A Proposed Approach for Teaching Music Students with Dyslexia Using Orton-Gillingham Techniques

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A PROPOSED APPROACH FOR TEACHING MUSIC STUDENTS WITH DYSLEXIA USING ORTON-GILLINGHAM TECHNIQUES

By

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When I was twelve years old, I sat next to my mother as she wrote her dissertation. Little did I know fifteen years later the roles would be switched. Thank you, Mom, for your love, your knowledge, your support, and your patienc

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ABSTRACT

This treatise proposes an approach for teaching music students with dyslexia using Orton-Gillingham techniques. The Orton-Gillingham Approach takes a structured, multisensory approach that can be used as a template for teaching music students. Orton-Gillingham addresses the encoding and decoding skills necessary for learning to read and write in one's spoken dialect. This treatise presents proposed adaptations to Orton-Gillingham methods that will meet the needs of those learning to read and write within the context of the language of music.

CHAPTER 1

INTRODUCTION

The Orton-Gillingham Approach is one of the leading multisensory approaches for teaching individuals with dyslexia how to read, spell, and recognize words. In the mid-1930's, Neuropsychiatrist and pathologist Dr. Samuel T. Orton and psychologist Anna Gillingham formed a team with the intention of creating an approach for learning language that incorporated elements such as phonology, morphology, graphemes, syllabification, encoding, and decoding. This approach encodes, decodes, and breaks down language in a specific way geared toward students with dyslexia (Sayeski et al., 2019).

Orton-Gillingham uses what is often referred to as The Language Triangle, with its three sides representing visual, auditory, and kinesthetic pathways of learning, making this a multisensory approach and experience. The approach is cumulative, systematic, and individualized for each student. The teachings of Orton-Gillingham present an ongoing diagnostic element that provides the basis for how to move forward with each lesson. The approach has often been adapted or modified to meet the needs of educators who use similar language-based learning tools. Examples include modifying Orton-Gillingham to use in larger class settings or adapting the approach for use with an older population of students (Ritchy & Goeke, 2006).

Multiple studies have been completed that test whether the application of musical training can improve the language skills in students with dyslexia. One study completed by Dr. Katie Overy suggests that incorporating music lessons into a student with dyslexia's curriculum will improve their phonological and spelling skills (Overy, 2003). Another study by Flaugnacco, Lopez, Terribill, Montico, Zoia, and Schön found that musical training improved reading skills

significantly for students with dyslexia (Flaugnacco et al., 2015). While there are many studies focused on music as a positive aid to students with dyslexia, there is significantly less research on what can improve a student with dyslexia's learning of music. The complexity of written music yields difficulties for individuals with dyslexia, such as spatial awareness, the combination of vertical and horizontal formats, and the decoding of pitches and rhythms (Flach et al., 2016).

A study by Nelson and Hourigan published in the National Association for Music Education examined learning strategies for a group of professional musicians with dyslexia. The study concluded that in order to learn music they all relied on multisensory learning, such as visual, tactile, kinesthetic, and aural (Nelson & Hourigan, 2016). Though this might be said for all musicians, the process these musicians used tended to focus on one sense at a time such as listening or feeling, before moving on or combining these senses. This results in a longer learning process. Another study by Leonore Ganschow, Jenafer Lloyd-Jones, and T. R. Miles yielded similar results, where students used multisensory approaches to create a different pathway into learning their music. Musical rhythm is often an area of struggle for students with dyslexia and is frequently coupled with other senses such as hearing and feeling, as opposed to simply reading and understanding (Ganschow et al., 1994).

The Orton-Gillingham Approach has yet to be applied directly to the learning of music for students with dyslexia or students with other language/cognitive/sensory processing disorders or neurodiversity. Its multisensory approach has the potential to yield positive results for musicians that require a greater use of multisensory experiences and the further breaking down of musical material. The Orton-Gillingham Approach breaks down the steps of reading into smaller increments of information, and the same can be done for learning music.

The following chapters will explore approaches and strategies used to teach students with dyslexia to read and write language. The information is then translated from language-focused to music-focused with the goal of helping students to be successful in learning to read, write, and create music. The Orton-Gillingham Approach has not yet been applied to music education, and therefore this author has created all musical counterparts to the Orton-Gillingham techniques presented (all of the proposed ideas are theoretical, and have not yet been applied in a music education setting). These adaptations have been created with the premise that learning to read and write in one's native primary language is parallel to learning to read and write in the language of music.

CHAPTER 2

WHAT IS DYSLEXIA?

Dyslexia is a neurological disorder that hinders one's ability to process language. It can affect many areas of learning including reading, spelling, writing, and speaking. There is often a correlation between students who are diagnosed with reading disabilities and the ability to accurately execute rhythms and pitch in music (Lee et al., 2015).

The International Dyslexia Association defines dyslexia as:

> Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing ability. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not the result of generalized developmental disability or sensory impairment. Dyslexia is manifested by variable difficulty with different forms of language, often including, in addition to problems with reading, a conspicuous problem with acquiring proficiency in writing and spelling.
>
> (Orton-Gillingham Basic Language Course Manual (OGBLCM), p. 4)

A simplified, shorter definition is used by the OGBLCM:

> Dyslexia is a neurological disorder in individuals who, despite conventional classroom experience, fail to attain the language skills of reading, writing, and spelling commensurate with their intellectual ability.
>
> DYS – difficulty with LEXIA – language
>
> (OGBLCM, p. 3-4)

Here are a few of the general characteristics that can be seen in students with Dyslexia written by the author (based on OGBLCM concepts):

- Difficulty in reading, spelling, writing, or arithmetic
- Hard time following instructions and staying on task

- Handwriting may be illegible
- Easily distracted, energy level highs and lows
- Letter and symbol sequence confusion
- Delayed spoken language
- Confusing directions – North, South, Up, Down, Right, Left
- Highly frustrated
- Anxiety when taking tests
- Retention difficulties
- Signs of immaturity

(OGBLCM, 2018)

For a musician, the structure of Orton-Gillingham has the potential to work well, because music is a sound-specific language, and therefore has multiple sounds available for learning both notes and rhythms. Statistically, 15-20% of the population have or will experience a form of Dyslexia. 80% of diagnosed cases of specific language disabilities fall into the category of dyslexia (OGBLCM, 2018).

The symptoms of dyslexia noted above directly affect the process a student uses to learn how to play an instrument, read music, feel rhythm, and perform in an ensemble. It is possible for a student with dyslexia to continue through college without ever becoming diagnosed. For this reason, it is beneficial for educators to be aware of the characteristics that accompany a diagnosis of dyslexia. While these characteristics can present in any learner, they will be exaggerated and more severe in students with dyslexia. What may be seen in relation to music include errors such as incorrectly naming words or notes, consistently playing under tempo, verbal and auditory processing difficulties, difficulty with sequences (playing notes in the correct order), difficulties with motor sequencing (especially with bowings and fingerings), and

confusing the right and left sides in relation to bowings or fingerings. General characteristics of individuals with dyslexia commonly include time or directional confusion, inability to successfully problem solve, and distractibility (Vance, 2004). In Sheila M Oglethorpe's *Instrumental Music for Dyslexics* (2002) she explains that:

> A child with dyslexia who is perhaps 2,3 or more years *behind* expectation for his chronological age in reading and spelling may yet be articulate and capable of reasoning in a manner well in *advance* of his chronological age. This, in itself, creates difficulties that are secondary to the condition of dyslexia, although psychologically they may be of equal importance.
>
> (Oglethorpe, p. 4)

Because a student with dyslexia may be behind in reading yet in reasoning may feel just as confident as another student, they may get frustrated with their learning process, which often affects their personal confidence. When educators learn how to best teach a student with dyslexia, the student progresses and has the opportunity to feel a sense of accomplishment.

During the late 20th century an abundance of research on dyslexia was conducted through the use of magnetic resistance imaging (MRI) and positron emission tomography (PET). The results of multiple studies (Stein and Walsh (1997), Galaburda er al. (1994), Paulesca et al. (1996)) confirmed that dyslexia at its root is caused by physiological factors. The brain of an individual with dyslexia has different attributes than the brain of somebody who does not have dyslexia. The result of this is shown in the symptoms that students with dyslexia exhibit.

One of the primary symptoms of dyslexia is auditory language-based symptoms. A student may be much slower in processing what they hear whether that is a lecture, recording, word, or sound. This also specifically applies to rhythm, which is not only used in music, but is called prosody, the musical element of speech. Rhythm in both music and speech are controlled by the brain's left hemisphere and tonality and pitch in music (not language) are controlled by

the brain's right hemisphere. Learning music therefore presents double the challenge. Borch-grevink (1982) said that "Almost any musical performance is therefore dependent upon perfect hemispherical coordination" (p. 5.). Oglethorpe writes "If the two ears are not hearing at the same speed, or if the messages presented by an auditory stimulus are subject to a 'disconnection syndrome' (Paulescu et. al., 1996) or cannot be processed at a high speed (Stein and Walsh, 1997), this will not be possible" (p. 5). Other auditory symptoms present in dyslexics include trouble in hearing rhyme and trouble "manipulating sound segmentation and sound blending" (Oglethorpe, 2002, p. 5). Extra words included on a piece of music for a beginner will only distract a student (Oglethorpe, 2002).

Sounds are a large part of learning language. Students with dyslexia often have trouble taking individual word sounds apart and immediately putting them together. They also have difficulty linking letter shapes and letter sounds and hearing the difference between the different letter sounds. Symbols represent sounds, and multiple sounds, whether rhythm or pitches, combine to create one sound, chord, beat, etc. The processing speed for recognizing sounds can slow a student down in their musical learning (Saunders, p. 3).

In addition to auditory symptoms a student with dyslexia will have visual symptoms. An individual with dyslexia will have trouble maintaining a fixed focus, meaning that they will not be able to differentiate which eye is dominant and will therefore often find that what they see visually is constantly moving from side-to-side causing a blurry effect. They will often randomly jump past a word (beat or note, if music), completely skipping it and their eyes will move down a line or up a line involuntarily. Similarities and differences in written symbols will not have as big of a distinction in a brain with dyslexia. Musical staves can create glare which will strain a student's eyes causing a need to switch vision from near to far. This can create challenges when

a musician is required to look up at a conductor alternating with looking back at their music on the stand (Oglethorpe, 2002).

Playing music requires a high level of physical coordination. A lack of spatial awareness in individuals with dyslexia can therefore create increased challenges when learning to play a musical instrument. Spatial awareness may lead to a student holding their instrument too close or far from their body. Someone with dyslexia may get confused with which hand should be doing what at a given time, especially if the hands are crossing over one another. For example, pianists are required to read two lines of music simultaneously, each corresponding to a particular hand. Similarly, string players have two separate hands doing completely different things. Each instrument is likely to come with its own set of unique difficulties (Vance, 2004 and Oglethorpe, 2002). Spatial awareness is relevant to the completion of writing a sentence, as it requires an understanding of how each letter and word connects to the others. A student with dyslexia might not see this intuitively as the typical learner might. For music students, being aware of the space required between notes and chords is essential to success in music theory (Oglethorpe, 2002).

The short-term memory in students with dyslexia is often impaired and they will have a hard time retaining information that is provided visually or auditorily. Oglethorpe (2002) writes "The kinesthetic memory, which requires a positive motor response either to an auditory or a visual stimulus, may take relatively longer to establish than the other two memories" (p. 6). Students with dyslexia consistently have shown impairment in their short-term and working memory (Reifinger, 2019). Going hand-in-hand with memorization difficulties, a student with dyslexia is likely to be more disorganized. The sequencing difficulties in learning are carried over into their everyday life. If short-term memory is difficult, it will be challenging for someone with dyslexia to manage the organizational process needed to follow through with planning.

What comes naturally to typical students in the areas of planning and organization will not come naturally to students with dyslexia. Practicing, which involves each of these, and is undoubtedly one of the most important aspects of learning music, will not be easy (Oglethorpe, 2002).

In addition to the learning areas stated above, an individual with dyslexia may also show poor concentration abilities. If information is not presented individually to the brain, eyes, and ears, the student will be unable to process information effectively. In addition, when information is presented collectively, the student's concentration will diminish as they feel overwhelmed. An individual with dyslexia may exhibit anxiety, low self-esteem, and frustration as they perceive that they are falling behind others in their learning. The demands of music on one's brain and senses to handle multiple elements at once such as rhythm, technique, dynamics, articulation, and musicality create unique challenges. If a student shows a lack of confidence or an inability to handle these areas at the same time, they can easily fall behind and lose confidence. At times a student with dyslexia may show erratic performance, in the sense that something is going smoothly one day and the next day they will not be able to do it (Oglethorpe, 2002 and (Vance, 2004).

The British Association of Dyslexia lists some tell-tale signs, abstracted from Kate Saunders in *What is Dyslexia*?:

Possible Signs of Dyslexia

- Appear bright and able, but can't get their thoughts down on paper
- Have areas in which they excel, particularly in drama, art and debating
- Be clumsy; Act as the 'class clown' to mask what they see as their academic failure
- Become withdrawn and isolated, sitting at the back and not participating
- Be able to do one thing at a time very well but can't remember an entire list
- Look 'glazed' when language is spoken too quickly

- Go home exhausted at the end of a normal day because they have had to put so much effort into learning.
- Be bullied

(Saunders, p. 4)

Because a student with dyslexia is often bright, it can be more difficult for an educator to notice that they may be having trouble. It is important to note inconsistences in their written assignments and their day-to-day classroom behavior. Staying attuned to a student's physical condition such as their level of energy or exhaustion, steadiness or clumsiness, or their facial expression can help the teacher make adaptations in the current moment. It is helpful for an educator to be aware of their students in all circumstances while looking for those tell-tale signs to identify what they may be going through.

Despite negative setbacks, students with dyslexia have been known for their perseverance. In addition to developing a positive mindset, they tend to find a way to work around their struggles, finding new ways to do things, in an ingenious kind of way. Here is an example of a student who found his own way around his disability, abstracted from Oglethorpe (2002):

> When Ben simply could not understand that notes going up on the page meant that they were going higher and therefore to the right on the keyboard, although he could *hear* the difference, his teacher said to him, 'What are we going to do about this Ben?' Ben thought for a moment and then said, 'Well, you could draw a line on the piano going up like this' --- indicating a line sloping up towards the treble. They compromised by sticking a yellow post-it label high up on the treble end and a blue one low down, close to the keyboard in the bass. His teacher wrote 'Up. High' and 'Down. Low'. The problem was solved --- by Ben himself
>
> (Oglethorpe, p. 8)

It is easy to become focused on how difficult things may seem for students with dyslexia, but research shows they tend to adapt and compensate for the personal weaknesses that arise. If a

student with dyslexia has support at an early age and the right kind of education personalized for them, it is likely they will have the literary skills that they need. Hornsby (1998) noted that younger children (age five and below) have brain cells that are always changing and adapting. The sooner a child is provided support that allows them to learn in a format that meets their needs, the greater the chances are for their success. Individuals with dyslexia most often come to accept themselves exactly as they are. As Oglethorpe (2002) shared, one student said "I know me now, and I wouldn't have me any different. I rather enjoy it!" (p. 8). Dr. Herbert Lubs, Professor of Pediatrics at the University of Miami has done multiple studies on families that carry dyslexic genes. Results showed advantages such as intense creativity and productivity (Oglethorpe, 2002).

CHAPTER 3

TEACHING MUSIC STUDENTS WITH DYSLEXIA

A child's first music lesson will be their first formal experience learning the language of music. There will be no pre-conceived notion of what the right way and right pace is to learn musical concepts. It can be fascinating and exciting for a child to see another person playing an instrument, using their body together with the instrument to create inspiring music. Their unique minds will be drawn to certain sounds more than others, and the array of sounds they hear can draw them to a specific emotion. A child with dyslexia may react much in the same way. That is the beauty of it. Children learn how to read and write language from an early age, and students with dyslexia associate learning how to read and write written language with the stress and difficulties that come along with it for them. Music is a completely new language, and an opportunity for students to start new, to express themselves, and to be creative, something that they are often quite skilled at. After possibly being isolated in school learning environments, music can create a whole new environment and replenish the motivation to learn and grow for a student with dyslexia (Oglethorpe, 2002). Sheila Oglethorpe in *Instrumental Music for Dyslexics: A Teaching Handbook* (2002) explains:

> We, as musicians and teachers, have the opportunity to assist in breaking down those barriers and opening doors. Percy Buck, the first lecturer in psychology at the Royal College of Music in London, even went so far as to say to students, 'You and I know how great music can open the windows of heaven; and you must realize that, to the majority of your pupils, the only possibility of ever getting a glimpse into Paradise depends on you.
>
> (Oglethorpe, p. 15)

Individuals diagnosed with dyslexia do not want their dyslexia to define them, just as no person wants to be defined by their disability. It is important that their teachers get to know them

on a personal level in terms of their background, interests, and their path toward where they are now, including how they were diagnosed and under what circumstances. It is imperative that teacher and student work as a team, letting the student with dyslexia take the lead by sharing exactly what bothers them, what works for them, and how they'd like to move forward. For example, a student who is bothered by visual stimuli and patterns may not do well using a basic stave. Together, teacher and student can explore ways of changing the stave so that it is not bothersome. Another example may be a student who is having trouble reading music at the same time as focusing on their hand position. A positive next step may be to completely separate those tasks until fully ingrained. Once ingrained into long-term muscle memory the student will be able to combine them. There should not be any rush to do this. The student needs to be ready and in agreement that the adapted approach meets their needs (Oglethorpe, 2002).

Not only does the student need to be adaptable to a specific teacher's style, but with students with dyslexia it is important that they let the student's particular strengths and learning style lead the future. Awareness of how the pupil with dyslexia is feeling, what they are thinking, and asking them these questions is imperative. Oglethorpe (2002) writes:

> One simply has to trust one's dyslexic pupil, to believe in him, and one has to convey that trust and belief to him. This means that every lesson, although carefully planned, is an exploration together. It is a real challenge both to one's adaptability as a teacher and also to one's imagination --- although half the enjoyment is in drawing on our pupil's imagination as well as our own, which is another way of making him feel valued. It can be immensely rewarding and stimulating.
>
> (Oglethorpe, p. 27)

Some examples of questions a teacher could ask their student might be "what colors do you like?", "do you enjoy playing from memory?", "what color do you think is best to use for

paper?", "what color would be best for highlighting specific things we need to remember?", or "would you like this score to be enlarged?" This gives the student options and ideas that allow them to develop a library of techniques that would most meet their needs as a learner. Another helpful technique is to have the student mark the score themselves, allowing them to become their own teacher and to be in control of their learning process. In this way, their written music will be self-notated without negative implications but rather with the reminder that they themselves decided what was needed as an essential aspect of their learning journey (Saunders, p. 7).

Another important technique is for the teacher to record lessons, not only for the purpose of getting to know the student, but also for teacher self-awareness. The goal in this is to create the optimal positive learning process for the student. Saunders lists a series of questions that teachers can ask themselves when listening back to their teaching (abstracted from *Teacher Guide to Music and Dyslexia)*:

- Did you talk too much?
- Did you give him enough time to reply or comment in his own way?
- Did you stimulate his imagination or were you too busy using your own imagination?
- What opportunities did you give him for using his?
- How did you make him feel that his opinion was important to you?
- How did you help to build his self-esteem?
- How did you use his strengths?
- Was the lesson truly multisensory?
- Which sense did he respond to best?
- If you failed in any way, how are you going to make sure that it doesn't happen again?

(Saunders, p. 7)

A trusting and positive bond between student and teacher occurs when both student and teacher engage in self-reflection. Optimal learning occurs when the student is comfortable sharing their

successes, setbacks, feelings, and experiences. When teachers observe themselves after the fact, they will gain insight into their own strengths and weaknesses and can therefore move forward to make each teaching experience a more positive one. It is beneficial for teachers to pay close attention to how much they and the student spoke, how much opportunity was given to the student to express themselves, how the student's strengths were encouraged, how much attention was given to building the student's self-esteem, and how many multisensory techniques were used. These observations will help to develop a positive rapport and a clear plan for how the student can learn and reach their goals. A successful relationship between a teacher and a student with dyslexia that leads to the student's success can be inspiring and rewarding. The value of a student-teacher teamwork approach is a positive model that can have benefits in all teaching environments (Saunders, p. 7).

In *Music and Dyslexia: A Positive Approach,* Miles et. al. note some teaching techniques for a teacher to keep in mind when they are aware that there are multiple learning styles in their classroom. Many accommodations made for students with dyslexia are beneficial to typical learners as well, such as presenting PowerPoints with visual clarity and making sure all handouts are concise, well thought out, and clear.

Students with dyslexia can be given their own copy of materials when possible, and even better, on colored paper using a large font. Any abbreviations or non-typical anomalies should be explained. A recommended technique known as 'chalk and talk' is where a teacher utilizes multiple colors of chalk on a chalkboard to distinguish different ideas or different lines. The use of a chalkboard allows for written material to be presented in differing sizes and layouts that are specific to the students' visual needs. In teaching music, one can use different colors for different pitches, symbols, staves, and measures. Scores can be presented with as minimal information as

the student needs and in a layout that is visually helpful to their learning style. By isolating the concept currently being taught, what might be an overwhelming amount of information can be presented in a more manageable manner.

The use of color can be used in multiple ways in the teaching process. Unexpected notes or symbols can be highlighted as well as any odd or not often used fingerings. A student can choose the colors that appeal to them most for this purpose. A simple drawing of a pair of eyeglasses is commonly used as a symbol meaning "pay attention!" Post-it notes can also be helpful, and they come in different colors. Throughout lessons it is recommended that the teacher check in frequently that the student has full comprehension of what is being presented. Techniques that include clapping, songs, body tapping, and drumming add a multisensory component. When teaching a student with dyslexia, positive feedback is used more often than usual with the teacher making it known that they appreciate the work that the student is putting into the lesson, even if they aren't getting positive results. It is also helpful to notice the student's strengths and make it their "special thing." For example, if a student is especially good at something such as ostinato or fermatas, it can be turned it into a fun special moment (Miles, et al., 2008).

There are several multisensory tactics currently being used to help students with dyslexia. Singing, humming, and whistling offer good opportunities for a differing multisensory experience. Moving around the room to create musical patterns can be a fun and engaging way for the student to memorize them. A larger step or movement may be used for a major interval, while a smaller step is used for a minor interval. As students are playing a scale on their instrument, teacher and students can stomp their feet when they reach the root, third, and fifth of the scale as a way to introduce arpeggios. Students can be encouraged to create illustrations of

titles of pieces and big musical moments that help them express the emotion that they want to portray in their playing. Before each lesson starts, it is helpful for a student with dyslexia to do a warm-up that incorporates some kind of movement and perhaps incorporates the concepts that they are currently successful with, thus building their confidence. Maybe a student finds the note 'B' to flow freely and feel effortless, and so exercises can begin with that note while the student works around it, moving further and further away from it. It is most effective for teaching to begin with shorter activities that include games, repetition, tapping, imitation, and playfulness (Miles et al., 2008).

An example of a creative activity that has been used with younger students is 'rhythm balloons' or 'rhythm squares.' The 'rhythm balloons' activity has four cut-out paper balloons that are red. The teacher places the balloons in front of the students in a row and shows the students how to tap a steady beat with them. The teacher says "red, red, red, red" as they tap the balloons. The students then follow the leader, tapping, clapping, or using percussion instruments. The teacher then adds four yellow balloons and explains the rhythm that they represent. If using rhythm squares rather than rhythm balloons, a square is divided into sixteen smaller squares and the student is prompted to insert into each smaller square either a red or yellow dot. The student randomly chooses which box has which color. Both the rhythm squares and rhythm balloons can be 'performed' by the students individually or as part of an ensemble. Red and yellow balloons or squares can be mixed and matched to create different rhythms. The rhythm squares specifically can be turned upside down or around to create different combinations of rhythms. With the rhythm squares, there is an opportunity to present a common rhythmical pattern in music, such as an AABA structure which is often heard in classical, pop, and folk music. The student is able to see the different color of the B square while hearing it at the same time, thus

offering a simultaneous auditory and visual experience. The students can also perform different rhythm squares at the same time, creating a more complex rhythmical experience. These games offer an opportunity for the students to compose their own rhythms and collaborate with one another by performing each other's rhythms (Miles et al., 2008).

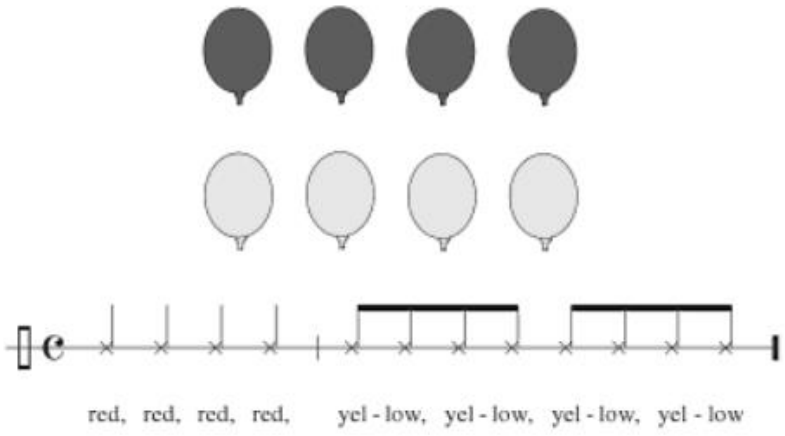

Figure 3.1: Rhythm Balloons

Note. This figure is an example of 'Rhythm Balloons'. Reprinted from Miles, T., Westcombe, J., Ditchfield, D. (2008). *Music and dyslexia: A positive approach*. John Wiley & Sons Ltd.

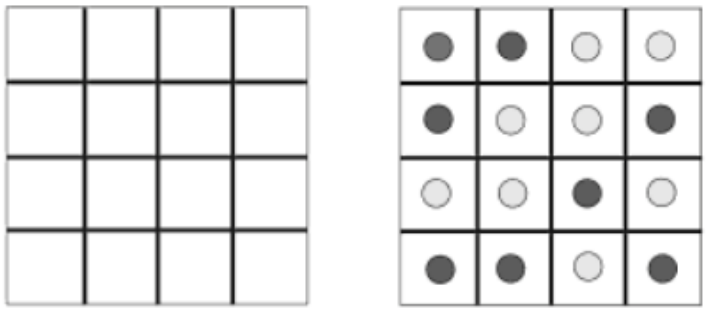

Figure 3.2: Rhythm Squares

Note. This figure is an example of 'Rhythm Squares'. Reprinted from Miles, T., Westcombe, J., Ditchfield, D. (2008). *Music and dyslexia: A positive approach*. John Wiley & Sons Ltd.

The students continue to follow the teacher's lead, performing different combinations of rhythms, creating their own rhythms, performing rhythms together, and having fun. Another technique used for multisensory teaching is called Dalcroze (Eurythmics: Art and Education, 1930), and is an effective technique used to teach rhythm. In Dalcroze, the body is used in conjunction with props such as balls and bean bags to work on learning rhythm and pulse. Froseth's rhythmic flashcard technique (GIA Publications, Inc.) is another useful tool, where a CD track is played to maintain the pulse as the teacher holds up flashcards that display notations of rhythms (Marshal and Daunt, p. 9-10).

Another rhythmical tool called Beat Blox is shown below, which is used to teach the musical notation of rhythm. The Beat Blox translates the code of the printed notation and uses tactile and visual stimuli. At times the visual aspect of music can be over-stimulating, and the Beat Blox has removed pitches, staves, and any other elements that are not simple rhythm. This simplicity frees the student of distractions when trying to focus on learning simple rhythms. One box contains twenty-eight pieces of wood that have musical notation on both sides and create up to seventeen different rhythms. Some pieces of wood have single notes with rests while others have a specific rhythm using up to four notes. The block provides both a visual and tactile stimulus, presenting small amounts of notes and rhythms to digest at one time, and the opportunity for the student to learn at their own pace. One of the positives of this system is that a student can work at their own speed, because the process is largely based on the student's individual observations (Greaves, 1993-2010).

Figure 3.3: Beat Blox

Note: This figure is an example of a Beat Blox. Reprinted from Greaves, F. (1993-2010). *Beat-blox.* Odds & Endpins.

When working with students with dyslexia thinking "outside of the box" is a must. Life-size versions of staves, notes, rhythms, and concepts can be drawn or created. Prioritizing the technology now widely available can be invaluable to students. There are applications such as Moodle, for example, that allow students to create their own virtual learning environment, lead a practice journal, and monitor their progress and goals. The teacher can create quizzes and activities for students. There are also web sources available such as Name That Note that make mundane tasks more interesting, or Musicards.net which will create flash cards on specific concepts in music such as intervals, triads, and key signatures (Marshal and Daunt, p. 9-10).

Here are examples from *Aural Skills: Some Ideas* by Sally Daunt in the *Music and Dyslxia Guide* of some activities and graphics that teachers can use for students with dyslexia:

Table 3.1: Color-Coding Music Theory Concepts

Type of 7th chord	Triad at the bottom	3rd at the top
Dominant 7th	Major triad +	Minor 3rd
Major 7th	Major triad +	Major 3rd
Minor 7th	Minor triad +	Minor 3rd
Minor/major 7th	Minor triad +	Major 3rd
Diminished 7th	Diminished triad +	Minor 3rd
Half diminished 7th	Diminished triad +	Major 3rd

Note. This table is an example of color-coding music theory concepts. Reprinted from Daunt, S. Aural Skills: Some Ideas. *Teaching guide to music and dyslexia.* 17-24.

The chart above is an example of how a teacher may color code a chart for a student, using the same color for large concepts such as seventh chords, triads, and thirds. The shade for each subcategory of the larger categories will be lighter or darker. For example, dominant and major seventh chords are given light pink, minor and minor-major seventh chords are given a medium shade of pink, and diminished and half-diminished seventh chords are given a shade of dark pink. The same process is used for triads from major down to diminished.

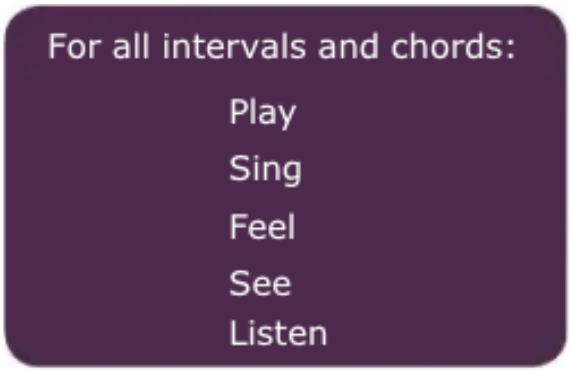

Figure 3.4: Multisensory Music Theory Activity

Note. This figure is an example of a multisensory activity for teaching music theory. Reprinted from Daunt, S. Aural Skills: Some Ideas. *Teaching guide to music and dyslexia.* 17-24.

The figure above is a simple way to create a multisensory experience when learning any new concepts. The student is instructed to do each of the above sensory tasks separately prior to practicing the combination of playing, singing, seeing, feeling, and hearing. (Saunders, p. 18).

It has long been advocated that a multisensory approach to teaching has yielded success in students with dyslexia. Mortimore in 2013 stated that "multisensory approaches are known to work best with doing" (Newman, 2019, p. 13). Morgan and Klein state in *The Dyslexic Adult in a Non-dyslexic World* that "multisensory approaches are known to work best with dyslexic learners" and that "experience dictates that the most successful approach for dyslexic students is the multisensory route" (Newman, 2019, p. 13). In the *Study Skills Handbook* written in 2013, Cottrell stated that "The more we use our senses … the more opportunities we give the brain to take in information using our preferred sense" and "the use of several senses also gives the brain more connections and associations, making it easier to find information later, which assists memory and learning" (p. 4). Incorporating as many senses as possible into an educator's approach will increase the likelihood that many different student's needs are met. A helpful example of multisensory approaches is provided by Morgan and Klein, "many students find that their learning is enhanced when tactile and kinesthetic strategies are employed … acting out situations or case studies through role-play helps them commit information to their long-term memories. The greater variety of ways information is presented, the more likely it will be that effective learning will take place (Newman, 2019).

It is commonly recommended that a teacher become familiar with each student's strengths and weaknesses. In 1984, Atterbury emphasized the importance of music instructors working collaboratively with special education instructors to successfully teach students with learning disabilities (Howe, 1999). Shared communication informs special education instructors

of knowledge related to skills that are used and emphasized in learning music. The music teacher will gain knowledge from the special education teacher regarding each particular student and can gain valuable information that will help in teaching multiple students in the classroom. It is difficult for a music teacher to know what each and every student has trouble understanding. One student may have trouble with memorization, yet not have difficulty distinguishing note names and clefs, while another student may have a strong memory but a hard time with sequencing and discrimination. By incorporating multisensory approaches into one's teaching, no student's preferred learning style will be missed. Examples to use in the classroom with a larger group of students include partner imitations, dancing while holding the object in context, structured signals for class transitions, and using something such as sandpaper cutouts for learning musical symbols. Instead of just incorporating the sense of sight, the student will be able to feel the sandpaper and associate it with the symbols (Howe, 1999).

It is frequently recommended that multiple teaching methods be incorporated when teaching students with dyslexia to best accommodate multisensory needs. The Suzuki and Kodály methods incorporate listening to works before reading them. Authors Ganschow, Lloyd-Jones, and Miles suggest making the musical staff multisensory by means of assigning different colors to different notes. This provides more clarity and stimulation than the usual black lines and white spaces. One can incorporate touch as a third sense in this equation by feeling the symbols in the music whilst positioning them (Ganschow et al., 1994).

Rhythm can be quite difficult for students with dyslexia. Listening audibly and memorizing a rhythm before attempting to play it has been shown to be beneficial. Executing the rhythm at the same time as playing it is difficult and will be performed best if the student first learns each of these tasks separately and puts them together later. The Kodály method assigns

particular sounds and symbols to rhythmic patterns. The student speaks the rhythm and also verbally explains what the rhythm means. The Kodály Method also has students march, sing, tap, and clap (Howe, 1999). For understanding rhythm, the Kodály method uses teaching strategies such as extracting rhythms from repertoire, inner singing of rhythms, and very similarly to Orton-Gillingham, uses a multisensory approach. Micheál Houlahan and Philip Tacka (2017) explain this in *Sound Relationships: An Approach to Teaching Rhythm According to the Kodàly Concept Using Takadimi Rhythm Syllable:*

> In our preparation phase of learning, we offer students a series of activities sequentially guiding them to develop kinesthetic awareness, aural awareness, and finally visual awareness of the new concept or element. We believe that students must work sequentially through these stages; in other words, they should not be presented out of order.
>
> (Houlihan & Tacka, p. 10)

Using Kodály, a teacher would use a sequential approach with the student, first starting with audiation, then moving to kinesthetic, aural, and visual, in that order. The senses work together to tell the teacher what the student knows:

> If students can accurately create a representation of the melody using auditory imagery, they are in a better position to understand how sounds can be labeled with syllables and traditional notation. It is our contention that if students cannot aurally describe, without any visual aid, such things as the shape of the melodic contour, the number of pitches contained in the contour, the starting pitch and the final pitch and then sing the pitch collection from the lowest note to the highest note, then their aural awareness skills are compromised and will not develop in tandem with their visual skills.
>
> (Houlahan & Tacka, 2017, p. 10)

Similarly to Orton-Gillingham, the Kodály Method has opportunities for assessments in their method to gage where each individual student is at. In both methods students become used to the procedures involved and they start to have a clear idea of how a class or lesson will be structured (Houlahan & Tacka, 2017). The Kodály method breaks up rhythm into rhythmic syllables, similarly to how Orton-Gillingham breaks up words.

The Suzuki Method incorporates flash cards (a large part of the Orton-Gillingham Method), games, and a sequential approach to learning. Reading the music is introduced later in the process, and it is thought that reading comes easier to these students because the earlier steps of listening, playing together with other students, and a developed motor memory of playing the instrument is already so ingrained (Macmillan, p. 9). Other methods commonly used to enhance multisensory experience are the Orff Method, which uses movement, speech, singing, and playing in its pedagogy (Howe, 1999) and the Jump Rhythm Technique, which turns one's body into a percussion instrument (Armstrong, 2013).

The Orton-Gillingham Method breaks down grammar into small parts, gradually introducing these parts one-by-one, from simple to complex, and using multisensory techniques. The process begins with nouns and then moves to pronouns, simple plurals, action verbs, and sentences. Throughout the process the student will be learning the words broken down, syllable-by-syllable. Multisensory techniques include saying sounds out loud, tracing letters (finger spelling), naming letters, writing letters, and an example of combining two techniques: writing letters while saying the names of the letters out loud.

While using the Orton-Gillingham Approach it is important to remember that the student is learning how to both encode and decode whichever concepts they are learning. When decoding, a student is recognizing symbols and being aware of what they sound like. They are

gaining knowledge of how to blend the sounds and symbols together, as well as recognize each individual sound or symbol in isolation. When encoding, a student progresses to recognize the sound and is aware of which symbol it represents. In music, a student puts the different aspects of the written music together to spell one musical line or phrase and therefore learns the different combinations of symbols, notes, and rhythms that are possible (OGBLCM, 2018).

Below are some proposed guidelines of how Orton-Gillingham concepts may translate into teaching music students, written by the author (based on OGBLCM concepts):

Decoding:

- Recognizing symbols, notes, and rhythms and knowing what they sound like
- Dividing the individual symbols, notes, and rhythms when they are blended
- Able to blend the symbols, notes, and rhythms together in any order

Encoding:

- Recognizing sounds and knowing what they look like when written
- Understanding how the sounds combine in different ways
- Knowing how to sequence or spell individual sounds or symbols (OGBLCM, 2018)

Important points to keep in mind when teaching students with dyslexia:

- The information should be presented in smaller parts that eventually form together
- Simple concepts are taught first and lead to more complex concepts

- Learning should be a multisensory experience
- Materials are reviewed multiple times, especially when adding new material
    - In order for concepts to be fully engrained into long-term memory, the students need to overlearn the concepts being taught
        - This helps the student understand how the concepts fit together as a whole
    - Review old materials → then introduce one new concept
- Learning in this specific way will aid the student in structuring their own learning later on

(OGBLCM, 2018)

CHAPTER 4

ORTON-GILLINGHAM

It is recommended by the Orton-Gillingham Approach that an individual suspected of having a learning disability be given a psychological evaluation by a licensed professional who is knowledgeable of and educated in dyslexia. Following a diagnosis, a planned-out curriculum of remedial instruction can be developed and implemented into the student's curriculum. This instruction should include the following items, abstracted from the Orton-Gillingham Basic Language Course Manual (OGBLCM) (2018):

a. A simultaneous, direct, multisensory approach that uses visual, auditory, and kinesthetic/tactile methods
b. A high level of structure in everything
c. A phonetically based program of reading and spelling which teaches the complete sound structure of the language
d. A great deal of repetition and drill in both individual and group instruction

(OGBLCM, p. 4)

A person certified in the Orton-Gillingham Approach should be aware of the following areas of difficulty in students, abstracted from the OGBLCM:

- Reading: Decoding and/or Comprehension
- Spelling: Encoding
- Writing: Formation of letters and/or written expression
- Expressive Language: Speaking
- Receptive Language: Listening

(OGBLCM, p. 5)

The three figures below are an explanation of the Orton-Gillingham Language Triangle, with its three sides representing visual, auditory, and kinesthetic pathways of learning. The Orton-Gillingham Approach is individualized for each student's needs and presented in a cumulative, systematic, and diagnostic format (Ritchy & Goeke, 2006). The following diagram abstracted from the Orton-Gillingham Academy Course Manual, is a description of the Visual Pathway spectrum:

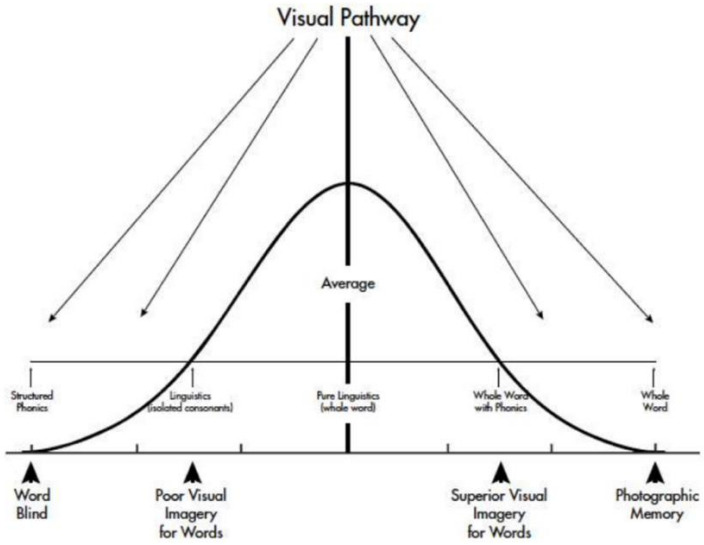

Figure 4.1: Visual Pathway Spectrum

Note. This figure is a description of the Visual Pathway spectrum. Reprinted from (2017). *Orton-Gillingham basic language course manual*.

Following the diagram, there is a spectrum for understanding phonemes and words, with the left side being "word blind" and the right side having a "photographic memory." The average falls in the middle of the diagram, with less time needed to focus on individual phonemes. Similarly,

music students who fall on the left may have the most trouble learning how to read music and these students may need to be taught notes, rhythms, pitches, and musical notation in a structured way. The next diagram is a visual representation of the auditory pathway, abstracted from the Orton-Gillingham Academy Course Manual:

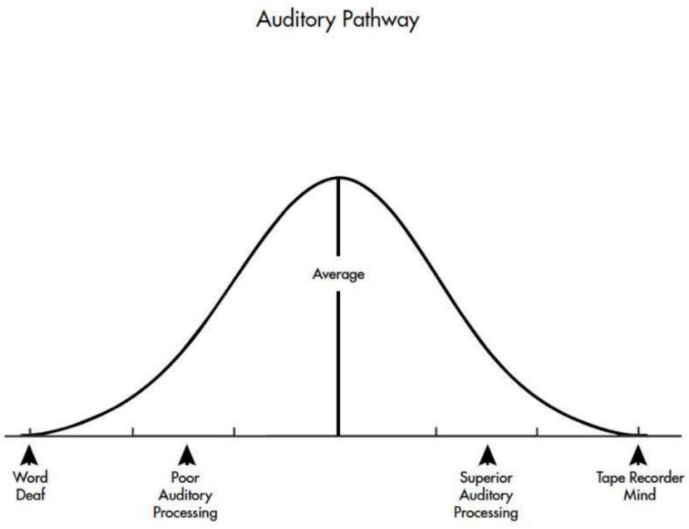

Figure 4.2: Auditory Pathway Spectrum

Note. This figure is a description of the Auditory Pathway spectrum. Reprinted from (2017). *Orton-Gillingham basic language course manual*.

A person falling far to the left of average on the above graph would be considered as "word deaf." A person far to the right may be considered to have a "tape recorder mind." This can relate to a music student in multiple ways. A student who hears a musical passage and can immediately repeat it may considered to have a "tape recorder mind." A person who hears the music but cannot in some way repeat it may be considered to be "deaf" in terms of ear training. This concept can be related to what is known as "tone deaf." The next diagram is a visual

representation of the kinesthetic pathway, abstracted from the Orton-Gillingham Academy Course Manual:

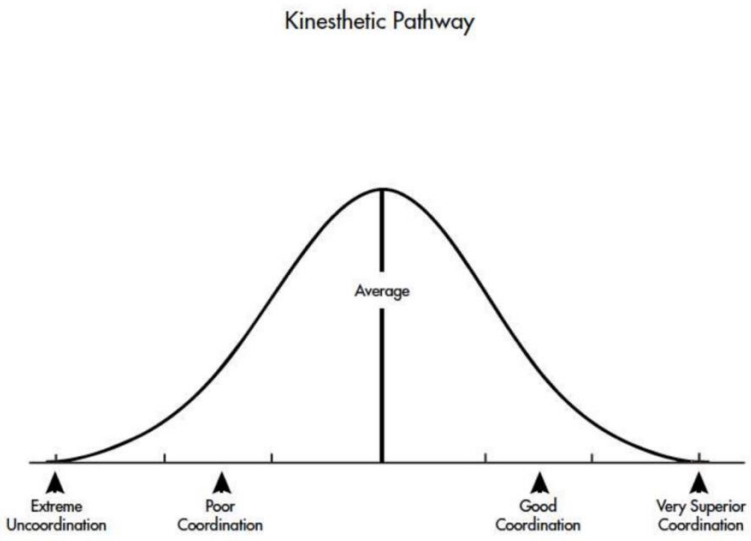

Figure 4.3: Kinesthetic Pathway Spectrum

Note. This figure is a description of the Kinesthetic Pathway spectrum. Reprinted from (2017). *Orton-Gillingham basic language course manual*.

This diagram explains the spectrum of body coordination. A person to the far left of average has extreme incoordination, and a person to the far right has superior coordination. Musical instruments require a substantial amount of coordination. A wind or brass instrument requires coordination of the hands, inner and outer embouchure (mouth), and lungs. A pianist requires coordination of both the hands and legs. While each instrument may differ in what is required, they all require a level of body coordination (OGBLCM, 2018).

Musical notation is not completely intuitive, and this may make reading and learning music more difficult for a student

with dyslexia. For instance, when learning how to read music one might intuitively think that a note's stem direction would affect its pitch, but this is not the case in the actual meaning of the

notation. There are many rules, not always intuitive, in Western musical notation that one must remember. Unlike reading text, which is presented in a sequential horizontal manner, music is read both horizontally and vertically, which can add challenges for students with dyslexia. A study done by Gromko in 2004 revealed that 48% of the differences between the students were associated with rhythm, text, visual patterns, and spatial-temporal reasoning. Because music has elements that go up, down, left, right, top, bottom, etc., students with dyslexia will likely have more trouble with this because of their known difficulties with special awareness (Flach et al., p. 235-6). In written music, many notes look similar, especially two notes that may be one line or one space apart. It is common for a student with dyslexia to recognize that a note is sitting in a space or on a line, but have trouble differentiating which space or line that note is on.

In a study in the International Journal of Music Education by Flach, Timmermans, and Korpershoek it is noted that a larger size of sheet music with stems all facing in one direction was helpful. Color is mentioned as helping in many studies, but in this particular study did not yield results (Flach et al., 2016).

Because of the complexities of written music, students with dyslexia often have more trouble reading and learning music. Musical notation is read both horizontally and vertically and requires the decoding of multiple areas at once (pitch, rhythm, transposition). There have been few studies on how to create a more effective musical learning experience for those with dyslexia. Examples of tools currently used include changing the color of paper, enlarging text, and having all stems in one direction as opposed to multiple directions. Other techniques include an emphasis on individualized instruction, greater use of recordings, clarity when the student is performing the correct technique, and an emphasis on choosing an instrument that suits the student's strengths (Vance, 2004).

CHAPTER 5

PROPOSED ORTON-GILLINGHAM-BASED TEACHING IN MUSIC

Orton-Gillingham's unique approach for working with students with dyslexia incorporates the following components, written by the author (based on OGBLCM concepts):

- ***Structured*** – Lesson plans are organized and new material is built off of previously learned material. This will create an independent learner in each student.
- ***Sequential*** – The simplest concepts are learned first to create a strong foundation. The process moves from simple to complex until the most complex of concepts is mastered.
- ***Repetitive*** – The approach is repetitive to give the student time to ingrain the information, recognize it, comprehend it, and become fluent in it.
- ***Cumulative*** – Each learned skill serves as a building block for the next introduced skill.
- ***Cognitive*** – An understanding of how language (or musical language) is laid out and how one can apply the skills learned to become proficient, accurate, and creative.
- ***Diagnostic*** – The student is continuously monitored by the instructor so that any specific areas of need are addressed.
- ***Prescriptive*** – Diagnostic information is turned into planning so that their needs are targeted and they are still progressing forward with a personalized plan.

(OGLBCM, 2018)

If these Orton-Gillingham components were applied to a musical lesson plan, it would be important to use a lesson plan template. The presence of the template is a key aspect of the Orton-Gillingham Approach for teaching students how to read. A simple lesson plan template handout might look like the example on page 59. It is important to remember the cumulative nature of the Orton-Gillingham Approach, which is why the lessons always start with a review of the prior week's lesson topics.

The instructor applying the Orton-Gillingham Approach into their lesson plan will have this handout with them to track the student's individual progress. The lesson begins with a review of material that was learned two lesson plans ago, referred to as "Old Review." Following the Old Review, the student is given a "New Review" that covers material learned in the last lesson plan. Both reviews give the student the opportunity to review previously learned material by means of a multisensory approach.

Following the Old and New Review, the student is taken through multisensory activities one by one. There is a visual exercise, an auditory exercise, and a blended exercise that incorporate all previously learned material. This activity separates the senses at first and then blends them, which is essential for a student with dyslexia.

Following the multisensory drills, the student is introduced to the new concepts planned for that lesson. Afterwards, there is a review of the "red" concepts. In the Orton-Gillingham Approach, red concepts refer to any reading, writing, or spelling scenarios that are exceptions to the rules being taught. Any unusual patterns or symbols that are exceptions to the regular rules for reading and writing music can be presented as red concepts. At the end of each lesson, the student is given a short multisensory assessment (OGBLCM, 2018). Pages 67 and 68 outline a typical Orton-Gillingham lesson template followed by a proposed adaptation for music.

Suggested Lesson Breakdown

Here is an example lesson plan abstracted from Heather MacLeod-Vidal & Kristina Smith's *Teach Reading with Orton-Gillingham*:

Day 1

- Review previous concept(s)

- Introduce new concept
- Mouth movement (Unit 1)
- Letter formation (Unit 1)
- Elkonin boxes
- Syllabication (Units 3–9)
- Teacher modeling

Day 2

- Review previous concept(s)
- Review current concept
- Concept-Picture Connection (index cards)
- Multisensory Connection

(Macleod-Vital & Smith, 2020, p. 7)

Below is a proposed multisensory plan for teaching a beginning student how to read music using Orton-Gillingham, created by the author:

- Review material from last lesson
    - Use flash cards
    - Use multisensory techniques – Auditory (play the recording), Tactile (have them finger trace), Kinesthetic (have them conduct and dance), and Visual (show them the flashcards and have them sing, clap, or play what is on the flashcard)
- Visual Drills on concepts already learned
    - Show the student flash cards and have them sing, clap, or play what they see
    - Add any movement such as conducting or dancing that was previously combined with teaching this concept
- Auditory Drills on concepts already learned
    - Sing, clap, or play a sound previously learned and have the student write down what they hear on enlarged staff paper
- Blending Drill
    - Give the student a task to complete that combines the above visual and auditory drills

- Introduce the 4/4 symbol, beginning with having the student conducting
    - Student says out loud 1-2-3-4 while conducting a 4/4 pattern
    - Have the student finger trace 4/4 on the staff
    - Have the student write 4/4 on the staff
- Introduce a whole note (using a flash card, without a staff present)
    - Sing the whole note out loud for four counts while conducting and have the student join in
- Show a flash card that has a whole note on a staff that has a common time symbol
    - Have the student finger trace the staff and the whole note
    - Have the student conduct and sing the whole note

Below are some proposed examples of ideas to incorporate into an Orton-Gillingham-based music lesson, created by the author:

- Play the student a recording of a piece that they will learn next
- Have the student move and conduct the music, using movements that align with the rhythm and subdivisions
    - Example: The piece is in 4/4 time, and the "dance" the student learns is a 4/4 conducting pattern (down, in, out, up with both arms)
- Present to the student a multi-colored musical staff on a small note card
    - Create the notecard from something that has a unique feel such as sandpaper
    - Have the student write their own staff
    - Have the student talk out loud as they finger trace the staff
        - THE-STAFF-HAS-FIVE-LINES
- Show the student the different clefs, each a different color, each on a different flash card
- Say the name of the clefs to the student, in a way that highlights the clef's main range
    - TREBLE – say with high-pitched sound
    - ALTO – say with mid-range pitched sound
    - TENOR – say with a mid-range pitched sound
    - BASS – say with a low-range pitched sound

    - Have the student finger trace the clefs
- Present a flash card with a common time symbol
    - Explain to the student that this symbol corresponds to their conducting pattern
        - Have the student say COM-MON-TYE-MM while conducting a 4/4 pattern

Teaching Tools

Strategies and activities incorporated into the teaching of Orton-Gillingham fall into one or more of the following categories, written by the author (based on OGBLCM concepts):

> ➢ ***Multisensory*** – tapping into all available senses that one learns with. This includes auditory, visual, tactile, and kinesthetic.
>
> ➢ ***Phonetic-Alphabetic*** – connecting sounds with symbols using a sequential phonetic approach.
>
> ➢ ***Synthetic-Analytic*** – Phonemes are the smallest unit of sound and Synthetic Phonics is the learning of phonemes and their grapheme counterparts (the written symbols that pair with them). Analytic Phonics is taking an entire word (or for example, a musical rhythm), and breaking it down (decoding)
>
> (OGBLCM, 2018)

The following section outlines a number of strategies used in the Orton-Gillingham Approach and their proposed adaptations for students of music.

Finger Tapping

The Orton-Gillingham Method uses finger tapping to connect sound with written concepts. When finger tapping, a student taps their thumb with their other fingers. Each letter

gets its own tap and the process moves simultaneously onto the next finger/next letter in the word.

In Heather MacLeod-Vidal & Kristina Smith's (2020) *Teach Reading with Orton-Gillingham*, finger tapping for language learning is explained (abstracted from MacLeod-Vital & Smith):

1. Tap once for each sound
2. Digraphs get one tap only (th, sh, wh, ch, etc.)
3. Vowel teams get one tap only (ea, ee, oa, ai, igh, etc.)
4. Glued sounds are tapped once with as many fingers as there are letters in the sound (for example, -ild is tapped once with three fingers together)
5. Silent letters are not tapped, just sounds that are heard

(MacLeod-Vital & Smith, p. 11)

The following example is a proposed method for how finger tapping may be used when teaching a music student, created by this author:

1. Tap one time for each note or beat (depending on the exercise)
2. Break up beats into teams using subdivisions
3. Chords are like "glued sounds" and are tapped with as many fingers as there are notes within a chord
4. Rests are not tapped
5. Each finger can correspond to a note or a beat in the measure

Mouth Movements

In the Orton-Gillingham Approach mouth movements are used for students who may have difficulty connecting sounds and letters. Below is an example chart abstracted from Macleod-Vital, H. & Smith, K. (2020):

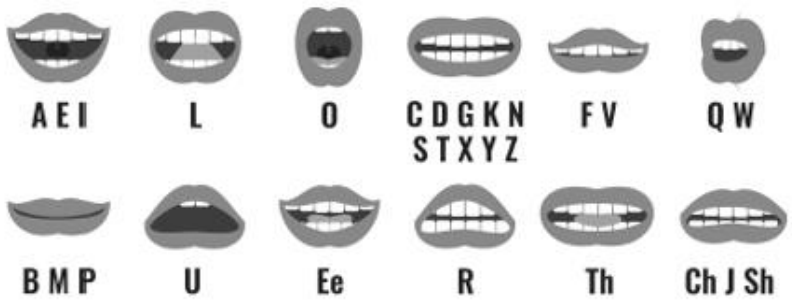

Figure 5.1: Mouth Movements for Letter Sounds

Note. This figure is an example of a mouth movements chart. Reprinted from (2017). Macleod-Vital, H. & Smith, K. (2020). Ulysses Press.

Not only can this chart be adapted into music for learning notes, sounds, and pitches; but can also be used in multiple ways for things such as tongue placement, embouchure, vowel shape, combining vowels, and facial expressions.

Elkonin Boxes

Elkonin boxes are used in the Orton-Gillingham Approach to connect finger tapping with correct spelling. The boxes break words into segments so that students can learn the multiple phonemes that individually make up words and how they come together. Similar to finger tapping, each box represents one sound but boxes can also contain multiple letters if there is a consonant diagraph, vowel team, or glued sound. Below is an example of an elkonin box, abstracted from MacLeod and Smith (2020):

b	i	g
p	e	t
a	t	
ch	i	p
d	u	ck
m	o	ss

Figure 5.2: Elkonin Box

Note. This table is an example of an Elkonin Box. Reprinted from (2017). MacLeod-Vital, H. & Smith, K. (2020). Ulysses Press.

Under the box, there are guidelines written (abstracted from *Teaching Reading with Orton-Gillingham*):

- One sound per box (th, sh, ch, wh, -ck)
- Consonant diagraphs go in one box (ea, oa, oi, ou, ay, etc)
- Vowel teams and diphthongs go in one box (all, am, ink, etc.)
- Glued sounds go in one box (all, am, ink, etc.)
- Silent *e* goes in the box with the letter before it

(MacLeod-Vidal & Smith, p. 12)

In teaching music, an elkonin box would be especially helpful for vocalists who need to dissect words and vowels as they are practicing in the early stages of learning. Though different than how this concept is used in teaching language, it may be possible to teach something such as rhythm, shown in the proposed example below, and created by the author:

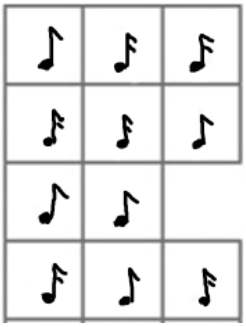

Figure 5.3: Elkonin Rhythm Box

In this specific example, three horizontal boxes are equal to one quarter-note beat (the only way this would work is with a metronome to establish a tempo). When having the student learn rhythms, the individual notes of a spelled-out rhythm can be presented to them, and worked on separately. For instance, using a metronome with a quarter-note beat, the student can be asked to name the type of note in the first box (in the example above, it would be an eighth note), and then tap the eighth note continuously with the metronome. Then, they could move to the next box (a sixteenth note in the example above), and do this routine for each of the boxes before putting them together. This will allow the student to learn each concept separately to avoid a feeling of being overwhelmed.

Color-Coding Musical Concepts

Below is a proposed chart for color-coding musical concepts, created by the author. A teacher can choose their own designated colors and use them in the learning process. Here are a few charts that include examples for how one might color code specific concepts when isolating them. Obviously, the examples below refer to the initial stages of learning these concepts, which would occur in seclusion.

Table 5.1: Color-Coding Musical Concepts

Learning to read musical staff and pitches:

Pitches on staff lines	Blue
Pitches in staff spaces	Green
Notes with sharps	Purple
Notes with flats	Orange
Red notes above or below the staff	Red (only used for red concepts)

Learning to read Clefs and Time Signatures:

Treble Clef	Blue
Bass Clef	Dark Green
Alto Clef	Purple
Tenor Clef	Orange
Simple Time	Pink
Compound Time	Blue

Learning to read rhythms:

Quarter Notes	Blue
Eighth Notes	Green
Sixteenth Notes	Purple
Thiry-second Notes	Orange
Sixty-forth Notes	Pink

Learning Dynamics and Articulations:

Forte, Fortissimo, Fortississimo	Light Blue, Blue, Darkest Blue
Mezzo Forte	Green
Piano, Pianissimo, Pianississimo	Dark Purple, Purple, Light Purple
Staccato	Orange
Legato	Pink

Using Movement

Below are some proposed examples for incorporating movement into one's teaching, created by the author:

- Conducting
- Dancing
- Tapping a table
- Finger Tapping
- Arm Tapping
- Marching while playing
- Walking while playing
- Using drum sticks or percussion (even for non-percussionists)
- Play the game "Head, Shoulders, Knees, and Toes"
- Incorporating yoga into lessons
- Incorporating exercise into lessons
- Using arms and legs to dictate notes or rhythms
- Have the student create their own movements to match notes or chords

Red Concepts

In Orton-Gillingham, words that do not follow a normal pattern and are considered "exceptions" and are called "red words."

In music, some proposed examples of red concepts are below, created by the author:

- Notes above or below the staff
- Notes without sharps or flats that are only a half-step apart
    - Such as E → F or B → C

- Double sharps and double flats
- Minor scales and their three forms
- Whether sharps and flats are carried through a measure in octaves
- Aleatoric pieces
- Odd time signatures
- Improvisational figures
- Extended techniques
- Complex conducting patterns

Example Curriculums

A cumulative Orton-Gillingham curriculum may present as follows, written by the author and suggested by the OGBLCM:

1. Nouns
2. Pronouns
3. Simple Plurals
4. Action Verbs
5. Sentences

(OGBLCM, 2018)

This is a cumulative process beginning with individual concepts that will later be blended together. Each teacher has the opportunity to design their own curriculum. Here is a proposed example of a simple curriculum for learning music, created by the author:

1. Staff and clefs
2. Introducing whole notes and select pitches
3. Time signatures
4. Introducing more pitches
5. Rhythms

6. Dynamics
7. Articulation

LESSON PLAN TEMPLATES

The following Lesson Plan Template is written in the Orton-Gillingham Basic Language Course Manual:

Student Name: Date:
Lesson:

Old Review:

Spell:

New Review:

Read:

Spell:

Visual Drill:

Auditory Drill:

Blending Drill:

Intro New:

Read:

Spell:

Spelling:

Reading:

Non-Phons (red words):

Assessment:

(OGBLCM, 2018, p. 15)

Below is a proposed adaptation created by the author of the Orton-Gillingham Lesson Plan that can be used for music students:

Student Name: Date:

Review concepts learned during the past two lessons

Old Review (2 lessons ago)

Write:
Tap:
Sing:
Play:

New Review (1 lesson ago)

Write:
Tap:
Sing:
Play:

Multisensory Exercises

Visual Exercise
Auditory Exercise
Blending Exercise

Introduce New Concepts

Write:
Tap:
Sing:
Play:

Review Red Concepts (unusual rules and patterns)

Write:
Tap:
Sing:
Play:
Assessment:

(OGBLCM, 2018)

CONCLUSION

This treatise proposes that The Orton Gillingham Approach for reading and writing language can be adapted to teaching music to students who have dyslexia or similar learning challenges. The Orton Gillingham Approach is designed to identify and track learning and acquisition of language skills in a manner that allows the educator to strategically provide what the student needs incrementally. It is structured and prescriptive to individually meet each student's needs, and while creativity in the process is encouraged; it also provides educators with specific multisensory teaching techniques, lesson formats, and methods for tracking progress. The Orton Gillingham Approach provides templates, teaching materials, and lesson guidelines that encourages continuity across differing educational environments. The techniques used in Orton Gillingham have the potential to create a similar approach that is adapted for teaching music.

The attention given to transferring Orton Gillingham ideas to a music education environment is based on the idea that music educators would benefit from a program that is uniform, structured, consistent, and readily available. While methods such as Suzuki, Orff, and Kodály provide valuable approaches and techniques to teaching music, they are not specific for teaching students with dyslesxia. Music teachers may incorporate multisensory methods and techniques similar to those in the Orton Gillingham Approach, however the research shows that there is not yet a specific, uniform, and accepted approach for teaching music to students with dyslexia or other similar learning difficulties. Students with dyslexia have benefited for over half a decade from the empirical knowledge and the formatted program set forth by Orton-Gillingham. This treatise was inspired by the idea that a program can be created that provides

music teachers with resources that parallel the Orton Gillingham Approach in its specificity, uniformity, and wide acceptance among educators.

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BIOGRAPHICAL SKETCH

Clarinetist Lara Mitofsky Neuss has been featured as an artist at a variety of conferences, ensembles, and festivals including International Clarinet Association ClarinetFest, Americans for the Arts, American Single Reed Summit, Third Practice Festival, Bang on a Can Music Festival, and Banff Centre for the Arts. Also an active audio engineer, Lara currently works for Arts Laureate where she edits and mixes audio for virtual choirs, bands, and orchestras. A strong new music advocate, Lara is an active performer and commissioner of today's composers. She is currently the Clarinet Project Manager of The New Works Project, a consortium project dedicated to lowering the financial barriers that exist in commissioning new music, increasing access to new music, and supporting marginalized voices within the community. In 2018, she went on an educational and performance tour, performing and teaching new music and improvisation at colleges throughout Sweden. Equally passionate about the orchestral repertoire, Lara has performed in ensembles such as the Tallahassee Symphony and Fort Collins Symphony. Lara recently earned her Doctor of Music from Florida State University and holds degrees from Colorado State University and San Francisco Conservatory of Music.