'Accessibility' is a Four-Letter Word: Developing Western Music Resources for the Visually-Impaired

Christina Ebersohl

University of Denver, Christina.Ebersohl@du.edu

'Accessibility' is a Four-Letter Word: Developing Western Music Resources for the Visually-Impaired

'Accessibility' is a Four-Letter Word: Developing Western Music Resources for the Visually-

Impaired

Abramo, Joseph Michael, and Amy Elizabeth Pierce. "An Ethnographic Case Study of Music

 Learning at a School for the Blind." *Bulletin of the Council for Research in Music*

 Education, no. 195 (Winter 2013): 9-24.

>   This case study exemplifies the inadequate resources typically available to instruct
>
>   children with vision impairment throughout secondary school, with specific focus on
>
>   music education. Interviews with students uncover indifference, inadequate training, and
>
>   a lack of resources. Students were often treated like their visual peers, which hindered
>
>   their progress. Students also described being given resources that were outdated, or
>
>   inadequate, such as print music with only half the notes enlarged, literary Braille code
>
>   being used as music Braille, and a lack of available technological resources. This case
>
>   study is important to understand that the music education system needs to be amended
>
>   even before the university and professional level in order to provide the best assistance
>
>   and support for visually-impaired musicians. Resources such as Dancing Dots and
>
>   Braille Music notation should be integrated, as well as proper training.

Bach, Johann Sebastian. *Collection of Twenty-One Favorite Pieces for Pianoforte*. Braille

 edition. New York: Schirmer, 1898.

>   The Bach *Collection of Twenty-One Favorite Pieces for Pianoforte* provides a good
>
>   example of Braille Music notation and its availability to visually impaired musicians.

Braille Music scores are available free through the Library of Congress, which houses

thousands of scores for different instrumentations. The score is hundreds of pages long,

bulky, and not easily transportable. It is important to understand the physical difficulties

these large scores create when assessing the different resources for visually-impaired

musicians. However, having the ability to learn and use Braille Music opens up many

new avenues for education and performance for a performer. And should a musician

know Braille Music, they could utilize the Dancing Dots software (Good Feel) to make

the score more portable through a refreshable Braille display. Braille Music notation is

used in music scores rather than literary Braille, which is important to note. Educational

systems must utilize the correct Braille code for specializations in order to properly

prepare students for professional life.

Haken, Lippold and Dorothea Blostein. *Lime Aloud*. PC ed., v. 9.05. Component of *Dancing*

Dots: Accessible Music Technology for Blind & Low Vision Performers software bundle,

(2009). http://www.dancingdots.com/prodesc/limealoud.htm

Lime Aloud is a software system housed under the Dancing Dots program which

provides accessible music technology for the visually-impaired. In the Lime Aloud

system, printed music has been scanned or imported into a secondary system (Sharp Eye)

and converted into a file similar to .XML which is a common computer music format.

The file is fed into Lime Aloud which allows the visually-impaired musician to work

through the music note for note, measure for measure, or as a whole with speech-reading

software. The program will read out key signatures, note values, accidentals,

punctuations, and other critical markings that musicians need to know. The software

bundle—which includes Lime Aloud, Sharp Eye, and Good Feel—is a fantastic new tool available to visually-impaired musicians, allowing them the option to learn aurally or tactilely. However, the process of converting the music still requires help from the visual, as the software can often misread the score and convert it into errors. While this program is far from perfect, having it as an available resource at schools, universities, and libraries would greatly increase the support and access that visually-impaired musicians have to music, and would bridge the gap between the visual and non-visual.

Hatton, Deborah D., and Karen Blankenship. "Advancing the Education of Student with Visual Impairments through Evidence-Based Practices." *International Review of Research in Developmental Disabilities* 46 (May 2014): 1-22.

Hatton's chapter gives a detailed overview of the history of education for visually-impaired students. Specially formulated schools were first offered in the US as early as the mid-nineteenth century, while public schools over special education programs for the visually-impaired as early as 1900. By the late 20th century, most visually-impaired students were educated by local public schools with special education programs. Concurrently, this chapter also focuses on the challenges consistent among students with visual impairments, specifically with concern to varying levels of education support, and the diversity amongst students with visual impairment. The need to identify each individual student's needs and abilities often hinders educational institutions' abilities to provide resources successfully. It is important to take this into context as we create a potential pedagogic plan for music educators. Just as visual musicians learn differently and with varying degrees of proficiency, so do the visually-impaired.

Kurihara, Yuki. "Accessibility in the Arts." Master's thesis, American University, Washington

    D.C., 2004. ProQuest Dissertations & Thesis Global.

Kurihara's thesis explores the development and progress of accessibility in the arts and

the community's perspective on the progress in Washington D.C., Specifically, she

focuses on the Kennedy Center, Arena Stage, and the Smithsonian Institution. She

discovered a link between institutional commitment and continuous education, and

accessibility. And while the community was pleased with progress made in the years, the

need for improvement did not go unmentioned. Interviewees believed that the East and

West Coast institutions provided better accessibility in the arts that otherwise. The biggest

concern of the respondents was the lack of communication, or even lack of effective

communication with disabled communities. While this thesis focuses on larger art

institutions and not educational institutions, the premise remains the same for both. The

need for effective communication, continuous education, and institutional commitment is

imperative. Schools and institutions need to be fully committed to providing proper and

current resources to students and their community in order for visually-impaired

musicians to successfully progress. This commitment must be taken into consideration

when creating a pedagogic plan, and the instructor must be prepared to change, adapt, or

learn what needs to be done.

Milani Jr., Albert, Paul Christensen, William McCann, Daniel Simpson, Gary Barber. *Good

    Feel*. PC ed., v. 3.2. Component of *Dancing Dots: Accessible Music Technology for*

Blind & Low Vision Performers software bundle, (2008).

http://www.dancingdots.com/main/goodfeel.htm

Good Feel is another software program housed within the Dancing Dots bundle, in the same bundle as Lime Aloud. Good Feel is the program that allows visually-impaired users to convert their Lime Aloud music files into Braille Notation. The music can then be printed with the use of a special tactile printer, or can be downloaded into a refreshable Braille display for more convenient portability. While arguments against the convenience and efficacy of Braille Music scores exist in the discourse, it is more important to remember that all individuals learn differently, and the important key to a successful pedagogic plan is to be prepared for multiple different avenues of approach.

Paschal, Brett. "Braille Primer for the Sighted Music Educator." American Music Teacher 63, no. 6 (June 2014): 23-25.

Paschal is a music educator in the Portland, Oregon university system. When a visually-impaired musician joined the choir he taught, he began the process of learning Braille Music. His article provides the basics of reading Braille Music for the sighted, such as duration, octave, and accidental markings and placement. This is important within the context of all the research. Not only does this show the need for proactive and continuous education for instructors, but also the prevalence and importance of Braille code in visually-impaired students.

Reimer, Bennett. "Roots of Inequity and Injustice: The Challenges for Music Education." In *Seeking the Significance of Music Education: Essays and Reflections*, 163-180. Lanham, MD: Rowman & Littlefield Education, 2009.

Discussing human inequality and injustice, this paper explores the idea that equality is a man-made construct. Reimer argues whether or not music education should attempt to engage in the struggles of inequality and injustices in the world. The field of education is believed to have no real weight in political matters, with critics vilifying educators who promote social justice and seek to produce agents of change rather than well educated individuals. However, Reimer argues that musicians and teachers and humans, in general, are experts in the field of injustices. Music and the teaching of it means achieving a goal beyond music's definable features, and we are obligated to addresses injustice in and through music education. Reimer lays the foundation for the argument that music education should be inclusive. If musicians and music educators are to address the inequalities in the world, they must address the inequalities within their own structure as well. As Kurihara argued in her article "Accessibility in the Arts", accessibility in the arts has greatly improved, but there is ample room for growth still. If we believe that the arts should lead the way in justice and equality, then we must first repair the deficiencies within the system first.

Saslaw, Janna. "'Teaching Blind': Methods for Teaching Music Theory to Visually Impaired Students." *Music Theory Online* 15, no. 3 (August 2009). http://www.mtosmt.org/issues/mto.09.15.3/mto.09.15.3.saslaw.html

This first-hand account of a music educator's experience with a visually-impaired music student is a critical component to the discourse. Her article lays out the pedagogic formula she adopted to best assist the student in the classroom and for success later. Saslaw first mentions that the more time a university has to prepare for a visually-impaired student, the better. Converting materials into accessible forms can take time, money, and resources that are not always easily identified. Because the student did not read Braille Music notation, the teacher devised an alternative plan. Saslaw provides a list of low-tech equipment that would be useful, as well as more complicated and expensive hardware that would aid a student and teacher. This is one of the first pedagogic plans for a music educator of the visually-impaired available, and it provides unique insights. While Abramo's interviews showcased that many students were treated like their visual peers, Saslaw's report shows a genuine interest in helping the student individually. It is important, thought, to remember that students will have individual needs and abilities and that a flexible pedagogic approach is warranted.

Tsujii, Nobuyuki, pianist. "Tchaikovsky- Piano Concerto No. 1 in B Flat Minor, Op. 23 (St. Petersburg)." Recorded with Mariinksy Theatre Orchestra, 08 July 2012. https://www.youtube.com/watch?v=Bj_DgWSI5ZM.

Nobuyuki Tsuji is a celebrated concert pianist who also happens to be visually-impaired. Much like reading the conclusion on a dissertation, this video showcases the end result of what successful music accessibility to the visually-impaired can accomplish. Visually-impaired musicians are often thought of in two different categories: as savants with perfect pitch and the ability to learn anything immediately by ear, or as disabled

individuals who are incapable of basic tasks without assistance. Tsuji is an example of how many musicians live between the extremes, and rise to success through proper accessibility and training, effective communication, and a little ingenuity and flexibility. His interpretation of Tchaikovsky's Piano Concerto no.1 is detailed, nuanced, and moving. There is no discourse that exists in which Tsuji is compared to his visual counterparts and found wanting.

Watson, Edward. "Braille Notation". *Grove Music Online*. Edited by H.V. Spanner and Roger Finman. Accessed 16 October, 2019. https://www.oxfordmusiconline.com.

Braille notation is defined by Watson in this Oxford Music dictionary. A basic reference, Watson explains the background of Braille notation, a construct of Louis Braille who lost his sight at the ae of 3 through a farm accident. Louis Braille was also an accomplished organist, which likely was the inspiration for the Braille Music code. Interestingly, French officer Charles Barbier was the inventor of the embossed-dot system, as well as the frame and embossing stylus that enables visually-impaired individuals to write the Braille system. Originally constructed out of a pattern of 12 dots arranged in 2 vertical columns of six, Louis Braille simplified the code to cells of 2 columns of 3 dots. Knowing the basics of Braille can be extremely helpful for educators of the visually-impaired.

Wolff, Christopher. "Paumann, Conrad." *Grove Music Online*. Accessed 16 October, 2019. https://www.oxfordmusiconline.com.

Conrad Paumann was a German organist and composer. This reference refers to his composition manual for the organ, *Fundamentum organisandi* written in 1452. As one of the first noted blind musicians, Paumann's compositional system is of extreme interest as it was developed before Braille was developed. His work and history showcase one of the earliest examples of adaptation for visually-impaired musicians, and a lasting influence on the history of Western music unbeknownst to many.

Wolffe, Karen. "Instruction in Areas of the Expanded Core Curriculum Linked to Transition Outcomes for Students with Visual Impairments." *Journal of Visual Impairment & Blindness*. 105, no. 6 (June 2011): 340-49.

Wolffe's article explores the need for expanded disability-related education within the institutionalized education system, as well as for adults who are no longer in school. Higher success rates in university and adult transition programs were seen when children and young adults received more disability-related training before entering these institutions. Furthermore, the use of computer and assistive technology help to enhance social interactions and are important to the success of young adults in the education systems. Understanding the need for disability-related training alongside education programs is an important factor to consider when developing pedagogic approaches and evaluating accessibility progress in institutions.