

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

SCHOOL OF MUSIC

Music, More Than Sound: Examining the Musical Experiences
of d/Deaf and Hard of Hearing Individuals

ALEX ALMONTE
SPRING 2024

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
in Music Education
with honors in Music Education

Reviewed and approved* by the following:

Linda Thornton
Professor of Music Education
Thesis Supervisor
Honors Adviser

Sarah Watts
Assistant Professor of Music Education
Faculty Reader

* Electronic approvals are on file.

ABSTRACT

The current realm of music education primarily focuses on students' ability to hear. This audio-centric perspective limits learning for d/Deaf and Hard of Hearing students, as well as hearing students, by not providing prominent, multi-modal ways to learn. This study examined the musical experiences of d/Deaf and Hard of Hearing individuals to (1) better understand ways individuals with hearing loss can be supported in their music education and to (2) understand different ways to foster a more holistic music education for all students. The findings of this study showed that music is a valued part of many d/Deaf and Hard of Hearing individuals' lives. Many d/Deaf and Hard of Hearing individuals engage in musicking by using their residual hearing, feeling the vibrations created by sound, and/or accessing music through visual means. These individuals enjoy musicking for its opportunities to learn a new skill, develop soft skills, and build deeper connections with themselves and others. Despite the value that music holds in the lives of d/Deaf and Hard of Hearing individuals, a majority of individuals with any degree of hearing loss believe that places of musical learning are not welcoming or accessible for them due to lack of supports. Learning of d/Deaf and Hard of Hearing individuals, as well as hearing students, can be more strongly supported by providing opportunities to focus on the benefits of differentiated learning, the benefits of applying multimodal teaching techniques with emphases on vision and tactual engagements, the value of one-one instruction, the necessity of working with students on a plan for their learning, and music's ability to foster community and soft skills in addition to musical skills. By continuing to understand the musical experiences of d/Deaf and Hard of Hearing individuals, music educators can continue to find ways to support the needs of all of their learners.

TABLE OF CONTENTS

LIST OF FIGURES	iii
ACKNOWLEDGEMENTS	v
Chapter 1 – Introduction	1
Positionality Statement	1
Terminology	2
Introduction.....	3
Chapter 2 – Literature Review	7
Chapter 3 – Method	16
Positionality Statement	16
Research Design	16
Phase 1: Survey Instrument	17
Phase 2: Video Chat Interviews.....	22
Chapter 4 – Data Analysis/Results	25
Phase 1: Survey Instrument	25
Phase 2: Video Chat Interviews.....	32
Chapter 5 – Discussion	43
Appendix A – Phase 1 Survey Questions	51
Appendix B – Complete Phase 1 Question Results	54
BIBLIOGRAPHY.....	56

LIST OF FIGURES

Figure 1: Phase 1 Participants' Self-Identities	54
Figure 2: Phase 1 Participants' Question Responses	54
Figure 4: Phase 1 Participants' Question Responses (3)	55
Figure 3: Phase 1 Participants' Question Responses (2)	55

ACKNOWLEDGEMENTS

Over the past two years, this project has grown from the encouragement of many. I appreciate the assistance provided by Dr. Sarah Watts. Many thanks to Professor Shasta Dreese for providing her cultural insight, as well as Ms. Rachel Mackerel for facilitating communication through her interpreting services and providing additional cultural insight. Thank you to Dr. Linda Thornton, my thesis supervisor, for generously devoting her time and energy into this project. Most importantly, I would like to thank all the participants who engaged in this project. Thank you for sharing your voices – I am honored to have been entrusted with your stories.

Chapter 1 – Introduction

Positionality Statement

I am an undergraduate music education major at The Pennsylvania State University. I am not d/Deaf or Hard of Hearing nor am I a part of the Deaf Community. I am a hearing individual, and my multicultural background and experiences as a student of color have encouraged me to consider ways in which typically underrepresented students can be better represented and supported in their music education. Through a minor in Deafness and Hearing Studies, I have studied Deaf Culture and American Sign Language (ASL) from both Deaf and hearing professors. While I can communicate with American Sign Language at a novice level, I rely on American Sign Language/English interpreters to ensure clear communication. Professionally, I have worked with d/Deaf and Hard of Hearing individuals, including students. My involvement in the arts at large has encouraged me to consider ways that music education can be engaged with outside of an aural lens despite being a musician who has engaged in music education from an audio-centric perspective. I am interested in furthering understandings of the musical experiences of d/Deaf and Hard of Hearing individuals, but I understand that I can never fully understand these experiences as I have not experienced them myself.

Terminology

I have included a short list of terminology to help facilitate an understanding of d/Deafness as it is regarded to in this study

- deaf – Little “d” deaf refers to a medically-focused identity in which deafness is regarded as the presence of hearing loss.
- Deaf – Big “D” Deaf refers to a culturally-focused identity in which deafness is not a disability. This identity is often associated with pride in the culture and community surrounding deafness.
- d/Deaf – A way to refer or identify with both identification of deafness.
- Hard of Hearing – Another identity associated with d/Deafness. This identity is often used by individuals with a mild to moderate hearing loss.
- d/Deafness as a spectrum – Many hearing individuals hold the misconception that d/Deaf is binary (i.e. a person is fully hearing or fully deaf). d/Deafness as a spectrum acknowledges the many degrees of hearing loss.
- Deaf community – The Deaf community includes many different people, including d/Deaf individuals, parents of Deaf children, hearing children of Deaf parents, American Sign Language interpreters, Deaf educators, professionals who work with Deaf people, and more.
- Residual hearing – A way to refer to the amount of hearing an individual with hearing loss has, despite their hearing loss.
- Musicking – Any form of musical engagement, including listening, performing, rehearsing, and other forms of musical action.

Introduction

During my senior year of high school, my choir director had me select a video lecture by a famous musician and write a brief reflection about it. I picked [Evelyn Glennie's 2003 TED Talk "How to truly listen"](#). At the beginning of her TED Talk, Dame Evelyn Glennie stated that her one true aim in life was "to teach the world to listen". This struck me as a powerful statement because Evelyn Glennie is deaf. As a hearing individual who grew up in the hearing world, my concept of listening had always been that of listening with one's ears. To me, my concept of listening was so closely tied to one's ability to hear. I had never considered that there may be something to learn about listening from deafness.

Evelyn Glennie continued her TED Talk by sharing her story. It began as many musicians' would: with a great love for music. Glennie shared that, as she became deaf at the age of twelve, this love was thwarted. She explained that, because of her deafness, the world told her that she could no longer be a musician. Glennie refused to believe this. She loved music too deeply for it to no longer be a part of her life. Evelyn Glennie shared that she learned to listen to music in a new way – by listening to it through her whole body. She explained that, by feeling music's vibrations, she was able to continue making and learning music and eventually become a world-renowned, professional musician.

I found myself incredibly intrigued by Evelyn Glennie's story. As a hearing musician, like many other hearing musicians, I had learned to engage with music through aural listening. To end her TED Talk, Evelyn Glennie began to play a song on the marimba. As I watched and listened, I leaned into her teachings and tried to experience music in the way that she had described. I touched my fingertips lightly to my computer and tried to listen, not only with my

ears but also with the rest of my body. I was surprised to feel the vibrations of the music dance across my fingertips. Experiencing the music in this way, both aurally and tactually, allowed me to connect with it in a way that I had never fully considered before.

I was left excited by this new discovery and became curious of the different ways people could experience, understand, and learn music. I interviewed my friend Elisa about her musical experiences and learned that she felt most connected to music through dance. She explained that she had grown up as a dancer so moving her body and feeling music through this medium had always helped facilitate her musical learning. I also learned about individuals with synesthesia and the way that they experience colors when they hear music. By experiencing music in this way, many of these individuals connected with music through art.

As I continued into my undergraduate education, my curiosity on this topic stayed with me, especially around my initial interest that there may be something to learn about listening from deafness. While taking a class at Penn State on Deaf Culture, I reached out to my professor Shasta Dreese, a Deaf individual, and asked her thoughts on the prominence of studying the musical experiences of d/Deaf and Hard of Hearing individuals to advise music education practices. She expressed support of such study and explained that many d/Deaf and Hard of Hearing individuals enjoy making music but often do not engage in music education because it is not made accessible for them. Professor Dreese shared that she thoroughly enjoyed her music education growing up because she had been given the chance to lead her learning. She also explained that the musical experiences of d/Deaf and Hard of Hearing individuals are widely misunderstood and that the existence of famous musicians like Evelyn Glennie and Mandy

Harvey hint that there are many things to learn about experiencing music outside of aural listening.

Professor Dreese's support facilitated my commitment to research the musical experiences of d/Deaf and Hard of Hearing individuals. Her sharing's, in addition to my own experiences in music education, have made it evident that music education is currently built upon an individual's ability to listen with one's ears. When we narrowly fit ourselves into this description, we limit ourselves to all the ways we can experience, understand, and learn music and we shut out individuals who may not primarily experience music through their hearing. To truly listen, we must open ourselves up to all the ways we can listen.

Purpose Statement

Music education is considered a valuable part of children's education in the mainstream American school system. The current realm of music education primarily focuses on students' ability to hear. This audio-centric perspective limits learning for d/Deaf and Hard of Hearing students, as well as hearing students, by not providing prominent, multi-modal ways to learn. Musical learning by d/Deaf and Hard of Hearing individuals, especially individuals who have made careers as professional musicians, suggests that there are ways to engage in music education without aurally listening. The purpose of this study is to explore the experiences of d/Deaf and Hard of Hearing individuals in order to determine music education pedagogy that is enriching and inclusive to individuals of varying hearing abilities. This study does not wish to focus on the question "How can deaf individuals be helped?", but rather, "How can

understanding the music-making of Deaf and Hard of Hearing individuals benefit music education?” (Churchill, 2015).

The investigation was guided by the following research questions:

- What musical interactions, through both formal and informal music education, have Deaf and Hard of Hearing individuals found the most valuable to their musical engagements?
- How can music education practices be developed away from an audio-centric perspective?

Chapter 2 – Literature Review

Churchill, W. N. (2015). Deaf and hard-of-hearing musicians: Crafting a narrative strategy. *Research Studies in Music Education*, 37(1), 21–36.

<https://doi.org/10.1177/1321103x15589777>

Dr. Warren Churchill is an American music educator who identifies as Hard of Hearing. As a Hard of Hearing individual, he has a voice in representing musical perspectives for those who identify similarly. Additionally, much of his research engages with those in the d/Deaf community, especially musicians. Churchill explored the ways in which a majority of the current research on music and deafness reflects an audiocentric viewpoint – the hearing world’s view of deafness as a disability. Churchill looked to explore perspectives of culturally Deaf and Hard of Hearing individuals, as this research is largely absent. He made acknowledgements that, to understand Deafness, it must be extended past physiological concerns – past medicalized and rehabilitative discourse. He also mentioned how language has reflected, and often still reflects audiocentric power and an Oralist view: “hearing-impaired”, “dumb” (originally meaning lacking the ability to speak), “to turn a deaf ear”, connoting deafness with ignorance. Churchill stressed that ASL is not a word-for-word translation from English; it often maintains its own visual poetic rhythm that is culturally embraced. When used in sign-singing, it also tends to hold a different meaning than the English text. Churchill continued that efforts to make Deaf people function as though they were hearing people is disabling and harmful.

This article highlights that a majority of the current research on D/deafness and music focuses on “how can deaf individuals be helped?”, rather than “how can understanding the music-making of Deaf and Hard of Hearing individuals benefit music education?”.

Churchill, W., & Hall, C. (2022). Toward “little victories” in music education: Troubling ableism through signed-singing and d/Deaf musicking. *Sociological Thinking in Music Education*, 72–85. <https://doi.org/10.1093/oso/9780197600962.003.0006>

Dr. Warren Churchill is an American music educator who identifies as Hard of Hearing. As a Hard of Hearing individual, he has a voice in representing musical perspectives for those who identify similarly. Additionally, much of his research engages with those in the d/Deaf community, especially musicians. Dr. Clare Hall is an Australian music educator who engages in ethnographic research about ableism within music education. As music educators, these individuals expressed views and concerns they have formed as active pedagogues. Churchill and Warren acknowledged the ableism in the field of music education’s centralization around listening and questioned if that makes music-making, as we know it as hearing individuals, exclusive to those who identify as hearing. They discussed that individuals must more greatly consider music as an action/activity (“musicking”) as to gain a less audiocentric view of it. They elaborated that this could be done by engaging in music-making through other sensory modalities – vision, touch, proprioception. “Signed-singing” is presented as a type of “musicking” that could be welcomed by music educators. Similarly to how there are a variety of ways to engage in singing and musical speech, musicking via signed-singing may happen with or without vocal production in a variety of signed languages (SEE, ASL, etc.). For example, Churchill and Hall referenced Sean Forbes’ song “Little Victories” which engages in more SEE-inflected signed-singing alongside speech sung lyrics. The researchers also referenced a rendition of Rachel Platten’s “Fight Song” feature on the television series *Zoey’s Extraordinary Playlist*. This rendition, displayed by Sandra Mae Frank and Deaf West Theatre) included

signed-singing that more greatly follows ASL grammar and semantics, alongside an instrumental rendition. Churchill and Hall concluded that the current realm of music education greatly excludes Deaf individuals because of linguistic limitations. This reinforced the importance of music as an intersensory experience. The researchers encouraged that music educators could be more mindful of aural diversities by considering a spectrum of signing and singing abilities rather than confining learners to a binary of hearing and completely deaf.

This article acknowledges music education's audiocentrism and promotes different modalities in which music-making can be explored. It also informs how music educators can lean into Deaf music-making to open their mind on different ways to experience music.

Glennie, E. (2019, April). *Deaf, sound and music questions*. Evelyn Glennie Office.

<https://www.evelyn.co.uk/wp-content/uploads/2019/06/Evelyn-Glennie-Deaf-and-Music-Questions.pdf>

Dame Evelyn Glennie is a deaf percussionist and is notably recognized as the first musician to maintain a full-time career as a solo percussionist. As both a musician and deaf individual, Glennie represents the perspectives – both musical and otherwise – for those who identify similarly. Glennie's article provided information on how she interacts with music. She first mentioned the use of hearing aids to accommodate her deafness in her past. She illuminated that although hearing aids can adjust the volume of one's surroundings, the quality of hearing is not always made better but distorted and confusing. The use of hearing aids made everything more painful to decipher and affected her balance. Glennie clarified that deafness is a spectrum and that many deaf people do not live in complete silence. She also noted that, "We cannot get

confused between hearing and listening – hearing is a medical condition whereas listening is an act of choice which is not only about hearing a sound. Anyone can engage in the act of listening should they make that choice” (pg. 10). Glennie explained that she is able to listen by performing barefoot, feeling the vibrations through her feet. She uses her whole body to register rhythms, texture, dynamics, pitches and more. These feelings, in addition to her visual awareness, advise her music-making. She acknowledged that this sensation is comparable to the familiar experience of feeling the strong bass in a club setting. Glennie told that everyone can experience sound through their whole body rather than just their ears. Engaging with sound through the body can be more tolerated, as too much sound can overload our ears. She mentioned that it is important to recognize that there are also differences to how music may feel as a participator or a passive listener, just as it would when you hear sounds, and from instrument to instrument.

This article outlined differences between “hearing” and “listening”, providing nuance on individuals’ engagements with music. It also informs that listening with one’s entire body, rather than just ears, can be useful for both D/deaf and hearing individuals.

Hash, P. M. (2003). Teaching Instrumental Music to Deaf and Hard of Hearing Students.

Research & Issues in Music Education, 1(1).

Dr. Phillip M. Hash is an American music educator whose research and teaching experiences have established his studies on effective music pedagogy. Hash described various types of hearing abilities and how this may affect the way students engage in the music classroom. He noted that, for Deaf and Hard of Hearing individuals, residual hearing may be an ability that is present, while other students may benefit more from their awareness of vibrations.

He explained that the use of hearing aids and cochlear implants can cause individuals to experience sound distortion that misrepresents accurate pitch or natural timbre. Hash explained that Deaf and Hard of Hearing individuals benefit from music education, as it can motivate positive behavior, develop positive self-efficacy, provide academic support, improve body coordination through rhythmic movement, and develop social skills, especially with hearing students. He told of ways the music classroom can be adapted to fit student's needs, such as instrument selection beneficial to students' abilities and engagement in music from various backgrounds. He also encouraged engaging with students in ways that are more helpful to them – hand gestures, body movements, guided improvisation – visual, tactile, and movement aspects of instrumental study.

This article showcases focuses on audio-centrism in the field of music education. It encourages multimodal ways of learning and teaching practices that are supportive for students of any hearing ability.

Jeri, B. (1992). An opera opportunity: Butterfly in the classroom. *Perspectives in Education and Deafness*, 10(4), 12-.

This article highlighted an opportunity for elementary school students, both hearing and D/deaf, to engage in an “Opera in the Classroom” experience. It explained that it was questioned whether studying an opera was appropriate for deaf students, but the many jobs necessary for putting together an opera, though, illuminated that students musical learning could also be fostered through visual, performing, language arts, and social studies. Banks described that students were able to expand their learning through this musical experience by broadening.

This article demonstrates ways in which music education can be expanded to include the many jobs available in the field of music.

Kim, C. S. *The enchanting music of sign language*. (2015). TED. Retrieved 2024, from https://www.ted.com/talks/christine_sun_kim_the_enchanting_music_of_sign_language.

Christine Sun Kim is a Deaf, American sound artist whose work features recurring elements of musical notation, written language, ASL, and use of the body. Her work has been internationally exhibited in locations such as the Museum of Modern Art. Sun Kim has a MFA in Sound and Music from Bard College as well as an earlier MFA from the School of Visual Arts. Her background allows her to represent a perspective on ways Deafness and music are similar. Sun Kim explained that she was taught that sound was not a part of her life as a Deaf person, but she later realized that sound was very much a part of her life. Through watching how people respond to sound, she has learned that she herself makes sound and must follow “sound etiquette”. She continued that, with the massive culture around spoken language, sound acts as a social currency – it holds value and power in mainstream society. Because of this, since she does not use her voice to communicate, it can be perceived that she doesn’t have a voice in society at all. Instead, interpreters empower her voice and help her to be heard. Sun Kim also voiced similarities between music and ASL, such as both being highly spatial and inflective, as well as both having the capability for subtle changes to affect the whole meaning. Grammatical parameters in ASL, such as facial expression, body movement, speed, and handshape, act like a musical chord; when one of those parameters is changed, the whole meaning changes. Sun Kim

told that ASL can be like visual music, and that ASL is alive and thriving just like music. Sun Kim advocated that we must allow ASL to develop currency without sound to reach a more inclusive society. She pushed that an individual does not need to be Deaf to learn ASL, nor do they need to be hearing to learn music.

This article illuminates the power differences between the hearing and Deaf worlds. It also highlights relations made between the expression of ASL and music.

Simpson, C. G., & Lynch, S. A. (2007). Sign language: Meeting diverse needs in the classroom. *Exchange, The Early Leaders' Magazine*, 45–49.

Dr. Cynthia G. Simpson had multiple years of experience as an early childhood and special education teacher, while Dr. Sharon A. Lynch had multiple years of experience as a speech-language pathologist, as well as a special education teacher. As educators of children, these individuals expressed views on language and learning in the field of education based upon their research and experiences. The researchers acknowledged that children's learning benefits from the combination of speech, movement, and visual enhancement of communication. Movement and gesture were explained to be natural for most children and often easier of a system than vocalization. Signing in class, for example signing songs that are traditionally sung in the classroom, promoted receptive and expressive language development, as well as memory and confidence. Simpson and Lynch also described that ASL's visual and kinesthetic nature make learning more tangible. The researchers explained both typical and special need learners benefitted in their learning and communication from the support that sign language provided in the classroom.

The article highlights sign languages' benefits to all learners in the classroom because of the multi-modality learning it provides.

Stocker, S., & Holzwarth, D. (2022). *Listen: How Evelyn Glennie, a deaf girl, changed percussion*. Penguin Random House LLC.

Shannon Stocker is a musician with Reflex Sympathetic Dystrophy. Similar to Evelyn Glennie, whose story she told in this children's book, Stocker has faced many difficulties from other individuals doubting her due to her dis/ability. Stocker told of Evelyn Glennie's experiences as a deaf musician. She informed of common hearing centric views by audiologists and school systems. In Glennie's music education experiences, it is expressed that only her ability to listen with her ears were considered, not her ability to listen with her body or, metaphorically, her heart. Stocker illustrated how support from others, specifically Evelyn's parents and percussion teacher Ron Forbes, encouraged Glennie's musical learning. The book emphasized how Glennie was able to listen more by focusing on how different vibrations feel. Stocker noted Glennie's mentioning that hearing is a specialized form of touch and that one's body can act as one giant ear.

This book illuminates the positive effects that can occur when individuals such as parents and teachers focus on the learning needs and wants of the student. The concept of listening with one's body and, metaphorically, one's heart (rather than their ears) is emphasized.

Vassallo, L. (1997). The creative arts: Tool to deaf pride – and hearing friends. *Perspectives in Education and Deafness*, 15(3), 12-.

Laurie Vassallo is an American educational interpreter who teaches music and directs drama activities. She has a bachelor's degree in music from Southern Methodist University and freelances as a professional harpist. Vassallo's background provides her perspective on Deaf and hearing students' interactions with music in the classroom. Vassallo told that the traditional setting of music class would often lead Deaf students to hate music class. Even with Deaf students able to sign while the other students were singing during concerts, this often caused students to feel awkward and embarrassed. Vassallo innovated her music program into a more specialized creative arts program, including *The Super Signers*, a deaf/hearing sign choir for 1st-3rd graders, and *A Show of Hands*, a deaf/hearing drama group for 4th to 6th graders. These groups provided Deaf students an opportunity to discover and share their culture and language as well as socialize with and teach their hearing classmates.

This article highlights ways in which the music classroom can be broadened and adapted. It discusses the ability to create an inclusive, enjoyable environment that focuses on the abilities of all students in the music classroom.

Chapter 3 – Method

Positionality Statement

I am an undergraduate music education major at The Pennsylvania State University. I am not d/Deaf or Hard of Hearing nor am I a part of the Deaf Community. I am a hearing individual, and my multicultural background and experiences as a student of color have encouraged me to consider ways in which typically underrepresented students can be better represented and supported in their music education. Through a minor in Deafness and Hearing Studies, I have studied Deaf Culture and American Sign Language (ASL) from both Deaf and hearing professors. While I can communicate with American Sign Language at a novice level, I rely on American Sign Language/English interpreters to ensure clear communication. Professionally, I have worked with d/Deaf and Hard of Hearing individuals, including students. My involvement in the arts at large has encouraged me to consider ways that music education can be engaged with outside of an aural lens despite being a musician who has engaged in music education from an audio-centric perspective. I am interested in furthering understandings of the musical experiences of d/Deaf and Hard of Hearing individuals, but I understand that I can never fully understand these experiences as I have not experienced them myself.

Research Design

The overall design of this research was a survey. The procedures were completed in two phases. Phase 1 was a questionnaire distributed through electronic means. Phase 2 was a set of video chat interviews with volunteers chosen from Phase 1 respondents.

Phase 1: Survey Instrument

Question Design

While reviewing literature related to music education and d/Deafness, it became evident that there was a significant lack of research exploring the relationship between these two topics. The existing body of literature predominantly viewed d/Deaf and Hard of Hearing individuals' presence and engagements in the music education classroom through a medical lens, focusing on pedagogy centered around d/Deaf and Hard of Hearing students' residual hearing. This medical focus demonstrated a research gap from a cultural perspective. Concurrently, much of my education and music education coursework emphasized student-centered instruction. I questioned how music educators can implement student-centered instruction in mainstream music education when there is such limited research on these individuals' personal experiences with music and music education.

Additionally, the courses I took in Deaf Culture and American Sign Language (ASL) highlighted the rich culture and history of d/Deaf and Hard of Hearing individuals in the United States, particularly in the context of communication and learning methods. As I learned about and engaged with this cultural perspective, I began to apply these communication and learning methods as new approaches to strengthen my own learning. For example, by learning and engaging in Deaf Culture's visual environment, I began to implement greater uses of visuals and the physical space around me to reinforce my learning processes. These realizations reinforced that culturally-focused research on the musical experiences of d/Deaf and Hard of Hearing individuals could potentially provide more opportunities to support students with hearing loss, as well as provide an alternate perspective for hearing students to learn through.

With an evident deficit of research on d/Deaf and Hard of Hearing individuals musical experiences, it was of utmost importance to provide a platform for d/Deaf and Hard of Hearing individuals to share their experiences. Advisements from a Deaf professor at Penn State and a licensed ASL/English Interpreter were sought out to ensure the questions' clarity and cultural appropriateness. Survey questions were broken up into four categories:

1. Screening Questions

- Example: Which of the following options best describes you?
 - deaf – medically deaf
 - Deaf – culturally Deaf/a member of the Deaf community
 - Both deaf and Deaf
 - Hard of Hearing
 - Other (please describe)
 - A description box was provided for participants to fully discern their identity in the instance they associated with another identity associated with any degree of hearing loss. The process of self-identifying further acknowledged individuals' personal experiences as well as avoided medical categorizations of an individual's hearing loss. While medical categorizations can be useful, it was recognized that some participants may not know their specific degree of hearing loss.

2. Music Education Background Questions

- Example: Have you ever been in a music group (choir, band orchestra, etc.)?

- Yes
- No

3. Relationship with Music and Music Education Questions

- Example: At any point in my life, music has been important to me.
 - Strongly disagree
 - Disagree
 - Agree
 - Strongly agree

4. Open-Ended Questions on Personal Experiences with Music/Music Education

- Optional – only participants who were interested in participating in Phase 2 completed this section of the survey instrument.
- Example: Please describe your experiences with music education, especially ways you may have felt included/excluded in the music classroom and why.

Survey Instrument Design

The survey instrument was designed on Qualtrics, as Qualtrics allowed for relatively easy integration of various accessibility features, particularly the integration of video components. When designing the survey instrument, I sought advice from a licensed ASL/English interpreter to ensure clear, culturally appropriate communication with participants. I worked with my university's Student Disability Resource Office to connect me with university-contracted ASL/English interpreter agencies. The interpreter advised to consider the variety of communication methods in which d/Deaf and Hard of Hearing individuals may prefer to receive

information. Preferences may include American Sign Language (ASL), English captions, reading lips, an individual's residual hearing, or likely, a combination of one or more of these communication methods. To meet these preferences and increase the survey instrument's accessibility, all written English text in the survey instrument included a split-screen video. On one side of the video, I was pictured reading the text aloud in English, and on the other side of the video, the ASL interpreter was pictured providing an ASL interpretation. The interpreter wore clothes that were contrasting to her skin tone to increase the visibility of her signing; this is considered standard practice for ASL/English interpreters. Each video also included AI-generated, English captions. A video example is linked [here](#). Additionally, the optional, open-ended questions included a choice for participants to provide either ASL video submissions or written English submissions. This consideration was made as to allow participants to fully express their experiences in their preferred communication method.

Participants

The research study was seeking adult participants currently residing in the United States that self-identified as deaf, Deaf, both deaf and Deaf, Hard of Hearing, or another identity associated with any degree of hearing loss. In recognizing the extreme underrepresentation – and often misrepresentation – of d/Deaf and Hard of Hearing individuals in the field of music and music education, hearing individuals were not sought out as participants. This promoted a focus entirely toward the voices of d/Deaf and Hard of Hearing individuals.

Participants were initially sought through the following methods:

- **Personal connections** with d/Deaf and Hard of Hearing individuals and with professionals who interact with d/Deaf and Hard of Hearing individuals. Professionals included ASL and Deaf Culture Professors at Penn State (both hearing and d/Deaf), Penn State's Sign Language Organization, licensed ASL/English interpreters I had previously worked with, and the Pennsylvania d/Deaf and Hard of Hearing Summer Academy program leaders. When contacting these individuals, it was asked if they could advise on any social media groups that I could share my survey in and if they would be willing to send out my survey to other d/Deaf and Hard of Hearing individuals they knew through their own personal connections.
- **Social media groups** that I had found or that were recommended to me by d/Deaf or Hard of Hearing individuals. These social media groups were widely comprised of sign language organizations at other universities, as well as d/Deaf community groups.
- **Contemporary artists and researchers** who inspired my research in the area of music education and d/Deafness, including Alice-Ann Darrow, Warren Churchill, and Christine Sun-Kim.
- **Higher education institutions** that had large populations of d/Deaf or Hard of Hearing individuals (students, faculty, staff, etc.).

Compensation, in the form of a drawing entry for a \$75 online Amazon gift card, was offered to participants who completed all required sections of the survey instrument.

Procedure

The survey instrument was open for 6 weeks. Potential participants were contacted through electronic methods, namely email and social media. Participants were only contacted once through these communication methods as to be mindful of the d/Deaf community as an overstudied population. The survey instrument was intentionally made short with the consideration that it could take participants with varying needs a considerably longer amount of time. A large differentiation in participants' survey durations suggested that this consideration was appropriate. Video submissions were used for the optional open-ended questions because funds were not available to purchase the software for live video recordings in Qualtrics.

Phase 2: Video Chat Interviews

Question Design

After the survey instrument was closed for data collection, responses from the optional, open-ended questions were reviewed for general themes as well as themes that emphasized the relationships between music, music education, and d/Deafness. Five themes emerged – (1) General Perceptions of Music and Musical Engagements, (2) Interactions/Attitudes by Others in Regard to Participants' Musicking, (3) Physical Space and Environment of the Music Education Classroom, (4) Interactions/Perceptions with Signed-Singing, and (5) Pressures/Coercion for Musical Involvement.

Video chat interview questions were then designed to explore participants' unique experiences with music and music education in association with these themes. An additional set of questions that reflected directly on the participants' responses to the survey instrument

multiple choice questions were also included. This set of questions was included at the beginning of the video chat interview. For each video chat interview, spontaneous questions were added to various themes as to cater to each participants' experiences. The ASL/English interpreter reviewed the questions for clarity and cultural appropriateness prior to the interviews.

Additionally, a demographic question regarding participants' medically categorized degree of hearing loss was included. In this question, I told participants that they only needed to share this information if they knew their degree of hearing loss and/or if they felt comfortable sharing this information. This question was intentionally placed at the end of the survey as not to influence participants' responses to the other video chat interview questions.

Video Chat Interview Instrument Design

Video chat interviews were completed over Zoom. Otter.ai – an AI transcription software – was used to transcribe the video chat interviews for later analysis. The transcription software was not as effective as anticipated. In the survey instrument, participants were asked if they would like an ASL/English interpreter present for their video chat interview. It was imperative for this option to be included to facilitate communication and to allow participants to fully express their experiences through their preferred communication style.

Participants

In the survey instrument, participants responded if they would like to be considered for a video chat interview to describe their musical experiences in detail. The survey instrument responses from participants who expressed interest in a video chat interview were reviewed.

Important information regarding the identity and experiences of potential video chat interview participants' was also noted. This included information such as their self-identified hearing status, whether they have ever been in a music class, whether they have ever been in an ensemble (and if they have, what role they played in that ensemble), whether or not they generally enjoy music, and their perceptions of the music classroom as welcoming and accessible. It was important to consider this information as I wanted a variation of identities and experiences to be recognized in these interviews. Participants were also given a one-out-of-ten rating based upon the information they provided in their open-ended responses. This rating was dictated based upon the amount of detail provided in their responses. A detailed response to the open-ended questions provided a perceived likelihood that participants would share detailed responses during their video chat interview.

Compensation, in the form of a drawing entry for a \$20 online Amazon gift card, was offered to participants who were selected and completed a video chat interview.

Procedure

The video chat interviews took place over two and a half weeks. Potential participants were contacted through the email they provided in Phase 1. Participants were contacted an initial time, and if they did not respond after the initial communication, a follow-up email was sent up to two additional times. Prior to the video chat interview, participants were provided an overview of the themes that would be discussed. Each video chat was about 60 minutes long.

Chapter 4 – Data Analysis/Results

Phase 1: Survey Instrument

There were 45 participants involved in Phase 1 of the survey instrument. They self-identified with one of the following demographics: 8 “deaf – medically deaf”, 10 “Deaf – culturally Deaf/ a member of the Deaf community”, 15 “both deaf and Deaf”, 9 “Hard of Hearing”, and 3 “Other”. “Other” identities that individuals described included “Hard of Hearing then d/Deaf”, “Deaf and Hard of Hearing”, and “Hard of Hearing to late deafened”. When the 45 participants were asked if they had ever taken music classes in school or had private lessons with a music teacher, 36 of the 45 participants (80%) responded that they had. In the open-ended portion of the survey instrument, some participants noted that they were discouraged from or not allowed to engage in a music education because of their hearing loss. When the 45 participants were asked if they had ever been in a music group (i.e. choir, band, orchestra, etc.), 21 of the 45 (46.67%) responded that they had. These music groups included elementary school, middle school, high school, and post-secondary school ensembles, as well as community ensembles of varying ages. 14 participants specified that they had been in a choir, and 2 of the 14 participants explicitly mentioned that they would use American Sign Language in their choir. Participants also specified that they played one or more of the following instruments in private lessons or in an ensemble: keyboard/piano – 7, guitar – 4, violin – 3, clarinet – 2, percussion – 2, cello – 1, flute – 1.

23 participants submitted that they wanted to participate in the optional, open-ended section. Qualtrics recorded that each of these 23 participants submitted either ASL video submissions or written English submissions for the questions in this section. Only 18 out of the

23 submissions were visible. This may have occurred due to the survey software crashing or due to a disinterest by participants in completing this section of the survey.

Participants' survey durations ranged from 1:34" to 1:31:29" with the average survey duration being about 12 minutes. Figures of the complete survey results can be found in Appendix B. Data from all categories of the survey instrument, including the optional, open-ended section, have been summarized throughout the themes shown below.

General Perceptions of Music and Musical Engagements

This theme emerged from the perspectives that participants provided in regard to their musicking. Most of the participants responded that music is currently important to them or has been important to them at any point in their life. 41 of the 45 participants (91.11%) responded that they enjoy listening to music (whether it's by hearing it through their ears or by feeling the vibrations). Participants who specified their preferred types of music often noted electronic, pop, and/or rock music genres. 19 of the 45 participants (42.22%) responded that they enjoy making music (i.e. singing, playing an instrument, composing, mixing music using technology). 29 out of 45 participants (64.44%) disagreed or strongly disagreed that places where people can learn music are welcoming of d/Deaf and Hard of Hearing individuals, and 35 of the 45 participants (77.78%) disagreed or strongly disagreed that places where people can learn music are accessible for d/Deaf and Hard of Hearing individuals. 23 of the 45 participants agreed or strongly agreed that they have been discouraged from music-making because of their hearing status/level of hearing loss, but 44 of the 45 participants (97.78%) specified that d/Deaf and Hard of Hearing individuals can be musicians.

Particularly in the open-ended portion of the survey instrument, participants shared a wide variety of perceptions of their music education engagements. Many participants noted that they felt lost during their music education because the programmed activities did not suit their needs. Participants who noted engagements in singing activities communicated that they were often unable to distinguish the words of a song without the lyrics in front of them and would often have difficulty distinguishing the pitches within a song. Participants who noted engagements in group instrumental activities communicated that they often were unsure of their teacher's instruction when playing an instrument, leading them to pretend they were playing along with the class.

While many of the participants' perceptions of music and music education indicated feelings of being lost or uncertain, many participants also communicated a love for music and music education. I have listed some of these testimonials below:

- "I do not formally study music but personally enjoy it; listening is a huge part of my life."
- "I love being part of the orchestra and the opportunities to be involved that come along with it."
- "My first musical theatre event and my first concert were both amazing experiences – to feel a part of such an emotional, group event was overwhelming."
- "Playing guitar while my dad played the accordion was a significant music memory. It was a rare moment of connection."
- "I was so proud of myself, as a Deaf person, for putting myself out there and playing the violin for these crowds."

- “I’d spend hours listening to music and loved it when the vinyls had the lyrics so that I could follow along.”
- “Even at my current age, I wouldn’t mind continuing my music education.”
- “I think learning music is important. Music helps with memory, different musical skills, and is something for everyone to have fun with.”

Interactions/Attitudes by Others in Regard to Participants’ Musicking

The identification of this theme emerged from the significant influence that others – particularly music educators, family members, and peer students – had on participants’ involvements in musicking according to their open-ended responses. Participants expressed a range of ways in which social interactions affected their musical involvements.

Some participants noted perceptions that others around them felt that music was not an involvement for them to pursue. A few participants explicitly specifically mentioned that they did not think their music teacher was supportive of their music education. One participant expressed the following, “The high school music teacher wasn’t as welcoming or willing to work with a deaf student or to make the necessary accommodations...He had already made up his mind about me and wasn’t willing to accept me into his class. I feel like he did not even give me the chance to prove myself which was disappointing.” Some participants mentioned that they were simply never encouraged to participate in anything music related.

Contrastingly, some participants noted that they felt other individuals were supportive of their musicking and/or included them in musical involvements. Many of these participants expressed that they had a teacher that regularly encouraged their musical involvements and

worked with them to create a unique plan for their learning. One participant shared, “I was fortunate to have a middle school teacher who believed Deaf people can participate in music class and that didn’t automatically write me off. Now, I am not saying he had the training and education to know how to teach a deaf student, but he always allowed me to participate and join the class.” Other participants also mentioned that their music educator(s) may not have had experience or knowledge on how to work with individuals with any degree of hearing loss but still made efforts to support and include them in the music education classroom. Three participants said they were treated the same as other students in the music classroom.

Many participants mentioned spending time with a parent, teacher, or other loved one as a point of connection with that individual. One participant shared, “My dad was a hobby musician of sort. He would plug in his electric fender guitar to his amp and teach me all the ways to listen to music: to feel the beat and their vibrations, how to listen to the chorus, how to dance to music based on the tempo. I love him for that. I really have an appreciation of music because of him.” Many individuals who noted similar experiences particularly expressed a deep appreciation for the time that the individual devoted to helping them learn or the intentional time given to build a connection with the participant.

With mentioning of this intentional time spent from others, a great deal of participants mentioned that they deeply appreciated small group and/or 1-1 instruction with a teacher compared to instruction with a larger class. In these responses, participants repeatedly mentioned that it allowed them to be granted the proper supports they needed to learn. One participant mentioned that a teacher had a peer take them aside to help them work on a song. The participant expressed that they really appreciated this because they did not have money for private lessons.

Another participant mentioned that they would have valued private lessons “so there would be less gawking from the other students...”

Physical Space and Environment of the Music Education Classroom

This theme emerged from the importance of the visual environment for people with any degree of hearing loss, especially for individuals who consider themselves a member of the Deaf Community. For the purpose of this research, the definition of “physical space and environment of the music education classroom” included the physical classroom setting, ways in which participants were positioned in a classroom, different technologies implemented in a classroom, as well as participants’ interactions with different instruments.

Participants often mentioned being placed in a position next to or nearby an instrument in the music classroom or another musical setting so they can feel the vibrations. One participant noted, “I notice that when I’m not able to hear the music due to malfunction of my hearing device, I can feel the vibration from the music.” In the multiple-choice section of the survey instrument, 29 of the 45 participants (64.44%) agreed or strongly agreed that they experience music through their sense of touch. 32 of the 45 participants (71/11%) agreed that they would be/would have been more interested in music classes in school or private music lessons if they focused more on their sense of vision and touch.

Interactions/Perceptions with Signed-Singing

While only two participants shared their perceptions of signed-singing in the open-ended portion of the survey instrument, the growing presence of signed-singing in the media (from both

hearing people and people with any degree of hearing loss), as well as general uncertainties of where signed-singing may fit in the current realm of music education, made the inclusion of this theme necessary. One of the two participants noted, “I may be the only one...who is not really into visual song-signing; I find them annoying in the same way certain poetry can be overly-emotive, but that’s really just my preference.” The other participant expressed a contrasting sentiment, “After learning American Sign Language, I realized how much I enjoy watching the interpreters sign the songs. It definitely makes it more fun and enjoyable to ‘listen’ to music other than just relying on the ears of my hearing device to hear it.” While many participants did not mention their perceptions of signed-singing in the open-ended portion of the survey instrument, 41 of the 45 participants (91.11%) agreed or strongly agreed with the following statement: “With help from the Deaf community, I think signed-singing (performing a song using sign language) would be a valuable way to make music in a music class.”

Pressures/Coercion for Musical Involvement

While only four participants mentioned that they felt pressured or coerced into musical involvements in the open-ended portion of the survey instrument, inclusion of this theme was crucial because of the trauma associated with these experiences. One of the four participants noted, “I feel that hearing people try to coerce deaf people into engaging in music. I feel pressured often. Some deaf people like it, but for others, it’s simply not on their radar. For them, it doesn’t feel like they are ‘missing out’, it’s just not part of their lives.” The three other participants expressed negative experiences surrounding being forced to sing or participate in a choir when they did not feel comfortable doing so. One of these three participants stated, “I was

forced to take a music class in college. She forced me to sing. This was before implant. I was more of a curiosity to her than any real education for me. This was a trauma memory to force a deaf person to use voice to sing.” Participants who expressed facing pressures or coercion into musical involvements emphasized feelings of discomfort, embarrassment, and aversion towards future musical endeavors.

Phase 2: Video Chat Interviews

Participant 1: Jackie

Jackie self-identified as deaf (i.e. medically deaf). She also disclosed in her interview that she is blind. Jackie shared that with her bilateral cochlear implants she is considered to have a mild hearing loss. Without them, she is considered to have a profound hearing loss in both ears. Jackie’s preferred communication method is spoken English. She does not communicate through ASL or utilize services from ASL/English interpreters. She sometimes utilizes captioning services when available. When engaging in musical activities, Jackie uses her cochlear implants. Two individuals of varying self-identities were wanted for the interview stage of the study as to represent the many identities that individuals with a hearing loss may hold. Jackie was chosen to participate in this phase of the study because of her self-identification as a deaf individual. In the open-ended section of her survey instrument response, Jackie also shared detailed information about her musical experiences, including singing in a choir and playing violin. Overall, her survey instrument response provided a great deal of information regarding her perceptions of her music education. Jackie’s complete survey instrument results are included in Appendix B.

General Perceptions of Music and Musical Engagements

In the survey instrument, Jackie indicated that she “disagreed” with the following statements: (1) “At any point in my life, music has been important to me.” (2) “Right now, music is really important to me.” and (3) “I enjoy making music (i.e. singing, playing an instrument, composing, mixing music using technology).” In her interview, Jackie was asked to elaborate on the reasonings that led her to make these indications. She explained that she has never really become as interested or passionate about music as she has seen others become. Jackie noted, “I do love music. I mean, music is such a beautiful thing. But when I’m comparing to those around me, I don’t think my experience with music is the same as what other people have experienced.”

Jackie indicated in the survey instrument that she “agreed” with the statement “I enjoy listening to music (whether it’s by hearing it through my ears or by feeling the vibrations)”. Jackie was asked to explain her process of listening to music and what she particularly enjoyed about it. With her degree of hearing loss, she explained that she does not provide much focus on the lyrics of a song when she is listening to music because the lyrics are often indistinguishable to her. Instead, she has found herself more drawn to the beat, melodic contour, and instruments that are used in a piece of music. She shared that she typically loves guitar and drums as well as music that is fast-paced and highly rhythmic. She also highlighted that she really enjoys instrumental music, especially music in a rock, pop, or metal genre.

Jackie indicated in the survey instrument that she “strongly agreed” with the statement “d/Deaf and hard of Hearing individuals can be musicians.” She shared that she has seen videos online of d/Deaf and Hard of Hearing individuals who are great vocalists and instrumentalists;

their ability to feel the vibrations of the music especially intrigued her. Additionally, Jackie mentioned the popular example of Beethoven continuing to compose music as he became deaf.

In the survey instrument, Jackie indicated that she “disagreed” that places where people can learn music are welcoming and accessible to d/Deaf and Hard of Hearing individuals. She articulated that she had never felt unwelcomed in spaces of musical learning but had also never felt welcomed either. Jackie shared a recollection of performing the national anthem with her peers in elementary school. She described that she had to rely on listening to what her peers were saying and trying to repeat it. She explained that this was difficult because she could only make out the beginning of sounds and nothing else. Jackie explained that it felt welcoming in the way that others looked to include her in this event, but since it did not support her needs, it was not accessible. Jackie expanded this conclusion to the totality of her music education. Her music education felt welcoming in the way that others would look to include her in activities but not all the activities were programmed to support her needs.

Jackie indicated that she “disagreed” with the following statement in the survey instrument: “I have been discouraged from music-making because of my hearing loss.” She was asked if she interpreted this statement as an internal discouragement as or an external discouragement. Jackie noted that this question made her curious if her lack of engagement in music was more affected by internal or external influences. She said she was unsure if, by growing up being deaf, she internalized that she would not be able to pick up music or if she had observed how everyone was perceiving her and was influenced by those biases. Jackie did share, though, that many of her siblings grew up taking private piano lessons. Due to her hearing

loss, her family had decided that she should not take these lessons. She mentioned that this did caused a small, internalized belief that music was not really for her.

Interactions/Attitudes from Others in Regard to Musicking

When Jackie was asked the following question: “How did the other’s perceptions of your music-making capabilities affect your involvements or your motivation in music education while you were in the K-12 school system?”, she recalled an instance where she attempted singing in front of other people. As she sang, she was interrupted and told that she was singing the phrase incorrectly. After listening to others demonstrate the “correct” way to her, she would try to repeat them, only leading to the other people reiterating to her that she was still signing incorrectly. Jackie communicated feeling discouraged from this instance and remembered feeling that deterred from singing in the future because of it. After this occasion, she would often just pretend that she was singing.

Jackie explained that she had a more positive experience when she played the violin in elementary orchestra. She did not recall anyone telling her that she was or was not good throughout this experience. She mentioned that she even had the opportunity to play a solo in front of a large audience. Jackie shared that, “...Even if [playing in the orchestra] wasn’t [a good experience]... I think [being in an ensemble] was still a really great opportunity to just be a part of a community and learn how to use an instrument. It doesn’t always have to be about the sound being produced. It could just be the experience that one has or being able to maneuver the strings and produce different sounds.”

When asked what qualities would make her feel most supported from a music educator, Jackie explained that she believes being supportive and encouraging are the best qualities an individual could demonstrate. She continued on by explaining the necessity for a teacher to acknowledge a person's deafness and the differences their hearing loss will have on their music education but still find ways to provide music education opportunities that are suitable to the individual. She explained that this would mean the teacher would need to have a kind of creativity to work around different ways of doing things.

Jackie emphasized that she really liked her one-on-one experiences learning the violin because of the individualization that was able to be provided. She explained that the teacher was able to show her the violin, varying playing strategies, and varying sounds that the instrument can produce in greater depth than when she was learning in a group. She expanded by saying it was probably the best quality music education she received.

Interactions/Perceptions of Signed Singing

Although Jackie explained she that does not use ASL as a communication method, she shared her perceptions of signed-singing. She believed ASL provides lyrics in a visual manner therefore providing visual access to language. Understanding that hearing individuals often struggle to understand the concept of signed-singing, Jackie was asked how she would classify this practice. She noted that she feels it could be aligned with acting because someone is interpreting what would be heard in someone's voice with visuals (i.e. facial expressions, hand signs, and other body language). She felt that, especially with the heightened expressive nature

that accompanies signed-singing compared to just traditional signing, the practice of signed-singing could be comparable acting.

Teaching & Learning Techniques

With her experiences in music education, Jackie and I discussed different ways she believes people with hearing loss could be better supported in their music education. Jackie communicated that she wished music educators spent more time elaborating on how to distinguish the sensation or sound quality she should have been sensing. She said that this additional background on musical concepts might have helped her understand them better. Jackie also mentioned that lyric sheets, integrations of ASL or signed-singing in the classroom, and greater engagements of instrumental music could help provide more access to music education for d/Deaf and Hard of Hearing individuals. Even with some of these strategies, Jackie mentioned that the best person someone could consult for ways to approach one's music education is the d/Deaf or Hard of Hearing individual themselves. Jackie stated, "I find the most essential source is the individuals themselves... they are the ones at the end of the day who are going to be experiencing it." Jackie continued that the experience of every individual is extremely different based upon what they can hear on the sound spectrum. She also mentioned the reality that some individuals with hearing loss may not want to be involved in music at all. Jackie also mentioned that teaching strategies used with d/Deaf and Hard of Hearing individuals could be beneficial to students with typical hearing because they would have more variety in music education. Jackie noted, "...there's so much more to music than hearing it. And that can

kind of open a space to learn about the Deaf community and their culture and how they're able to do music. It's still music, but it's just different because it brings in different aspects of music."

Participant 2: Noah

Noah self-identified as Deaf (i.e. culturally deaf). He is considered to have a severe-profound hearing loss. He shared that he has a unilateral cochlear implant; a tool that provides him access to some sounds in his environment and function in the hearing world. His CI has nine channels. Noah explained that individuals who have cochlear implants with a full twenty-four channels have full access to the sounds around them. American Sign Language is Noah's preferred communication method. He often utilizes services from ASL/English interpreters when communicating with individuals who do not know ASL. When engaging in musical activities, Noah switches between using his cochlear implants or not. Two individuals of varying self-identities were wanted for the interview phase of the study as to represent the many identities that individuals with a hearing loss may hold. Noah was chosen to participate in this phase of the study because of his self-identification as a Deaf individual. In the open-ended section of his survey instrument response, Noah also shared detailed information about his experiences with music, particularly on his great familiarity with signed-singing. Overall, his survey instrument response provided a great deal of information regarding his perceptions of his musical experiences.

General Perceptions of Music and Musical Engagements

In the survey instrument, Noah indicated that he “agreed” with the following statements: (1) “At any point in my life, music has been important to me.” (2) “Right now, music is really important to me.” and (3) “I enjoy making music (i.e. singing, playing an instrument, composing, mixing music using technology).” In his interview, Noah was asked to elaborate on the reasonings that led him to make these indications. He explained that he believes music allowed him opportunities to connect with others. Especially in high school, when individuals were often talking in groups all around him, he would sometimes find himself lost. Anytime music was on, though, everybody would start doing the same thing. Noah made the realization that “[music] is something that I can learn to be a part of and not worry about communicating because. It’s not back and forth... [Music] was a good way for me to kind of escape from feeling like I wasn’t belonging. I didn’t have to worry about anything. I could just enjoy myself, relax, and have fun.”

Noah indicated in the survey instrument that he “strongly agreed” with the statement “I enjoy listening to music (whether it’s by hearing it through my ears or by feeling the vibrations)”. Noah was asked to explain his process of listening to music and what he particularly enjoyed about it. This question prompted Noah to share his experiences being involved with the hearing community and Deaf community at different times in his life. Noah shared that he didn’t have Deaf culture of sign language growing up. At the age of three, he got his cochlear implant. Since this device provided the ability to recognize more sounds, he became more involved in the hearing community. When it came to hearing, Noah told that music was one of the things that he felt he could feel and practice what if felt like to hear. In college, Noah began learning sign language which lessened pressures on him to hear, talk, and wear his

cochlear implant. Noah explained that even when he couldn't hear it, music was always something that he could feel in his body. He noted the importance in the differences he experiences when enjoying music with and without his cochlear implants. He also emphasized the importance to him in experiencing music from both an aural and tactile lens because his CIs are a machine, like any machine, that do not have a guarantee of always working.

Noah told that his favorite genres of music are pop, rap, and rock and that he especially likes songs with fast-paced rhythms and a strong bass. Noah indicated in the survey instrument that he "strongly agreed" with the statement "d/Deaf and hard of Hearing individuals can be musicians." In his interview, he elaborated that he believes anyone that can follow a beat can be a musician. Especially with the use of technology, he believes that there is much greater access for individuals with a hearing loss to learn and experience music with the use of visual and vibrational technology.

In the survey instrument, Noah indicated that he "disagreed" that places where people can learn music are welcoming and accessible to d/Deaf and Hard of Hearing individuals. He told that, when he was in the K-12 public school system, there was no attempt to accommodate or change the curriculum so he could engage in a music education. Noah indicated that he "disagreed" with the following statement in the survey instrument: "I have been discouraged from music-making because of my hearing loss." In the interview, Noah elaborated that he never really became interested in playing any kind of instruments. He did think about learning the drums but then figured it was not worth it because he had other interests such as sports. He shared that he was curious if he had more access to technology if he would learned how to play

an instrument. Overall, he just was not as passionate about music-making because of a lack of resources.

Interactions/Attitudes from Others in Regard to Musicking

When Noah was asked the following question: “How did the other’s perceptions of your music-making capabilities affect your involvements or your motivation in music education while you were in the K-12 school system?”, he recalled that sometimes people were surprised a deaf kid was engaging in music or musical events such as the school dance. Noah also noted that many of his teachers would emphasize his ability to be involved with his peers, making him feel more comfortable with them. He mentioned that he does not recall any music teachers talking to him to be involved or music or anything music related, though. Noah also shared he remembers pretending to play the recorder in his elementary music education. He said that the teacher never recognized that he was not actually doing anything or that he was not learning it, leading him to just sit there. Noah believes that many hearing individuals do not have much exposure to d/Deaf and Hard of Hearing individuals, leading them to not know what they can do to provide them proper accommodations.

Physical and Environment of the Music Education Classroom

Noah explained that he believes a U-shaped seating formation is most accessible. He emphasized that this allows for visual accessible and ensures that everyone is getting information at the same time. He also noted the need for people to remember to stop speaking or signing when writing on the board or showing a visual aid. He stated that this allows a few moments for

d/Deaf and Hard of Hearing individuals to read the information then look back at the person as they carry on.

Interactions/Perceptions of Signed Singing

Noah believes that signed-singing is its own unique category apart from other arts categories. He explained that signed-signing is important for the Deaf and Hard of hearing people because it provides accessibility to the music. He told that there are sign language performers that add their own personality to their signings to express implicit meanings from the song which requires good translation skills. Noah shared that hearing people always end up watching interpreters and comment on how beautiful it is. He emphasized that it signed-singing is meant is not art but access.

Chapter 5 – Discussion

This study aimed to examine the musical experiences of d/Deaf and Hard of Hearing individuals to (1) better understand ways individuals with hearing loss can be supported in their music education and to (2) understand different ways to foster a more holistic music education for all students. The findings of this study showed that music is a valued part of many d/Deaf and Hard of Hearing individuals' lives. Many d/Deaf and Hard of Hearing individuals engage in musicking by using their residual hearing, feeling the vibrations created by sound, and/or accessing music through visual means. These individuals enjoy musicking for its opportunities to learn a new skill, develop soft skills, and build deeper connections with themselves and others. Despite the value that music holds in the lives of d/Deaf and Hard of Hearing individuals, a majority of individuals with any degree of hearing loss believe that places of musical learning are not welcoming or accessible for them.

Determinations on whether an individual with hearing loss has a negative or positive experience in their music education is greatly dependent on the amount of support and access an individual is provided in their musical learning. Many d/Deaf and Hard of Hearing individuals feel most supported in their music education when they are provided opportunities to interact with music from a visual and/or tactual lens, are offered opportunities for one-on-one instruction, and are included in the planning of their learning. Strategies to support a d/Deaf or Hard of Hearing individual's music education can be extremely variable from person to person due to factors such as the individual's degree of hearing loss, the resources available in the individual's area, and the individual's desire and comfort to engage in a music education. This variability highlights the necessity of working with a d/Deaf and Hard of Hearing individual on a plan for

their learning. Understanding the musical experiences of d/Deaf and Hard of Hearing individuals' provides insight on ways to support the music education of those with hearing loss but also ways to support a more holistic music education for all students.

As mentioned in previous chapters, much of the existing research surrounding music and deafness is focused on the use of d/Deaf and Hard of Hearing individuals' residual hearing. While this is one of the ways individuals with hearing loss often engage with music, the results of this study illuminate the prominence of d/Deaf and Hard of Hearing individuals' musical engagements through visual and tactual means, in addition to the use of residual hearing. Visual means include observations of an instrument's mechanics while it is being played, the use of varying lights displayed alongside music, and signed-singing through American Sign Language (ASL) interpretations of songs. The use of signed-singing is particularly notable because of its growing exposure through social media platforms by d/Deaf, Hard of Hearing, and hearing individuals. Participants noted that, with help from the Deaf community, signed-singing would be a valuable way to make music in a music class. It is important to recognize the education in American Sign Language and Deaf Culture that is necessary to engage in this practice. This is especially necessary by hearing individuals because signed-singing has been widely misused and misunderstood by the hearing community. Video chat interview participant Noah, who sometimes engages in musicking via signed-singing, noted that this practice must be considered its own unique category apart from other arts categories.

Tactual means include the use of vibrational technology to intentionally feel music as well as an individual's ability to feel the vibrations of music or an instrument through their general senses. Music preferences of d/Deaf and Hard of Hearing individuals is shown to often

be highly rhythmic and fast-paced and commonly include genres such as electronic, rock, and pop. These types of music are likely of great interest to d/Deaf and Hard of Hearing individuals because of the potential tactual engagements they provide through their rhythmicity. An emphasis on sight and touch coincide with emphases on these senses in the lives of individuals with hearing loss, especially in regard to the visual environment that is central to Deaf Culture.

Emphases on visual and tactual means also bring forth the importance of the physical space in the classroom. Classroom interactions and procedures can be set up to allow for multimedia styles of learning, especially through technology. Findings of this study illuminate that a U-seating formation can best support the learning of d/Deaf and Hard of Hearing individuals. Not only does this allow for more visual accessibility for students but other research has shown that this formation also allows students to feel more connected with one another and more included in their education.

The ways d/Deaf and Hard of Hearing individuals were interacted with by others also greatly influenced an individual's musical experiences. Many participants noted that they felt that music education was unwelcoming or inaccessible. Current general feelings include feelings of being lost or misunderstood. These feelings were often associated with ignorance by hearing people and communities around d/Deaf and Hard of Hearing individuals, communities, and culture. Individuals had positive music experiences when they had others support their musicking and when they were worked with on a plan for their learning. One-on-one instruction by a music teacher, teaching assistant, or peer student was identified as especially valuable in supporting the education of individuals with any degree of hearing loss. Many participants also

noted that music allowed opportunities to find community and connect with others, including friends, family, other students

This study highlighted the following key findings from the musical experiences of d/Deaf and Hard of Hearing individuals: the benefits of differentiated learning, the benefits of applying multimodal teaching techniques, the value of one-one instruction, the necessity of working with students on a plan for their learning, and music's ability to foster community and soft skills in addition to musical skills. Many of these practices may sound familiar because they are practices that we consider as strategies for effective teaching with hearing students. This enlightens that familiar teaching techniques can support d/Deaf and Hard of Hearing students.

Recommendations for Educators

The current realm of music education is predominately focused on aural listening. Benefits of multimodal learning demonstrate the need to implement differentiated teaching techniques in the classroom. Below I have listed some pedagogical recommendations for supporting the music education of d/Deaf and Hard of Hearing individuals, as well as recommendations for continuing education around this topic.

Pedagogical Recommendations

- Communicate with the student and individuals who work with the student – parents/guardians, special education teachers, interpreters, etc.
- Learn the student's communication preferences (spoken English, SimCom, American Sign Language) and understand the student's degree of hearing loss, if known.

- Ensure other students in your classroom are not creating an isolating environment for d/Deaf and Hard of Hearing students by supporting a classroom culture of understanding.
- Create circular or U-shaped seating formations to allow for visual access in the classroom.
- Ensuring you are providing instruction before moving around the classroom.
- Consider implementing more use of visuals in your teaching, such as visual schedules, visual showings of the beat, lyric sheets, integrations of American Sign Language.
- Offer ways for a student to be physically engaged with the music, such as feeling vibrations of the instrument or sound source.
- For students who primarily use their residual hearing, especially in instrumental music education settings, keep in mind that some instruments are easier for d/Deaf and Hard of Hearing individuals to access based upon their degree of hearing loss and type of hearing loss.
- Open opportunities for one-one instruction with you, the teacher, another music teacher, or with a peer student.
- Remember that music education can be fulfilling for reasons outside of musical skills, such as community building and the development of soft skills.

Continuing Education

- ASL Classes offered in local community colleges, colleges, or online (sometimes offered for free), especially classes taught by d/Deaf and Hard of Hearing individuals.
- Following d/Deaf and Hard of Hearing social media influencers/platforms.
- Being involved in d/Deaf and Hard of Hearing community groups or social media groups in your local area. Ensure that these are spaces where opportunities to ask questions are welcome.
- To ensure supports of a specific person, work with the d/Deaf or Hard of Hearing individual to know the best ways to support them in their music education.

Recommendations for Future Research

The understanding of d/Deaf and Hard of Hearing individuals' musical experiences is far from complete, making the continuation of research in this area extremely necessary. Future research on this topic should look to maintain an understanding of these experiences from a cultural focus rather than a medical focus. Examining the musical experiences of solely d/Deaf and Hard of Hearing individuals, in contrast to examining both the musical experiences of both individuals with hearing loss and without, helps ensure this cultural focus. Continuing research in this way also helps prioritize the widely underrepresented voices of d/Deaf and Hard of Hearing individuals. Future research should aim to uphold regular communication with a Deaf (i.e. culturally deaf) individual, especially if that individual has completed research or has a thorough education on d/Deafness. Pursuing research for a cultural focus also emphasizes the necessity to be culturally sensitive. The Deaf community is often an overstudied population.

After reaching out to Deaf institutions, such as Gallaudet University, they informed me that due to the Deaf community often being overstudied that most Deaf institutions have extra protections, usually facilitated through their IRB Office. Research hoping to work with individuals from such institutions should be aware and respecting of this.

Conclusion

The current realm of music education primarily focuses on students' ability to hear. This audio-centric perspective limits learning for d/Deaf and Hard of Hearing students, as well as hearing students, by not providing prominent, multi-modal ways to learn. This study examined the musical experiences of d/Deaf and Hard of Hearing individuals to (1) better understand ways individuals with hearing loss can be supported in their music education and to (2) understand different ways to foster a more holistic music education for all students. The findings of this study showed that music is a valued part of many d/Deaf and Hard of Hearing individuals' lives. Many d/Deaf and Hard of Hearing individuals engage in musicking by using their residual hearing, feeling the vibrations created by sound, and/or accessing music through visual means. These individuals enjoy musicking for its opportunities to learn a new skill, develop soft skills, and build deeper connections with themselves and others. Despite the value that music holds in the lives of d/Deaf and Hard of Hearing individuals, a majority of individuals with any degree of hearing loss believe that places of musical learning are not welcoming or accessible for them due to lack of supports. Learning of d/Deaf and Hard of Hearing individuals, as well as hearing students, can be more strongly supported by providing opportunities to focus on the benefits of differentiated learning, the benefits of applying multimodal teaching techniques with emphases

on visual and tactual engagements, the value of one-one instruction, the necessity of working with students on a plan for their learning, and music's ability to foster community and soft skills in addition to musical skills. By continuing to understand the musical experiences of d/Deaf and Hard of Hearing individuals, music educators can continue to find ways to support the needs of all of their learners.

Appendix A – Phase 1 Survey Questions

Screening Information

1. Are you currently 18 years of age or older?
 - Yes
 - No
2. Are you currently living in the United States of America?
 - Yes
 - No
3. Which of the following options best describes you?
 - deaf — medically deaf
 - Deaf — culturally Deaf/ a member of the Deaf community
 - both deaf and Deaf
 - Hard of Hearing
 - Other (please describe)

General Questions

4. Have you ever taken music classes in school or had private lessons with a music teacher?
 - Yes
 - No
5. Have you ever been in a music group (choir, band, orchestra, etc.)?
 - Yes
 - No
6. What type of music group(s)? Please describe your role in each (i.e. the instrument you played, the voice part you sang, or any other role you had).
(Short answer response)

Disagree/Agree Questions

Please indicate how much you agree or disagree with each statement (strongly disagree, disagree, agree, strongly agree):

7. At any point in my life, music has been important to me.
8. Right now, music is really important to me.

9. I enjoy making music (i.e. singing, playing an instrument, composing, mixing music using technology).
10. I enjoy listening to music (whether it's by hearing it through my ears or by feeling the vibrations).
11. d/Deaf or Hard of Hearing individuals can be musicians.

Please indicate how much you agree or disagree with each statement (strongly disagree, disagree, agree, strongly agree):

12. Places where people can learn music are welcoming of d/Deaf or Hard of Hearing individuals.
13. Places where people can learn music are accessible for d/Deaf or Hard of Hearing individuals.
14. I have been discouraged from music-making because of my hearing status/level of hearing loss.
15. I experience music through my sense of touch.

Please indicate how much you agree or disagree with each statement (strongly disagree, disagree, agree, strongly agree):

16. I would be/would have been more interested in music classes in school or private music lessons if they focused more on my senses of vision and touch.
17. I would be/would have been more interested in music classes in school or private music lessons if the teacher worked with me on a plan for my learning.
18. With help from the Deaf community, I think signed-singing (performing a song using sign language) would be a valuable way to make music in a music class.
19. My ability to hear does not affect my ability to listen.

20. Would you like to be considered for a video chat interview to describe your musical experiences in detail? An interpreter, if needed, will be provided. If chosen for an interview, you would receive a \$20 online Amazon gift card after the interview is completed. If you click "Yes", you will be directed to three open-ended questions; the answers to these questions will be used to guide your interview, if selected.

- Yes
- No

21. Thank you for choosing "Yes" to the previous question, please click the link below to provide your email address. We will only use your email address to contact you for a video chat, if you are selected.

([hyperlink to separate survey](#))

Open-Ended Questions (only for individuals who would like to be considered for a Zoom interview)

For the following two questions, it is encouraged you provide an answer that is at least 5 sentences long, but any length is welcome.

22. Please describe your experiences with music education, especially ways you may have felt included/excluded in the music classroom and why.
23. Please describe a significant memory of a musical experience. Why was it important to you? Focus on the way you felt and how your senses were involved during this memory.
24. Any additional thoughts or comments you may have on your experiences with music, music classes in a school, or music classes with a private music teacher.

Appendix B – Complete Phase 1 Question Results

Which of the following options best describes you? 45 ⓘ

...

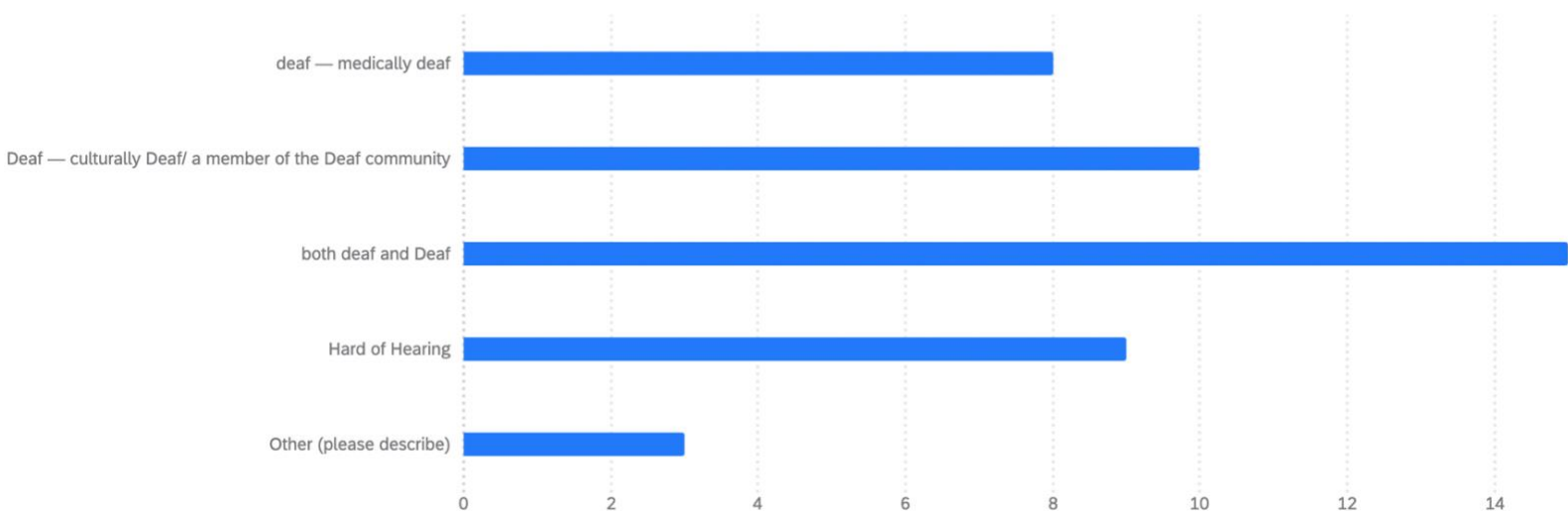


Figure 1: Phase 1 Participants' Self-Identities



Figure 2: Phase 1 Participants' Question Responses

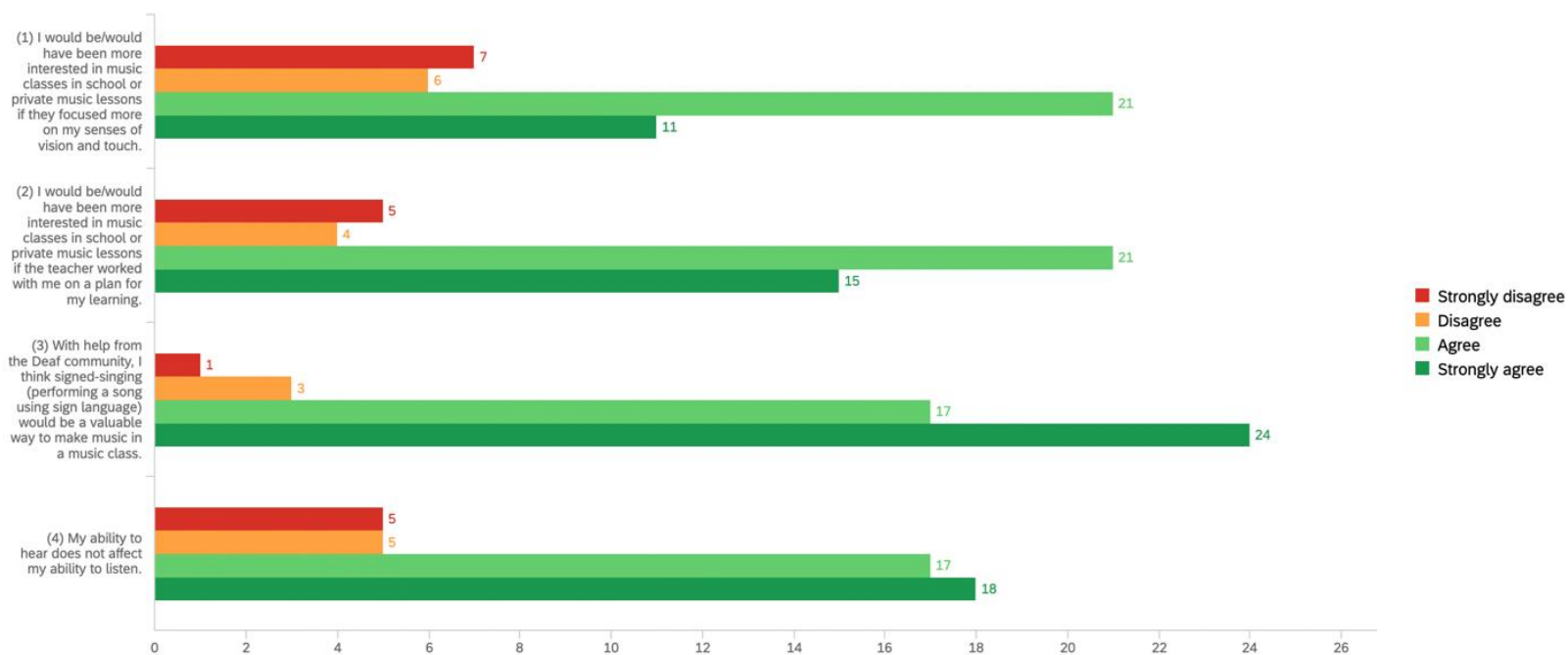


Figure 4: Phase 1 Participants' Question Responses (2)

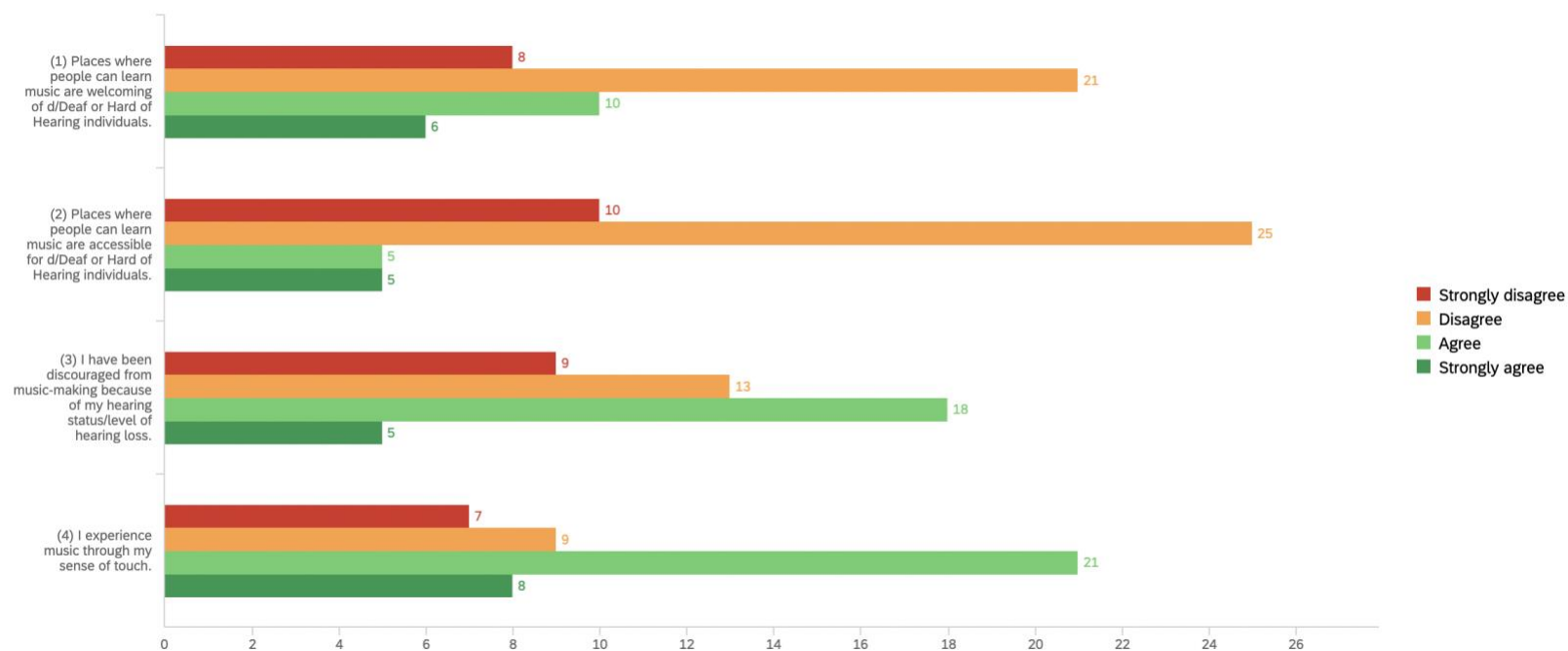


Figure 3: Phase 1 Participants' Question Responses (3)

BIBLIOGRAPHY

- Churchill, W. N. (2015). Deaf and hard-of-hearing musicians: Crafting a narrative strategy. *Research Studies in Music Education*, 37(1), 21–36.
<https://doi.org/10.1177/1321103x15589777>
- Churchill, W., & Hall, C. (2022). Toward “little victories” in music education: Troubling ableism through signed-singing and d/Deaf musicking. *Sociological Thinking in Music Education*, 72–85. <https://doi.org/10.1093/oso/9780197600962.003.0006>
- Glennie, E. (2019, April). *Deaf, sound and music questions*. Evelyn Glennie Office.
<https://www.evelyn.co.uk/wp-content/uploads/2019/06/Evelyn-Glennie-Deaf-and-Music-Questions.pdf>
- Hash, P. M. (2003). Teaching Instrumental Music to Deaf and Hard of Hearing Students. *Research & Issues in Music Education*, 1(1).
- Jeri, B. (1992). An opera opportunity: Butterfly in the classroom. *Perspectives in Education and Deafness*, 10(4), 12.
- Kim, C. S. *The enchanting music of sign language*. (2015). TED. Retrieved 2024, from https://www.ted.com/talks/christine_sun_kim_the_enchanting_music_of_sign_language.
- Simpson, C. G., & Lynch, S. A. (2007). Sign language: Meeting diverse needs in the classroom. *Exchange, The Early Leaders' Magazine*, 45–49.
- Stocker, S., & Holzwarth, D. (2022). *Listen: How Evelyn Glennie, a deaf girl, changed percussion*. Penguin Random House LLC.
- Vassallo, L. (1997). The creative arts: Tool to deaf pride – and hearing friends. *Perspectives in Education and Deafness*, 15(3), 12-.