



THE CORINTHIAN  
*The Journal of Student Research at Georgia College*

The Corinthian

---

Volume 20

Article 5

---

November 2020

## Inside the Music Classroom: Deaf Students

Robyn S. Meeks

*Georgia College and State University*

Follow this and additional works at: <https://kb.gcsu.edu/thecorinthian>

 Part of the [Accessibility Commons](#)

---

### Recommended Citation

Meeks, Robyn S. (2020) "Inside the Music Classroom: Deaf Students," *The Corinthian*: Vol. 20 , Article 5.  
Available at: <https://kb.gcsu.edu/thecorinthian/vol20/iss1/5>

This Article is brought to you for free and open access by the Undergraduate Research at Knowledge Box. It has been accepted for inclusion in The Corinthian by an authorized editor of Knowledge Box.

Inside the Music Classroom: Deaf Students

Robyn S. Meeks

Georgia College and State University

## Inside the Music Classroom: Deaf Students

Many studies have shown the advantages and disadvantages with students who are deaf, many focusing on how hearing loss can affect the student singing or even playing. Many deaf students face several challenges when being in the music classroom; for example, being judged by other students from not able to sing the correct pitches or notes. Another reason is that they are not able to hear the background music or piano which can lead them to having issues of making sure that they are in the correct pitch as well as the correct verse or line. If a deaf student is wanting to join any music activities, then they should be given the right to and the teacher needs to accommodate to the students' needs and understand that it could be a better opportunity to get more children who have a hearing disability involved in the classroom. This research paper will examine four types of deaf studies that can help many teachers get a better understanding of how deaf students are impacted in a music classroom.

### **Family Involvement in Music Impacts Participation of Children with Cochlear Implants in Music Education and Music Activities**

Olszewski studied children who use cochlear implants, born deaf, and have a different musical experience from those who lost hearing after birth (Olszewski et al., 2005). Their reputations of sounds, including speech and music, include only what they have heard through their cochlear implant, whereas those who have lost their memory and mental representation of how various stimuli sounds (Olszewski et al., 2005). When looking into the detail of family involvement with music for cochlear implant children, studies evaluating the impact of parent preference and family environment could continue to illuminate the effect on children with cochlear implants in many performance areas. Holt showed that the impact of family interactions and dynamics, regarding speech and language measures include additional studies in music

perception and enjoyment may reveal similar familial impact (Holt et al., 2012, 2013). If a cochlear implant student has family involvement in music, will the student be inspired to stay in a music activity. It depends on the student because not all students who are deaf and use cochlear implants want to continue with music, but they will have some experience with being involved in an activity that is around the music perspective.

### **The Impact of Single-Sided Deafness upon Music Appreciation**

Hearing loss can diminish the enjoyment of experiencing music (Gfeller and Knutson, 2003; McDermott, 2004; Darrow, 2006; Leek et al, 2008), and problems listening to music through hearing aids and cochlear implants are well documented (Chasin 2003; Leal et al, 2003; McDermott, 2004; Leek et al, 2008; Firszt et al, 2012; Madden and Moore, 2014). Studies assessing speech intelligibility have shown that participants with Single-Sided Deafness do not perform as effectively in competitive noise environments as binaural listeners (Welsh et al, 2004). A study was done testing adults with Single-Sided Deafness. The difference in the way music sounded in post Single-Sided Deafness. The results show that participants with SSD found that music sounded significantly more unnatural, less pleasant and more distinct following the onset of Single-Sided Deafness. Single-Sided Deafness may cause problems with music appreciation due to the impaired auditory scene analysis. If a student with Single-Sided Deafness listens to music it will sound more distorted when listening for the lyrics with the background music, than the student who has Single-Sided Deafness who can tend to focus more on the background as a focus on concentration to where it would not sound distorted.

## **Rhythmic Training Improves Temporal Anticipation and Adaptation Abilities in Children with Hearing Loss during Verbal Interaction**

Children who have hearing loss or use a cochlear implant undergoing musical training show greater sensitivity to fine temporal modification sound (Tim et al., 2012). Rhythmic training can be useful to facilitate temporally accurate speech interaction, which can improve speech coordination behavior (Konvalinka, Vuust, Roespstorff, & Frith, 2010). Studies show that children who have a prelingual hearing loss, that are either equipped with cochlear implants are particularly vulnerable in terms of temporal prediction abilities because of early auditory deprivation. Prelingual hearing loss happens before the student develops a speech and language skill which makes the student vulnerable singing a song. Studies have also focused on the effect of rhythmic stimulation and this has a facilitatory effect on speech processing on people with a typical development (Cason, Astesano, and Schön, 2015; Chernobyl, Tillman, Vaughan, and Gordon, 2018). Children who have hearing loss or use any type of hearing aid can have issues with hearing music or even when using speech because some children may have issues distinguishing what sound is being played. If a student with prelingual hearing loss and uses a cochlear implant is more consistent and accurate than normal hearing of music and speech than a normal hearing student. Rhythmic training could be a powerful tool to facilitate temporally accurate speech interactions, which in turn may improve speech coordination behavior (Konvalinka, Vuust, Repstorff, & Frith, 2010). Rhythmic training is using a certain rhythm either they say the rhythm which can lead the student to have a better structure and flow of their verbal interactions. Then the student who has hearing loss and uses a cochlear implant practices more will be more consistent and has the same accuracy as a student who has hearing loss.

## *Singing Proficiency of Members of a Choir Formed by Prelingually Deafened*

### *Children with Cochlear Implants*

Cochlear implant students usually demonstrate poor ability in accurately perceiving and producing pitch information in speech and music activities. Studies have indicated that music training or music activities are beneficial to children with cochlear implants (Gfeller, 2016). Cochlear implant children have a positive outcome in the use of music activities and music training in rehabilitation to improve communication and self-esteem for deaf children. Studies showed that students with cochlear implants have mismatched vocal pitch patterns from targeted songs, but age-appropriate rhythm reproduction compared to normal hearing. Deaf children with cochlear implants showed erroneous tunes in vocal singing, which clearly showed comparable energy, vitality, and joy in singing to their hearing peers (Trehub, Vongpaisal, & Nakata, 2009). Cochlear implant students have the ability to improve in chorus with musical training, so that they can be able to sing alongside students who are normal hearing. If a student with hearing loss demonstrate average ability in accurately perceiving and producing pitch is more consistent and accurate than normal hearing of music and speech than normal hearing students. Then the person who sees cochlear implant practices more will show improvement and have a better effect on pitch-relation and performance.

### **Conclusion:**

This research was to look at the study and effects on deaf students in the classroom and how it can either be helpful or ineffective to other professionals. When looking back at the journals and studies, us educators should help the student with the disability, because the student should get the opportunity to experience music and find that it is really enjoyable. Educators need to find ways that can let the family get involved so that the student can have more

confidence in learning; as well as, letting the student have a chance to sing or perform in class. If a deaf student is wanting to join a music activity, then the deaf student should feel welcomed and know that they are encouraged to sing or play an instrument.

## References

- Hidalgo, C., Pesnot-Lerousseau, J., Marquis, P., Roman, S., & Schön, D. (2019). Rhythmic Training Improves Temporal Anticipation and Adaptation Abilities in Children with Hearing Loss During Verbal Interaction. *Journal of Speech, Language & Hearing Research*, 62(9), 3234–3247.
- Meehan, S., Hough, E. A., Crundwell, G., Knappett, R., Smith, M., & Baguley, D. M. (2017). The Impact of Single-Sided Deafness upon Music Appreciation. *Journal of the American Academy of Audiology*, 28(5), 444–462. <https://doi-org.gcsu.idm.oclc.org/10.3766/jaaa.16063>
- Hidalgo, C., Pesnot-Lerousseau, J., Marquis, P., Roman, S., & Schön, D. (2019). Rhythmic Training Improves Temporal Anticipation and Adaptation Abilities in Children with Hearing Loss During Verbal Interaction. *Journal of Speech, Language & Hearing Research*, 62(9), 3234–3247. [https://doi-org.gcsu.idm.oclc.org/10.1044/2019\\_JSLHR-S-18-0349](https://doi-org.gcsu.idm.oclc.org/10.1044/2019_JSLHR-S-18-0349)
- Jing Yang, Qi Liang, Haotong Chen, Yanjun Liu, & Li Xu. (2019). Singing Proficiency of Members of a Choir Formed by Prelingually Deafened Children with Cochlear Implants. *Journal of Speech, Language & Hearing Research*, 62(5), 1561–1573. [https://doi-org.gcsu.idm.oclc.org/10.1044/2019\\_JSLHR-H-18-0385](https://doi-org.gcsu.idm.oclc.org/10.1044/2019_JSLHR-H-18-0385)