

2024-08-01

Music And Dyslexia: Systemic Inequities And Educational Best Practices

Natalie Bonelli
University of Texas at El Paso

Follow this and additional works at: https://scholarworks.utep.edu/open_etd



Part of the [Education Commons](#)

Recommended Citation

Bonelli, Natalie, "Music And Dyslexia: Systemic Inequities And Educational Best Practices" (2024). *Open Access Theses & Dissertations*. 4170.

https://scholarworks.utep.edu/open_etd/4170

This is brought to you for free and open access by ScholarWorks@UTEP. It has been accepted for inclusion in Open Access Theses & Dissertations by an authorized administrator of ScholarWorks@UTEP. For more information, please contact lweber@utep.edu.

MUSIC AND DYSLEXIA: SYSTEMIC INEQUITIES AND EDUCATIONAL BEST
PRACTICES

NATALIE MARIE BONELLI

Master's Program in Education

APPROVED:

Cynthia Carolina Terán López, Ph.D., Chair

Alyse C. Hachey, Ph.D., Co-Chair

Jessica Slade, Ph.D.

Stephen L. Crites, Jr., Ph.D.
Dean of the Graduate School

Copyright 2024 Natalie Bonelli

Dedication

My thesis is dedicated to my students, who inspired my research and desire to create a more inclusive and malleable learning environment.

MUSIC AND DYSLEXIA: SYSTEMIC INEQUITIES AND EDUCATIONAL BEST
PRACTICES

by

NATALIE MARIE BONELLI, B.M.E.

THESIS

Presented to the Faculty of the Graduate School of

The University of Texas at El Paso

in Partial Fulfillment

of the Requirements

for the Degree of

MASTER OF ARTS

Department of Teacher Education

THE UNIVERSITY OF TEXAS AT EL PASO

August 2024

Table of Contents

Dedication	iii
Table of Contents	v
Chapter 1: Introduction	1
1.1 Statement of the Problem	1
1.2 Purpose	3
1.3 Significance of the Study	3
1.4 Outline of the Chapters	4
Chapter 2: Methodology	5
2.1 Data Analysis	6
2.2 Positionality Statement	7
Chapter 3: Findings	9
3.1 The Challenges Faced by Students with Dyslexia: Diagnosis and Inequities	10
3.1.1 The Effects of Misdiagnosis of Dyslexia	10
3.1.2 Diagnosis of Dyslexia Impacted by Students' Socioeconomic Backgrounds	12
3.1.3 The Effects of Race and Language on Misdiagnosis of Dyslexia	14
3.2 The Benefits of Music Education Among Students with Dyslexia	17
3.3 Best Practices: Disability Critical Race Theory and Person-Centered Plans	19
3.3.1 Disability Critical Race Theory	19
3.3.2 Accommodations and Modifications to Curriculum	22
Chapter 4: Discussion	26
4.1 Limitations	31
Chapter 5: Conclusion	32
References	34
Vita	39

Chapter 1: Introduction

Dyslexia is a learning dis/ability¹ that, due to a phonological processing problem, impacts the manipulation of language (Sandman-Hurley, 2013) in all languages, including music. Yet, music education can help develop the student's sound encoding and automatization skills, both of which are impacted by dyslexia (Bourguignon, 2019). Therefore, in this thesis, I aim to describe the experiences of minoritized students with dyslexia. I pay particular attention to their experiences in music classes, as I am a music teacher who seeks to improve her pedagogical practices. Yet, the limited research on this topic forces me to take a broader look at the systems of power impacting students with dyslexia and their specific academic and personal journeys. Then, I shifted my focus to understand better music educators' responsibility to transform their pedagogical practices to support students with dyslexia.

1.1 STATEMENT OF THE PROBLEM

Dyslexia is the most common of all learning disabilities, impacting phonological and literary skills in all areas of schooling (Bourguignon, 2019). One main problem is the lack of diagnosis of minoritized students with dyslexia encounter (Hettleman, 2003; Knight & Crick, 2021; Moore, 2022; Odegard et al., 2020). Students with dyslexia who go without a proper diagnosis are deprived of accommodations and modifications that can support their academic journey, cause low self-esteem, and lose their academic confidence (Coppola, 2017). What is more, students in underserved communities are more likely to be misdiagnosed and less likely to receive interventions or resources (Odegard et al., 2020). As such, it is important first to understand

¹ Specific learning dis/ability or learning dis/ability are terms often used in IEPs/PCPs to specify a dis/ability that impacts specific academic skills such as reading, writing, learning a new language, or math (U.S. Department of Education, 2018)

how dyslexia is diagnosed and what structural systems of power prevent minoritized students from receiving a proper diagnosis and, therefore, academic support.

A second problem is the lack of training teachers have to support students with disabilities in general (Manning, 2016). More relevant to this paper is the lack of knowledge music educators have about how to support students with dyslexia properly and the complicity of institutions to overlook the needs of these students. As such, this paper's second important consideration is to address the accommodations and modifications that music educators can use and the responsibility of institutions to support students with dyslexia from diagnosis to graduation.

To do so, I decided to focus mainly on practices informed by Disability Critical Race Theory (DisCrit). DisCrit is a seven-tenet theoretical framework that serves to address the intersection of ableism and racism (Annamma et al., 2022). While I will be addressing these seven tenets in detail later in this paper, I want to highlight early on how DisCrit uses intersectionality to uplift multifaceted identities and to show how the lack of a multidimensional lens upholds normalcy and hegemony. Crenshaw (2020) explains that intersectionality is not just about how different aspects of social identities, such as race, class, gender, sexuality, nation, ability, ethnicity, and age, overlap but specifically about the systems of power associated with each one. Hill Collins and Bilge (2020) explain that intersectionality "investigates how intersecting power relations influence social relations across diverse societies, as well as individual experiences in everyday life" (p. 2). As the findings will show, minoritized students with dyslexia are impacted in many ways, and using the idea of intersectionality may help address the various systems of power that get in the way of a fair education. At the same time, DisCrit informs my support for person-centered strategies that allow music educators to recognize the intersectionality of students with dyslexia, particularly in minoritized communities.

1.2 PURPOSE

Music classrooms are often inclusive, meaning students in general and special education can learn together in an ensemble. Because of this, music educators need to use pedagogical approaches that address and accommodate various learning dis/abilities, such as dyslexia, that impacts literary skills (Flach et al., 2014), phonological and sound processing, and decoding (Bourguignon, 2019). Consequently, my research aims to explore the inequity that minoritized students face in the path of diagnosis and interventions for dyslexia and how music educators can adjust their teaching for this common circumstance to create an inclusive and accommodating classroom. In this paper, I first explain how the positionality of each student directly impacts diagnosis and interventions. I then examine the consequences of misdiagnosis or lack thereof, alongside the role of inequity in this. I also identify the impact in the music classroom and the specific role of staff and music educators, specifically in teaching and modifying for students with dyslexia. Finally, I outline how using Disability Critical Race Theory helps to inform person-centered strategies for music educators.

1.3 SIGNIFICANCE OF THE STUDY

I also want to recognize that this thesis calls explicitly on the tenet of DisCrit, which states the importance of uplifting marginalized voices and recognizing the history of this not being done in a white hegemonic society (Annamma et al., 2013). As such, the particular focus of this paper is first to understand the experiences of students with dyslexia and second to support music educators teaching students with dyslexia. The combined efforts will help address a niche area of research that has the potential to outline the systemic flaws of our special education program in relation to music and transform an inclusive music classroom, meaning a class with general and

special education students, into a truly inclusive classroom with modified pedagogy and teaching practices to accommodate all.

This paper also serves to promote rights and interventions for students with dyslexia, as DisCrit supports it as it speaks to the label of a dis/ability impacting rights. Dyslexia is recognized under the Americans with Disabilities Act (ADA), thus legally requiring services and accommodations (U.S. Department of Justice, 2000). Services and accommodations are inclusive of reliable diagnosis (which I describe in detail later), interventions, and modifications in the curriculum.

1.4 OUTLINE OF THE CHAPTERS

In the second chapter of this paper, I address the methodology used to conduct a narrative literature review. The third chapter presents the findings of research in dyslexia diagnosis and deterrents in diagnosis, consequences of misdiagnosis, the role of financial status, race, language, and ethnicity, the benefits of music education for students with dyslexia, and the role of DisCrit and person-centered planning in supporting students with dyslexia. The fourth chapter is the discussion, in which I address the role of educators and school districts and outline future research needs and limitations of the study. Finally, the last chapter is the conclusion, where I call on educators and the education system as a whole to take action to better support the minoritized community of students with dyslexia in music classrooms.

Chapter 2: Methodology

A narrative literature review serves to synthesize past research into a discussion of its methodologies, findings, and limitations (Feak & Swales, 2009). This review was built on a foundation of literature and media studying dis/ability and race, dyslexia diagnosis, music's relation to dyslexia, and classroom accommodations through quantitative and qualitative global studies; this review serves to review, critique, and synthesize the current knowledge in this area.

Consequently, this narrative literature review seeks to respond to two main research questions:

1. What are the experiences of students with dyslexia in music classrooms?
2. What can music educators do to support students with dyslexia in their academic journeys?

To respond to these questions, I have used qualitative and quantitative research studies alongside media, which includes sources from the Education Resources Information Center (ERIC) and Google Scholar database that mentioned or exemplified the following codes: Dis/ability Critical Race Theory (DisCrit), race and dis/ability, dyslexia and music, music and literacy, individual education plans (IEP), and dyslexia diagnosis.

My sources include four media sources, three dissertations, federal dis/ability acts and regulations, and 19 peer-reviewed studies. These range from the 1990s to the present, showing the exponential growth and need for research in this area. Music and dyslexia have been studied in tandem more recently, leading to implications for continual growth and critique, such as I aim to contribute to in my review. In the next section, I discuss the process of analysis used to analyze my sources.

2.1 DATA ANALYSIS

Through coding, my sources were categorized by study and mention of dyslexia diagnosis, dis/ability and race, accommodations/best practices, and the relation of music and dyslexia. The codes allowed me to explore the intersection of the identity of a musician and a person with dyslexia. These categories were derived from commonalities in codes and broadened patterns, which I then refined into three themes, including (1) the experience of a student with dyslexia with an emphasis on diagnosis, (2) the benefits of music education for students with dyslexia, and (3) best practices for dyslexia in the music classroom.

In the first theme, the experience of a student with dyslexia with an emphasis on diagnosis, I discuss why dyslexia diagnosis is a subjective label due to varying factors impacting the intervention, such as universality of process, race and ethnicity, finances, and accessibility. These factors are a result of systemic bias and inequity. Students who may have dyslexia are going against these inequities and working despite them in academia. The process of diagnosis and the experience of students with dyslexia are reviewed in order to understand specifically what minoritized students are facing in their academic journey and how music educators can recognize and adjust instruction based on this system. This theme is the foundation of the argument toward accommodations that are informed by the experience of a student with dyslexia; those who work in education must be knowledgeable in dyslexia in order to recognize signs and needs in students. This theme supports best practices, highlighting the systemic flaws specifically and discussing them, thus requiring classroom educators to act as diagnostics and interventionists.

The second theme, the benefits of music education for students with dyslexia, addresses how music literacy is impacted by dyslexia and how dyslexia is impacted by studying music (Ganschow et al., 1994). The relation of these skills gives insight into how a student may struggle

and grow in the pursuit of both. By understanding how music is specifically challenging for students with dyslexia, these processes can be rewritten and modified to meet students' needs. Similarly, by understanding how music may help literacy skills, educators can use an asset-based approach to grow these skill sets alongside one another. Knowing this connection well is crucial to establishing successful practices in the music classroom. The overlap of music and literacy is vital to understanding necessary modifications on a day-to-day basis, alongside emphasizing the need for more training and support for music educators from the district and preservice schooling and experience. These themes will be further examined and explained in the findings section.

Finally, the third theme, best practices for dyslexia in the music classroom, will show short and long-term accommodations/modifications and person-centered plans/individualized education plans (PCPs and IEPs) that music educators could use to support students with dyslexia. This theme is a result of quantitative and qualitative studies and interviews in classrooms and districts worldwide. These practices are a collection of music-specific modifications and processes that have been tried, true, and supported by data and experience of the educators interviewed. This section serves as a guideline or suggestion for music teachers to incorporate into their classrooms. This also calls to attention the systemic flaws requiring teachers to rely on modifications to create the most inclusive classroom possible, with or without diagnosis. These practices must be used upon diagnosis and even without a professional diagnosis to prevent students from falling between the cracks.

2.2 POSITIONALITY STATEMENT

I am a secondary music educator in Albuquerque, New Mexico, and I teach at two Title I schools where I have general and special education students. I received my bachelor's degree from the University of New Mexico in music education with an emphasis in choir. I took one diversity

education course and had no training/courses in special education or accommodations in the music classroom. For me, music education is not solely an academic pursuit; it weaves through students' personal lives, creating a multidimensional relationship between music and academics. For this reason, I have chosen to address the approach of music educators teaching students with dyslexia.

In my career teaching in Albuquerque Public Schools for three years now, I have struggled with modifying my content and approach to sheet music for my students with dyslexia. I had never considered the crossover of music and literacy and, thus, dyslexia's impact on these skill sets. However, I have grown alongside these students and found what works for them, and I became curious about what more I can do for them and any student with literary challenges.

I believe the only way to help students with dyslexia is with an understanding of an intersectional DisCrit lens, a theory this thesis calls upon, and an individualized approach, such as person-centered plans (PCP)/individualized education plans (IEP). Therefore, this thesis shows the importance for music educators to receive training and knowledge of Disability Critical Race Theory, the intersectionality of marginalized learners, the process of diagnosis, and IEPs/PCPs.

Chapter 3: Findings

The research on music and dyslexia weaves throughout the themes of diagnosis and the inequitable experience of minoritized students with dyslexia, the relation and benefit of music education for students with dyslexia, and best practices/accommodations for musicians with dyslexia in the classroom. The literature brings to light information that outlines the process of diagnosis and its flaws, leading to an immense number of undiagnosed students and students without adequate resources to grow with their dyslexia (Hettleman, 2003; Manning, 2016; Coppola, 2017). This then surfaces in the music classroom, prompting music educators to develop accommodations and best practices to meet these students' needs.

In this chapter, I present a chain of events and the consequences that lead to inequities in the experience of a student with dyslexia. First, I discuss the struggles to obtain a dyslexia diagnosis, the effects of misdiagnosis, and the lack of a universal process that can lead to invisible dyslexics² (Hettleman, 2003) in the music classroom. This term represents minoritized students without a diagnosis, pointing to several systemic flaws that lead to misdiagnosis. In this discussion, I further address financial deterrents and the role of race, language, and ethnicity that contribute to a lack of accessibility and opportunity for diagnosis. Next, I outline how this lack of accessibility trickles down into the classroom and how the responsibility of diagnosis and accommodations falls on teachers with, at the fault of their district, little to no training in special education. Lastly, I highlight the role of literacy in music and how dyslexia changes the learning environment for students. I will then outline suggested best practices to address the aforementioned inequity and changes in pedagogy aimed at best supporting musicians with dyslexia.

² In describing people with dis/abilities, it is important to use person-first language. This paper is conducted with that belief, however invisible dyslexics is a term coined by Hettleman (2003) and will only be used within the context of their research.

3.1 THE CHALLENGES FACED BY STUDENTS WITH DYSLEXIA: DIAGNOSIS AND INEQUITIES

Diagnosis of dyslexia is commonly and preferably done in a setting with a diagnostician after gathering information from interviews, testing, and observations (International Dyslexia Association [IDA], 2015). However, due to issues of access and lack of recognition of symptoms, the diagnosis does not always come in time for support to be offered to the student with dyslexia, and often the symptoms go unrecognized. What is more upsetting is dyslexia diagnosis is often distributed subjectively, overlooking the student's race, ethnicity, and socioeconomic status, accessibility to services and resources, and the universality of the process (Hettleman, 2003). This is a result of inequity in K-12 education and the overlook of intersectionality among students with dyslexia, deterring them from getting a diagnosis and the necessary resources.

This first theme will argue for a reliable dyslexia diagnosis that relies on more than reading skills, incorporating comprehension, print knowledge, and the fluidity and accuracy of silent and oral reading (Hammill and Allen, 2020). At the same time, if a student is bilingual, they should be tested in both languages to ensure accuracy (Moore, 2022). Further, it will show the importance of understanding that dyslexia is a spectrum with various symptoms (Sandman-Hurley, 2013), meaning uniformity in testing can lead to misdiagnosis due to neglecting each student's positionality and experience. Finally, it will show that a strong diagnosis also considers each student's lived experience to create an equitable process. To do so, I will first expose the effects of misdiagnosis of dyslexia, then the minoritized identities and inequities impacting diagnoses such as the low-income, Latinx, Black, or English learner.

3.1.1 The Effects of Misdiagnosis of Dyslexia

To understand the difficulty of diagnosing dyslexia, it is important to recognize the complexities involved and the lack of knowledge on this topic.

Sandman-Hurley's exploration of dyslexia (2013) described the learning dis/ability as a spectrum, highlighting the individuality and circumstantial context of each case, meaning two people may not experience dyslexia in the same way. What one person with dyslexia struggles with, another may not. For example, automatization of sound versus sound processing, which are two common but contrasting symptoms, may be present in two different students. Sandmann-Hurley (2013) also debunks common misconceptions of dyslexia that many classroom teachers still hold to be true, such as the experience of dyslexia and accommodations for dyslexia being identical for all students (when, in reality, different students require individual modifications as they may be facing challenges in separate areas of literacy). This is proven by citing specific and varied phonological processing deterrents of dyslexia, such as difficulty spelling versus decoding when translating text into speech. Sandman-Hurley (2013) suggests a multisensory style in teaching in order to broaden our approach to the spectrum of dyslexia. The multisensory teaching style refers to the use of human senses, specifically sight, sound, and touch, to accommodate all learning styles, such as visual, aural, written, or kinesthetic. Yet, before digging deeper into individual approaches that support students with dyslexia, I must go back to diagnosis.

Because dyslexia is a spectrum, a student may fly under the radar of diagnosis throughout their time in school, becoming what Hettleman (2003) calls an "invisible dyslexic." An invisible dyslexic is a student compromised because of lateness or lack of diagnosis or a student not given the necessary resources. In researching Baltimore Public Schools, a large urban district's student population, Hettleman (2003) found that more than 20% of students fit the definition of an invisible dyslexic; this is believed to be the same for other large urban districts. Hettleman's study aims to call districts to intervene to stop the detriment of undiagnosed students, particularly those of

underserved communities. While this article is dated, diagnosis continues to be a major challenge, and many students continue to go undiagnosed, as it is shown in the following article.

Hammill and Allen (2020) dove deeper into exploring the re-diagnosis of students who were previously told they have dyslexia. The results from eight states (not listed) were not found to be consistent with the previous diagnosis, shining a light on the currently flawed screening process that identifies dyslexia by looking for poor reading skills, which does not occur in every case of dyslexia. This study highlights a non-universal process that varies in diagnosis, which then skews research using students with dyslexia because of the false negatives/positives (Hammill & Allen, 2020). Of 70 students previously described as likely to have dyslexia, Hammill and Allen found less than half, 49%, to be consistent with this title in their screening. Hammill and Allen suggest a more comprehensive process that consists of measuring reading comprehension, print knowledge, and the fluidity and accuracy of reading silently or orally.

As has been presented, understanding dyslexia is complex, and the current diagnosis process lacks rigor. Yet, this is just one of the obstacles in our public special education program. As referred to in this paper, proper diagnosis can signify the student with dyslexia receiving proper accommodations and modifications in the classroom setting and interventions that support their overall life outside school. In the following section, I explore the impact of different systems of power on diagnosis, learning, and music literacy.

3.1.2 Diagnosis of Dyslexia Impacted by Students' Socioeconomic Backgrounds

Aside from the process of diagnosis, financial status manipulates the educational rights of students everywhere. The work by Knight and Crick (2021) shows data from the U.K.'s Millennium Cohort Study (MCS) on 11-year-olds in England and Wales to analyze the socio-

demographic variables (gender, age, social class) that may interfere with diagnosis³. Parents with high socioeconomic status (SES) were labeled as more willing to manipulate their circumstances to get their students what they need, in this case, a diagnosis and resources (Knight & Crick, 2021). Most diagnoses in this data were found amongst higher SES families. An example of this privilege is found in Coppola (2017).

Coppola (2017), a young adult diagnosed with dyslexia in primary school, centers herself on the discussion of the experience of a student with dyslexia who happened to be financially well-off enough to afford resources in comparison to an anonymous peer with a similar diagnosis and lack thereof financial support. Coppola estimates her specific journey with dyslexia, diagnosis, and interventions/resources to have cost around \$400,000. A lack of diagnosis and/or funds complicates the journey of a peer student with dyslexia significantly by slowing appropriate interventions, accommodations, and resources (Coppola, 2017).

However, Moll et al. (2022) indicate that despite the high cost of treating dyslexia, a cost-utility analysis shows that interventions improve the physical, emotional, educational, social, and personal well-being of young adults. Moll et al. also found that several health insurance companies do not cover such resources as those in Germany and the United States. This analysis was run on 36 individuals comparing the financial cost to the improvement in quality of life after dyslexia interventions using a qualitative questionnaire, with all 36 participants showing positive growth post-interventions. Thus, the research shows that without coverage for resources, families may be less likely to seek out resources for financial reasons or lack of accessibility to said resources via insurance or academic institutions, thus impacting quality of life negatively.

³ Amongst my research, social class was most commonly correlated with diagnosis and is my emphasis in relation to this study.

The above articles present a variety of data on the financial deterrents in achieving dyslexia diagnosis and interventions. Knick and Crick's (2021) data in England, paired with Moll et al.'s (2022) cost-utility analysis, shine a light on the financial and personal impact of dyslexia interventions, for better or worse. The personal impact on a student with dyslexia connects to the music classroom, changing the way a student participates and learns music. This elective class is sometimes the only class a student feels successful in. If a student is unable to receive interventions for dyslexia, they are impacted in and out of school, academically and personally. In this next section, I discuss the impact of race and language on diagnosis, another identity that may be uncovered with an intersectional approach to learners.

3.1.3 The Effects of Race and Language on Misdiagnosis of Dyslexia

Although social class was one of the main social categories that impacted the diagnosis of dyslexia, it is important to note that it was not the only one. Race and language also play a pivotal role in the diagnosis process. The following articles address the inequities faced by students of color with dyslexia. They reveal that inequities are ever present, thus necessitating the response and education of teachers to understand the systems of power impacting students daily, academically and personally.

Odegard et al. (2020) explored the relationship between dyslexia diagnosis, race, and language through data from second-grade students, analyzing the relationship between dyslexia diagnosis and race. Odegard et al.'s study represents the relationship between minoritized students and dyslexia mis/diagnosis; students of color (Latinx and Black students) were found to be less likely to be diagnosed with dyslexia. Similarly, schools with a higher minority presence had lower overall diagnoses. Finally, schools with a larger presence of students who struggled with reading were also less likely to diagnose. Overall, this study exemplifies various levels of oppression that

contribute to an unfair diagnosis process that further marginalizes students of color with a disability.

In the same way, Moore's (2022) insight into the linguistic impact on dyslexia diagnosis exemplifies the flaws in our education system and in the education of teachers and staff employed to diagnose and intervene. Data was pulled from Texas Public Schools on English Learners (EL) and monolingual students, comparing rates of dyslexia diagnosis, and it was found that ELs were diagnosed significantly less (Moore, 2022). This error in the process, an inability to test non-monolingual students effectively, calls for support staff to be able to accurately and effectively test ELs in both languages, thus putting some of the responsibility on bilingual teachers to recognize symptoms in the classroom (Moore, 2022).

By using an intersectional lens, as noted in DisCrit, I argue that a proper dyslexia diagnosis is impacted by systems of power that work against students of low-income families, students of color, such as Latinx and Black communities, and bi/multilingual students. Intersectionality thus serves to recognize multidimensional identities (Annamma et al., 2013) and questions these systems in place that operate within a binary with fixed notions of dis/abilities, notions that directly contradict Sanman-Hurley's (2013) definition of dyslexia as a spectrum with varying symptoms and experiences. What is more, an intersectional lens serves to understand the (perhaps unintentional) complicity exhibited among teachers and administrative staff, who often lack the training to diagnose students with dyslexia properly. Annamma et al. (2013) and Moore (2022) specifically address the intersectionality of learners and the systems over them that change the way they learn, feel successful, and are seen, heard, and served by educational staff. This responsibility of staff falls in general and special education, highlighting the need for training that I will discuss in the next section.

3.1.4 Misdiagnosis on Behalf of Poorly Trained Teachers and Administrative Staff

The responsibility to modify and accommodate on behalf of classroom educators is usually met with a lack of support and resources on behalf of the district to adequately train teachers for effective intervention with dyslexia in all forms.

This is a need found in the research work of Knapp (2022). Knapp (2022) formed a group of music educators to discuss race and dis/ability in the classroom, referred to as a Collaborative Teacher Study Group or CTSG, and found that teachers felt uncomfortable and un-knowledgeable in this area. Knapp's conversations with teachers also exemplified a need for a deeper understanding of intersectionality amongst students and an underrepresentation of students with dis/abilities and of color in secondary music classes. Therefore, Knapp (2022) suggests a DisCrit approach that deepens an educator's understanding of the role of dis/abilities and race in the music classroom. A deeper understanding is inclusive of a teacher's reflection of their role in creating an inclusive and equitable environment and the modification of pedagogy for students with dis/abilities. In the CTSG, teachers were able to broaden their understanding of DisCrit and how it applies to more than the music rather than the instruction itself (Knapp, 2022). In music, DisCrit can be interpreted as uplifting marginalized voices, which directly translates into music selection that branches outside of Western repertoire and speaks to advocacy and resistance to norms. Knapp concludes that preservice exposure, training, and professional development on DisCrit are necessary for future educators to facilitate an equitable learning environment.

This theme is meant to expose systemic inequities that impact students with dyslexia in diagnosis and intervention. Within this context, Knapp (2022) calls for school districts to provide training and education on DisCrit so that teachers are informed when supporting students with

dyslexia. This is addressed further later in this review. Before, I discuss the benefits of music education for students with dyslexia.

3.2 THE BENEFITS OF MUSIC EDUCATION AMONG STUDENTS WITH DYSLEXIA

In this theme, I discuss the benefits of music education for students with dyslexia informed by an asset-based mindset. Music is literary in that it requires and grows the ability to focus on various parts of sound (Bourguignon, 2019), sound encoding (Flaunacco et al., 2015), notation, identification, and differentiating of written music (Jaarsma et al., 1998). These are all skills directly impacted by the experience of dyslexia. I discuss Bourguignon's (2019) research and media and the studies of Flaunacco et al. (2015), Ganschow et al. (1994), and Jaarsma et al. (1998) that link music, literacy, and dyslexia.

The link between music, literacy, and dyslexia is not new, and it has grown significantly since it was explored by Jaarsma et al. in 1998⁴. This pilot study was created to identify what part of musical instruction was most challenging for students with dyslexia, drawing the parallel between an experience linked to literacy and the literacy aspects of music. Over the span of five weeks, a group of nine students, five with dyslexia and four without, students received private music lessons, each followed by an assessment on notation. Students with dyslexia were found to struggle with notation, identification, and differentiating, but best practices such as a multisensory approach, outlined in the next theme, were suggested to build this skillset using an asset-based mindset, nurturing and growing the application of these skills in and out of music. In using this asset-based mindset, students can develop and strengthen compensatory strategies⁵ (Ganschow et al., 1994), such as focusing on application over notation. An application emphasis over a written

⁴ This older study, along with Ganschow et al. (1994) are included to highlight the history and growth in the link between music and dyslexia.

⁵ The term compensatory can be read as a deficit-based mindset, but in this case, it means emphasizing the skills that work for each student.

emphasis, meaning the playing/singing of music over reading music, allows the literary deterrent to be secondary to the physicality of music, which poses fewer struggles for a student with dyslexia. Students with dyslexia in music education feel successful in discovering and employing individualized strategies. Therefore, when finding what works for them, musicians feel confident in their abilities.

Similarly, in 1994, Ganschow and colleagues interviewed seven musicians with dyslexia and shared their strengths, weaknesses, and strategies they have used/experienced in their music education. Their common struggles encompassed notation, inflection, rhythm, and the processing of sound (Ganschow et al., 1994). The strategies outlined also emphasized multisensory teaching individualized to each student. The authors noted that some musicians with dyslexia benefitted from a kinesthetic approach, such as tapping out rhythms, an aural approach that allows students to learn music using their ear and sound replication on their instrument, and memorization of music. The varied approaches to learning music benefit students with dyslexia as they develop visual, aural, and kinesthetic skills because they must remember how the music looks, sounds, and feels on their instrument.

Musical training is viewed as complementary in assisting students with dyslexia because of the development of the above listed literary skills (Bourguignon, 2019). In this more recent study, Bourguignon (2019) compiles data and studies from Belgium and the United States with the goal of developing a deeper understanding of dyslexia. Bourguignon argues that while music may bring frustration to students with dyslexia, it also benefits them greatly, concluding that music and dyslexia have a positive connection in literary growth.

Flaunacco et al. (2015) support the assumption that music enhances students' skill sets. The authors conducted a study where 46 Italian children with dyslexia between the ages of 8-11

participated in a controlled trial that tested their phonological skills of processing and decoding sound before and after seven months of musical training. This study breaks down what components of music are directly linked to literacy and dyslexia, highlighting how the two can grow alongside each other, as Bourguignon (2019) suggests.

The relationship between music and dyslexia has been studied for a long time, with Jaarsma (1998) and Ganschow et al. (1994) serving as our foundational knowledge on this connection. The newer work by Bourguignon (2019) and Flaughnacco et al. (2015) further the conversation by supporting the role of music education in a student with dyslexia's educational journey. An educator's role, then, is to modify and accommodate in a way that ensures an equitable experience in gaining literary skills and knowledge.

3.3 BEST PRACTICES: DISABILITY CRITICAL RACE THEORY AND PERSON-CENTERED PLANS

Best practices and accommodations are daily practices that include short- and long-term goals using person-centered plans (PCPs), also referred to as individualized education plans (IEPs). The practices to be described are a result of experienced educators' tried and true practices, paired with data-backed approaches in the music classroom. These practices stem from a lack of support and training from school districts, leading to the development of modifications in music classrooms to create an inclusive and modern pedagogy. These practices are also informed by the DisCrit theory.

3.3.1 Disability Critical Race Theory

I have briefly introduced DisCrit earlier in this thesis paper; however, I want to go deeper at this point. Disability Critical Race Theory is a combination of Disability Studies and Critical Race Theory that works to highlight the intersectionality of marginalized learners; oppression, racism, and ableism are deeply connected in the lives of underserved students (Annamma et al.,

2018). This theory centers on the lived experience of dyslexia and is thus crucial to inform individualized approaches and modifications in the classroom. DisCrit also challenges the preconceived notions of dis/ability (Manning, 2016), and it encourages progress and growth in special education from a progressive and inclusive lens that highlights intersectionality. I decided to use DisCrit because best practices in the music classroom include DisCrit-informed decisions and modifications that are individual to each student and their experiences. Annamma et al. (2013) outline the seven tenets of DisCrit:

1. DisCrit highlights how ableism and racism work to uphold normalcy
2. DisCrit questions singular identities and highlights multidimensional identities
3. DisCrit outlines social norms and roles of race and dis/ability while describing how the label of one or the other can impact a person in society
4. DisCrit lifts up marginalized voices and recognizes that history has not done so
5. DisCrit draws in the role of legality with race and dis/ability and how it has been used to deny rights
6. DisCrit acknowledges that advancements for people with dis/abilities have been because of the power white middle-class people hold
7. DisCrit needs activism and supports resistance to norms.

The idea of normalcy reflects our white, high SES hegemonic society that is supported and furthered by the discrimination that DisCrit calls out. This framework recognizes the impact of racial and dis/ability labels on a person and how these labels have been used to deny rights. The reason for this discrimination comes back to the power our white classist hegemony holds and the consequences of maintaining binaries and a singular idea of the experience of dyslexia. DisCrit empowers multidimensional identities using intersectionality and exposes the systems of power

that impact intersectional identities. For example, a student with dyslexia may also be Latinx, meaning that they are vulnerable to the consequences of ableism and racism.

Furthermore, Annamma et al. (2018) argue for the implementation of DisCrit, which works to highlight the intersectionality of marginalized learners in our interactions with young adults. Intersectionality recognizes people in regard to their *social axis* and the dimensions of said person and is a process of deconstructing to decolonize (Migliarini, 2023). This means that the view of a student reaches beyond white hegemonic norms to include the multifaceted identities of students who may be marginalized or underserved in one or more ways. This also includes why these communities are underserved, referencing systems of power such as the education system, districts, or societal norms further imposed by higher systems. These multiple axes of oppression intersect and shape our experiences (Perouse-Harvey, 2020). I am including intersectionality because, as a tool and lens, it opens our understanding of our multifaceted students, layers of oppression, and the individuality of their experience.

Music educators, in particular, must recognize these layers in an inclusive classroom to better understand the environment their students are part of in and out of school. This practice of intersectionality creates space for students experiencing dyslexia, amongst other things, such as financial struggle or privilege, such as the case with Coppola (2017), and various marginalized identities. While Coppola (2017) does not advocate for DisCrit and intersectionality directly, she emphasizes the importance of looking at the whole person in working to understand students' dis/ability. Annamma et al. (2018) argue that the reason for this inequity in education is a dis/ability system built on white hegemonic norms that have not accounted for intersectionality and individuality. This observation was made amidst the case of a young Black girl with dis/abilities who killed her abusive father and who was met with a lack of empathy and respect upon

investigation. While the average length of detention is around 20 days, this young girl was held for over 200. This trend of inequitable treatment ranges across race, ethnicity, and dis/ability. This is an example that signifies the severity of neglecting to use a DisCrit lens in working with students who have dis/abilities.

Consequently, I am including DisCrit because it serves to open our eyes to the layers of oppression students face in our education system, alongside centering the student's experience. I argue that this tool and lens should be adopted and provided to music educators teaching an inclusive classroom so as to prepare them to understand what their students need in and out of the school.

3.3.2 Accommodations and Modifications to Curriculum

Finally, I will outline specific accommodations and modifications for music educators that center the student. Person-centered-planning is comparable to an individual education plan (IEP), meaning it takes the whole experience of the student into account and creates a plan for accommodations and strategies in the classroom while collaborating with the family to improve equity and success in the classroom (Migliarini, 2023). An IEP or PCP can exist without a medical diagnosis and must be created through an asset-based mindset (Migliarini, 2023) in order to create an unbiased plan that serves to uplift the student's skill set and grow using their strengths rather than focusing on their deficits.

Migliarini (2023) conducted a pilot study in Rome with migrant students who have dis/abilities, where the role of DisCrit, PCPs, and intersectionality was analyzed in relation to the student's experiences. It was found that the understanding and usage of these tools focus on giving each student what they individually need to create a smoother path to an individualized definition of success.

After this initial study, Migliarini and Elder (2023) worked with educators to outline how to move forward with an inclusive style of education. The purpose of this follow-up on the pilot study was to encourage the use and emphasize the importance of PCPs/IEPs that meet students' needs with equity and an asset-based mindset, honoring DisCrit. In observing the interactions of educators with and in regard to students with dis/abilities, Migliarini and Elder (2023) found that when teachers view students through a deficit lens, the phrasing of dis/abilities, needs, and the process of an IEP/PCP is impacted and biased. As an IEP/PCP is formed by input from parents, teachers, staff, and the student, perspective and phrasing are crucial to the development of an unbiased and asset-based plan. However, similar to the process of dyslexia diagnosis, the process of an IEP/PCP is not universal and can change the outcome for students.

In a similar line, Perouse-Harvey (2020) studied the experience of preservice teachers in an education class with discussions of race, dis/ability, and simulations of IEPs/PCPs. In this short one-semester course, it was found that preservice teachers were more knowledgeable and comfortable discussing and participating in these discussions and PCPs, but that there was more to learn to fully prepare them for the classroom. These individualized plans serve as the first step for many students to transform their school experience, but not every student if they are not recommended for special education, thus requiring an IEP/PCP. Music educators are required to participate in some education classes prior to teaching, but any special education-specific courses such as Perouse-Harvey (2020) advocates for are rare, thus dis-servicing music teachers.

In addition to IEPs/PCPs, the following accommodations can be done with and without a diagnosis or IEP, and they can be included in any music classroom where the need exists. Solis (2010), Manning (2016), Jaarsma et al. (1998), Ganschow et al. (1994), and Flach et al. (2014) suggest shifts in music practices to increase comprehension and application of written music for

students with dyslexia. Colored paper was found to increase the success of reading sheet music by 20% for three college musicians with dyslexia (Solis, 2010). The color change alters the light waves that interact with the paper musicians read from- a small shift for music educators. Jaarsma et al. (1998) found that application and the connection of content to practice (singing or playing an instrument) operates on an asset-based pedagogy, eliminating the emphasis on notation and working in a more hands-on way. This tool was successful, meaning students became quicker with note recognition, association, and application over the span of five weeks' worth of music and literary lessons and assessments on notation, identification, and differentiating written music (Jaarsma et al., 1998). This kinesthetic approach falls into a category of multisensory teaching that Ganschow et al. (1994) suggest combining visual, aural, written, and other sensorial learning to individualize approaches with each student. Finally, Flach et al. (2014) studied Dutch children aged 8-13 and focused on the readability of written music for students with and without dyslexia, specifically the size of notation, stem direction of notes, and color of notation. They found that the size of notes and consistency of stem direction led to 50% more success in the reading of the sheet music. This study investigated alterations that are free, attainable, and based on assets as opposed to deficits of students with dyslexia.

All of the above practices are more tactile than those described by Manning (2016) in regard to administrative and district support. Manning (2016) conducted semi-structured open-ended interviews to gain qualitative measurements from two music educators on their accommodations for special needs in the classroom. The practices of these two educators were then broken down into recurring themes such as community building, sensitivity to students' needs, classroom management, technology, and accommodations. The purpose of this study was to identify what strategies music educators are using to work with students who have special needs

while learning about what challenges persist in this practice (Manning, 2016). Above community building, sensitivity to students' needs, and accommodations, the support in the form of preservice education and training was seen as the foundation for all else.

The above studies address the experience of students with dyslexia and the multidimensional identities such as low-income, Latinx, Black, or even musician who face inequities in academia as a result of systemic bias and a lack of an intersectional lens. Mis/diagnosis, its impact on student musicians, and best practices and accommodations are woven through a discussion of inequity and dyslexia. In the following chapter, I describe the implications of this narrative literature review.

Chapter 4: Discussion

I set out to conduct this narrative literature review to respond to two research questions: (1) What are the experiences of students with dyslexia in music classrooms? and (2) What can music educators do to support students with dyslexia in their academic journeys? So far, I have shown the experience of students with dyslexia, the impact on music education, and the responsibility of districts and educators. This responsibility is a result of the inequities faced by these students, which translate into their academic and personal endeavors, which music falls into.

In this chapter, I first look at dyslexia through a DisCrit lens and the responsibility of districts and the education system as a whole to educate preservice teachers emphasizing DisCrit and intersectionality, lifting marginalized voices, and promoting activism and resistance to norms (Annamma et al., 2013; Annamma et al., 2018). Then, I translate these endeavors into music education and the role DisCrit may play in informing PCPs in the classroom. Finally, I discuss the importance of these modifications by highlighting and centering the experience of minoritized students with dyslexia while recognizing the intersectional identities and systemic inequities that impact these students' experiences.

Dyslexia diagnosis is a flawed and inequitable process that deters minoritized students from receiving resources and interventions, which directly neglects the fifth tenet of DisCrit on legality and rights (Annamma et al., 2013). Financial status, race/ethnicity, and accessibility play a large role in creating what Hettleman (2003) calls "invisible dyslexics." This label may come as a result of a student of color, such as a Latinx or Black student, not receiving a diagnosis, a family not being able to afford the screening, or a district not having a reliable diagnostic process and/or biased input due to a deficit-based view of students with dyslexia. In addition, if a diagnostician or educator does not have an understanding of the broad spectrum of dyslexia and its individuality

from student to student (Sandman-Hurley, 2013), the diagnosis and district data could potentially be invalid thus creating further academic deterrents or impure dis/ability data, just as Hammill and Allen (2020) propose is a large scale problem in our country. Invisible dyslexics, believed to make up around a quarter of large urban districts (Hettleman, 2003), can then be assumed to be present in any classroom, thus requiring appropriate action and intervening on behalf of educators.

Accessibility to dyslexia resources is a privilege based on finances, race/ethnicity, language, and the legitimacy of special education within districts, though it is and should be treated as a legal right (U.S. Department of Justice, 2000). Coppola (2017) draws a comparison of her own privileged experience with her dyslexia journey and her friend who went without diagnosis due to finances. This scenario based in the United States is parallel to the UK MCS that shows a family of higher SES is more likely to obtain a diagnosis for their child or fight for appropriate interventions and resources (Knight & Crick, 2021). Moll et al. (2022) advocate for the reduction of the cost of diagnosis and interventions due to its immense impact on the physical, emotional, educational, social, and overall well-being of the student, but also call attention to its lack of coverage with insurances in Germany and the United States, two of many countries in this situation. Insurance and health care are other systems of power impacted by the role of race/ethnicity, language, and finances, thus limiting accessibility. Through a DisCrit lens, advocacy translates to accessibility through our healthcare systems, acknowledgment of the legality of rights and interventions for students with dyslexia, and attention to the minoritized identities of our students (Annamma et al., 2013).

DisCrit also accounts for the intersectionality and individuality of every learner, going against our current dis/ability system that is built on white hegemonic norms (Annamma et al., 2013; Annamma et al., 2018) that have done the opposite and defined dyslexia inside a small box

without room for varied experiences. These norms have led to students of color becoming less likely to be diagnosed (Odegard et al., 2020) and ELs inadequately being tested and misdiagnosed (Moore, 2022). DisCrit recognizes the impact of language, race/ethnicity/ and SES on families and how it translates into academia, a perspective that educators and districts must adopt.

Outside the classroom, most of the responsibility for bettering our dyslexia processes and norms falls on our districts. In exploring teachers' belief systems on race ability and growth through a study group, Knapp (2022) found a deep need for an intersectional understanding of students and their multifaceted identities and experiences. Preservice exposure, training, and professional development on DisCrit are necessary for future educators to be able to facilitate an equitable learning environment (Knapp, 2022). It is important to know that the practices found to be beneficial in an inclusive classroom have been developed as a result of flexible educators and pedagogical research reacting to a lack of training and education on working with students with dyslexia in the music classroom.

In the music classroom, most teachers will teach an inclusive classroom with students in general and special education, and/or undiagnosed students who have a specific learning dis/ability. Bourguignon (2019), Flaunacco et al. (2015), and Jaarsma et al. (1998) all label the crossovers of music, literacy, and dyslexia, and they suggest that one can help the other because of the similarities. In understanding this link, music educators can use an asset-based mindset to teach this skill set, strengthening comprehension and application in and out of the music classroom. An understanding of the connection between music and literacy requires background knowledge of dyslexia and the experience of a student with dyslexia.

Understanding the link between music and dyslexia and the flaws in the diagnosis process alongside its inequities has led to the development of best practices and suggestions for

proactivity amongst teachers and districts to better prepare our public special education processes. Through a mixture of day-to-day accommodations and large-scale systemic changes, musicians growing up with dyslexia can get individualized interventions.

Interventions ideally begin with DisCrit-informed IEPs or PCPs that center the student on the creation of the educational plan. Aside from diagnosis and resources, these plans can be put in place without a medical diagnosis, relieving families of the financial burden that accompanies it. Migliarini (2023) and Migliarini and Elder (2023) explored the importance of DisCrit in these plans that are inclusive of the intersectionality of students, meaning that their race/ethnicity, SES, language, and life experiences are taken into account in creating the plan. In this creation, educators and staff involved must also approach the process with an asset-based mindset that centers the students' strengths and the role they play in their comprehension and path to success (Migliarini & Elder, 2023). Teachers involved in the creation of these plans consist of general and special education staff (IDA, 2015), necessitating adequate training and experience in this area and the implementation of a DisCrit-informed lens.

Systemic change begins by recognizing the role of districts and education programs in higher education in training preservice teachers. In one semester of a preservice class, Perouse-Harvey (2020) found that while students experience growth and comfort in discussions of race, dis/ability, and IEPs/PCPs, more was needed. Manning (2016) shares this sentiment, arguing that above any modifications in pedagogy, district support and training are crucial in efforts toward special education. The combination of an education inclusive of DisCrit-based conversations, an intersectional view of students and inequitable systems such as the education system and districts, and well-informed and unbiased IEPs and PCPs can promote immense change in policy and

processes across districts. This can be done by utilizing the seven tenets of DisCrit (Annamma et al., 2013) as guidelines or check-ins when working with students with dyslexia.

Within the classroom, day-to-day modifications with an asset-based mindset can be transformative for musicians experiencing dyslexia. Solis (2010), Manning (2016), Jaarsma et al. (1998), Ganschow et al. (1994), and Flach et al. (2014) stand for approaches inclusive of multisensory teaching, application emphasis, and modification of written music to improve readability. Multisensory teaching with a kinesthetic emphasis, as described by Ganschow et al. (1994), paired with application over automatization (Jaarsma et al., 1998) works to remove emphasis on the reading of music and focuses on the playing/singing of music, which leads to the same end goal of hands-on creating. This also incorporates an asset-based teaching style that focuses on physicality while implicitly building literacy. Application and notation go hand-in-hand, but flipping the order of teaching and emphasis allows students to build on the physicality as they develop the automatization of notation. Educators can also print sheet music on colored paper of student's choice and blow up the notation, making it larger and easier to read because of the light waves' shift with various backing colors (Solis, 2010; Flach et al., 2014). The color of the paper and size of the notation can vary with each student's needs and preferences and even make it more fun to read, something that should not be overlooked depending on the age group of the musicians. These modifications and systemic changes place the responsibility on general and special education staff, alongside college preservice programs and the public education district, to ensure adequate training of music teachers.

In conclusion, the experience of a student with dyslexia is blurred by inequities reinforced by the education system. From diagnosis, multidimensional students with varying identities, such as Latinx, Black, low-income, or English Learners, have low access to both

diagnosis and resources (Coppola, 2017; Hettleman, 2003; Moll et al., 2022). The experience of a student with dyslexia in the music classroom must be centered on decision-making on behalf of districts and classroom educators. This translates into preservice training (Manning, 2016) and an educator's understanding of a DisCrit-informed pedagogy (Knapp, 2022). In advocacy for systemic change for students with dis/abilities, responsibility must be recognized top down in our education system to invoke long-term change and a shift in the way we view dis/ability.

4.1 LIMITATIONS

Current research on music and dyslexia is still new, with most growth in the subject area having taken place in the last 30 years. This requires more specialization within additional studies. In all sources regarding the process of dyslexia diagnosis reviewed in this paper, the studies neglected to list/itemize the exact system used or provide transcriptions of the dialogue that takes place in the settings. To universalize and/or reform said process, these current studies must be analyzed, questioned, and extended.

While dyslexia and music are linked in studies globally, more studies in the United States are necessary to decide on appropriate interventions and reform. Like Knight and Crick's (2021) U.K. cost-utility analysis, a similar study must be done in the U.S. with intersectional variables relating to the variety and accessibility of said dyslexia resources in the cost analysis. More data on which insurances cover dyslexia interventions, such as what Moll et al. (2022) shared with Germany and the U.S., may also be valuable in this effort. Going forward, music education would benefit from being studied in relation to students with dyslexia, using a DisCrit-informed approach and an asset-based mindset. While the link between music and dyslexia has not been researched heavily, future research and practice should be conducted through the proper lenses that seek to inform with equity and intersectionality in mind.

Chapter 5: Conclusion

In this thesis, I have conducted a narrative literature review that focuses on the experience of students with dyslexia, the inequities they face, and the added layer of music education and the responsibility of music educators and their districts to establish a DisCrit lens and practices, emphasizing intersectionality to better understand and teach minoritized students with dyslexia while actively advocating to de-establish the systems of power creating inequity for these students. To do so, I gathered studies and media on and relating to dis/ability and race, dyslexia diagnosis, music's relation to dyslexia, and modifications in the music classroom to accommodate the experience of a student with dyslexia, paired with sources supporting using a DisCrit informed approach and PCPs.

The findings and discussion in this thesis outline this experience in a way that promotes accommodations and recognition of multidimensional identities in students that require modifications fit to each circumstance. The data presented by Migliarini (2023), Migliarini and Elder (2023), and Perouse-Harvey (2020) provide quantitative and qualitative observations on how to meet students' needs, and through Annamma et al. (2018) and Knapp (2022), educators may find direction for looking at PCPs and IEPs with a DisCrit lens providing context on dyslexia in the general and music classroom. These concepts are related to a need for advocacy, a tenet of DisCrit (Annamma et al., 2013).

Due to my positionality as a music educator teaching in an inclusive classroom, I used studies beginning in 1994 to learn more about the connection between dyslexia and music, thus establishing a need to understand the experience of a student with dyslexia, as the aforementioned authors outlined. Music literacy and general literacy have a direct connection to one another, highlighting the need for research and support for students with dyslexia partaking in this art. The

systemic inequities deterring diagnosis, interventions, and training for teachers are a domino effect, causing general education music teachers running an inclusive classroom to act without adequate knowledge and support.

This thesis explored best practices for teachers, the specifics of literacy and intersectional identities in an inclusive music classroom, and the inequities necessitating this research. Going forward, more support and research are needed on a district, state, federal, and global basis to enhance the experience of students and teachers in this very situation. As music educators, our inclusive classrooms require the time, effort, training, and understanding of a DisCrit approach to create a truly inclusive experience for students with dyslexia. Failure to do so neglects a modern understanding and practice of equity and DisCrit in the music classroom.

References

- Annamma, S. A., Connor, D., & Ferri, B. (2013). Dis/ability critical race studies (DisCrit): Theorizing at the intersections of race and dis/ability. *Race Ethnicity and Education*, 16(1), 1–31. <https://doi.org/10.1080/13613324.2012.730511>
- Annamma, S. A., Ferri, B. A., & Connor, D. J. (2018). Disability critical race theory: Exploring the intersectional lineage, emergence, and potential futures of DisCrit in education. *Review of Research in Education*, 42, 46–71. <http://www.jstor.org/stable/44668713>
- Annamma, S. A., Ferri, B. A., & Connor, D. J. (2022). Introduction to the special issue - imagining possible futures: Disability critical race theory as a lever for praxis in education. *Teachers College Record*, 124(7), 3-16. <https://doi.org/10.1177/01614681221111427>
- Bourguignon, M. (2019). How music shapes our brain and helps acquire literacy [Video]. *TED Talk*. https://www.ted.com/talks/how_music_shapes_our_brain_and_helps_acquire_literacy
- Feak, C. B., & Swales, J. M. (2009). Orientations. In *Telling a research story: Writing a literature review* (pp. 1–22). University of Michigan Press ELT.
- Flach, N., Timmermans, A., & Korpershoek, H. (2014). Effects of the design of written music on the readability for children with dyslexia. *International Journal of Music Education*, 34(2), 234–246. <https://doi.org/10.1177/0255761414546245>
- Flagnacco, E., Lopez, L., Terribili, C., Montico, M., Zoia, S., & Schön, D. (2015). Music training increases phonological awareness and reading skills in developmental dyslexia: A randomized control trial. *PLOS ONE*, 10(9). <https://doi.org/10.1371/journal.pone.0138715>

- Ganschow, L., Lloyd-Jones, J., & Miles, T. R. (1994). Dyslexia and musical notation. *Annals of Dyslexia*, 44, 185–202. <http://www.jstor.org/stable/23769692>
- Hammill, D. D., & Allen, E. A. (2020). A revised discrepancy method for identifying dyslexia. *Journal of Pediatric Neuropsychology*, 6(1), 27–43. <https://doi.org/10.1007/s40817-020-00079-2>
- Hettleman, K. R. (2003). *The invisible dyslexics: How public school systems in Baltimore and elsewhere discriminate against poor children in the diagnosis and treatment of early reading difficulties* (pp. 2–34). Abell Foundation.
- Hill Collins, P., & Bilge, S. (2020). *Intersectionality* (2nd ed.). Polity.
- International Dyslexia Association. (2015, June 11). Testing and evaluation. <https://dyslexiaida.org/testing-and-evaluation/>
- Jaarsma, B. S., Ruijsenaars, A. J., & Van den Broeck, W. (1998). Dyslexia and learning musical notation: A pilot study. *Annals of Dyslexia*, 48(1), 137–154. <https://doi.org/10.1007/s11881-998-0007-4>
- Knapp, E. (2022). "I want to be a better person and a better teacher": Exploring the constructs of race and ability in a music educator collaborative teacher study group (Order No. 29170065). Available from ProQuest Dissertations & Theses Global. <https://utep.idm.oclc.org/login?url=https://www.proquest.com/dissertations-theses/i-want-be-better-person-teacher-exploring/docview/2669106841/se-2>
- Knight, C., & Crick, T. (2021). The assignment and distribution of the dyslexia label: Using the UK millennium cohort study to investigate the socio-demographic predictors of the dyslexia label in England and Wales. *PLOS ONE*, 16(8). <https://doi.org/10.1371/journal.pone.0256114>

- Manning, I. (2016). Music for all: Supporting students with special needs in the music classroom [Master's thesis, University of Toronto]. TSpace.
https://tspace.library.utoronto.ca/bitstream/1807/72239/1/Manning_Ilana_R_201606_MT_MTRP.pdf
- Migliarini, V., & Elder, B. C. (2023). Moving forward: DisCrit-informed person-centered strategies for inclusive education. In *The future of inclusive education* (pp. 193–210). Palgrave Macmillan. https://doi.org/10.1007/978-3-031-49242-6_6
- Migliarini, V. (2023). Inclusive education from the DisCrit perspective. In *International perspectives on inclusive education: In the light of educational justice* (pp. 193–210). Verlag Barbara Budrich.
- Moll, K., Georgii, B. J., Tunder, R., & Schulte-Körne, G. (2022). Economic evaluation of dyslexia intervention. *Dyslexia*, 29(1), 4–21. <https://doi.org/10.1002/dys.1728>
- Moore, K. A. (2022). The identification and prevalence of dyslexia among English learners [Doctoral dissertation, Texas A&M University]. <https://hdl.handle.net/1969.1/197869>
- Odegard, T. N., Farris, E. A., Middleton, A. E., Oslund, E., & Rimrodt-Frierson, S. (2020). Characteristics of students identified with dyslexia within the context of state legislation. *Journal of Learning Disabilities*, 53(5), 366–379.
<https://doi.org/10.1177/0022219420914551>
- Perouse-Harvey, E. M. (2020). Speaking up for all kids: Developing pre-service general education teachers as advocates through critical coursework and simulated IEP meetings [Doctoral dissertation, University of Michigan].
- Sandman-Hurley, K. (2013, July). What is dyslexia? *TED Talk*.
https://www.ted.com/talks/kelli_sandman_hurley_what_is_dyslexia

Solis, M. A. (2010). The effects of colored paper on musical notation reading on music students with dyslexia [Master's thesis, Texas Tech University].

Coppola, S. (2017, June 2). Dyslexia and privilege | Samantha Coppola [Video]. *YouTube*.

<https://www.youtube.com/watch?v=6hwmM5G2mCw>

U.S. Department of Education. (2018, May 25). Sec. 300.8 (c) (10). Individuals with Disabilities Education Act. <https://sites.ed.gov/idea/regs/b/a/300.8/c/10>

U.S. Department of Justice. (2000). *Enforcing the ADA: A status report from the Department of Justice (April - September 2000)*. <https://archive.ada.gov/aprsep00.htm>

Crenshaw, K. (2020, February 15). Kimberlé Crenshaw | The 2020 Makers Conference. *YouTube*

<https://www.youtube.com/watch?v=cSTf89pLcl0>

Vita

Natalie Bonelli is an alumnus of the University of New Mexico, where she earned a bachelor's degree in music education with a concentration in voice. Since graduating, Natalie has worked in the Albuquerque Public School system teaching choir and piano itinerate at Title I schools in the North Valley of Albuquerque. Prior to teaching, she taught part-time through the New Mexico Philharmonic's Young Musician Initiative (YMI) and as a Music Ministry Intern at St. John's United Methodist Church. Alongside teaching, Natalie worked as a contract singer throughout college and in the customer service industry. Her roots in customer service held some of the most valuable life lessons and were a formative part of her upbringing.

Natalie Bonelli plans post-graduate school to continue teaching in Title I schools in the North Valley and to continue to advocate for underserved communities, students, and music programs. Thus far, she has worked to revitalize three low-income music programs in this community, bringing artistry with advocacy. Moving forward, her teaching philosophy remains rooted in diversity, equity, and social justice, with a special love for her minoritized personal and academic community.

Contact Information: bonellinatalie@gmail.com