) for the boy to read to the dog. This modification allowed the child to remain in the program for its year duration.

Librarian 6 bought an easel so their deaf storyteller could easily hold the book and turn the page during storytime. Librarian 9 customized a storytime craft by helping attendees make a "who book" that featured "the sign for who on the front of the book and the sign inside for me, mother, father, grandmother," etc., inside. Librarian 7 holds regular sign language classes at all library branches, which are open to all ages to help friends and family members of deaf individuals learn sign language.

Librarian 4 built a collection of DVDs related to signing and books to educate hearing people about deafness. Librarian 8 served deaf children in storytimes and accommodated D/HoH children and aging adults by applying for a grant to get a t-coil system installed under the carpet of their auditorium, which allowed the library to host events where the speaker wears a special microphone that is automatically picked up by anyone wearing an assistive hearing device. Libraries 4 and 10 stated they had been serving the D/HoH community a long time, listed having a TTY, a device that allows D/HoH

individual to use a landline telephone, as the thing that first got D/HoH people coming into their library.

Librarian 5 reported staff had complaints from D/HoH patrons that some of the library's videos were labeled closed captioned, but the patron would take them home only to discover that they were not. To rectify this problem, the library purchased a DVD player to keep at the front desk so patrons could test the DVDs for closed captioning before taking them home. Librarian 7 hosted a deaf culture event at the library once a month by modifying recognized national holidays and events such as Black Deaf History Month and Deaf Hispanic Heritage Month. Librarian 7 also reported hosting book discussions for deaf individuals. These book discussions were different than a typical book discussion in that they did not assume the individual attending had read the book and were led by a deaf proficient reader who had read the book. Librarian 6 also reported having a book group in sign language that focused on deaf adults.

Librarian 7 described the process of deciding her library needed to offer customized computer classes and storytimes for D/HoH individuals, "We had computer classes and we would try to bring the deaf to the computer classes. Because they're looking down and they have to look at the interpreter and then type, the teacher was already speaking and going on to the next thing."

Involving the Target Audience

Having programs for a particular group means it is necessary to include them in planning, delivering, and evaluating the program. As Alana Kumbier and Julia Starkey explain, the popular slogan used to advocate for people with disabilities, "Nothing about us, without us," means that we must make room for people with disabilities in leadership roles, not just as members.[87] Librarians 6 and 9 accomplished this by having a deaf signer conduct (rather than interpret) storytimes. Librarian 9 explained, "The reason we wanted deaf signers is because then children and families are seeing real deaf people doing something for the community."

Librarian 9 helped deaf individuals in the community advocate for D/HoH services to the library, which included having a deaf person write a grant so the library could pay for the requested services. Librarian 7 echoed, "Everyone knows about [our library services for the deaf]. People move into town and right away they're here" at the library.

Outcomes

Meeting the Needs of the Minority Culture

Librarian 9 recalled her experiences meeting the needs of deaf children, "This is one of the places where they get regular exposure to sign language and an opportunity to use it and to see it [used]." Librarian 9 further described positive programming outcomes for D/HoH children, stating that "our programming increased the reading comprehension of D/HoH children who attended by 43 percent."

Librarian 7 was responsive to her library's deaf families by hosting programs like domestic violence prevention for deaf adults. Librarian 7 explained why meeting the needs of the deaf community is so important, "I think that this is where deaf people need to be. We have everything that they don't have: information. Nobody tells them what's happening around them."

Educating the Majority Culture

Librarians reported when they provide programming targeted at D/HoH populations, hearing people also attended and reported positive experiences. Hearing parents bringing their hearing children to ASL storytimes taught them about deaf culture and diversity according to Librarian 9. Librarian 9 also describes teaching a hearing parent sign language in order to communicate with their deaf child: "The hearing people that come [to programs for the deaf] get exposed to deaf culture."

During a storytime with a deaf storyteller, "We explain to the children that although it could be a male voice or a female voice that you hear, we want you to focus on the individual who is signing because they're communicating" (Librarian 6). Librarian 4 described parents conveying their excitement about the educational experience of having their hearing child attend ASL storytime. Librarian 6 observed, "There's a comfort that comes [for hearing children] with understanding deafness."

Build Social Connections

Librarian 9 explained the importance of using programming to build social connections by stating, "It's really not just their literacy, but it's building their social network." Librarian 4 echoed, "We are very active in seeking them [deaf people] out because . . . we want to make this a first thought for people: that this is a place for lifelong learning and no matter what your needs are we should be able to accommodate them."

Conclusion

ECRR teaches children's librarians to focus on pre-literacy skills in story time programming. While learning pre-reading skills is important for the parents of hearing children, it is vital for the parents of D/HoH children. Especially since four out of the six pre-reading skills found in ECRR require some sort of modification for D/HoH children. This research contributes to the field of librarianship by generating a model that

describes the modifications and accommodations librarians made to create successful programming for D/HoH children.

Because library services for special populations is more prevalent than ever, it is critical that librarians are constantly questioning existing models and asking themselves, "Does this apply to everyone?" or "Who might this model exclude?" Being aware of obstacles, taking the initiative when a child needs to be served, and not treating/viewing children as different were significant findings in this research.

Libraries can play an important role for D/HoH children and their families. Not only can they offer materials to check out such as books, graphic novels, and DVDs with closed captioning, they can also provide a wealth of information about early literacy and a place to build a D/HoH community. Libraries can help bridge the gap for early learners by providing early literacy programs modified for D/HoH children, free classes for families of D/HoH children to learn ASL, and other library programming with a D/HoH audience in mind. For public libraries to play this critical role, they must be knowledgeable about early literacy interventions for special populations like D/HoH children. &

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continued on page 36

- Which foods are most popular? How can we find out? *Create a survey, gather and organize results, produce a visual representation.*

For older kids: Provide nutrition labels for a variety of food products. Using these, challenge kids to assemble a healthy menu for a meal or a day. EatRight, from the Academy of Nutrition and Dietetics, has some accessible information on reading nutrition labels.

Sample Program #2

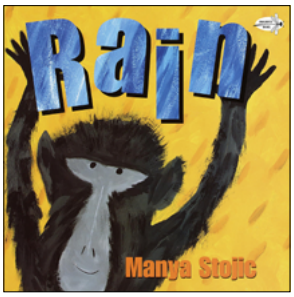
THEME: Weather forecasting

SKILLS: Identifying information need; locating information

Why are weather forecasts important, and how do we find out about the weather?

This topic could be of particular interest to kids taking part in outdoor programs, such as those provided through local parks departments.

- Get the conversation started by appearing in clothes that are inappropriate for the weather that day (a big coat in summer, flip-flops in winter, etc.). How do you know what to wear for the day?
- Share the book *Rain* by Manya Stojic and discuss ways to tell when the weather is changing.



- Talk about the value of weather forecasts.
- How do we know what the weather will be (what are some sources)?
- What's the forecast for tomorrow?

Close the session by reading about the completely outlandish weather conditions in Judi Barrett's *Cloudy with a Chance of Meatballs.* &

Every? Child Ready to Read—continued from page 20

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