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A DISSERTATION APPROVED FOR
THE SCHOOL OF MUSIC

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ABSTRACT

DEEPER LISTENING: AURAL LEARNING AS A TOOL FOR LARGE INSTRUMENTAL ENSEMBLE REHEARSALS

Music is primarily an aural experience, yet much of the pedagogy utilized in wind band rehearsals in the United States is reliant on the reading of notation and the use of words to explain musical ideas to an ensemble. While Western notation may serve as an efficient transmission method for rhythmic and pitch content, it does not as effectively convey other musical elements such as timbre, articulation, dynamics, style, and emotion. Music educators in the United States desire for students to develop listening skills, but does the teaching style dominated by reading visual notation afford students opportunities to fully develop their listening skills and, ultimately, musicality?

Music is a multi-sensory phenomenon, which implies that music pedagogy should engage the auditive, kinesthetic, and visual senses. Western art music pedagogy began as an aural experience before the rise of Western notation, and countless other musical cultures rely on aural learning as their primary transmission model. By adding aural learning practices to U.S. wind band rehearsals, students may develop a deeper and broader understanding than through reading notation alone, potentially fostering social and cultural understanding between students and other musical cultures. Through this research study, I argue that Irish traditional music pedagogy (which is based on aural learning) can be an effective teaching method in a wind band setting. I highlight this through an analysis of the histories of aural

learning, the application of an aural learning model for large ensemble rehearsals derived from Irish traditional music practices, and an analysis of the perceived impact of aural learning pedagogy on the collegiate wind band students.

Chapter 1 – Why Aural Learning?

Purpose

The purpose of this study is to investigate the effectiveness and impact of aural learning as a tool for musical transmission in wind band pedagogy, as well as to understand the perception of the tool's practicality by the musicians and myself as the teacher. This document seeks to: 1) provide a historical account of aural learning in Western art music and Irish traditional music, 2) present an aural learning teaching method to be used in wind band rehearsals, and 3) provide data gathered from students and myself (via self-reflection and researcher observations of students) on the impact of the aural pedagogy on our music learning experience and performance. I also present potential benefits for aural learning to expand music education's access to diverse student populations, as well as offer repertoire that could benefit from aural learning practices. Music is a multi-sensory experience (auditive, kinesthetic, and visual) and all of the senses should be investigated when transmitting music, especially when a particular culture prioritizes one of the senses. Based on my findings from a pilot study with a wind band and the current project's data, I believe that adding aural teaching methods to wind band rehearsals develops a deeper understanding of the music for students. This allows them more freedom of expression and opportunities to connect and interact with each other, the music, and the origin culture of the music.

Aural learning has been the primary means of transmitting musical ideas in folk and non-Western music for centuries. For example, drum ensembles in Ghana, classical and folk Indian music, African-American gospel music, Andean harp ensembles, Javanese gamelan, and

European folk music found in places like Ireland all utilize aural learning.[1] Dr. Jessica Cawley defined aural learning in the context of traditional Irish music, as "the process of learning by ear [that] involves how individuals listen, absorb, recall, and perform music without visual aids."[2] As a band director and Irish traditional musician, I have experienced the powers of both notation and aural learning to transmit music to others. I love the beauty of music notation and find it resonates with my learning style, but I became fascinated with the power of aural learning while exploring the world of Irish traditional music. I was curious if the learning methods found in Irish traditional music could be replicated and helpful in wind band music rehearsals.

Need for Study

Much of early, corner-stone wind band repertoire such as Holst's *Second Suite in F*, Vaughn Williams *English Folk Song Suite*, and Percy Grainger's *Lincolnshire Posy* draws on European folk music. This caused me to wonder if learning these melodies using the pedagogy of the cultures that inspired the composers would enhance the musical experience of the ensemble members? As Irish traditional musician Liz Doherty stated in an interview with Jessica Cawley,

> If somebody has to learn from the book alone, without ever hearing the music, it would be difficult because what's on the page is very flat. Unless you're hearing the nuances of it, it doesn't really bring that energy across, or the lift, life, and the subtlety.[3]

[1] Patricia Sheehan Campbell, *Lessons from the World: A Cross Cultural Guide to Music Teaching and Learning,* (New York: Shirmer Books, 1991), 103.
[2]Jessica Cawley, *Becoming a Traditional Irish Musician: Learning and Embodying Musical Culture*, (New York: Routledge, 2021) 10-11.
[3] Cawley, 149.

Indeed, Western notation systems express pitch and rhythmic ideas efficiently, but Patricia Sheehan Campbell warns us that, "no musical notation has yet been capable of expressing in a visual way precisely the way the music should sound."[4] Campbell further argues that "music is a listening art, and performers must listen most intently to themselves in order to improve their performance."[5] A leading contemporary wind band composer, Viet Cuong, commented that the sheet music notation system is vague, comprised of symbols that can be interpreted in many different ways to produce many different sounds depending on who mediates the notation.[6] Renowned band educator Richard Floyd in his book *The Seven Deadly Sins of Music Making* shared his worries about band directors' obsession with notation at the risk of artistic music-making. Floyd argued that in our analysis of the written notation "music unfortunately becomes an ink-on-the-paper, black-and-white quantitative issue" that focuses on correctness at the expense of "true artistry."[7] His text reminds us that notation is not "actually music," and that "those spots on the page don't make any sound" because notation is a "blueprint" that must be mediated and "humanized" to "bring the music to life."[8] Similarly, Campbell argued that notation is just one side of the coin, and that learning by ear can be just as efficient, if not more effective, to transmit musical ideas. From the jazz perspective, ethnomusicologist Ingrid Monson posited that

> it is not enough for a musician to play through a tune with only its melody and harmonic structure in mind… the player must be so thoroughly familiar with the

[4] Campbell, 1991, 106.
[5] Campbell, 1991, 103.
[6] Viet Cuong and Tyler Ehrlich, "Preparation, Realization, and Interpretation – 3 Keys for an Artistic Performance of Band Repertoire," (lecture presented at The Midwest Clinic: International Band and Orchestra Conference, Chicago, IL, December 20 2023)
[7] Richard Floyd, *The Seven Deadly Sins of Music Making*, (Chicago, IL, GIA Publications, 2020), 17.
[8] Floyd, 17-18.

basic framework of the tune that he or she can attend to what everyone else in the band is doing.[9]

This is what the Irish call "getting the whole of it" or understanding all facets of music holistically.[10]

Music is an aural phenomenon, so I argue we let sound communicate sound. Ethnomusicologist Kay Shelemay defines the communication of musical ideas as "transmission," or "the means by which musical materials are communicated from one musician to another, regardless of the time or depth of the materials being communicated."[11] The method of transmission used in different ensembles around the world relies heavily on contextual values, culture, and purpose.[12] U.S. wind bands currently prioritize a Western notation system based on European values such as virtuosity and uniformity, but would adding other transmission models to our pedagogy allow more students to access broader varieties of music? Could aural learning remove barriers for students who struggle to read notation systems? I have taught many students who have shown prowess at learning by ear but struggled with notation reading, leading to frustration and disengagement in music rehearsals. I believe the addition of aural learning in large ensemble rehearsals helps music students capture more musical information in ways that enrich their experience, develop broader musicality, and lead to more vibrant and expressive performances.

This research entails reviewing historical trends in aural learning paired with current studies on the benefits and applications of aural learning in music classrooms. I designed an aural

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[9] Ingrid Monson, *Saying Something: Jazz Improvisation and Interaction,* (Chicago, IL: The University of Chicago Press, 1996), 83.
[10] James Cowdery, *The Melodic Tradition of Ireland,* (Kent, Ohio: The Kent State University Press, 1990) 78-79.
[11] Kay Shelemay, "The ethnomusicologist and the transmission of tradition*," Journal of Musicology* 14, no. 1 (1996): 35-51.
[12] Patricia Sheehan Campbell, Steven Demorest, and Steven Morrison, *Musician & Teacher: An Orientation to Music Education,* (New York: W.W. Norton, 2008), 41.

learning pedagogy model from the core tenets of aural learning strategies found in Irish traditional music pedagogy to be used with wind bands. This project involved the University of Oklahoma (OU) Wind Symphony and OU Boomer Campus Band learning melodies by ear from band repertoire derived from Irish folk melodies. Musicians in these ensembles displayed a large spectrum of musical proficiency, from an elite collegiate ensemble playing professional repertoire to a non-auditioned concert band whose skill level is on par with most high school concert bands. I documented and investigated my experience of teaching with this aural learning tool to understand the tool's effectiveness in addition to using a voluntary and anonymous student survey about the experience. Finally, the ensemble members conducted an audio analysis to rate and describe which components of aural learning were most successfully transmitted. They compared the ensemble's performance of the melodies to the audio learning files created by Irish musicians. This analysis allowed students to voice their opinions on the pedagogy's effectiveness for potential application in wind band rehearsals. I discovered that this aural learning pedagogy model sensitized students to all musical elements in a holistic manner which allowed them to understand and replicate the elusive "life and lilt" of Irish traditional music. It also allowed them to engage with the music, Irish music culture, and each other in meaningful ways that led to artistic and vibrant performances of the repertoire.

This document serves as a resource for those interested in implementing aural learning in their concert band rehearsals. The information documented and analyzed seeks to guide those wishing to take this journey, as well as provide evidence for the benefits and challenges of aural learning in a large ensemble setting.

Limitations

This project sought to understand the perceptions and effectiveness of aural learning by two wind band ensembles of varying skill levels. While music can be learned visually, kinesthetically, and aurally, I focus on aural learning as that is the primary method of transmission in the Irish traditional music from which I draw. This project does not seek to quantify the effectiveness of aural learning, or to compare aural learning effectiveness to learning via notation. Instead, it hopes to present an in-depth reflection on the ensembles' experience of the pedagogical tool and the impact it had on their musical experience and performance. This study only investigates the experience of two different ensembles at the collegiate level and further research is needed at multiple age levels of instrumental music learning to determine how effective aural learning is implemented with younger students in wind band rehearsals. Furthermore, this project only uses the lens of Irish traditional music within the concert band repertoire given that Irish traditional music is primarily transmitted aurally and employs ornamentation that is hard to capture via notation. The project does not seek to explore music making outside of the repertoire structure within wind bands, but instead how wind bands can modify the pedagogy to transform musical experiences of repertoire based on Celtic music. To this end, the final section of the document presents repertoire for future considerations with aural learning, which highlights repertoire directly arranged from folk melodies from Celtic cultures and not "Celtic Inspired" original works. Further research is needed to investigate aural learning's effectiveness in other cultures and styles of music, including the standard concert band repertoire housed within the Western art musical canon.

Chapter 2 - Survey of Aural Learning within Music Pedagogy Contexts

History of Notation vs. Aural Learning in Western Art Music

To provide context for the following study, it is worth summarizing what has been written about notation and aural/oral learning in Western art music and other musical cultures. Despite notation being the current and primary method for musical transmission in large ensembles, Western art music (WAM) was historically transmitted and preserved aurally/orally from the Middle Ages until the Classical Period in the 1700's. As musicologist Peter Jeffery stated in *Re-envisioning Past Musical Cultures*,

> Oral transmission is not a particular feature of some music at certain times, but rather a universal characteristic of almost all music at almost all times. What we call 'oral transmission' is what most human beings throughout history have known simply as "music" - something to play or hear rather than something to write or read. We modern Westerners are the ones who do things differently, and our preference for writing is our handicap.[13]

To this end, have music educators and artists in WAM lost some essence of music-making by relying primarily on Western notation? Given my experiences with Irish traditional musicians, I find much can be gained from returning to this modality of learning *alongside* Western notation. In *A Sensory History Manifesto*, Mark Smith noted that pre-Enlightenment poetry and narrative relied on mixing the senses so listeners would not only hear, but feel the words.[14] His text went

[13] Peter Jeffery, *Re-envisioning Past Musical Cultures: Ethnomusicology in the Study of Gregorian Chant,* (Chicago, IL: University of Chicago Press, 1992), 124.
[14] Mark Smith, *A Sensory History Manifesto*, (University Park, PA: Pennsylvania State University, 2021), 42.

on to mark the prioritization of sight in the Enlightenment with the rise of written text.[15] He argued that not engaging all senses leaves a limited view of the experience of history and I believe the same can be said for music. Patricia Sheehan Campbell's 1991 text *Lessons from the World*, provides an in-depth account of the progression from aural/oral learning to notation-based transmission in WAM. In the initial chapters, she discussed how music notation (sheet music) was created as a teaching mechanism to serve as a memory aid after lessons.[16] Teaching music involved a call-and-response demonstration by knowledgeable mentors, similar to the responsorial songs in Catholic masses between the cantor and congregation. Campbell notes the rise of the printing press and sheet music in Europe during the sixteenth century, which led to writing out more parts and scores. The efficiency of the printing press over hand written music allowed access to notation that aided in music-making, which helped democratize musical learning, yet at the same time shifted attention from listening to reading. Even so, composers and musicians valued the eye and ear equally, with teachers often modeling music as the primary method of transmission.[17] This was especially true in the Baroque era (~1600s-1700s) where embellishment of notated music was expected and common practice, with performers adding trills and ornamentation as needed.[18] During the Classical period (1700s), composers developed a precise notation system (standard staff notation) that conveyed their musical ideas more accurately and brought about a greater sense of finality to the score.[19] Still, some like Roussau "regarded music reading and writing as theoretical matters, and [they] advised against emphasizing literacy skills until the student had had sufficient listening and participating

[15] Smith, 41.
[16] Campbell, 1991, 26.
[17] Campbell, 1991, 25-40.
[18] Campbell, 1991, 40-41.
[19] Campbell, 1991, 47.

experiences."[20] Music learning slowly transitioned from a combination of aural/oral and written instruction to primarily written notation in the 1800's. Campbell concludes her summary of notation in WAM with the paradigm shift in the twentieth century. During this time, creative power shifted from performers to composers/conductors who could dictate and prescribe precise sounds through notation.[21] This shift favored music as a fixed and concrete art object symbolized by the musical score.

Colonial America was greatly influenced by European trends, with Lowell Mason utilizing call-and-response learning before introducing notation.[22] The rise of U.S. public-school performing ensembles in the 1900's coincided with European fascination with notation. The emphasis on literacy and notation reading resided primarily with the instrumental ensembles of orchestra and wind band and emphasized European repertoire that favored German composers.[23] From my observations, this trend continues in many U.S. schools, where band and orchestra focus on learning music from Western notation and choirs utilize both aural learning and notation. David Whitwell argued in his text *On the Performance of the Music of Mozart* that this focus on notation may be hindering student's understanding of music and their expressivity within musical performance. He stated,

> The notation of music is a misnomer, for strictly speaking it is only the notation of the grammar of music. There is no real music on the page…As a result, in music education we are teaching only half of what music is…We say we are teaching rhythm, but we are teaching arithmetic and it is no wonder the student has

[20] Campbell, 1991, 47.
[21] Campbell, 1991, 55.
[22] Patricia Sheehan Campbell and Lee Higgins, "Intersections between ethnomusicology, music education, and community music," in *The Oxford Handbook of Applied Ethnomusicology,* edited by Syanibor Pettan and Jeff Titon (New York: Oxford University Press, 2015), 641-642.
[23] Campbell & Higgins, 642.

> difficulty feeling rhythm when it is taught for the eye. We say we are teaching music when we teach harmony, but we are actually teaching how to read and understand a graphic foreign language…the eye intrudes upon our very language, as we say, 'Now watch the intonation at letter B,' while it is hearing the intonation at letter B which matters.[24]

If notation only gets at "half" of the music (in Whitwell's opinion), it seems that more tools that integrate listening are needed in the classroom in order to allow students access to the whole of musical experience. Often when I reflect on my own teaching or observations of other band directors, I notice we address technique *or* expressivity, but this tears apart these two aspects of music from each other. Music is a holistic art form, built on sound. Music pedagogy thus needs to address the whole of music, not unintentionally segment it into technique versus expressivity. By integrating aural learning alongside visual transmission via Western notation, students can experience more of the music.

Listening Outside Western Art Music – Aural Learning in Folk and Popular Music

Outside of WAM, musicians from many contexts and genres rely on aural learning as their primary mode of music transmission. The world of aural learning has produced countless phenomenal musicians who use oral mnemonic systems for pitch and rhythm and have little to no background in notation reading. Such practices are found in genres like pop, Indian classical music, R&B, steel pan music from Trinidad and Tobago, and Native American drum and song circles. Patricia Sheehan Campbell's *Lessons from the World* noted that Asian art music utilizes

[24] David Whitwell, *On the Performance of the Music of Mozart: With Stylistic Principles of Performance,* (Maxime's Music, 2022), 178-79.

call-and-response between master teacher and student as the primary method of transmission, with notation serving as a memory aid.[25] In *Sensational Knowledge,* ethnomusicologist Tomie Hahn studied the kinesthetic and oral transmission of Japanese dance and music. She also described how Balinese practices emphasize learning by rote, where students mimick the teacher both aurally and with their body movements in a manner that combines tactile/kinesthetic transmission and aural transmission.[26] Ethnomusicologist Greg Downey described the "bodily listening" found in Brazilian capoeira, where practitioners constantly embody their performance through the kinesthetic intersections of playing instruments and dancing, resulting in engrained habits of performance.[27] These "engrained habits" become integral to the musical activity, where the music and the kinesthetic movement of playing and dancing cannot be separated and are crucial to the learning process.[28] In "On teaching Americans to play mbira like Zimbabweans" Erica Azim found that the Shona learn mbira in Zimbabwe through a lifetime of listening and that Western students sounded "un-Shona" unless they took part in longitudinal deep listening to replicate the sound and feel of the music.[29] Sister Mary Ann Hanley reported in "Those West African Rhythms" that West African's experience music enculturation at an early age with music and dancing as an integral part of daily life.[30] She was amazed at the sensitive listening skills of West African musicians, where drumming students learned from a teacher speaking rhythms and mnemonic syllables in sentences with students echoing back and applying them to the drum

[25] Campbell, 1991, 107.
[26] Tomie Hahn, *Sensational Knowledge: Embodying Culture through Japanese Dance,* (Middletown CT: Wesleyan University Press, 2007), 117-118.
[27] Greg Downey, "Listening to Capoeira: Phenomenology, embodiment, and the materiality of music," *Ethnomusicology* 46, no. 3 (2002): 487-509.
[28] Downey, 491.
[29] Erika Azim, "On teaching Americans to play mbira like Zimbabweans," *African Music* 7, no 4 (International Library of African Music, 1999): 176-177.
[30] Mary Ann Hanley, "Those West African Rhythms," *American Music Teacher* 22, no. 6 (1973): 32.

without the use of notation.[31] She wondered if students in the U.S. could benefit from such learning styles to develop deeper listening and adept musical memory. In her dissertation "Mentoring Music Educators in Gospel Music Pedagogy in the Classroom," Patrice Turner found aural/oral teaching was critical in the teaching of gospel music in public school classrooms. She noted that gospel music comes from African American culture and is learned by ear, where the intricate rhythms, complex harmonies, and vocal nuances are difficult to capture in sheet music notation.[32] She defined the gospel teaching style as a cyclical process of both aural and oral communication, where a teacher listens while preparing lessons to learn a phrase (aural), then sings it to students in class (oral), and students listen to the teacher (aural) and then sing it back (oral).[33]

Similar informal and aural practices are pervasive in pop and jazz genres. These have been studied by Joseph Louth in his "Lifelong learning and the informally trained jazz artist" [34] and Lars Lilliestam in "On playing by ear." [35] Lilliestam categorized different modes of musical transmission: auditive, visual, tactile/motor, and verbal, with each area interacting with the other to help reproduce the music.[36] He went on to state that listening to recordings and other musicians was the primary tool for most rock and popular musicians.[37] Ingrid Monson's book *Saying Something* on communication within the jazz rhythm section highlighted that jazz artists rely on deep and conversational listening, where musicians have to "pay attention to what is

[31] Hanley, 33.
[32] Patrice Turner, "Mentoring Music Educators in Gospel Music Pedagogy in the Classroom." Ph.D. diss. (Columbia University, 2009), 20-21.
[33] Turner, 113.
[34] Joseph Louth, "Lifelong learning and the informally trained jazz artist," *International Journal of Community Music* (2006).
[35] Lars Lilliestam, "On playing by ear," *Popular Music* 15, no. 2 (1996): 195-216.
[36] Lilliestam, 201-202.
[37] Lilliestam, 206-207.

transpiring if they expect to say things that make sense to the other participants."[38] By this, she means paying attention aurally to the musical dialogue among the musicians. Further research in aural imitation of jazz musicians underscores that music learning is a synthesizing activity as opposed to sequential. Solli, Aksdal and Inderberg's "Learning Jazz Language by Imitation" analyzed the learning sequence of jazz musicians. They found most hear "musical wholes of rhythm, tonality, harmony, and individual style" with each listen instead of isolating certain elements, like pitch or rhythm.[39] This holistic, synthesizing listening as a method for transmitting all music elements has potential implications for meaningful and effective musical transmission to a broad range of students and within a broad range of musical repertoire.

My own experience stepping outside of notation began with my journey in Irish traditional music. Irish and Scottish traditional musicians play a repertoire that is primarily instrumental dance music performed at informal musical gatherings called sessions. In Ireland, there is a distinction between "traditional music," which embodies a repertoire of dance music and songs passed down aurally/orally (sometimes called "trad" by its practitioners), and "folk music," which generally refers to more contemporary singer-songwriters with a guitar.[40] While trad music's name may imply a stagnant musical culture, the trad genre constantly evolves and grows as a living tradition. Though "folk music" may be an apt description of this genre due to its aural/oral musical transmission and communal purpose, I will continue to use the term "trad," or Irish traditional music (ITM), because it is the preferred label of its practitioners.

[38] Monson, 1996, 84.
[39] Mattias Solli, Aerling Aksdal and John Pål Inderberg, "Learning Jazz Language by Aural Imitation: A Usage-Based Communicative Jazz Theory (Part 2)," *The Journal of Aesthetic Education* 55, no. 4 (2021): 119.
[40] Ciaran Carson, *Irish Traditional Music,* (Belfast, IE: Appletree Press, 1986), 5.

In her book *Becoming a Traditional Irish Musician,* Jessica Cawley investigated the process and methods for learning ITM, which rely heavily on aural/oral practices. She defined ITM as,

> An international community of people bound together through their participation in and enjoyment of traditional music, dance, and song. The musical practice – playing, singing, dancing, and listening – is what binds people together.[41]

This implies that the ITM community is based on the sharing of the repertoire and musical act and not hereditary, which allows ITM pedagogy practices to transfer to musical acts outside of Ireland. There is much literature on the history, cultural performance context, and music theory within ITM, but I will focus on the aural/oral transmission of tunes from one generation to the next. ITM utilizes aural learning, or as Carson wrote in his text *Irish Traditional Music*, "the traditional singer or musician learns by ear, not by theory."[42] Sheet music is rarely seen in ITM performances and learning environments. While uncommon, sheet music is not taboo, just not the primary learning mode. Cawley described that some manner of staff notation or letter name notation is used with less experienced players and serves as memory aid via a skeletal representation of the tune, much like WAM before the rise of printed notation.[43] Put more poetically, "a traditional tune printed in a book is not *the* tune; it is a description of one of its many possible shapes."[44] Therefore, notation in ITM is a memory aid and starting point, not a prescriptive, static musical artifact.

[41] Cawley, 4.
[42] Carson, 62.
[43] Cawley, 143 & 149.
[44] Carson, 8.

Musicians in the trad genre emphasize that learning by ear is the best way to capture all of the intricacies of a tune. From my conversations with many trad players, it appears that the subtle nuances of articulation, rhythm, and phrasing cannot be captured effectively by notation alone. These musical elements give ITM the style, life, and lift that embodies the genre. Cawley's investigation included interviews with many musicians on the impact of aural learning. Trad musician Michael O'Sullivan told her "it's very hard to get the feeling of the tune by just the notes."[45] Trad musician Mary Bergin analyzed that musicians miss the elusive "lift" of ITM when only using notation.[46] Cawley also discovered "repeated listening's [allowed] learners to absorb melodies, timbres, inflections, ornamentations, and variations." [47] The necessity of listening to replicate this lift and life of ITM was best noted by the renowned Francis O'Neill, collector, musician, and promoter of ITM in the U.S. He once stated,

> Many [non-Irish musicians] appear to have little conception of that peculiar rhythm or swing without which Irish dance tunes lose their charm and spirit. The jig and reel, at their hands, becomes a mere jumble of sounds.[48]

These practitioners essentially argue that notation will never be enough to understand the intricacies of Irish traditional music and aural learning must be included in the learning process. Cawley studied the many ways students learn in ITM, finding beginning musicians learn through a combination of listening, observation, and imitation of the teacher in fairly informal classroom settings.[49] Outside of the classroom environment, many trad musicians learn by listening to recordings of tunes, with the recording acting as the "teacher" to be imitated.[50] Further learning

[45] Cawley, 150.
[46] Cawley, 150.
[47] Cawley, 157.
[48] Francis O'Neil, *Irish Folk Music: A Fascinating Hobby*, (Chicago, IL: Regan Printing House, 1910), 291-292.
[49] Cawley, 74.
[50] Cawley, 162.

happens at the informal musical events called "sessions," where musicians gather to play repertoire together at a pub, house, or public space. These environments offer a rich opportunity for musicians of all skill levels to engage in "active [and] purposeful listening with one another" as they learn new music and skills.[51] Michael Moloney said it best in his dissertation *Irish Music in America* that "the most simple and universal way of learning music is through imitation."[52] He observed "the act of learning music cannot be isolated from formal and informal processes of enculturation and socialization which all societies impose on its members."[53] Therefore, meaningful learning of music housed within ITM requires active and social participation with the cultural and pedagogical practices of Irish music culture, including aural learning.

In my own interviews with four trad musicians and pedagogues in Cork, Ireland, all agreed that musicians in WAM may find joy in learning by ear, and that there may be a deeper personal connection or relationship with the music and fellow musicians when the barrier of the music stand and staff paper is taken away.[54] I have watched wonderful musicians pick up tunes with just a few listens because of their aural skills and what Karl Nesbitt described as "touch memory."[55] No matter if the learning happens in the formal classroom, privately with recordings, or at a music session, trad musicians value listening as the primary learning tool.

There are some documented attempts to bring this culture and modality of learning into U.S. large ensemble music classes, particularly with fiddle music which has roots in Irish and Scottish traditional music. Sheronna McMahon's dissertation *A Critical Analysis of Scholarship on the Transmission and Learning of American Fiddle Music* paralleled my own journey. Like

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[51] Cawley, 53.
[52] Michael Moloney, "Irish Music in America: Continuity and Change," Ph.D. diss. (University of Pennsylvania, 1992), 328.
[53] Molony, 328.
[54] Tyler Stark, "Lessons Learned from Irish Traditional Musicians and Teachers," (unpublished manuscript, August 9, 2023), typescript.
[55] Stark, 2023.

me, McMahon started in WAM and then explored folk music (in her case fiddle music), later bringing her passion for fiddling into the orchestra classroom.[56] She noticed that players who learned from notated fiddle music came nowhere close to capturing the style of those who had learned through enculturation and listening.[57] In her orchestral teaching, Sheronna McMahon utilizes call-and-response learning of fiddle music, performs fiddle music on concerts with the whole orchestra, and gives lectures on how to engage with this style of music in a culturally mindful way.[58] She concluded that incorporating fiddle music in orchestral rehearsals can build confidence, motivate students, add variety to rehearsals, and engage students' creativity.[59] Given the power of aural learning from WAM's early history and the countless musical cultures around the world that rely on this tool, there is a growing body of evidence that points to the educational and artistic benefits of its inclusion in instrumental music education classes.

Research in the Implementation of Aural Learning in Music Classrooms

Despite the rise of notation as the primary method of music learning in WAM, other systems and pedagogical tools evolved within formal music classrooms. In their text *Musician & Teacher*, Campbell, Demerost, and Morrison noted pedagogues like Kodaly and Suzuki as pioneers of new methods of teaching. Kodaly developed a method of learning that emphasized singing and movement, where students "learn music of the best quality, and that all listening and performance experiences should be directed toward the development of children's inner hearing."[60] The Suzuki method relies on aural learning by structuring music education in the

[56] Sheronna McMahon, "A Critical Analysis of Scholarship on the Transmission and Learning of American fiddle Music: Implications of an Aural Tradition for Music Education" Ph.D. diss. (Boston University, 2014).
[57] McMahon, 14.
[58] McMahon, 2014.
[59] McMahon, 88.
[60] Campbell et. al, 2008, 30.

same manner as language learning, "orally, with consistent listening, parental involvement, and positive reinforcement."[61] This idea was further developed by Edwin Gordon into his *Learning Sequences in Music*, where he compared music learning to language learning stating,

> It would seem ridiculous to teach rules of grammar…if students had not already learned to listen to and speak the language with understanding. Logic tells us it is equally absurd…to try to teach students to read music notation if they have not yet learned to listen to and perform music with understanding.[62]

Thus, his method begins with the ear and is followed by the eye.[63] In her book *Lessons from the World*, Patricia Sheehan Campbell presented music learning strategies and repertoire from other cultures to enrich formal music classes (fostering the multi-cultural movement in music education). Like Gordon, she encouraged sound-before-sight methods where "the reading and writing of music should follow a rich and prolonged period of aural experiences."[64] She found that elementary schools are proponents of hands-on learning utilizing sound before sight, but this wanes in the middle and high school.[65] She argued that "if students are to understand the components of musical style, they must have extensive opportunities for listening," which can be facilitated by teachers in rehearsal.[66]

Music pedagogues continue to analyze and ponder different methods of music learning. In their extensive text *Music Matters*, Elliott and Silverman discussed the pedagogical importance of experiencing music instead of constant lecturing, where dialogue about music

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[61] Campbell et. al, 2008, 30.
[62] Edwin Gordon, *Learning Sequences in Music: A Contemporary Music Learning Theory*, (Chicago, IL: GIA Publications, 2012), 26.
[63] Gordon, 26.
[64] Campbell, 1991, 212.
[65] Campbell, 1991, 214.
[66] Campbell, 1991, 230.

should always be directly related to the playing and listening of music.[67] Elizabeth Chappell's article on the importance of aural learning in strings classes defined informal practices of musical transfer as

> Learning by rote is a teacher-led activity that involves verbal and visual instructional cues without traditional notation. Learning by ear is a student-engaged, aural translation of an existing piece without traditional notation. Both learning types may fall under the heading of *sound before sight*.[68]

These music pedagogues continue to share their beliefs in the value of holistic learning that engages multiple senses and modalities.

Studies in alternative music pedagogical practices reveal the importance of experiential and collaborative learning. Lucy Green's *Music, Informal Learning and the School* was a pioneer study for "informal learning." She created a student-centered and student-led music project in the United Kingdom that evolved out of popular and folk music methods of enculturation and imitation. Students were placed in small groups and learned music together through listening, with teachers acting as a facilitator of inquiry.[69] This experiment was replicated by Sara Jones in "An Exploration of Band Students' Experiences with Informal Learning," and found students were able to capture multiple elements of music through listening/experienced-based learning, empowering them as musicians.[70] Steve Oare's article "Aural Image in Practice" posited that

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[67] David Elliot and Marissa Silverman, *Music Matters*, 2nd ed. (New York, NY: Oxford University Press, 2015), 218.
[68] Elizabeth Chappell, "Research-to Resource: The Importance of Aural Learning in the Strings Classroom" *Update: Applications of Research in Music Education* 38, no. 3 (2020), 7.
[69] Lucy Green, *Music, Informal Learning and the School: A New Classroom Pedagogy,* (London, England: Ashgate Publishing, 2008).
[70] Sara Jones, "An Exploration of Band Students' Experiences with Informal Learning," *Bulletin of the Council for Research in Music Education* no. 206 (2015): 61-76.

creating strong and accurate aural images helped music students in concert band practice more efficiently and increased motivation.[71]

Sheronna McMahon's dissertation in fiddle music pedagogy documented several instances of aural learning in large ensemble classrooms. She described a performance study group at UCLA that learns complex melodies by aural imitation before receiving notation, with some members able to retain these melodies for years without practicing them.[72] McMahon also documented Arizona fiddler Peter Rolland's classroom teaching method of fiddle tunes in orchestra classes, where an entire orchestra learned a unison tune by rote in a call-and-response manner followed by practicing with recordings of the tune at different tempi outside of class.[73] Such experiences are reminiscent of the "Third Stream" course/learning method founded by Gunther Schuller and Ran Blake at the New England Conservatory. The "Third Stream" according to Schuller was the fusing of improvisatory and rhythmically vibrant elements of jazz with "compositional procedures and techniques" from Western Art music.[74] Blake expanded the term to add multiple styles of music from around the world. The program required musicians to learn melodies by ear, which involved extensive listening to recordings, singing along with the recordings, and eventually singing without the recording.[75] Students were discouraged from immediately transferring these melodies to their instruments as it may interfere with the aural image. The student must have the music "burned into the memory" which he argues is only possible when the ear is "fully liberated."[76] Blake found this intensive manner of study was

[71] Steve Oare, "Aural Image in Practice: A Multicase Analysis of Instrumental Practice in Middle School Learners," *Update: Applications of Research in Music Education* 34, no. 2 (2016): 37-44.
[72] McMahon, 19.
[73] McMahon, 25.
[74] Ran Blake, "Third Stream and the Importance of the Ear: A Position Paper in Narrative Form," *College Music Symposium* 21, no. 2 (1981): 139.
[75] Blake, 142.
[76] Blake, 142.

required to truly acquire a new style, or else the new sound could "curdle" if hastily added and not allowed to set root in the musical mind.[77] Therefore, aural learning requires a prolonged engagement which is integrated into music pedagogy and not a one-time experience. Such models provide a basis for the aural learning model I propose.

Killian and Sekalegga researched the influence of aural versus notation learning on the performance of Ugandan folksong accompaniment, showing the positive effects of aural learning, especially paired with visual cues.[78] In "Effects of Applying an Aural Participation Procedure while Note Reading and Learning Unfamiliar Music Excerpts" Paul Sweetnam studied the impact of utilizing aural practices when reading notated piano music. In his research on music cognition, he found that when presented notation, the brain places primary focus on notation decoding before aural perception.[79] While his findings did not show significant growth when introducing aural practices (sight-singing/audiating while performing/reading notation), his results may stem from the combination sight and sound instead of learning melodies by ear before notation reading. He found that when reading notation, many students' active ear shuts down and they are incapable of hearing their own wrong notes.[80] If students' ears are not attuned and active due to the act of decoding notation, there is the potential for missed musical data that can hinder musical performance.

Patricia Campbell noted that in the 1990's, very little ear-training was taking place in schools and private lessons, with listening activities that remained passive for students.[81] In

[77] Blake, 144.
[78] Janice Killian and Lawrence Branco Sekalegga, "Influence of Learning Ugandan Folksongs using Aural/Oral versus Notation Means on US Music Majors' Preferences for Instruction Method and Quality of Freely Created Rhythmic Accompaniments," *International Journal of Music Education* 36, no. 4 (2018): 630-43.
[79] Paul Sweetnam, "Effects of Applying an Aural Participation Procedure while Note Reading and Learning Unfamiliar Music Excerpts," DMA diss. (University of Southern California, 2007), 13.
[80] Sweetnam, 60.
[81] Campbell, 1991, 18.

response to this, she championed three ways of student listening: Attentive Listening (listening that attends to musical elements and structures, such as identifying form), Engaged Listening (active listening that requires some element of participation/response in the music-making process while listening, such a singing along while listening), and Enactive Listening ("intensive listening" used while performing that attends to every musical detail while responding musically).[82] While teachers engage students in these different types of listening in various ways, how much rehearsal time is focused on developing student listening and aural skills? McNeil's 2023 study "Aural Skills Pedagogy in the Wind Band" surveyed aural strategies used by U.S. band directors in rehearsal. The study found that most of the techniques utilized by these band directors involved singing melodies or rhythms from notation, with many band directors citing a lack of time as the primary barrier to utilizing aural skills in rehearsals.[83] Even so, all the band directors involved in the study noted students experienced positive musical effects when singing was incorporated into rehearsals.[84] When students sing in rehearsal, they actively create strong aural images by practicing pitch and rhythmic material without having to worry about the physical technique required to play their instrument, creating a musical reference to translate to their instruments. Ryan Nowlin, current conductor and commander of "The President's Own" United States Marine Band, informally polled the members of the ensemble and found that many wished they had done more listening in class, both to recordings as well as learning music by ear.[85] Students are asking teachers to incorporate more listening, yet teachers are anxious because the method lies outside of normal rehearsal methods. There are a few resources and

[82] Patricia Sheehan Campbell, *Teaching Music Globally: Experiencing music, expressing culture,* (New York: Oxford University Press, 2004), 55.
[83] Brady McNeil, "Aural Skills Pedagogy in the Wind Band: A Survey of Secondary and Collegiate Wind Band Conductors' Perceptions and Strategies," *Journal of Band Research* 59, no. 1 (2023).
[84] McNeil, 25.
[85] Ryan Nowlin, "What's Your Motivation" (lecture presented at The Midwest Clinic: International Band and Orchestra Conference, Chicago, IL, December 20, 2023).

books that incorporate listening and audio files for wind band music learning, but very few use listening as the primary means for learning. The most established resource to help students learn by ear in wind band settings is *Listening Excerpts to Develop Band Musicianship* by Jim Childers. He has compiled many excerpts of musicians playing wind band works so students can listen and learn, arguing that we expect students to understand musicianship without exposing them to quality aural examples.[86] Such a resource for engaged listening is the aim of my project, but I seek to create a resource and model that facilitates interactions with repertoire drawn from musical cultures outside of U.S. wind band culture. Such a resource and model would seek to offer multiple pathways to learning music from repertoire inspired by Irish and Scottish music.

The book *College Music Curricula for a New Century* provides different ideas on revitalizing music curriculum to meet the needs of the modern student. One of the chapters written by Jack Talty on "Noncanonical Pedagogies for Noncanonical Musics" offered that students exposed to both notation and aural learning reap tremendous benefits as performers, allowing them to access and understand musical styles from different musical cultures. Talty insists that "flexibility is key, and providing students with a plurality of methods and approaches to analyzing and communicating musical ideas ensures they are equipped to view music through a variety of lenses."[87] This echoes Campbell's 1991 declaration that "Western art music is a notated tradition, and yet some of the principles of aural learning…can be successfully adapted to classrooms…in an attempt to develop students' musical sensitivity."[88] Band directors in the U.S. are already using various aural learning strategies such as sight singing and call-and-

[86] Jim Childers, *Listening Excerpts to Develop Band Musicianship,* (Chicago, IL: GIA Publications Inc., 2020).
[87] Jack Talty, "Noncanonical Pedagogies for Noncanonical Musics: Observations on Selected Programs in Folk, Traditional, World and Popular Musics," in *College Music Curricula for a New Century*, ed by Robin Moore (New York: Oxford University Press, 2017), 108.
[88] Campbell, 1991, 114.

response singing of musical lines, but what if these activities were the initial method of learning musical material prior to receiving notation instead of supplement rehearsal strategies? The pedagogical research done in the area of aural/oral and informal learning continues to ask educators not to abandon notation, but to add and expand aural learning as another tool alongside notation to create a more diverse and meaningful learning experience for musical transmission. Such practices can build stronger aural images that allow students to learn in an accessible manner.

Summary of Reviewed Literature

In summary, the reviewed literature suggests that aural learning has always been an aspect of music transmission. Western Art Music began as an aural/oral practice before the rise of notation systems in Europe during the Enlightenment Period of the 1700s. This rise in notation learning shifted the power of musical decisions to composers and conductors while asking musicians to decipher a notated code that only represented musical sounds. Such a system requires much aural interpretation of the visual code from musicians and teachers in a learning context.

Other cultures and genres of music continue to use aural/oral, mnemonic, and kinesthetic learning as the core of musical transmission, including popular music, Indian classical music, Indonesian gamelan, and folk idioms such as Irish and Scottish traditional music. These musical cultures assert that aural learning allows for musical transmission that is effective at conveying musical data. Aural learning in this way provides a deep engagement with the musical sound that develops strong aural images for students.

Finally, scholars of music pedagogy continue to discuss the topic of "sound before sight" as a meaningful and practical sequence of learning in music classes. This method is primarily used in elementary classes and wanes in secondary instrumental classes, but some music teachers explore these concepts in connection with learning music from folk idioms. There is anxiety among teachers about incorporating aural learning in music rehearsals, with many citing a lack of time and training, yet most agree with its effectiveness. The literature suggests the need to incorporate aural learning alongside notation to provide a more holistic approach to music pedagogy. Such practices can help reach a variety of music students with different needs, such as students with visual impairments, nuero-divergent students, and those who struggle with reading notation.

Chapter 3 - *Music Transmission as Enacting Diversity, Equity, and Inclusion*

As a musician fostered in concert band and Western art music culture, I found Western sheet music helpful and effective for learning. Yet, as a high school band teacher, I discovered that many students struggled to decipher articulation, tone color, and other stylistic aspects of band works from sheet music, especially repertoire inspired by cultures outside of Western art music (WAM). Such moments make students feel small, incompetent, and that the music classroom is not designed for them. I have also witnessed students who struggled to read notation but were very gifted aurally. After one hearing, without any notational aids, they could perform musical ideas perfectly. I asked myself why one method of teaching was valued over another and if adding new tools could enrich band rehearsals for all students? I found that when music learners were given multiple means to understand musical concepts, students with musical and cultural backgrounds outside of upper-class, European contexts were able to access a variety of musical concepts in a holistic manner, which allowed them successful and meaningful interactions with music-making.

Western notation has been an efficient and valued tool for transmitting musical ideas within the WAM culture, allowing many ensembles to achieve musical performance goals. Yet this transmission modality presents particular issues. As a written code for music, it must be mediated and interpreted to decipher the musical sound signified by the notation. As mentioned earlier, it favors pitch and rhythm while only scratching the surface of transmitting timbre, articulation, and phrasing. I find this is most evident when concert bands or orchestras perform notated sheet music that draws from another musical culture, such as jazz, popular music, or folk music. Given these experiences, I advocate for expanding the musical learning experience to

allow multiple entry points into musical learning, which then promotes diversity, equity, and inclusion within instrumental music classrooms in the U.S.

Incorporating Diverse Learning Modalities via Music Transmission

Diversity within wind band pedagogy involves both engaging with a diverse repertoire, as well as engaging in diverse modalities of learning. Wonderful work continues to be done to expand the wind band repertoire to include diverse works from underrepresented composers, but I believe discussion on the diversity of musical learning is equally important. While sheet music is the common transmission modality for wind bands in the U.S., countless other music cultures rely on aural/oral and kinesthetic/tactile learning as the primary method of music transmission. Wind band repertoire has seen a growth in music inspired by diverse aural/oral music cultures, especially folk, jazz, R&B, pop, and Latin American music. This expansion of repertoire not only provides students exposure to different musical styles, it also allows opportunities to learn music in different modalities. Throughout my teaching, I found that band students struggled to understand the notated representations of stylistic idioms within these genres. I have witnessed many a performance of an Irish dance tune, an African-American Spiritual, or a jazz piece that "fell flat" because the music notation was unable to convey the style of the origin culture. When performance practice and aesthetic values do not readily align with the values and structures of Western notation, rehearsal and performance of such works require much contextualization and mediation to bring the music to life. This echoes Jack Talty's argument that Western notation *appears* to function as a common musical language across cultures, yet it is commonly regarded as *inappropriate* to transmit "traditional" and world music idioms.[89] By holding Western

[89] Talty, 107.

notation as a "common language" to transmit music, we assert a universalist approach where notation is perceived as a ubiquitous way to learn music. Western notation is a tool like any other, with strengths and weaknesses. Renown band educator Richard Floyd describes this via metaphor, where musical notation is like an architect's blueprint for a building, which only offers a two-dimensional framework of the end creation. Floyd argues, "It's only after the plans are realized and then 'humanized' does the true aesthetic human value of the edifice become reality."[90] To enhance the student experience and bring out this "human value," music teachers should consider diversifying music learning strategies to champion holistic music learning.

I argue that although music is a multi-sensory experience, the current education model for U.S. instrumental learning is based on a visual and Western art notation transmission. Students could benefit from multiple modalities that showcase a holistic music pedagogy experience drawn from other cultural systems of music transmission. This includes learning methods inspired by call-and-response, aural/oral learning, as well as learning housed within kinesthetic experiences. While I believe in engaging multiple senses while learning, I focus on aural/oral learning for this research as it is the primary transmission modality for the Irish traditional music (ITM) utilized in this project (although kinesthetic experiences are also woven into ITM pedagogy).

Patricia Campbell's books *Lessons from the World* and *Teaching Music Globally* offer musical learning strategies and repertoire from other cultures to enrich students' experience in WAM music classes. Many of these lessons involve singing and dancing in a call-and-response manner that relies on student listening. These exercises are easily transferred into wind band rehearsals, where students can dance while playing their instruments or sing a folk song before

[90] Floyd, 18.

reading notation. Campbell also argued that such practices help bridge cultural gaps when working with repertoire from different cultures, stating teachers should "honor the pedagogical system in which the music is embedded… teaching via oral/aural techniques if they are traditional to the musical culture."[91] It is our job as band conductors and instrumental music teachers to investigate source material when programming repertoire from different cultural contexts, collaborating with culture bearers and ethnomusicologists to better understand the musical and pedagogical values of each culture with which we engage. Such bridge-building is at the heart of developing a concert band learning environment that speaks to equity for all students and celebrates the diverse musical world in which we inhabit.

To bring about diversity and equity in the music classroom, I advocate that teachers should introduce learning models that promote diverse learning strategies and culturally responsive learning. Culturally responsive teaching acknowledges and incorporates pedagogical practices of underrepresented populations or subcultures outside of the hegemonic culture into the local school curriculum to teach students in a manner that resonates with their home culture.[92] If a student grows up in a musical culture that relies on imitation and aural learning, music educators should consider incorporating these activities as part of the music-learning process in instrumental ensemble classes. Therefore, instrumental music education can look outside of the WAM transmission system to other cultures that employ a broader array of transmission modalities that speak to students from many backgrounds. Integrating world music repertoire and pedagogical practices into the U.S. music academy, particularly in wind band ensembles, will benefit students' musical experiences by enhancing personal expression and

[91] Campbell, 2004, 14.
[92] Michael Vavrus, "Culturally Responsive Teaching," *21st Century Education: A Reference Handbook* (vol. 2), September 6, 2023.

musicality, exposing students to a broader array of musical styles and vocabulary, as well as developing musical and cultural empathy. This is accomplished through the integration of different teaching strategies from a variety of musical cultures that utilize visual, aural, and kinesthetic learning, such as the call-and-response aural learning utilized in this research project.

Seeking Equity Amongst Diverse Music Learners

Equity within the context of music education and transmission modalities means that all students have access to musical knowledge in the modality of learning that best resonates with their learning identity. This implies that every student, regardless of socioeconomic or cultural background should be able to access musical knowledge in a manner that allows them success given their cultural identity and access to resources. Who benefits from current transmission models in instrumental music classrooms? Sheet music transmission tends to favor those with high socioeconomic status who can afford the private instruction and resources needed to understand and decode musical notation. Those with the resources have access to opportunities to receive one-on-one instruction outside of the wind band classroom that helps students advance their musical skills. This learning model comes primarily from Western European cultures rooted in virtuosic, individualistic art music that is not rooted in participatory music-making. The U.S. population is diverse with the following demographics for children under 18 projected for 2060: 36% Caucasian, 16% African American, 1% Native American, 8% Asian/Pacific Islander, 32% Latino, and 11% two or more races.[93] This diversity of ethnicity, paired with diversity of social class, creates music classrooms with a mixture of cultural identities, musical backgrounds, and

[93] Jonathan Vespa, David Armstrong, and Lauren Medina, "Demographic Turning Points for the United States: Population Projections for 2020 to 2060," Census.gov, October 8, 2021. https://www.census.gov/library/publications/2020/demo/p25-1144.html.

learning style preferences. Yet, current learning models focused in notation reading may not address this diversity, creating issues of equity and access to musical knowledge. Yuko Arthurs and Karin Petrini's research compared the musical experiences of sheet music learners versus aural learners and found that many aural learners (usually self-taught) felt that reading music is not integral to their ability to perform music at high levels of technique and artistry. Yet, the ability to read sheet music prevented them from joining certain ensembles and excluded them when learning music was only available in notation.[94] Such exclusionary practices were highlighted by David Barker and Lucy Green's study on teaching music to those with visual impairments, where visual language and notation created a barrier for students who prefer tactile and aural transmission methods.[95] Music classrooms exhibit a diverse group of individuals with different needs that stem from differences in culture, identity, physical or cognitive ability, or access to resources. Therefore, teaching strategies should address the multiple needs of music students. The complexity of learning music is reflected in the challenges faced while learning via notated music. Pitch and simple rhythm are readily accessible in Western sheet music while timbre, articulation, and style are not easily conveyed and require much mediation. This prioritizes music that values melody, harmony, and simple rhythms over music that emphasizes timbre, articulation, and complex rhythmic content and flow, creating a fractured musical learning experience for American band students.

Such difference in musical values stems from the Enlightenment period and rationalism that separated the mind and the body. This separation sought to create systems for dominance and othering between the "masculine" mind and the "feminine" body, where "the mind cleansed

[94] Yuko Arthurs and Karin Petrini, "Musicians' Views on the Role of Reading Music in Learning, Performance, and Understanding," *Musicae Scientiae* (2023): 9-10.
[95] David Baker and Lucy Green, "Perceptions of Schooling, Pedagogy and Notation in the Lives of Visually-Impaired Musicians," *Research Studies in Music Education* 38, no. 2 (2016): 13-14.

of bodily contaminations (sensuality, animality) was in the service of securing boundaries between objectivity and subjectivity, inner and outer space, self and world."[96] This separation of body and mind is paralleled in WAM notation, where elements that are experienced primarily in the kinesthetic body (rhythm, articulations, timbre) are considered more subjective and less prominent in the notation system compared to pitch contour and harmony which are more objective and can be associated with the mind. A method of transmission that speaks to the heart of the elements which are easier "felt" than notated could allow easier access to them. In this way, the notated musical score is offering what Titon refers to as "explanations" of the music instead of embodied "understandings" of the musical experience in relationship with others.[97] As a music educator and scholar, I am interested in new ways that we can take the generic information of the score (which I argue are instructions and suggestions) and facilitate the interpretation and specific lived experience of music-making with others, shifting from a positivist approach to a qualitative, phenomenological approach for understanding pedagogy.[98] Therefore, a musical lesson that allows students a holistic and social experience, pairing the cognitive and embodied modes of musical experiences with their peers, would allow for a deeper understanding of musical elements in place of Western notation's current segmented approach to musical transmission.

Composer, educator, and activist Jodie Blackshaw questioned the disconnect between the wind band repertoire and the diverse learning styles of students. She asked band directors, "have you ever wondered why so many students do not continue playing an instrument beyond school?

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[96] Bordo in Betty Bayer and Kareen Ror Malone. "Feminism, Psychology and Matters of the Body." *Theory & Psychology* 6, no. 4 (1996): 670.
[97] Jeff Titon, "Knowing Fieldwork," in *Shadows in the Field: New Perspective for Fieldwork in Ethnomusicology,* edited by Gregory Barz and Timothy Cooley, 2nd edition, 25-41 (New York: Oxford University Press, 2008), 27.
[98] Zoe Sherinian, "Systematic and Embodied Music Theory of Tamil *Parai* Drummers," in *Music and Dance as Everyday South Asia,* edited by Sarah Morelli and Zoe Sherinian (New York: Oxford University Press, forthcoming 2024)

maybe it is because they didn't connect to the music they were playing [or the manner they learn it]."[99] Craig Kirchhoff speaks to the same concern asking,

> How many musical souls have been lost on our watch? Was it because we placed too much emphasis on the product rather than the process?...Was it because we placed too much emphasis on short-term rewards rather than the long-term value of nurturing within our students a life-long love affair with music and the creative process? Or was it because the music we selected represented a very narrow spectrum of human experience with insufficient musical depth and intellectual challenge to stimulate the creative impulses and the curious mind…[100]

This disconnect of both repertoire and teaching style could block many students who learn in different ways, stemming from cultural differences in learning or access to resources depending on socio-economic status. Aural/oral and kinesthetic learning pedagogies can fill in the learning gaps left by notation while creating dynamic rehearsal environments. In response to learning access in collegiate curricula, Mark DeWitt's article on aural/oral training in postsecondary schools argued that a curriculum centered in aural/oral traditions removes an entry barrier for many talented students who never learned to read Western notation, a skill correlated to social class.[101] Similarly, ethnomusicologist Zoe Sherinian has shown that Indian folk music pedagogy based on participatory, aural/oral, and kinesthetic transmission is socially and economically accessible for music students of diverse backgrounds, while giving them the means to construct a

[99] Jodie Blackshaw, "The Repertoire (R)evolution," in *The Horizon Leans Forward…*, edited by Erik Kar Jun Leung (Chicago, IL, GIA Publications Inc, 2021), 206.
[100] Craig Kirchhoff, "Idea File: Selecting Repertoire: A matter of conscience – a personal viewpoint," *The Journal of the Canadian Band Association* 3, no 1 (2004): 46.
[101] Mark DeWitt, "Training in local oral traditions: Analysis of postsecondary music programs in North America," in *College Music Curricula for a New Century*, edited by Robin Moore (New York: Oxford University Press, 2017), 71.

positive identity and experience with music.[102] While Western art music is derived from and usually performed for the elite upper class of European society, folk music values the participation of everyone in egalitarian experiences which opens up access to musical performance for those with a variety of skills and musical backgrounds.[103] In Sherinian's work with Dalit women in Tamil Nadu, India, such access to resources and learning opportunities led to social transformation, empowering students by offering them experiences with frame drumming and folk dance that contributed to increased levels of confidence and self-worth, community, and leadership.[104] These experiences can become transformational, linking "knowledge and power to foster actions and political agency" within marginalized communities, and can encourage a commitment to equality and democracy in schools.[105] These pedagogical practices revolve around dialogic relationship between educators, students, and community members to deliver teaching in ways that resonate with community values and assert the community's self-agency.[106] These transformations are at the heart of community music activists' efforts to emphasize "inclusive musical participation and… expression of cultural democracy."[107] I found such practices also encourage ownership of the learning process, developing musically independent students who are not vessels to be filled, but eager musical problem solvers working with teachers in the rehearsal process.[108] Granting access to knowledge

[102] Zoe Sherinian, "Activist ethnomusicology and marginalized music of South Asia," in *The Oxford Handbook of Applied Ethnomusicology,* edited by Syanibor Pettan and Jeff Titon (New York: Oxford University Press, 2015) 359.
[103] James Theophilus Appavoo, *Folklore for Change*. (Tamil Nadu: T.T.S. 1986), 8-19.
[104] *Sakthi Vibrations*, produced and directed by Zoe Sherinian, edited by Jeff Palmer (2019, USA, 2019) DVD.
[105] Thomas Warner Jr., "The Future of Wind Band from a Marginalized Urban Perspective," in *The Future of the Wind Band*, edited by William Perrine, (Chicago, IL: GIA Publications Inc, 2021), 265.
[106] Warner, 269-275.
[107] Lee Higgins and Lee Willingham, *Engaging in Community Music: An Introduction.* (London, UK: Routledge, 2017), 1.
[108] Paulo Freire, *Pedagogy of the Oppressed*, (Harmondsworth, Middlesex: Penguin Education, 1972), 71-80.

and placing ownership in the hands of students allows equitable music learning experiences that foster community among learners.[109]

Inclusion as a Pathway to Foster Musical Growth for All

To diversify learning and promote equity within music classrooms, music teachers should foster environments of inclusion. Such environments recognize the diversity within music classrooms and actively seek to create musical experiences that serve all students. Fostering a welcoming and inclusive environment through musical transmission is expressed in three areas: it develops musical and cultural empathy, engages students in culturally responsive learning, and provides accessible and diverse learning modalities.

The World Music Pedagogy movement (championed by Patricia Campbell) emphasizes that music educators should be aware of "the social power of music" and its ability to connect students to people of various cultures to "develop human empathy."[110] Campbell discussed the need for students to experience diverse musical cultures, learning to value both commonalities and differences that lead to respect and a deeper connection/understanding between themselves and others.[111] This musical and social empathy is not at the expense of losing one's own identity. Identity and selfhood are born out of social experiences with the world and others.[112] It is our daily lived experiences with other people that help us define ourselves by both our differences and similarities to others. Therefore, expanding our musical awareness allows a deeper understanding of the self and the students' musical identity.

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[109] Freire, 71-80.
[110] Patricia Sheehan Campbell, "Intercultural Understanding through World Music Pedagogy," *Teaching Music* 30, no. 3 (2023): 40.
[111] Campbell, 2023, 40.
[112] Timothy Rice, "Time, Place, and Metaphor in Musical Experience and Ethnography*," Ethnomusicology* 47, no. 2 (2003): 157.

Such practice of identity construction is reflected in Woodland Native Americans of Eastern Oklahoma, where tribal reciprocity in the form of intertribal shared musical experiences allowed participants to maintain distinct local identities within a complex musical and social web between tribes.[113] In essence, experiencing different musical and cultural practices not only builds empathy, but enriches the distinct musical and cultural identities of all involved. I believe this fosters social harmony by removing the "fear of the unknown" through the development of embodied awareness and relationships. Such practices expand students' musical landscape while broadening their view of the world and its musical possibilities.

Campbell stressed the need to include and honor the pedagogical system of a music's origin culture, which may mean teaching via aural/oral methods.[114] This necessitates including culture bearers in the classroom experience to provide musical and social context that enriches music learning in a variety of music cultures.[115] Within Irish and Scottish traditional music, this could involve a visit from a fiddler, piper, or singer to wind band rehearsals to demonstrate and teach melodic and rhythmic passages. Such visits also include opportunities for the culture bearer to discuss where and when certain tunes are performed within the culture. These experiences are crucial because "music that is meaningful within its own culture or place [such as the participatory and communal nature of Irish traditional music]…loses aspects of its context when performed…in a concert hall by ensembles not connected to the culture."[116] There is a stark difference between the standard Western art concert hall experience and the lively and intimate nature of an Irish pub session. Indigenous music scholar Dylan Robinson described concert

[113] Jason Jackson and Victoria Levine, "Singing for Garfish: Music and Woodland Communities in Eastern Oklahoma," *Ethnomusicology* 46, no. 2 (2002): 302.
[114] Campbell, 2004, 14.
[115] Campbell and Higgins, 645.
[116] Higgins and Willingham, 13.

practices where Indigenous music is performed within a WAM context on a concert stage, as "disconnected." He asserts that this practice of including Indigenous music yet forcing it to "fit" into classical performance structures not only lacks cultural resonance, but enacts "epistemological violence" on the Indigenous culture by failing to recognize the "Indigenous structures" of performance that are driven by communal values.[117] In contrast, culturally situated practices housed in inclusionary acts, which stem from engagement with the culture and culture bearers, bring about confidence and a sense of belonging for music learners.

Such culturally centered practices are exemplified within the Frederick Douglas Academy samba band, which was established in Harlem in response to the failing concert band program. One of the students or "sambistas" reflected on engaging with Samba Band culture to the point that it became core to their identity and a point of pride. They described how new ways of learning music, such as listening to a song fifty times to get the music and words, as well as inclusion in the samba band community led to new levels of confidence.[118] Similarly, the MAYV (Music Alive! in the Yakima Valley) program at the University of Washington promotes immersion in other musical learning styles in local communities (usually immigrant populations from various cultural backgrounds) which excites, emboldens, and opens the "ears, eyes, and minds" of future music educators by emphasizing collaboration with musical communities outside of the academy.[119] Such collaborations enrich the musical lives of all who take part in the process, as well as build musical and social bridges between music programs and diverse musical communities.

[117] Dylan Robinson, *Hungry Listening: Resonant Theory for Indigenous Sound Studies*, (Minneapolis, MN: University of Minnesota Press, 2021), 6.
[118] Campbell and Higgins, 657.
[119] Campbell and Higgins, 663.

An aural learning model like the one I propose connects students to Irish traditional musicians via a virtual "visit" with culture bearers. "Visiting" is an important concept in the Irish community and involves spending time with each other in a social setting (usually over a cup of tea) and getting to know each other in ways that are courteous, respectful, and reciprocal.[120] While face-to-face interactions with culture bearers cannot be replaced by mediated training through audio or video recordings, access to culture bearers through any form of media brings students closer to another culture and builds musical and social awareness and understanding. This awareness and understanding becomes embodied through musical practice and performance, which I believe leads to social and musical empathy. As mentioned previously by ITM scholars and practitioners, certain idiomatic Irish musical elements cannot be transmitted via notation alone. Talking with Irish music teachers, they found this is especially true with Irish ornamentation and the rhythmic lilt of the music.[121] The complex rhythmic and articulation elements of Irish ornamentation can be critically listened to, embodied through call-and-response aural/oral learning (which involves singing) and then replicated with expressivity and musical accuracy to a level that notation seems unable to convey without mediation through demonstration by a culturally trained music teacher or culture bearer. By honoring the pedagogical system of ITM through implementing aural/oral learning, we not only honor ITM culture and practitioners, but we allow students to achieve a more expressive and meaningful musical performance.

As Campbell stated, "Good teachers know their music, and they understand the musical needs of their students."[122] She elaborated that music reflects the process by which it is created

[120] Titon, 38.
[121] Stark, 2023.
[122] Campbell, 2004, 4.

and transmitted and that teachers should honor these processes to create culturally responsive pedagogy.[123] In music education, this entails understanding the musical and educational contexts of the students and developing teaching methods that resonate with the musical values and identities of all students. James Banks argues that all students, regardless of culture, have the right to learn in a way that fits their needs and styles.[124] I believe having multiple pedagogical pathways is crucial for instrumental music rehearsals. Such practices are the gateway to a diverse musical learning environment that creates equitable opportunities where all students are included in music-making. Teachers need to meet students where they are, honoring their distinct cultural and learning identities. By utilizing multiple transmission modalities, especially those that reflect the values of the "creators" of the music (both the original "composers" and the performers), musical experiences in the classroom will be more meaningful, accessible, and empowering to all students, regardless of their background.

Teaching models in concert band classrooms have been built on WAM practices and often overlook the variety of learning styles and cultural values represented throughout the U.S. I advocate that to promote diverse learning strategies and culturally responsive learning, we need a broader tool kit. Instrumental music education can look outside of the WAM transmission system to other cultures that employ oral/aural and kinesthetic/tactile transmission modalities. This does not mean abandoning visually oriented Western sheet music/notation, but expanding the teaching approach to offer a holistic learning experience that is reflective of the diverse population of students in concert band classes. Integrating world music and world music pedagogical practices into the U.S. music academy, particularly in wind band ensembles, will enrich students' musical experiences and musicality, thereby promoting greater equity and social harmony in our world.

[123] Campbell, 2004, 6.
[124] Campbell, 2004, 12.

This could include dancing while rehearsing music from the Caribbean, call-and-response singing and playing when working with band arrangements of Gospel music, or tracing the rise and fall of an Irish air's melody while listening prior to attempting the melody on wind band instruments. The following project investigates the incorporation of Irish traditional music pedagogy into the wind band rehearsal. It emphasizes a call-and-response, aural/oral learning method valued by Irish traditional musicians while allowing students to interact with Irish traditional musicians as culture bearers indirectly through aural learning tracks/recordings. I show how incorporating this mode of music transmission alongside the Western notation of the musical works allowed for both culturally responsive learning in relation to ITM culture, as well as offered another learning modality for students who may find aural/oral learning more accessible than reading visual notation. This is just one way we can expand the instrumental music curriculum to promote diversity, equity, and inclusion for instrumental music students.

Chapter 4 - Methodology and a Model for Aural Learning with Wind Bands

Aural Learning Project Model Design

This study explored the impact aural learning had on students' musical experience within a large ensemble rehearsal cycle. It followed the implementation of an aural learning project with the University of Oklahoma (OU) Wind Symphony and OU Boomer Campus Band learning Irish traditional melodies found in wind band repertoire. The Wind Symphony learned Sean O'Riada's *Mise Éire* and the Boomer Campus Band learned Pádraigín Ní Uallacháin's *The Willow Tree*. The study lies within the theoretical framework of aural learning as music transmission, which is a core tenant in Irish and Scottish traditional music. It is supported by music education scholars like Lucy Green, Patricia Sheehan Campbell, and Ran Blake, who have studied the impact of aural learning as a transmission modality for students. Data were analyzed using a phenomenological lens to understand what elements of music were effectively transmitted via aural learning, students' experience utilizing aural learning, as well as my perceptions of the challenges and benefits of using this pedagogical tool as the teacher.

As Jeff Titon stated "phenomenology emphasizes the immediate, concrete, sensory lifeworld, and it attempts to ground knowledge in the world of lived experience."[125] Titon goes on to describe "musical knowing" as the culmination of knowledge concerning the lived experience of "being-in-the-world" through the multi-sensory experience of music with others.[126]

[125] Titon, 28.
[126] Titon, 32.

This project attempts to understand students' lived experience of "musical knowing" in relation to their interaction with Irish musicians via an audio learning track, each other, and myself as a musical teacher and guide.

The project was modeled after a pilot study done with the OU Wind Symphony in the Fall of 2023 using Malcolm Arnold's *Four Scottish Dances*. The pedagogical tool used in the aural learning project was designed from primary school classroom practices found in Cork, Ireland, common throughout the community of Irish traditional musicians. While the musicians in both wind band groups were advanced, this was the first time many of them had engaged with aural learning as a primary method of music transmission. Therefore, I intended to introduce this concept in an introductory manner similar to novice music learning in Ireland. The melodies for the different pieces were recorded by Irish traditional musicians and set into the band keys for each piece. Jessica Cawley, Irish traditional musician, teacher, and scholar, recorded the audio track for *The Willow Tree* on Irish flute and I recorded the track for *Mise Éire* on a wooden whistle. I used the application *AnyTune* to slow down the tracks without altering pitch, creating practice audio files for the musicians.

While this study sought to understand the impact of musical transmission with aural learning as the primary modality, it is worth noting that many trad musicians learn through observing teachers via kinesthetic and visual modalities alongside the aural. Video tutorials provided by the musicians would have allowed for deeper interaction with the culture bearers via visual and kinesthetic learning. Such practices warrant further consideration in future projects, but I believe that much of the musicality was transmitted through these audio tracks. The ease of creating simple audio tracks by my trad musician collaborators allowed for an accessible means to connect students with these culture bearers. Some may question how much of the audio

recording captured the Irish musicians' live musical performance, but given the quality of current recording devices, I feel that the learning tracks were representative of the musicians' musicality and provided students with a useful learning tool. Bringing culture bearers into the classroom is ideal and should be implemented whenever possible. However, this project aimed at using technology to bring culture bearers to students in an accessible and cost-effective manner.

These tracks, as well as a curated Irish traditional music playlist and images of Ireland, were uploaded into a OneDrive folder and shared with participants. As Turner found in her research on gospel music pedagogy, "it is important for music educators to provide their students with authentic aural models when preparing to teach the gospel style," and students need multiple recordings of music from a certain style to reference and absorb the musical intricacies.[127] Given this, I found it important that students be exposed to multiple trad musicians and interpretations during the project. By offering these resources prior to the project, students had more time to experience and familiarize themselves with sounds and images connected to Irish traditional music. No sheet music was handed out at the beginning of the project and learning began with audio recordings, similar to the learning sequences and activities from Patricia Sheehan Campbell's *Teaching Music Globally*.[128]

Participants were encouraged to practice and engage with these resources, but group learning facilitated by myself was the primary mode of transmission. I created a PowerPoint presentation that provided ABC notation for each melody (just musical pitch letter names) in concert pitch, as well as ABC transposed pitches on a study sheet for musicians to reference during teaching (found in Appendix B). This practice draws from Irish traditional music classes that use ABC notation (in ITM, staff notation is rarely utilized and there is little to no visual

[127] Turner, 290.
[128] Campbell, 2004.

representation of rhythm). The ensemble listened to the entire tune first and then rehearsed smaller chunks in a call-and-response manner with the audio tracks. I encouraged students to listen deeply and critically, not only capturing pitch and rhythm, but also articulations, phrasing, ornamentation, and sound color. This is what Campbell described as "Enactive Listening," or "intensive listening" in order to capture all elements of music accurately from the culture bearers of the tradition.[129] Campbell created several such exercises with this model in her World Music Pedagogy sequence.[130]

My model's process included listening and then responding by singing letter names, humming, singing solfege, diddling (mouth-music similar to scatting) while fingering their pitches, and eventually playing the melodies on their instruments in response to me and the aural track. By engaging aural senses and kinesthetic senses through the act of singing and feeling the vibrations in their head and chest, students were able to embody the melodies in ways that produced strong aural images that were then transferred to their instruments. This is very similar to the methodologies of the "Third Stream" course at the New England Conservatory.[131] As the teacher, I avoided specific listening feedback, usually prompting them to "listen deeply and capture as many musical elements as possible." I chose to do this to understand how much musical material students would capture without the teacher mediating the interpretation of either the aural or written musical data. Once the melodies were learned (two to three aural learning sessions), musicians received their sheet music to place the melody in the context of the larger work and learn the accompaniment parts. Rehearsals then proceeded as normal, with a review of

[129] Campbell, 2004, 126.
[130] Campbell, 2004.
[131] Blake, 1981.

the audio learning tracks in each rehearsal and continued use of aural demonstrations alongside standard pedagogical practices.

Research Design

Participants & Recruiting

The OU Wind Symphony members make up one of the participant groups. The OU Wind Symphony is the top wind band ensemble at the University of Oklahoma. It is comprised of undergraduate and graduate students and primarily made up of music majors, but includes some music minors and non-music majors. Members must audition to join the ensemble. This group had 58 members of various woodwind, brass, and percussion players who performed music at grade 5-6 level.[132] The OU Boomer Campus Band made up the other participant group. The Campus Band ensemble was mostly non-music major undergraduate students. It is a non-auditioned group of 55 members of various woodwind, brass and percussion players who play music at the grade 3-4 level. Prior to the start of the project, recruiting was executed by the research advisor with both ensembles to avoid any potential coercion to participate in the study. The research advisor introduced the project to both ensembles and members were given the opportunity to participate in the data collection portion of the project or not. Participation was completely voluntary and any student who wished not to have their experience recorded was noted by the research advisor.[133] Any observations made by myself regarding these individuals were stricken from the research records and presentation. Once the ensemble was given the opportunity to understand and consent to the research, the project commenced.

[132] Wind Band grading systems range from 1-7, with 1 representing beginning band music and 7 representing professional repertoire.
[133] All students in both groups opted to be a part of the study.

It is important to note my positionality within this research project. Given my unique role as teacher, graduate student, peer, and researcher/analyst, my stance and context within the project offered a specific lens within the analysis. As the teacher, my observations of student interactions were limited to my range of focus at any given moment and my memory of class events following each rehearsal. As a teacher and graduate student, there is a level of authority that I had over the students. To mitigate this, my research advisor recruited and collected consent for the project and the feedback survey was anonymous so that students were able to speak their minds with confidence. While this project does not exist within a vacuum, I argue that human experience is subjective and the combination of my perspectives as teacher and researcher alongside the student's voices offers an in-depth and worthwhile image of our experience with aural learning.

Data Collection & Analysis Tools

The following pages present the IRB-approved protocol for gathering data generated from the experience of this aural learning project with the two ensembles. All aspects of the project were vetted and approved by the OU IRB. Data were gathered in the following forms: 1) autoethnographic field notes documenting my experience using the pedagogical tool and my observations of students' experience (engagement in rehearsals and growth from the tool), 2) a voluntary and anonymous exit survey completed by the ensemble members, and 3) audio analysis done by me and the students comparing their final performance of the melodies to the original audio files. The survey asked students to reflect on their experience during the project, as well as to analyze the effectiveness of musical transmission by comparing the ensemble's performance of the melodies to the original Irish musician learning track.

Following each learning session, I took notes on my impression of the effectiveness and challenges of this pedagogical practice. This included my perception of which musical elements I believed were captured in the moment, as well as observations of students' reactions to the pedagogical tool through body language, verbal exchanges, and musical participation. These reflections were compiled into a journal of field notes that were analyzed for common themes (found in Appendix C). The reflections serve as a reflexive exercise to document and share my experience teaching with this method to other educators. I recognize my inherent bias as both the teacher and the researcher. The purpose of these autoethnographic notes is not to assert claims on the teaching method's impact, but rather to allow other music teachers to see my journey using this tool so they can learn from my successes and failures. I hope revealing my experience demystifies the process of the designed aural learning model so that other band directors feel empowered to incorporate it into their rehearsals.

At the conclusion of the project and concert cycle, ensemble members were emailed an anonymous and voluntary survey to ascertain their perception of the project. The survey asked students if they had previous experience with music learning outside of formal classrooms, their general thoughts about the aural learning process, what they enjoyed about aural learning, what was frustrating about aural learning, what elements of music they found easy to acquire with aural learning, and if they believe it was an effective tool that should be considered for future music learning. All collected data were de-identified and kept in a secure location.

Audio recordings of the group performance of the melodies and their full performance were analyzed by students and myself to understand which elements of music were perceived to be effectively transferred through aural learning. The final audio file of each melody compared to the original learning audio file was presented to students in the exit survey. Students were

asked to rate the transmission of the musical elements of timbre, pitch accuracy, rhythmic nuance, articulation/emphasis, and dynamics/phrasing. This included filling out a Likert scale using the options: not well at all, slightly well, moderately well, very well, and extremely well. Students also listened to an excerpt from the final performance and were asked to reflect on the impact the project had on their musical performance. I engaged in a comparative analysis between the musical performance and the learning tracks to note my perceptions of what I believe was transmitted effectively. I then compared my analysis to that of the students. These analyses provided insight into the students' experience and impressions of aural learning, which I used to understand the model's effectiveness and impact on student learning.

Chapter 5 - Data and the Impact of the Aural Learning Experience

Teacher Reflections

The following pages offer reflections of my experience teaching this project to place the reader in my shoes and ears. I hope this helps others who wish to replicate the pedagogical model in wind band classrooms. These reflections are filtered through my personal lens and offer *my experience and results* of this process. I would like to begin with a short vignette from the pilot study with *Four Scottish Dances*. All vignettes were created after in-depth reflection on my field notes and offer a narrative analysis of my findings. As I was preparing for the project, I felt the "tyranny of the concert" and the pressure to make sure the end result was an accurate depiction of both the music and students' achievement. I feared the amount of time for aural learning (3 out of the 13 rehearsals) would detract from regular rehearsals and that such a loss of traditional rehearsal time would negatively impact students' performance. My fears were assuaged by a bizarre event three months before the project rehearsals.

I was working on the audio learning tracks of the Four Scottish Dances melodies recorded by Scottish musicians and listening to them for long periods of time. Later in the week, I was at an Irish music session in downtown Oklahoma City. It came my time to call up a tune and I said we would play Ennis Oirr, a lovely waltz that I have been playing for years on tin whistle. As I started the tune, I felt something was wrong. The notes did not seem right and my fingers were moving to confusing pitches. The lead fiddler offered the first two measures of the tune which jogged my memory. At the end of the session, it dawned on me that I had been trying to play the waltz from Four Scottish Dances, which begins with the same interval leap of a major sixth. Though I had never played this new waltz on whistle, the sheer amount of listening paired

with my finger memory of whistle scale patterns had allowed my brain to recreate this music. This discovery solidified my belief in the power of aural learning to provide a deeper relationship with music.[134]

Similar fears crept into my mind during the *Mise Éire* project with the OU Wind Symphony and *The Willow Tree* Project with the OU Campus Band, but my experience with the power of aural learning reinforced my resolve in its effectiveness. I decided to trust the process. Each group began with an introductory lecture about aural learning, its use in Irish traditional music (ITM), as well as background information on the tune's composer, structure, and historical context. In this introductory class, I informally polled the ensemble and found that almost all participants agreed that notation can be confusing. Almost every student acknowledged that they use audio recordings to aid in the practice and preparation of wind band music. My mentors and I noted that the initial lecture took a significant amount of time, with little active playing, and we came to the conclusion that future projects should break this introduction up over two days by introducing the concept and importance of aural learning in the first lesson and providing the background information on the music and composer in the second. It is important to note that each lesson ended with an encouragement to continue to listen to the learning tracks and the curated playlist in order to help bring about deeper contact with the musical style. I offered this advice to help students embody the music throughout the rehearsal cycle. Before analyzing certain themes within my reflections, I wish to describe the first aural learning lesson and final performance to depict the bookends of the experience with each ensemble.

After I finished describing the background of the tune to the Campus Band, I drew students' attention to the ABC notation help sheet that was also on the PowerPoint presentation

[134] Tyler Stark, "Listen, Respond, Repeat: Effectiveness and Perceptions of Aural Learning Pedagogy in Wind Band," Unpublished manuscript, April 6, 2024, typescript, 8.

at the front of the room. I explained that these notations are a tool to help them reference pitch, but they do not need to use them. I hit play on the audio track and a vibrant and woody flute sound started to emit from the band room speakers, filling the space. I anxiously looked around to see the students' responses, noting that many were staring at their ABC notation sheet, some up at the screen, some were staring at me as I used my hands to carve out the contour of the melody, and some were staring into space with a look of concentration on their faces. They sat with an upright posture and there was a sense of focus in their demeanor. When the track concluded, I assuaged their fears by letting them know that we would break it down and that it was ok if they struggled and made mistakes. We began with the first motive which is about one measure long. I clicked play and had them listen. I told them to listen deeply and see if they could capture many musical elements, not just rhythm and pitch. We listened again and I encouraged them to hum along. You could hear their humming add resonance in the room as they sought to mimic the track. I asked them to sing it back in response with me. I demonstrated, using diddling nonsense syllables like "di da da di da" and the students sang it back to me. They were a little shy with their singing, but I encouraged them to sing out! This one comment is all it took and they sang twice as loud with a fuller tone and more confidence. This was repeated a few times until they were confident with the motive. I paused and asked if they needed more listenings: some said "yes," so we repeated the process. I then had them listen to the learning track with their instruments ready. Once it concluded, I cued them with a conducting gesture and we played the motive. They did well, but their sound was fairly pinched and hesitant and the rhythms were not exactly aligned. I asked them to listen again and this process repeated until they were confidently playing together. As we listened, students continued to exhibit facial expressions of concentration, moving their fingers to the notes while humming or singing along.

We continued to add on motives until we had a whole phrase learned. While playing, they sat with an upright and attentive posture. I guided them through this process, singing with and for them while they were singing or playing. I showed rhythmic impulse and melodic contour gestures with my arms, much like a Sean-nós singer (old style Irish singing) would when teaching. Without the score to look down, I was free to look around at the students, observe their posture, listen to their playing, and at times make eye contact.

During the Campus Band performance, we began by singing the first verse and chorus of the melody. The principal clarinet played the starting pitch and the ensemble hummed. I showed the preparatory breath and we boldly sang together. Their voices were deep, powerful, and resonant, reverberating off the wood panels of the concert hall and filling the open space. As we concluded the singing, they brought their instruments up and started to perform the work with my preparatory gesture. While they had sheet music in front of them, I could connect with many players via eye contact. My gestures were flowing and horizontal in nature, drawing the musicians' attention to the music's peaks and valleys, as well as the connection between notes. Their musical sounds were resonant and you could hear a passion in their playing. I heard the lift and lilt from the audio track imbued in their sounds and felt a sense of pride in what they had accomplished. While it was not a "perfect performance," I felt deeply moved by the students' attention to detail, how they brought out certain ornamentation and articulations, as well as their trust in the aural learning process which led to this moment.

On the first day of the Wind Symphony aural learning project, there was an excited energy in the air. Many students had participated in the pilot project and there was less anxiety about what lay ahead. Just like the Campus Band, we listened to the whole tune first, but unlike the Campus Band, students were not given ABC notation except the first notes at the beginning

of each phrase. This change came from their feedback in the pilot project, where some felt the ABC notation robbed them of the challenge of finding pitches aurally. I offered ABC notation help sheets at the end of the first class for anyone who wanted them, but many students opted not to take one. As I clicked play on the audio track, a piercing whistle melody sprang out of the speakers. The students listened, and similar to the Campus Band, we hummed, sang in response, and then played in response. Because these students were familiar with the process and were more musically experienced, their singing was bold and exuberant. I felt like I was in front of a professional choir, hearing the sheer resonance of their voices. Their singing alone was moving. As we reviewed smaller phrases, I used my hands to gesture the contour of the melody like a Sean-nós singing teacher. This proved more useful than showing meter changes because of the slow and unmetered nature of the tune. When I asked if they needed more listenings, a student from the saxophone section exclaimed "we got this… let's do this!" Since this first lesson came right after a very successful concert, there was more chatter and jovial side conversations. While this slowed down the teaching process, it mimicked the social "visiting," or "craic" in Ireland, so I did not harp on them too much. The learning experience felt relaxed, yet they were attentive with an upright posture and looks of concentration while listening. When we stopped a section, many students would "noodle" and try to figure out their mistakes to match their aural image. Overall, there was a positive and fun energy about the rehearsal. We were able to get through the first phrase using an additive method,[135] and I noted that students were trying to capture the nuanced ornamentation in the learning track from the very beginning. After class, one student

[135] This additive method occurs in many Irish traditional music lessons, where students listen to the whole tune, and then focus on learning one phrase/motive. Once this phrase is achieved, the students add on the next phrase, instead of learning the first phrase, followed by the second, and then putting them together.

commented on their initial frustrations with learning by ear and when I recommended the help sheet, they said "no that would be cheating" in a playful way that caused me to laugh.

For the performance, the Wind Symphony memorized the work, much like Irish traditional musicians. This allowed us to stage the ensemble in a large circle surrounding the seats in the hall, emulating an Irish session circle. This enabled me as the conductor to participate with them in the circle instead of leading from a podium. While the circle led to some alignment and balance issues, I loved how it created an egalitarian and democratic performance environment.[136] *Students had to rely on those close by to stay together because my main function was to start and stop the group and encourage those around me during the performance. As I looked around the circle, illuminated by the soft glow of the light-up necklaces worn by the musicians in front of their hearts, I was deeply moved. The players were moving and swaying with each other to the rise and fall of this air. They looked at me and each other to entrain*[137] *and find musical and emotional connection within the ensemble. I could hear the heterophony envelop me, where individual voices sang out in an ornamented section and then slipped back into the collective group. When I talked with audience members afterward who were seated within the circle, they exclaimed how powerful it was to be engulfed by the music, to have the resonance wash over them and move them emotionally. I remarked to some students that this was the closest I had ever come to experiencing the Irish session circle outside of ITM.*

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[136] See Robinson's work challenging standard Western art music performance practices and presentation in *Hungry Listening*. Given the Irish traditional music context, I had the players move away from their chairs on the stage and I placed them in a giant circle that expanded into the concert hall and surrounded parts of the audience, emulating an Irish session circle.

[137] According to the National Library of Medicine, "entrainment is the alignment of ongoing neuronal activity to the temporal structure of external rhythmic input streams." Within the musical context, this behavior describes the synchronization of musicians' cognition in the musical act, exhibited by their physical motions and musical sounds aligning.
Peter Lakatos, Joachim Gross & Gregor Thut. "A New Unifying Account of the Roles of Neuronal Entrainment." *Curr Biol*. 29, no. 18 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6769420/.

Aural Learning & Musical Conducting Experience

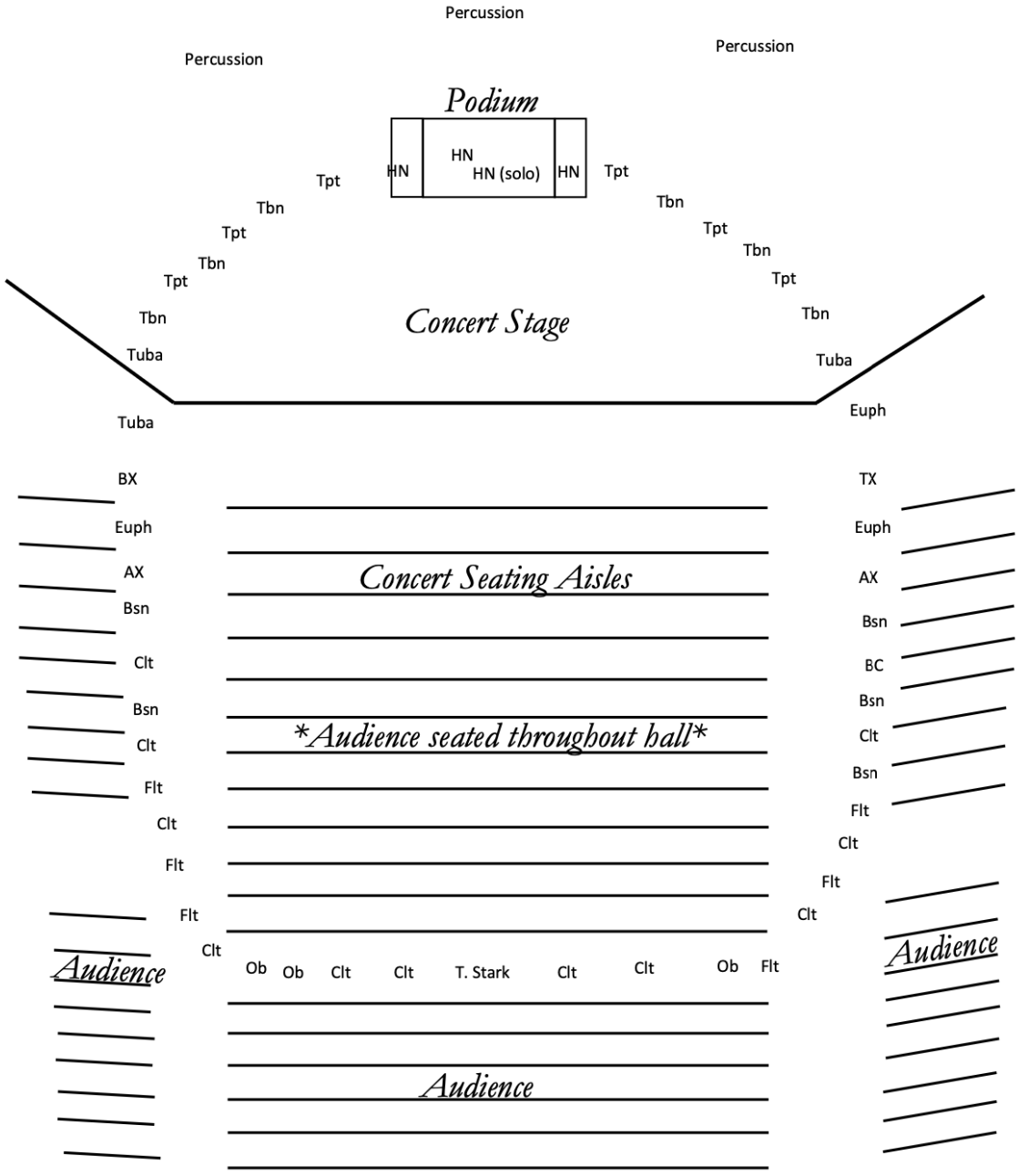
Given these glimpses into the project and my full reflection notes (see Appendix C), I believe the project involved many opportunities for dynamic and engaged learning. As a teacher, I found this method very rewarding. Much like the pilot project, I loved that I was not teaching from a score at the start because it gave me the freedom to look up at the students and engage them via eye contact. As a conductor, aural learning allowed me to explore new gestures outside of the meter. In conducting workshops, participants are continually asked to show "less time/meter" and show the "how" and "why." As Craig Kirchhoff asked me once "Can you look like the music?" I incorporated a style of conducting that was similar to how Sean-nós Irish singers teach, showing the contour and rhythmic impulses with their hands and arms. This allowed me to explore space in a way that I believed helped students think about the connection and musical direction between notes, which better embodied the "singing style" of these melodies compared to dictating the meter with my conducting. I believe such practices allowed me to develop more expressive conducting gestures for each work that brought out salient musical elements.

Wind Symphony ITM Rehearsal/Concert Staging Experiment

The use of the circle set up for the Wind Symphony created teaching challenges for analyzing balance, as well as issues with aiding students in alignment. There were many moments while conducting in the circle when I was unable to hear the brass players (especially horns, euphoniums, and tubas whose sound was not directed at me) on the opposite side of the circle compared to the woodwind players nearby (see figure 1). I felt frustrated because I could no longer hear the collective group and it was challenging to offer feedback on balance from my vantage point in the circle. During the second day in the circle setup, I rehearsed from the middle

of the circle, which gave me a better aural perspective to help diagnose and aid students in musical problem-solving. I then went back to my place in the circle for full runs and the performance.

Figure 1 – *Wind Symphony Circle Performance Setup*



For those hoping to use a circle-set up in the future, I would recommend rehearsing from the center, as well as pondering different placement options for students in relation to the director depending on each ensemble's instrumentation and orchestration because each piece will offer different challenges. I suggest considering how sound production reaches the audience. In this case, I chose to place the bell front brass on stage to project out into the hall to reach all audience members, while placing the more ambient woodwinds in the hall where their sounds radiated outward to not distract from ensemble balance. Despite the frustrations of the circle, I found experience created a democratized experience which I believe was meaningful due to the strong connection between musicians around the circle. This was seen by their entrainment and the amount of eye contact they used with each other in the performance. In the circle, I had to give up power as the conductor given the distance between me and some musicians. This forced students to rely on each other for entrainment (which involved moving together physically and musically) and alignment instead of relying on the conductor to keep the group together. This performance set-up warrants further investigation, but I believe the end musical results outweighed the risks and challenges.

Using Irish Traditional Music Metaphors to Enhance Aural Learning

Outside of my conducting gestures, I utilized Irish landscape and art metaphors when teaching. I drew inspiration from ethnomusicologist Steven Feld, who used metaphors to describe the deep relationship between Kaluli music and their forest environment.[138] The relationship between music and landscape is also shared by many Irish musicians. Concertina player Mary MacNamara once described the source of her music as "a remembered landscape… when [she] plays a tune, she pictures the musicians who gave it to her and the surrounding in

[138] Steven Feld, "Social Structure and Musical Structure" *The Journal of Ethnomusicology* 28, No. 3 (1984): 394-395.

which they lived."[139] While educators are constantly using metaphors in learning situations, I believe the use of culturally responsive metaphors, in this case Irish metaphors, is key to connecting students with the musical culture of Ireland. I used metaphors related to the Irish landscape and experience with the Campus Band by encouraging students to bring out the soft lyrical nature of singing the lullaby to a newborn, as well as to imagine sweeping forests and mountains in Ireland to reinforce more majestic sections. I utilized similar Irish-based metaphors with the Wind Symphony, such as describing the initial sustained chord as emulating sunlight gently falling on a misty haze by the Irish coast. I felt this metaphor connected them with Ireland, while also presenting a sound color and softer dynamic that helped the low brass balance to the horn solo in the beginning. I also described images of rolling hills and sweeping landscapes for the fuller impact sections, as well as streams and cascading waterfalls to describe descending flute runs. The most salient metaphors I drew on with the Wind Symphony were the ideas of a Celtic knot and the importance of dialogic conversation in Ireland. This reinforced the nature of heterophony, where all parts are important and weave together in a collaborative quilt. I believe that supporting aural learning with ITM-inspired conducting gestures and imagery from Ireland helped provide a deeper and holistic understanding of this music. I assert this conclusion based on students' survey responses that indicated a better understanding of Irish music culture and style. I would highly encourage such practices for those replicating the project.

Singing and the Habituating the Melody

I found that singing in response to the aural track was key to student success. Singing allowed a transitional step between listening to and performing the melody on the instruments. I believe students were able to reinforce the aural image through the act of humming and singing

[139] Helen O'Shea. *The Making of Irish Traditional Music*, (Cork, IE: Cork University Press, 2008), 68.

because it allowed them to compare their understanding of the melody to the learning track. Singing also allowed students to feel the vibrations and rhythm of the melody in their body before translating it to their instrument. In many musical cultures, such embodiment of music is crucial to develop a deeper knowledge of the art form.[140] Students began singing timidly in both groups, as well as playing tentatively, but the longer they had lived with the melodies (listening, singing, and playing) the more confident their sounds became, creating habits. I could hear this hesitancy at the beginning of the Campus Band project when they were unable to decipher when notes were supposed to release and restart. I also noted that when adding motives to create larger chunks of music, students had trouble retaining the musical information in the middle of the phrase. Over time, students became so familiar with the tunes that all these issues disappeared. This created a "kinesthetically habituated" knowledge of the melody that gave students greater confidence, which allowed them the ability to attend to other musical elements.[141] With both groups, I observed that students left rehearsal whistling or singing the tunes, with full added ornamentation. This exhibited an embodiment and deeper knowledge of the music that has become a part of them. The tune was ingrained in their brain, which I believe allowed them to attend to expressivity within the performance. I argue this opened up new musical possibilities to explore outside of basic technique and accuracy of pitch and rhythm, which is supported by their musical performance and their survey responses stating they were able to move past correct pitches and rhythms. The beautiful communication of the Wind Symphony members around the circle, as they connected via eye contact and moved their bodies in response to each other and the music, spoke to the embodied nature of their music learning. It allowed them to share moments with each other. This moment of musical sharing is where I believe music resides, not

[140] Downey, 487-509.
[141] Sherinian, 2024.

in the notation or audio recordings. Such moments parallel Jeff Titon's definition of music in which he argues:

> Music, conceived not as a signifying language but as a collaborative relationship among the people making it, gives us, at those magical moments of self-transcendence, a connection among living beings leading to friendship…[142]

This act of "musicking" was coined by Christopher Small to describe music not as a noun, but as a verb, and includes the relational act of sharing music with others, which is at the heart of Irish traditional music values.[143] Given these observations, I believe this process of aural learning and engaging multiple senses allowed the students to access this musical experience, fostering a deeper musical and emotional connection to the music and their fellow musicians.

Audio Musical Analysis

Along with my students, I conducted an audio analysis to understand which elements of music we believed were most impacted and effectively transmitted through the aural learning process. As the teacher and researcher, I acknowledge the bias in my analysis in that I hoped the melodies would transfer from the audio learning tracks. Throughout the process, I reflected and critiqued my analysis in an attempt to alleviate any skewed interpretation. I have provided my findings to place the reader within my aural landscape as the teacher. I found the student analysis provided the most salient data as my study's purpose was to understand how aural learning impacted *their* phenomenological experience of learning music. Therefore, more weight should be placed on their comments as the participants. These two analyses will be offered in

[142] Titon, 38.
[143] Christopher Small, *Musicking: The Meaning of Performing and Listening,* (Middleton, CT: Wesleyan University Press), 1998.

comparison, but I also invite the reader to take on their own analysis. Given that my research explores the importance of aural experience in comparison to visual experience, it seems prudent that those reading should listen to the aural learning track, group melody performance, and final performance of the work to judge the effectiveness by their own standards and perspectives. Below I have provided links to listen to each of these audio files. I encourage you to listen to these files in their entirety, as well as when they are referenced in the analysis so that you can make your own judgments.

Aural Learning Project Audio Files

Campus Band

The Willow Tree Learning Track:

https://drive.google.com/file/d/1VqBgyOXGn5mc4MJSPJTPSLRH_G_5DYFI/view?usp=sharing

The Willow Tree Campus Band Melody Recording:

https://drive.google.com/file/d/1JT6LIWRLOJ5kGK9UJnVH1jgNgsrHTJCx/view?usp=sharing

The Willow Tree Final Band Performance:

https://drive.google.com/file/d/1SEvIwdsBGcWiN_w3EIIjuDIoP4v-XxQf/view?usp=sharing

Wind Symphony

Mise Éire Learning Track: https://drive.google.com/file/d/11t4o1m_Wek5CXaMGmc-d9Hf5cJwQ1Gco/view?usp=sharing

Mise Éire Wind Symphony Melody Recording:

https://drive.google.com/file/d/1Px2f5GI0yfTB_0jAkcKKgY7I9GAhmKlW/view?usp=sharing

Mise Éire Final Band Performance:

https://drive.google.com/file/d/1kEdHAu1J4AiwWI3nRctlnzL6I1O4ivQW/view?usp=sharing

Ornamentation Teaching Demonstration Video: https://drive.google.com/file/d/1CtTr-0eqbUB2H5Baxf75koERWwCjiEOc/view?usp=sharing

Instructor Audio Analysis

For my analysis, I used a reflection template that outlined five elements of music (timbre, pitch accuracy, rhythmic nuance, articulation/emphasis, and dynamics/phrasing). After each rehearsal session, I compared the original aural learning track with the band performance, listening to the learning track and then the band track, focusing on one element at a time. Such analysis required "repeated," "focused listening" that was "painstaking" with great effort to listen for what was present in the recordings, much like Deborah Wong's listening analysis in her essay "Witnessing: A Methodology," for what was absent in her audio files.[144] This means each comparison session included at least five listenings, one per musical element. The following are specific moments that highlight what I found most interesting within each musical element.

In regards to timbre, the word "vibrancy/vibrant" was prevalent in my reflections and comparison. Britannica dictionary defines "vibrant" as "having or showing great life, activity, or

[144] Deborah Wong, "Witnessing: A Methodology," in *Transforming Ethnomusicology,* edited by Beverly Diamond and Salwa El-Shawan Castelo-Branco, Vol. 1, (New York: Oxford University Press, 2021), 193.

energy."[145] To me, vibrancy as a musical descriptor indicates an energy, depth, and life to the sound, drawing to mind the image of sound waves soaring out of the instruments and enveloping the listener. I encourage you to listen to the entire learning track of each ensemble to analyze the timbre. While there is a "pureness" of the pitch in both the whistle and flute learning tracks, there is also a "woody" nature since both instruments were constructed of wood instead of metal or plastic. Therefore, the wooden whistle and flute have a dark, warm, and lush sound while also projecting and piercing the silence. Now listen to the learning track file followed by each band's melody recording file and compare them. I felt that both ensembles were able to capture the essence of these sounds ("woody," "earthy," and "piercing") even though the students' instruments are constructed differently. This diverged from my findings in the pilot study with *Four Scottish Dances,* where the learning tracks utilized fiddle and the timbre was not as well transferred.[146] The current success of transmission may be because the wind instrumentalists are now emulating other wind instruments instead of string instruments. It was harder for the percussionists in the groups, who were learning the melody on mallet instruments, to emulate the flute/whistle sounds, but I noticed in *The Willow Tree* that the Campus Band percussionists' strokes were weightier during the aural learning project, which translated to using a fuller and heavier stroke on all mallet and drum instruments in performance. I believe this added resonance to the percussion sounds while playing *The Willow Tree* was caused by emulating the dark, woody flute sounds. In contrast, the Wind Symphony percussionists had a brighter and lighter touch on *Mise Éire.* The contrast of "touch" between ensembles matches the difference of sound between the learning tracks of a lower wooden flute (*The Willow Tree)* and a higher-pitched

[145] Encyclopædia Britannica, accessed April 25, 2024, https://www.britannica.com/dictionary/vibrant.
[146] Stark, 2024.

whistle (*Mise Éire)*. This approach to touch was never explicitly taught in the rehearsals, but embodied and understood through the aural learning process.

In the trajectory of the Campus Band project, I found that partway through the experience, brass and woodwind players alike began to have pinched sounds in the upper registers of their melody playing. This may be due to the challenges of these ranges on their instruments. It also may have stemmed from difficulty comparing their higher written ranges to the lower wooden flute learning track. By the time of their performance, the Campus Band students were able to find the vibrant, dark sound throughout their instruments' ranges, which may speak to their gaining familiarity and facility with the parts over time. I noted a similar progress with the Wind Symphony, with early renditions capturing the piercing nature of the whistle sound, but at times sounding pinched. As we got closer to the concert and they had lived with the melody longer, the students were able to keep this piercing nature while adding the warmth of the wooden whistle. I believe that multiple listening experiences and exposure to the "desired" timbre allowed them to efficiently capture this element without much verbal explanation.

Within the element of pitch accuracy, my reflection notes for both groups revealed that pitch remained in tune and that students were matching all of the notes effectively with each rehearsal. I believe aural learning and singing to internalize the pitch content allowed for a strong awareness of pitch and intonation matching. Both groups had initial trouble with intonation when there were large leaps, such as the major seventh leap in m.7 of *The Willow Tree* (Figure 2) and the leap of a fifth in mm. 8-9 of *Mise Éire* (Figure 3). You can hear this challenge for the Campus Band in their melody recording file at 0:22 and in the Wind Symphony melody recording file at 0:33. I also found that longer note durations were usually out of tune at the

beginning of the project, but eventually came in tune closer to the concert performance. These issues are common in wind band rehearsals regardless of whether using aural training or notation reading.

Throughout the project there was a growing number of students who engaged with adding non-notated ornamentation. Both Irish musicians were provided the notated melody (seen in black notation in Figures 2 and 3) but added idiomatic Irish ornamentation at their discretion (shown in red). Both groups of students were encouraged to learn these "additions" in the aural learning process and include them in their final performance. As well as learning the ornaments in the aural learning track, the Wind Symphony students were also taught the entire repertoire of Irish ornamentation options and encouraged to improvise and add their own ornamentations as they saw fit on an individual basis. Near the beginning of the project, both groups had only a few players/sections experiment with ornamentation, but by the end of the project, almost the entire ensemble was adding ornamentation to the melodies. The Campus Band began with just the saxophones and clarinets emulating the added triplets of *The Willow Tree* (shown in red in Figure 2). You can hear this ornament in the learning track at 0:09 and in the band melody recording track at 0:10. As rehearsals progressed, the rest of the woodwind sections followed suit, with trumpets joining in by the third rehearsal, and eventually horns near the end of the project. To bring their attention to these ornaments, I spent the second rehearsal describing and modeling them, and in following rehearsals I continued to remind them of the ornaments' presence and modeled them with my voice. Trombones had a harder time with some of these ornaments given the facility of the slide and the fact that much of their music did not allow them to play this part of the melody. I also noted that the different "pats" (a quick grace note below the given pitch) in *The Willow Tree*, such as at mm. 5 and 11 (*The Willow Tree* learning track 0:15),

were introduced to the group, but overall the players were reticent to add them, with the exception of a few flutes and clarinets. This may be because these ornaments were softer and more nuanced than the pronounced triplet figures in the learning track. The pat is also a very quick ornament, and occurs in a lower tessitura in this tune, so it could be that some woodwind instruments played them but it was not audible within the recording.

Figure 2 – *The Willow Tree Melody Skeletal Notation with Added Ornaments*



As mentioned earlier, the Wind Symphony members were exposed to the whole range of Irish traditional ornaments (pats, double pats, cuts, crans, rolls, slides, triplets, runs, and finger vibrato) in a teaching demonstration led by myself on the whistle. For reference to these different ornamentations, please see the teaching video listed with the audio tracks where I demonstrate each type to the Wind Symphony. During the learning process, we discovered that "cuts" and ornaments that involved intricate keywork were only idiomatic for woodwind instruments and

that the brass were unable to participate in these ornaments. In rehearsals and performance, Wind Symphony students were encouraged to match the ornamentation of the learning track, seen by the added notes in red in Figure 3 (a slide in m. 5, cuts m. 6 and 11, pats, triplets, finger trills, and runs). You can hear these ornaments in the *Mise Éire* learning track from 0:00-0:37 to familiarize yourself with the sounds of these ornaments. They were also given the freedom to add new ornamentation to their parts on an individual basis. In the band melody track for *Mise Éire* you can hear students emulating the learning track ornaments (0:00-0:38), as well as individuals improvising new ornaments such as the low brass adding in a perfect fifth (0:58) to create a bagpipe sound on the final note. When listening to the performance audio file, you can hear that the trombones added a run (mi, re, do) during the final ritardando before the culminating chord (2:52). Listening as the conductor within the circle set-up, I could hear the beautiful heterophony of individuals trying new ornaments within the larger framework of the melody, which I compared to the intricate weavings of a Celtic knot.

Rhythmic nuance was of chief interest to me as that is the most important element identified by Irish traditional musicians (ITM). In any discussion about ITM, trad musicians continue to reference the "lilt," "lift," "bounce," and "dance" of the rhythms. Within my analysis, I noted both tunes had a smooth nature with moments of bounce and lilt brought on by ornamentation. In the aural learning tracks and the students' performance audio files, you can hear these rhythmic "lifts" within the smoother nature of the tune, especially when the ornament is a triplet figure. In *The Willow Tree* learning track from 0:08-0:18 and the band performance track from 0:44-0:52 you can compare this "lilt," as well as the *Mise Éire* learning track from 0:18-0:36 and the band performance track from 1:56-2:08. In initial rehearsals, there was much inconsistency with release points of long notes because of the open and unmarked nature of

learning by ear. These problematic release points occurred in m. 6 of *The Willow Tree* seen in Figure 2 (The *Willow Tree* band melody track 0:07) and m. 3 and m. 5 of *Mise Éire* as seen in Figure 3 (*Mise Éire* band melody track 0:22). These issues were resolved with more attentive release gestures from my conducting and further clarity within the context of the notated parts. Overall, the rhythms were transmitted accurately through aural learning with few deviations throughout the process.

Figure 3 – *Mise Éire Melody Skeletal Notation with Added Ornaments*



Articulation and emphasis are a large part of the elusive "style" of this music that plays into rhythmic nuance. In the pilot project with *Four Scottish Dances*, I discovered that aural learning made the lift, lilt, and nuanced emphasis of Scottish dance tunes apparent to students and they were able to emulate the articulation style and emphasis with ease after just a few

listenings.[147] In this recent project, both tunes utilize a more legato articulation, drawing from lullaby and slow-air singing. The learning tracks incorporate slurs and a hard "di" syllable articulation housed within the flowing legato style. Overall, I found the musicians were able to match not only the style of legato articulation, but also when to slur notes versus using legato tonguing. As mentioned earlier, the ornamentation helped add a rhythmic emphasis or accent that was transmitted within the aural learning process. In *The Willow Tree,* there is a slight emphasis placed on the "snappy" sixteenth note followed by a dotted-eighth note rhythm on beat 3 of m. 1 (Figure 2, *The Willow Tree* learning track 0:00-0:004). This nuanced accent followed by a lift is common in Irish and Scottish music and was executed well through aural transmission. A similar accent occurred on the triplet ornament in m. 3 on beat 4, followed by the emphasis on the syncopated rhythms in m. 4 (*The Willow Tree* learning track 0:07-0:14).

With *Mise Éire* you can hear a similar emphasis on the triplet leading into m. 4, followed by the ornamented additional triplet within beat 2 of m. 5 (Figure 3, *Mise Éire* learning track 0:10-0:14). There is also a slight emphasis added on the anacrusis triplet leading into m. 6 and m. 11 (*Mise Éire* learning track 0:18-0:20). Finally, there is a nuanced accent added by the "cut" ornament on beat 3 of m. 6 followed by the "snappy" rhythm in m. 7 (*Mise Éire* learning track 0:20-0:24). The subtleties of these accents are very difficult to notate using sheet music and usually require much mediation on the part of the music teacher, but I found that aural learning allowed students to understand and perform these nuances with ease, contributing to the "lilt" of the Irish tunes. This can be heard both bands' final performance tracks.

Execution of dynamics and phrasing was moderately successful in the aural learning transmission. The dynamic contrast in the learning tracks for both tunes utilized the range of

[147] Stark, 2024.

mezzo-piano to forte. I believe the musicians were able to capture these changes slightly during the aural learning phase, but I also noted that much of these dynamics were written into the sheet music for *The Willow Tree* and their performance of them was more exaggerated and convincing after receiving the notated sheet music. Therefore, it is hard to say the impact notation had on the understanding of dynamic contour with the Campus Band. The dynamic changes can be heard in *The Willow Tree* in mm. 1-2, where the flutist crescendos to the highest concert G on beat 2 of m. 2 before receding in volume to m. 3 (Figure 2, *The Willow Tree* learning tack 0:00-0:09). There is another crescendo in the half note concert F in m. 7 as it leaps up to the concert E on beat 3 of m. 7 (*The Willow Tree* learning tack 0:20-0:28). In *Mise Éire,* similar dynamic swells were present in the learning track and replicated by the performers. There is a crescendo from the anacrusis of m. 3 into the high concert Ab in beat 3 of m. 3 (emphasized by the grace note run) that gets softer as the melody falls back down in pitch throughout m. 4 (Figure 3, *Mise Éire* learning track 0:06-0:18). This melodic gesture repeats and utilizes similar dynamic swells that were accurately replicated by the musicians in the band melody and performance audio tracks. The musical dynamic changes for *Mise Éire* were not as apparent in the sheet music notation, so it was easier for me to conclude that dynamic phrasing was imbued through aural learning.

Regarding phrasing and the placing of energy within the meter and structure of these melodies, I feel aural learning helped musicians break away from the segmentation that is usually brought on by the visual implications of barlines in notated music. James Thurmond's book *Note Grouping* argued that the development of the barline has led to an unnecessary and unmusical accenting of every downbeat, where musicians only see barlines instead of observing the musical motion of motives, phrases, and sections that cross barlines.[148] While listening to the

[148] James Thurmond, *Note Groupings: A Method for Achieving Expression and Style in Musical Performance*, (Galesville, MD: Meredith Music Publications, 1991), 31-45.

learning files of both works, one can notice the fluid, meandering nature of the melody. *The Willow Tree* is in a 4/4 time-signature which implies a metric accent at the beginning of each measure, yet the phrase structure is built in a 4-measure phrase with a 2-measure extension which repeats. This extension creates an asymmetry that provides a feeling of fluidity within the melody. The contour of the melody also emphasizes beat three (the highest pitch of the phrase), defying the barline's implication of accents on the downbeat. *Mise Éire* is a slow unmetered air and incorporates shifting time signatures in the notated parts (4/4, 3/4, and 3/8) to accommodate for the carefree wandering metric structure. Like *The Willow Tree*, the shifting time signatures blur the impulse of the barline and create fluidity. When students utilized aural learning, they were not bound by the accented phrasing of barline downbeats. Overall, aural learning helped musicians play expressively and focus on the energy and motion between notes instead of just note starts and stops. This may be due to the fact that Western notation, with its note head dots, often focuses the eye and mind on the beginning and end of a note because we do not see a continuation of sound visually within the notation system (such as a line or visual representation that indicates length, direction, and continuous sound). The aural learning process helped students achieve the goals of Thurmond's "Note Grouping" method without time-consuming explanation. Aural learning allowed the musicians to focus on the flow and connection of notes within the musical phrase. My analysis continually referenced students' ability to execute the horizontal nature of the music. This is evident when listening to the band melody tracks and full performance track, where you can hear the students' sense of line between notes because they were not hindered by the vertical accent structures imposed by the graphic construct of barlines.

Camps Band Student Audio Analysis

Given my findings, I now turn to the students' analysis from the Qualtrics survey (complete responses found in Appendix D). For the Campus Band, 22 (40%) out of the 55 members responded to the survey. Of these respondents, 9 were brass players (41%), 12 were woodwinds (55%) and one was a percussionist (4%). Respondents were fairly evenly split between their years at OU, with one graduate student/other. This respondent pool is a good representation of the ensemble's makeup. When asked about their experience outside of band class, many listed marching band and private lessons, but some listed jazz bands, playing guitar, or being a part of church groups. While private lessons and marching band are housed with Western art music (WAM) culture, it is possible that those interacting with jazz and informal music-making have prior experience with aural learning. When asked what elements they believed were easily transmitted through aural learning, students gave a variety of responses. Campus Band member's responses appear in Figure 4 and Figure 5.

Figure 4 shows students' responses to "general effectiveness," where they were asked prior to audio analysis to select which elements of music they thought were easily transmitted via aural learning. This is compared to their audio analysis responses for each element, where students compared their performance with the learning track (Figure 5). Therefore, Figure 4 offers insight into students' initial beliefs on the impact of aural learning prior to their listening and the analysis of the end result in Figure 5. All students responded to the "general effectiveness" question while only 15 students took part in the audio analysis. Within the "general effectiveness" category, a majority believed that each element was easily transferred via aural learning.

Figure 4 - *Campus Band General Aural Learning Effectiveness Responses (Pre- Analysis)*

(22 respondents)

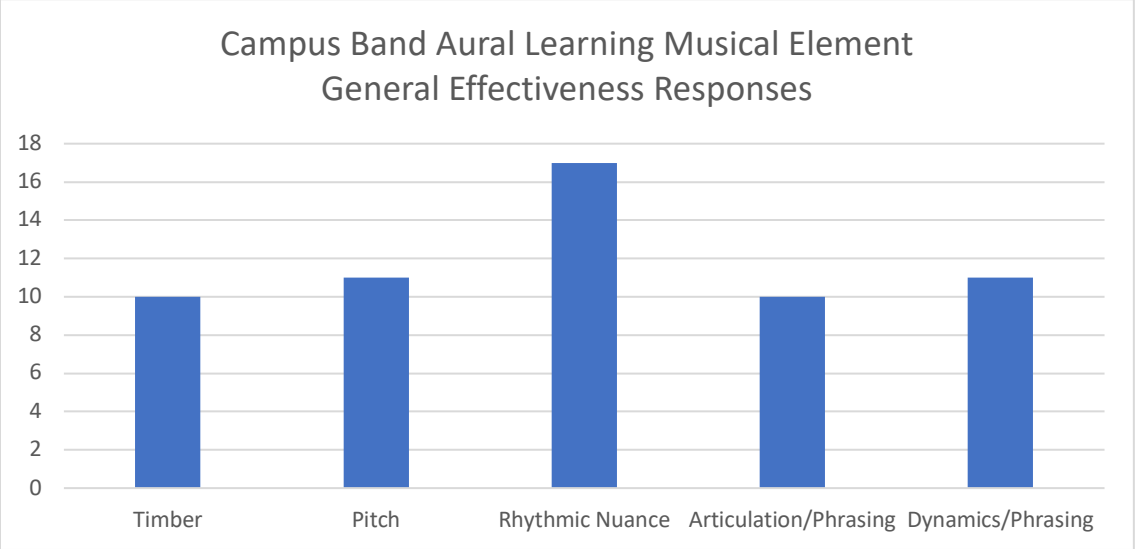
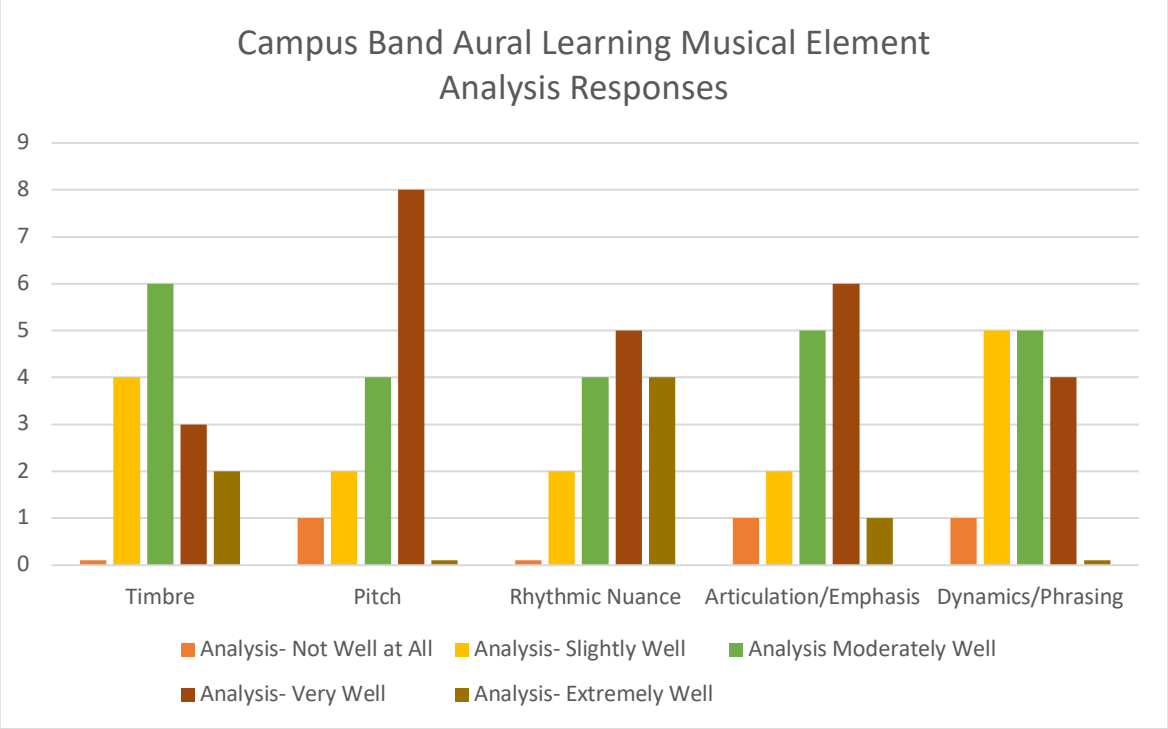


Figure 5 – *Campus Band Musical Analysis Survey Responses (Post- Analysis)*

(15 analysis respondents)



Rhythmic nuance received overwhelming consideration, showing a strong belief in rhythmic transmission. Students may have focused on rhythm because it might be interpreted as the most apparent musical element within ITM, and it was not available in any notated format for the Campus Band (unlike the ABC notation that offered pitch reference). Within the audio analysis, most students selected "moderately well" or higher for each element, although a few students selected "not well at all" for pitch, articulation/emphasis, and dynamics/phrasing. When looking at the two upper categories (*very well* and *extremely well*) as evidence of powerful transmission, respondents favored pitch and rhythmic nuance, whereas articulation was evenly split between the various choices. Respondents were not as convinced about timbre or dynamics/phrasing within the transmission analysis, which may be because they are comparing a wooden flute to a wind band instrument. It is important to note that some respondents chose timbre, rhythmic nuance, and articulation/emphasis elements as "extremely well" transmitted, with rhythmic nuance receiving great consideration. Such responses reveal that these students strongly believed in the impact of aural learning on these specific elements. The audio analysis responses favored pitch alongside rhythmic nuance in contrast to the general effectiveness responses that focused mostly on rhythmic nuance. Within their selections, it was apparent that students believed that rhythmic and pitch content benefitted the most from aural learning, closely followed by articulation. Students may have favored these two areas because pitch and rhythm are usually discussed first in wind band rehearsals. Another theory is that Campus Band students may have favored these because they are concrete and objectively identifiable compared to the more elusive elements of articulation, phrasing, and dynamic contrast.

When asked to respond to their final performance, the Campus Band students were able to provide clarity to their analysis selections. Many students described how it was easier to focus

and improve their intonation and rhythmic accuracy while learning aurally because they were not "distracted" by the notation. A student argued that "getting to simply hear the style and mimic it was much more streamlined for learning the rhythms." Another respondent mentioned they were better able to catch their mistakes after aural learning because of the "reference" aural image. Such reflection reminded me of Sweetnam's remark that the active ear shuts down when having to decipher notation.[149] One student went further to say that aural learning helped them work on intonation without having to use a tuner. I believe this is because the pitch center had become ingrained in their mind and ears, sensitizing them to pitch tendencies. Some students felt that they were able to emulate the timbre of the Irish flute which helped them achieve the "color of the piece."

Ornamentation was another area impacted. Students found joy in the process of adding these "decorations" to the skeletal melody. One student mentioned the impact aural learning had on phrasing. They believed they "could hear the directionality of what we were playing, knowing where it was going before we had the notation in our hands." This speaks to aural learning's ability to help students practice connecting notes by avoiding the segmentation brought on by barlines. Overall, students felt that their pitch, rhythm, and ornamentation were positively impacted by aural learning, which was also reflected throughout their survey responses.

Campus Band students continued to mention that aural learning impacted their interpretation of the "style" of the lullaby. They commented that aural learning helped them capture the "lifted feel of the piece" or the "little accents." This allowed them to "draw out the [piece's] character" so it did not sound like "every other wind band piece." A student provided an astute comment that aural learning was similar to learning how to speak. They stated,

[149] Sweetnam, 60.

"Imagine if the [musical] phrase was a sentence… listening to someone say it helps me place the punctuation and the emphasis on where it needs to go to make the sentence make the most sense possible." This comment confirms Gordan's assertion that music learning should mimic language learning.[150] This imagery about inflection speaks to the hidden elements of style that are hard to notate, but apparent when listening and responding. One student even mentioned that when receiving the full notation, their first reading of the piece was "more stylized" than the other pieces on the concert, describing how "it felt like we were trying to learn the style and the notes as one, rather than as separate pieces." These comments reflect a holistic learning[151] I hoped would result from integrating aural learning into wind band rehearsals.

Wind Symphony Student Audio Analysis

In the Wind Symphony, 15 (26%) out of the 58 members took the voluntary survey (25%). Of these respondents, 8 were brass (53%), 6 were woodwinds (40%) and 1 was a percussionist/other (7%). Respondents were fairly evenly distributed between 1st year to 3rd year, with no 4th year participants and 1 graduate student/other. This response pool shows a diversity of experience and instrument type within the Wind Symphony responses and is representative of a majority of the group. Regarding the question about experience outside of large ensemble rehearsals, many commented that they took part in chamber music or private lessons which are most likely housed in WAM culture, but others offered that they played in "jam bands" and jazz bands or were part of church choirs/bands. These latter groups may have given students previous experience with aural learning that aided them in the project. It is important to note that while the survey does not show a large proportion of the Wind Symphony student experience due to its

[150] Gordon, 26.
[151] Solli, et. al, 119.

voluntary nature, those who took the time to fill out the survey did so thoughtfully, which allowed me insightful feedback into their experience.

The Wind Symphony participants' responses regarding the effective aural transmission of different musical elements can be seen in Figure 6 and Figure 7. Figure 6 shows students' responses to "general effectiveness," where they were asked prior to audio analysis to select which elements of music they thought were easily transmitted via aural learning. This is compared to their audio analysis responses for each element, where students compared their performance with the learning track (Figure 7). Again, Figure 6 offers insight into students' initial beliefs on the impact of aural learning prior to listening and then the analysis of the end result in Figure 7. All students responded to the "general effectiveness" question, while only 11 students took part in the audio analysis. Within "general effectiveness," a majority believed that each element was easily transferred via aural learning, with rhythmic nuance and pitch receiving the most consideration, followed by dynamics/phrasing, and timbre and articulation/emphasis receiving slightly less than half of the responses. This reflects the Campus Band student responses and may be due to the ease of understanding and analyzing pith and rhythm. Within the audio analysis, there was a similar response, where most students selected "moderately well" or higher for each element. Out of every category, no respondent selected "not well at all," which indicated they believed there was some transference from the learning track to the performance. When looking at the two upper categories (*very well* and *extremely well*) as evidence of powerful transmission, respondents favored timbre and pitch, whereas the other elements showed an even split between "very/extremely well" transfer and a "slightly/moderately well" transmission.

Figure 6 - *Wind Symphony General Aural Learning Effectiveness Responses (Pre- Analysis)*

(15 respondents)

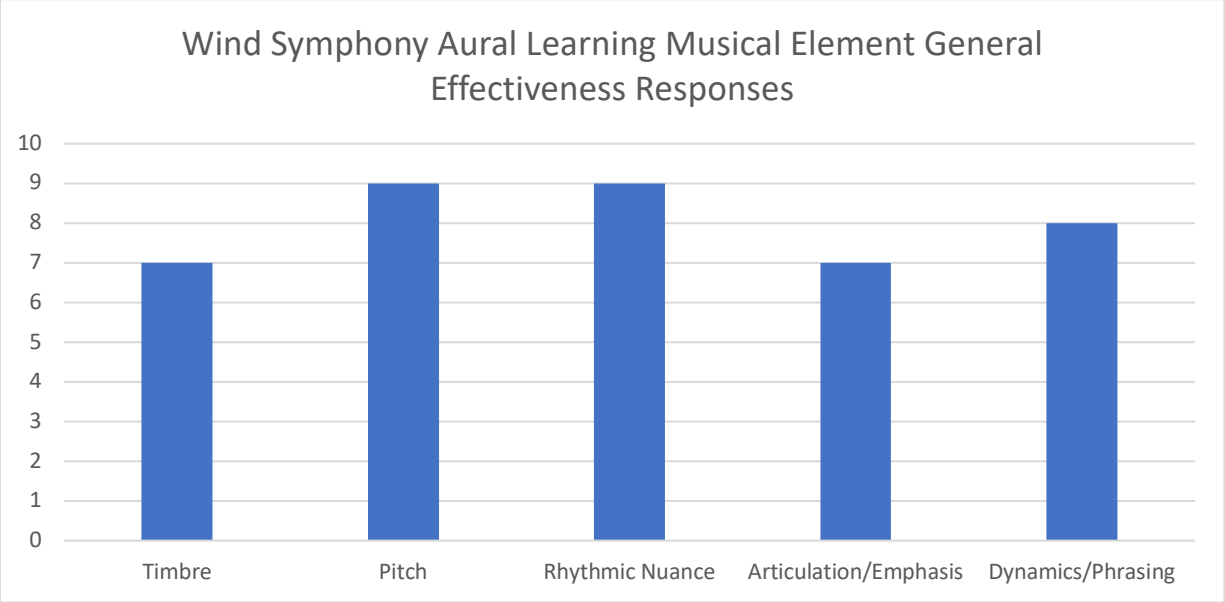
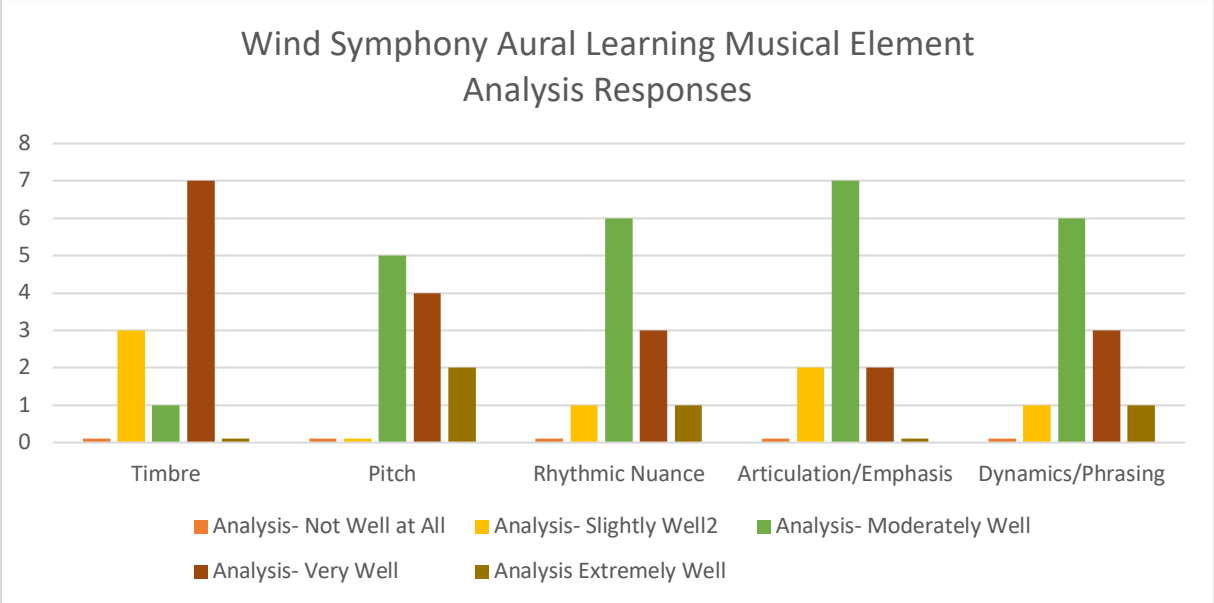


Figure 7 - *Wind Symphony Musical Analysis Survey Responses (Post Analysis)*

(11 respondents)



It is important to note that some respondents chose pitch, rhythmic nuance, and dynamics/phrasing elements as "extremely well" transmitted, revealing these students deeply believed in the impact of aural learning on these elements. The audio analysis responses favored timbre and pitch, in contrast to the general effectiveness responses which favored rhythmic nuance, pitch, and dynamics/phrasing. When compared to the Campus Band student responses, Wind Symphony students may have gravitated to timbre and pitch given their advanced musicianship skills and the novelty of a whistle timbre compared to a wooden flute.

When asked to respond to their final performance, the Wind Symphony students were able to elucidate their survey choices and provide more concrete explanations. Many expressed the ability for aural learning to tackle music learning holistically. One student mentioned listening to the learning track gave them something to "strive for in my own playing" and to understand elements "as a whole unit, rather than simply working on one of these aspects at a time, as I might have to do if reading from a page." Some students said aural learning made the process and music seem more "authentic" and that the learning track made the style apparent. One student enjoyed the "freedom to experiment" to "achieve a 'lifted' note" with their articulation. Another mentioned that "being able to watch my colleagues instead of the music helped with the feel of the weight, lift and emphasis" in the music. Still, others commented on the great intonation and resonance of the full band performance.

One of the biggest areas of consideration regarded ornamentation. Students mentioned that aural learning made ornamentation easier to understand "instead of trying to interpret notation." They felt "liberated" to embellish the melody through aural learning instead of being confined to the page. One student compared this project to a previous experience playing similar types of ornamentation that were notated. They commented that the notation in their previous

experience was “always [confusing] about exactly how the ornaments should sound,” whereas the ITM aural learning project made the ornaments clearly understood. These responses support my impression that aural learning allowed students to attend to multiple musical elements at once in a manner that allowed for accuracy and understanding during musical execution.

On a more philosophical level of analysis, the Wind Symphony students reflected that aural learning “allowed us to perform the melody in a musical and intentional way” and that “it sounded as if the performance held a deeper sense of emotion, of nuance, and of meaning.” While their initial analysis responses in the survey conveyed only a moderately successful transfer of musical data in aural learning, their written responses show a connection and understanding between aural learning and the style, ornamentation, and elements of music that notation fails to convey. From their responses, I would argue that aural learning unlocked certain musical elements and gave students the freedom to play expressively. The dialogical nature of aural/oral learning allowed them to interact directly with sound within the interpretive process, which may have fast-tracked their musical understanding of the piece, especially regarding its style.

Audio Analyses Comparison

Comparing student analyses, both groups believed pitch was well transferred (and rhythmic nuance to a degree), but students in the Wind Symphony found that timbre was also well transmitted. Both groups emphasized the ease of learning ornamentation and the style of the piece from aural learning. Comparing the student’s analysis to my own, I agree that all the musical elements were transmitted with some degree of effectiveness, as evident by the audio tracks. I too found that the articulation/emphasis, rhythmic nuance, and ornamentation which contributed to the style of the music was greatly impacted by the aural learning project. While

the Campus Band students were not as convinced about the transmission of timbre, I still am drawn to the vibrancy of their sounds in performance. While student responses and my observations did not find the dynamic contrast strongly conveyed, I feel that both analyses demonstrated that the phrasing and horizontal nature of the music benefitted from aural learning.

Given these analytical remarks, I assert that aural learning provided meaningful and helpful musical benefits to the students' performance, allowing them to capture many nuances within the analyzed musical elements. A Campus Band student mentioned that they learn aurally in other genres and that they felt "like we should use it in more [band] works." Given that the majority of the students enjoyed the process and saw musical benefits from the pedagogical tool, I would highly recommend its effectiveness as a transmission model. I encourage the reader to continue to listen to the different audio tracks and perform their own analysis which can be compared to these findings.

Student Experience & Feedback

Before I highlight the students' experience from their viewpoint, I wanted to provide my observations of their musical engagement in the learning environment. Students appeared to enjoy and readily engage with this pedagogical model. As the teacher, I noticed high levels of engagement and ownership from students throughout the process. I noted on most rehearsals that students sat with an upright and attentive posture. This may have occurred because of the energy I brought to teaching the project or because students were engaged to learn in a new way. I observed that the Campus Band always seemed prepared to play the melody, with very little talking between musical tasks. They were attentive, although they had a harder time looking up and getting out of their sheet music once they had received it. There were days in the middle of

the rehearsal cycle when I could tell students were tired and were more slumped in their chairs, but overall they seemed dedicated to the aural learning and rehearsing tasks. I kept noting "good energy" in my observation notes, which comes from observing their attentive posture and readiness to perform. I observed that the moments when the energy dropped coincided with too much talking from me as the teacher. When students were asked to actively listen to the learning track and my singing demonstrations or play, they were attentive and engaged.

As seen in the previous vignettes from my teacher reflections, when I asked Wind Symphony members if they needed more listening, they enthusiastically refused and were ready to apply it to their instruments, which is probably due to their advanced musical skills. The Campus Band requested more listenings in the early stages, wanting to make sure they were able to capture rhythmically dense sections. I enjoyed both of these experiences because students were taking ownership of their learning process and making sure they had the resources and exposure needed to execute the musical task. I perceived this learning style was more democratic because I facilitated learning between the audio track and the students instead of dictating how the music should be performed. This gave students more ownership and power to guide the learning process, shown by their request for more or less listenings and the ability to ask questions about the audio track. I also believe the change of pace and the more collaborative style of group call-and-response learning allowed for higher levels of engagement in the process, which is evident in the students' enthusiasm for the project within their survey responses and their attentive posture within rehearsals.

Campus Band Student Feedback

Beyond my observations, students were able to reflect on *their* experience and the process in a general sense outside of audio analysis. The following pages offer some insights into

their lived experience during the project. I hope to let their voices shine through via their quotes. You can find all of their collected survey responses in Appendix D. Many Campus Band respondents felt that aural learning was a fun and exciting challenge. One student mentioned that they "enjoyed getting to piece together part of the melody, and it felt more rewarding when we put the parts back together." Some commented that they enjoyed the piece more because of the aural learning and that it was "fun to learn something in a new way." The novelty of learning in a new way may have kept them engaged in rehearsals. Interestingly, one student mentioned that they used to go to Irish trad gigs with their father while growing up and that Irish music was always a part of their musical identity. They felt this process was meaningful because of their connection to the trad community, which allowed them to "appreciate the piece so much more." Another student mentioned they liked the "freedom to play how I feel instead of obeying a piece of paper" while another said they "appreciated it more than I would usually with learning a piece in a classical manner." This freedom to play and learn in new ways strikes me as an educator. Such comments showcase what I perceive as an enjoyable, vibrant, and engaging experience that led to positive interactions with music learning.

Campus Band students continued to reference aural learning's impact on their sensitization to the melody when performing the full band work. This concept of "balance" was not in my initial consideration regarding my research questions, but its prevalence within the students' responses warrants discussion on how aural learning brings students' awareness to musical balance within the band works. Students mentioned that the project "made me listen more and pay more attention to the articulation and pitches and blend with my section." They were also able to "place when/where the melody was easier than I usually can." Students constantly referenced the ability to find which section had the melody in the band piece, which

helped them play softer when it was not their turn, allowing the melody to sing out. One student remarked "throughout the piece I could hear the melody better than any of the other pieces we played." While I did make some comments about balance during the teaching process, I agree with the students that balance came more easily, which I argue is because of their familiarity with the melody. This familiarity also helped them read notation more easily. One respondent said "I think it gave us a stronger start when reading the sheet music." Another student offered that "learning by ear relieves so many anxieties that have been created by trying to play exactly what is in front of you." They went on to say that aural learning made them "a better and more confident musician." These anxieties in the music learning process are worth considering as educators. As Craig Kirchhoff asked, "How many musical souls have been lost on our watch?"[152] For this student, the anxiety caused by having to interpret and know the music from the notation was replaced with confidence which came from a deeper knowledge of the work. I believe this knowledge was gained from deeper listening and musical exposure.

Many Campus Band students used the word "connection" when describing the impact of aural learning which I believe describes their relationship to the music and others. As one student stated, "my connection to the piece was much stronger because we had an established past with the melody." This "past" is what another student described as developing "a relationship with the piece before getting the sheet music." Students continued to depict how aural learning helped them understand the "story" of the music (they might be referring to the lullaby lyrics or the musical rise and fall of a phrase) which was connected to emotion. Students were able to tap into the emotion of the work while playing, which allowed them higher levels of expressivity as heard in their final performance. This is supported by one respondent who stated aural learning

[152] Kirchhoff, 46.

allowed them to get at the "emotion behind [the] music" and that "I feel like sometimes when I'm using sheet music, I get so focused on what's on the page that I forget to put any kind of emotion or my own style behind [it]." Other students described how it gave them a greater appreciation of the music and culture of Ireland. Finally, a student reflected on the power of aural learning to imprint the melody in their mind, stating they will "definitely remember *The Willow Tree* better years from now compared to another song we played for the concert." This comment reminds me of the aural learning-based ensemble at UCLA whose participants had similar experiences with recalling/remembering their musical experience for years given the deeply ingrained nature of the music via aural learning.[153] Given their responses, I assert this deep knowledge and the relationship the students established with the melody allowed them to experience musical magic. I believe their responses showcase that aural learning gave them the freedom to be expressive and focus on more nuanced elements of performance because the music was ingrained in them.

The ingraining or embodying of the melody was a concept Campus Band students referred to throughout their reflections, usually in relation to having to sing the melody. A student described how "[singing]/playing the given melody felt more like muscle memory than reading the music." Others mentioned how "singing together as a group" gave them confidence with their music. Similar to understanding the emotional content of the work, students continued to reference getting the "feel of the music" through aural learning. This speaks to style elements that are related to rhythmic nuance and articulation/emphasis, but I believe the students are going further to describe an embodied relationship with the music. They "feel" the music in their physical bodies as well as hear their strong aural images. This parallels the experience of

[153] McMahon, 19.

Brazilian Capoeirists who kinesthetically experience their music-making in both learning and performance.[154] One student said "it gave us the heart of the piece in a way" and described how it drew them into the aural landscape of the "intended sound of the melody" within ITM. This student argued that such practices are important, which I think speaks to their understanding of culturally responsive learning that allowed them to honor ITM pedagogical practices. Even more powerful was a student's belief that aural learning "went beyond playing the right notes and markings on the page…there's a soul created during this performance" where the band brought the "music to life" through to aural learning. Such words echo Richard Floyd's call for music teachers to "humanize" the notation in order to bring the music off the page.[155] Bringing the music to life implies that there is a social connection between the music, the musicians, and the original creators of the tune. This connection is not an abstract concept, but a lived and physical experience in the moment. This reflects the social nature of performing discussed within performance theory, where Bauman asserted "performance enhances experience, bringing a greater intensity of communication between performer[s] and audience."[156] Such moments of communication were summarized by one respondent who said "I felt the piece was more of a creation of me and the ensemble, rather than it being a creation of [simply] the composer." This reaction speaks to the power of aural learning to engage students in music-making in dynamic ways with each other. Music in this way is no longer a static artifact housed on a piece of paper, but the act of making music with others that is constantly evolving and changing due to the interaction of the musicians.

[154] Downey, 487-509.
[155] Floyd, 17-18.
[156] Ruth Stone, *Theory for Ethnomusicology*. (New Jersey: Pearson Education Inc., 2008), 137.

Campus Band Student Frustrations and Recommendations

While many students enjoyed the process, aural learning did come with some frustrations. Some students expressed difficulty adding in the non-notated ornaments in *The Willow Tree*. Another student commented that when reading notation, you can read quickly, gathering musical data, but with the audio learning track, you have "to go at the [learning track's] pace which takes up significantly more time and repetitions." I agree with the student, but I wonder if during their speedy notation reading, if there are things that are missed? If that is the case, it may take just as much time to arrive at the "full version" of the melody through mediating the notated score. Another student mentioned retention was an issue stating "it was difficult to follow the entire piece at times and remembering what came next due to it essentially having to be memorized." Within most of these comments, students agreed that the process became easier over time, which was confirmed with the Wind Symphony members who had participated in the pilot study and found the second project more attainable. There was one student who adamantly disliked the project. They claimed it "dampened my excitement to participate" and that it seemed "redundant." This student believed aural learning had little to no impact on the process and that we could have achieved the same result with standard rehearsals. I see where the student comes from and value their opinion because it speaks to the fact that there is no "one way" to teach and learn music. As a counter-argument, I want to draw attention to the countless students who believed they reaped great benefits from aural learning. They expressed that aural learning brought them closer to the meaning, feeling, and context of the music. This leads me to believe the project was worth the effort, even if it does not resonate with some students' learning preferences.

Campus Band students also offered feedback on how to improve the pedagogical tool. They mentioned how it would be interesting to "learn any countermelodies" aurally in addition to the main Irish tune. I had considered this, but given the rehearsal time limits, I opted to focus on the melody as that is the primary focus of ITM. Another student mentioned that aural learning in smaller groups would be fun to create a more informal learning environment. The primary recommendation was to not offer the "ABC help/cheat sheet" in the aural learning process. I found this very interesting. This was a similar suggestion in the pilot study with *Four Scottish Dances* with the Wind Symphony. I took their advice with the *Mise Éire* Wind Symphony projet, only offering the "help sheet" to those who wanted it at the end of the first rehearsal. I chose to give this "help sheet" to the Campus Band as these players are mostly non-music majors and less experienced than the Wind Symphony players. Yet, both groups wanted the challenge of learning aurally with no notation. The Campus Band is about the same skill level as many high school band programs. If these players do not want the "help sheets," it is fair to say many high school band directors utilizing this model may not need them either. However, some students in Campus Band felt they needed the "help sheet." Once again, being able to cater to everyone's desired mode of learning while exposing them to new methods is crucial. Such practices speak to the participatory and inclusive nature I find present within ITM culture. As Jessica Cawley reminds us, trad musicians in Ireland value the "freedom to choose from an array of learning practices [which] ensures enculturation is possible for learners with different needs, personalities, and learning styles."[157] I would recommend that teachers utilizing this model start without the "help sheet" and be aware the student response, tackling the easiest of phrases first. Teachers should have the "help sheet" ready in case students become overwhelmed and frustrated. When students

[157] Cawley, 71.

are allowed to opt in or out of using the "help sheet" it gives them the freedom to shape their learning experience, which empowers them and places more ownership on them in the process.

Wind Symphony Student Feedback

Within the Wind Symphony student reflections, many noted benefits to the addition of aural learning within the rehearsal cycle. Most participants described how aural learning helped "improve their ear" because it was their primary learning tool. A respondent was thankful for the ability to exercise this ability since listening is "a vital skill to have as a musician." Another respondent offered that the project improved their "ability to internalize [and] memorize music." Others mentioned that aural learning got easier over time and it gave them a "better sense of pitch." These reflections further legitimize the music learning theory developed by Gordon which favor the "sound-before-sight" models that parallel language acquisition.[158] For a skill that is critical to musicians, I find that we spend little focused time directing students' attention to aural training in rehearsals. We expect students to take that knowledge from theory and ear training classes and apply it with little context in ensemble rehearsals. Given their responses, it is evident students appreciated the directed focus to flex their listening muscles, which hopefully translated to similar experiences with other pieces.

Many students responded that aural learning allowed them easy access to style and ornamentation. This was described in the audio analysis section, but I wish to highlight other insightful comments from the students. One student remarked, "it made it a lot easier to play the entire piece in the style of the excerpt, rather than learning the whole thing from paper." Another student found that the learning track was ingrained in their brain, stating "every time the melody played a passage from the original flute recording, it made me hear [the flute] and play it

[158] Gordon, 26.

accordingly." One student mentioned that "similar to transcribing in jazz, I felt I was able to integrate phrasing more naturally when learning music by ear." Finally, a respondent stated aural learning was "a really good way to collectively learn a melody with all the nuances in style and embellishments." These student comments highlight that aural learning illuminated elements of music in ways that resonated with their learning style and brought clarity to the sometimes confusing and vague concepts of style and ornamentation.

Similar to the Campus Band experience, many students discussed aural learning's ability to bring about a unity of sound with attention to ensemble balance. A student articulated that the aural learning project "brought everyone together and made us all know what the melody was," which highlighted the communal nature of the project and showed a sensitization to the melody regarding balance within the full band work. Another spoke to the "community bond in how we listen," reinforcing the ITM value of community.[159] Aural learning allowed them "to listen to more things going on in other instruments across the room that I normally wouldn't pay attention to." One respondent went as far as to say aural learning allowed them to "listen for where the music was going instead of watching the conductor." As a conductor, I enjoy the ability to guide an ensemble through a work, but as an educator, I am thrilled that this project allowed musicians to rely less on me and opened up collaboration within the ensemble. Such practices promote ownership and a democratic rehearsal process that is at the heart of Irish traditional music culture.[160] While the circle performance set-up with the Wind Symphony created challenges within the rehearsal process, I believe, much like some of the students' survey responses, that the process and new performance formation allowed for a more egalitarian music learning environment within their experience.

[159] Stark, 2023.
[160] Stark, 2023.

Finally, like the Campus Band students, Wind Symphony students remarked on how aural learning created a deeper "knowledge" or "connection" that came through the embodiment of the music within the rehearsal cycle. One student reflected that "having a traditional Irish musician play the melody, it also allowed me to understand its idea and meaning more." Many cited developing a greater "connection" with the music with one student saying they felt they connected "with each note I played." Others commented on how the aural learning project brought them closer to Irish traditional music, citing a better understanding of "the history and cultural components" and the "source material of the piece." A student argued that "[sheet] music can create a barrier between the performer and our ability to play expressively." Some students reflected on how the sheer number of listenings, the YouTube playlist, and images of Ireland helped them foster this connection through prolonged exposure. I argue such practices not only help musicianship, but develop cultural and musical empathy through exposure to new musical worlds. Other respondents noted how aural learning made them more aware of everyone in the room, where the musicking experience fostered a deeper emotional and social connection. This joy in making music with others was summed up with one student's remark that "it made me more connected to [the music] and with the other musicians. The big hit in the [piece] was one of the best musical moments I've had in college." I was struck by how the students' descriptions of how the aural learning process allowed them to embody the music and entrain with their fellow musicians. One respondent described how it "made me feel as though I was part of the piece, rather than just separated from it." Another mentioned that

> aural learning allowed me to internalize aspects of Irish music and culture that I otherwise would not have experienced. From the collaboration, to improvisations, ornamentation, and even emotional connections with ensemble members and

audience members. I firmly believe I would not have experienced these aspects of the music [at] such a deep and intuitive level had we learned the piece traditionally with sheet music.

I could not have spoken more eloquently. I find these responses support my conclusions in the earlier audio analysis section on the embodiment of music. Students exhibited this embodiment in the Wind Symphony by their whistling of the tune after class, their physical movement while playing in the circle, and their comments about finding a deeper connection to the music and each other that came from deep and intentional listening.

Wind Symphony Student Frustrations and Recommendations

Even with the success of the Wind Symphony project, some frustrations were voiced by students that should be highlighted. Some participants mentioned that the melody was "not idiomatic" on their instrument (trombone) while others mentioned that aural learning is not their strength and they preferred having notation. One respondent mentioned how it was challenging to recall larger chunks of music without a notational aid. Such comments remind me that all students are different. It is important to provide experiences that allow everyone the opportunity to learn in a way that resonates with them while encouraging students to take on new challenges and expand their modes of learning.

Similar to the Campus Band students, Wind Symphony members recommended using aural learning in smaller groups and outside of rehearsal, but they also understood the limitations to how much extra work you can expect from a student ensemble. This could easily be done in a "sectional format" to allow students to experience aural learning in an informal and intimate setting that draws parallels to the ITM sessions. Interestingly, one student who participated in the pilot project thanked me for providing a "help sheet" of the ABC notation with their specific

transposition as it reduced stress about transposing while aural learning. Another mentioned that I should provide some sort of "proto-notation" that shows the melody's contour or have students use hand gestures to physically trace the contour. I did encourage both groups to follow my hand gestures with the melody contour when singing (though almost no one joined in), but it appears that students would benefit from having to experience this directly within the project. All of this feedback is helpful and should be considered for future projects. It was interesting to note that many of the Campus Band comments in the survey were similar to the pilot project Wind Symphony did with *Four Scottish Dances*. They requested less scaffolding with the "help sheets" and found initial struggles with retention and learning in a new style. I find it intriguing that the Wind Symphony responses had fewer of these comments and focused on their experience with ornamentation and ensemble connection, which may have been due to their exposure to aural learning in the pilot study.

Summary of Analysis

Given all of the data derived from my teaching reflection on student reaction during the process, an audio analysis done by myself and students, and the students survey feedback, I argue that aural learning had a positive impact on the students' musical learning and experience. From my own reflections, I found that students were excited to engage in this new model for learning, demonstrating this excitement through their enthusiastic verbal responses and attentive body posture. As a teacher, I felt liberated to connect with students via eye contact because I also did not have a notated score to read from. This allowed me to focus on using my conducting gestures to show the shape of the musical line, bringing out points of emphasis and the essential "life" and "lilt" of the Irish music through both horizontal-legato and carefree-bouncing

conducting gestures. In addition to aural learning with the audio tracks, I discovered that students gained a more holistic learning experience by supplying them with images of Ireland, metaphors connecting the music to the Irish landscape and people, as well as a playlist of many different types of trad music to help students begin the enculturation process. This is reflected in the students' expressive performance of the music and their survey comments describing a deeper "relationship" with the melody. Having students sing was integral to the process of habituation and enabled them to have a kinesthetic/felt experience while learning and presenting these works. All these techniques allowed me to engage their audio, visual (including watching physical conducting gestures, viewing images of Ireland, and utilizing notated sheet music), and kinesthetic senses in the learning process. This led to high levels of engagement and an embodied knowledge of the music in rehearsals and performance.

I assert that aural learning allowed for the effective transmission of musical elements, although some elements were better transmitted than others. Through audio analysis, the students and I agreed that rhythmic nuance, pitch content, and articulation/emphasis were readily accessed through the aural learning model. I believe these elements of music are most often discussed and a present part of music learning dialogue in rehearsals. Therefore, the students and I were drawn to comment on these elements, while phrasing and dynamic shifts were not at the forefront of our analytical mind, but that does not mean transmission did not occur. Some students found timbre was transmitted, while others were not as convinced, but I continue to assert that imitating the musician recorded on the aural learning tracks gave students an aural image that allowed for a vibrant sound that I believe had "vibrancy" or "energy."[161] While some students were not convinced about the transmission of dynamics/phrasing, I am convinced that

[161] This "energy" and vibrancy of sound is easily transmitted by teacher demonstrations in private lessons in Western art music, but can be more challenging for conductors to convey in large ensemble settings.

not seeing notation and barlines allowed students to connect the energy and flow between notes that captured the lyrical style of both works. This is supported by Thurmond's "Note Grouping" system,[162] where aural learning allowed students to create a flowing and carefree aural image before being influenced by the natural tendency to accent downbeats following visual barlines. Both students and I found that aural learning allowed a direct understanding of the performance of the nuanced ornaments that are idiomatic in ITM, as well as the elusive "lift" and "lilt" that defines its style. Could many of these elements be captured through notation and rehearsal? Possibly, but I think such efforts would take inordinate amounts of time and explanation that are bypassed through the aural learning process that produces nuanced understanding. Aural learning helped students transition from what Titon referred to as "explanations" of the music to an informed and deeper "understanding" of the music.[163] Using aural learning as a tool to jumpstart the interpretive process allowed a freedom and ease of learning that I found made the process more enjoyable and rewarding which can contribute to a life-long love of participation in music.

In the student survey responses, the majority were enthusiastic about the aural learning process and said they would love to do it again. Only two students (one in each group) said they would not wish to use aural learning in the future and one member of the Wind Symphony group marked "unsure." I argue that the positive responses outweigh the few negatives and the model is worth replicating. Many students were eager to learn in a new way and enjoyed improving their listening skills, which was evident in their survey responses. Students felt less pressure to "get it right" while learning aurally, having the freedom to musically explore, which gave them confidence when placing their aurally learned melody in the context of the notated band work. They articulated that aural learning facilitated an understanding of the style, history, and context

[162] Thurmond, 2008.
[163] Titon, 27.

of Irish traditional music. They found that learning not only the background information of melody, but also learning about the ITM way of learning (aural in a call-and-response manner) enriched their musical experience and brought about a more stylized and meaningful performance.

Aural learning framed within this model allowed them to develop a "relationship" with the melody that allowed for a deeper understanding of articulation, phrasing, and rhythmic nuance that makes up the style of the music, as well as the "emotion," "feel," and "meaning" behind the melodies. Such comments speak to Titon's description of music as the collaborative action of making music with others to foster relationships.[164] Rehearsing and performing music in this way sparked a connection between students, but also between students and the melody. While the students' interaction with the Irish musicians was mediated, their engagement with the audio files brought them closer to the melody and by extension, allowed them to develop an indirect relationship with Irish musicians through the playing and learning of Irish traditional music in the pedagogical style valued by ITM practitioners. This connection reflects Campbell's "Enactive Listening" or focused listening, but what I call "deeper listening."[165] This deeper listening helped students get inside the music, or as one person said, let them "internalize" and remember the melody. This embodied, habituated feeling, or deeper understanding of the music fostered itself in their lived experience of making music with each other. I believe aural learning's ability to generate this deeper awareness allowed students to create a deeper musical

[164] Titon, 38.

[165] I developed this term to describe my understanding of a listening-learning strategy that delves deep into the heart of music to experience it holistically. I recognize that this term is similar to the term "deep listening" coined by the esteemed composer Pauline Oliveros to describe a meditative and hyper-conscious listening within both performance and daily life. While Oliveros's term and work show similarities, my definition seeks to elaborate on Campbell's "enactive listening" and I arrived at this term before being exposed to Oliveros's work. I highly recommend Oliveros's "Deep Listening" activities for those interested in experientially delving into philosophical questions on the different kinds of listening.

community with each other in the musical moment, seen through their physical interactions during the performance. In the end, the pedagogical model allowed us to take the music off the page and into the air around us and our audience. This project impacted students' musical experience beyond the musical elements, which allowed them to experience music in a different manner. I argue the aural learning model led to extremely meaningful music-making in both rehearsals and performances. It allowed us to readily experience the social act of making music, which I believe should be at the heart of musical experiences in wind band classrooms.

Chapter 6 – CONCLUSION

Given my findings and the countless resources that sing the benefits of aural learning, I firmly believe and advocate for integrating call-and-response aural/oral practices within large ensemble rehearsals. From the analysis done by myself and students, I assert that by learning in response to audio recordings made by Irish traditional musicians (ITM) and exposure to music and images of Ireland, students were sensitized to all musical elements in varying degrees, but more importantly, it brought them into a deeper and more fulfilling relationship with the music, Irish music culture, and each other. This does not mean discarding notation and other pedagogical tools, but adding aural learning into the standard learning methods found in wind band classrooms.

The students and I found aural learning especially helpful to understand the culturally distinct style idioms of ITM since notation is often vague and requires much mediation by knowledgeable musicians and teachers. Since the performance of music is a multi-sensory and embodied experience, the combination of aural learning through call-and-response teaching, kinesthetic experiences, and visual learning through notation and imitation allows for a multi-faceted approach that suits all learners. This helps musicians as the Irish say, "get the whole of it" [166] so that the music becomes a part of them through intentional and meaningful exposure, or deeper listening.

It is apparent that aural learning has always been a powerful tool of music pedagogy. While aural learning and the use of pitch and rhythmic mnemonics are the primary modality of musical transmission for many musical cultures outside of Western art music (WAM), the

[166] Cowdery, 78-79.

roots of WAM began in aural/oral techniques as is evidenced as early as the 1300s.[167] The rise of notation during the Baroque and Classical periods spanning the sixteenth to early nineteenth centuries provided a new tool to convey musical ideas, but also moved musical attention to the eye, often at the expense of the ear.[168] Questioning the benefits of music notation has led to several attempts to merge notation and aural learning. For example, the "Third Stream" efforts at the New England Conservatory,[169] as well as aural learning conducted by many orchestra teachers who engage with fiddle music,[170] showcases the addition of aural learning into music pedagogical practices in the U.S. Aural learning continues to be the primary learning method for countless music cultures, including Irish and Scottish traditional musicians, but wanes in instrumental music ensemble classes in the U.S. due to a perceived lack of time and training.[171]

Music education scholars continue to research the benefits of aural/oral and informal music learning and argue that music learning is similar to language acquisition, which begins as an aural/oral transmission. Such ideas reinforce the Suzuki Method, Kodaly's music learning practices,[172] as well as Gordon's sequences for learning music.[173] Music is primarily an auditive experience, which is why students with strong aural images can perform at higher levels.[174] Integrating aural/oral and kinesthetic learning practices can provide an effective means to access stylistic elements of music that notation is unable to convey. My aural learning model further affirms the effectiveness of the models developed by Kodaly and Suzuki that are based on singing, as well as Dalcroze's eurythmics model which ties dance and movement into

[167] Campbell, 1991, 26.
[168] Campbell, 1991, 25-40.
[169] Blake, 142.
[170] McMAhon, 2014.
[171] McNeil, 2023.
[172] Campbell et. al, 2008, 30.
[173] Gordon, 2012.
[174] Oare, 2016.

music learning.[175] Given the history of these multi-sensory music learning models and my projects findings, I argue that instrumental music teachers should continue to seek creative ways to engage all students' senses while learning music. Given the many modalities that students use to learn, teachers who are able to incorporate multiple learning styles are able to provide more holistic experiences for all of their students, which promotes diversity, equity, and inclusion within the music classroom.

When students are given equal access to diverse ways to understand musical knowledge, all students are provided with an inclusive musical experience. Western notation is a tool that benefits many students by effectively transmitting visual music data, yet those who are not versed in Western notation or who are unable to utilize it (such as students with visual impairments, learning disabilities, or neurodiversity) or those who have not had foundational private teaching find such practices to be exclusionary.[176] Offering multiple learning modalities opens up doors for students and promotes diversity, equity, and inclusion to musical experiences for all students. I assert that incorporating such pedagogical models helps students develop musical and cultural empathy through their engagement in culturally responsive learning which provides accessible and diverse learning modalities for a broad range of students. These practices not only enable students to learn in a modality that resonates with their home culture, but also pay homage to the learning practices from the music's source culture. The aural learning project detailed in this document allowed OU band students to indirectly interact with Irish traditional musicians via the audio recording, providing them the opportunity to analyze and embody the Irish musician's performance. This model opens up access to cultural experiences for music programs that may not have the access or resources to

[175] Campbell, 1991, 75-76.
[176] Baker and Green, 2016.

facilitate such opportunities in-person. I believe that aural learning also promoted ownership of the learning process, which allowed a collaborative environment for students to become musical problem solvers with teachers in rehearsals.[177]

As students experienced this learning model and reflected on it, they found that their musical performance and experience were positively impacted. Our audio analysis and their reflections made it clear that aural learning allowed easier access to musical elements that musicians often perceive to be difficult to accurately and clearly notate (rhythmic nuance, ornamentation, style, etc.), as well as feeling more comfortable and confident playing the music. I feel that aural learning helped the musicians break away from the segmentation that is usually brought on by the visual implications of barlines in notated music,[178] which allowed students to embody and perform the flowing nature of these melodies and understand the connection between notes and phrases. The audio tracks showcased a successful transfer of musical data from the learning tracks to the students' playing, which allowed for a vibrant and engaged performance.

The students also described a model that was fun and engaging, which ultimately led to a deeper knowledge of ITM culture and the musical work. Students were able to embody their music-making in a way that promoted expressivity and allowed for an artistic and powerful performance. Overall, their experience demonstrated the success of this learning model and encourages me to continue to promote and refine it so that it is accessible to wind band teachers around the world. This research showcases that aural learning can be easily incorporated into large instrumental music classrooms and that this pedagogical tool enhances students' musicality, expressivity, and understanding during rehearsals and musical

[177] Freire, 71-80.
[178] Thurmond, 1991.

performances. It argues a need to continue to explore collaboration between music educators, ethnomusicologists, and musicians from a variety of musical cultures.

Suggestions for Further Research

In this project, my intent was not to prove that aural learning was more effective than learning through notation, but to understand how adding aural learning enhanced students' experience. A further study involving two groups of similar size and skill levels, with one learning through the aural model and the other with Western notation, may highlight any difference in effectiveness between the two learning modalities. I believe such studies are not as meaningful as understanding the students' holistic experience created by the addition of aural learning into existing pedagogical models, but they may prove beneficial to generalize and spread the model to other programs.

To this point, my research has only created teaching resources for three works in the wind band repertoire that derive from Irish and Scottish traditional music culture. Appendix A offers a current list of wind band repertoire arranged from traditional tunes from the British Isles. It is my hope to generate audio learning tracks, tune background information, "ABC help sheets," as well as playlist for these tunes so that any teacher can choose to teach these works with the aural learning model I have created. That being said, other genres and styles of music in the wind band repertoire could benefit as well. I have discovered the book *Listening Excerpts to Develop Band Musicianship* by Jim Childers, which offers a means for teachers to expose students to quality aural examples of wind band works.[179] This resource utilizes wind band musicians playing wind band repertoire, which is a wonderful tool for students and teachers,

[179] Childers, 2020.

but I argue that other tools are needed to help students engage with diverse musical cultures in ways that are culturally responsive. My own work resides in Irish traditional music as that is my musical background, but I am certain this model can and should be applied to other genres and cultures. I believe it could be applied to wind band music derived from Jazz, African cultures, Latin America cultures, Asian cultures, Australian cultures, folk traditions in Europe, and Indigenous populations in the Americas, but I also encourage other researchers and educators to adapt my model to fit within the pedagogical values of the cultures with which they have interacted. This aural learning model may also serve other instrumental ensembles such as orchestras, chamber groups, mandolin choirs, guitar ensembles, etc. I look forward to finding collaborators educated in these varied contexts who could help generate teaching materials for wind band music inspired by these musical cultures.

Final Thoughts

My initial research idea was to understand the effectiveness of aural learning in wind band settings. While I delved into this question, my scope expanded to understand how aural learning enriches the musical *experience* of students in wind bands. This aural learning model takes time and energy, but after experiencing this process with three separate ensembles, I believe the time and effort is worth it. By using aural learning to complement visual notation and thereby expand the different ways students access music learning, we offer more paths up the mountain to musical performance and expression. As a teacher, I feel aural learning has opened up new doors and I hope that the students who took part in this project feel the same. This work allowed me to delve further into the heart of music. My journey into music education began because I was a bored percussionist at the back of the room. While I waited to

play, I began to listen and was fascinated by what I heard. I kept listening and watching how band directors helped guide students to new levels of expressivity. I wanted to be a part of that magical process. Since then, I have continued to listen deeply, searching for musical meaning that occurs within sound and within the interactions between people. This journey leads me to believe that music will continue to reveal itself (its meaning and purpose) and bring people together through the act of musicking and *deeper listening*.

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Appendix A

Potential Aural Learning Music in the Wind Band Repertoire from
Traditional/Folk Music from the British Isles

Repertoire Title	Arranger	Tunes Utilized	Music Nationality
Ancient Airs of Ireland	Michael Sweeney	-Return from Fingal -Lord Mayo -The Yellow Bittern -Captain O'Kaine -Song of the Chanter -Behind the Bush in the Garden	Ireland
Celtic Air and Dance #1	Michael Sweeney	-The Parting Glass - *Tha mi Sgìth*	Ireland
Celtic Air and Dance #2	Michael Sweeney	-Tune from County Derry -Star of the County Down	Ireland
Celtic Air and Dance #3	Michael Sweeney	-Red is the Rose -Bill Sullivan's Polka	Ireland
Celtic Air and Dance #4	Michael Sweeney	-Pretty Maid Milking Her Cow -I'll Tell Me Ma	Ireland
Celtic Air and Dance #5	Michael Sweeney	-Ned of the Hill -Upperchurch Polka No. 1 -Ballydesmond No. 3	Ireland
Celtic Suite	Elliot Del Borgo	-On Leaving Home -Kathleen O'More -Humours of Winnington	Ireland
Images of Ireland	Brain Balmages	-Sweet William -Star of the County Down -The Minstrel Boy	Ireland
An Irish Air	Robert Sheldon	-Molly Malone	Ireland
Irish Rhapsody	Clare Grundman	-The Morreen -I Know Where I'm Going -Shepherd's Lamb Reel -Cockles and Mussels -The Rakes of Mallow -Kathleen O'More	Ireland
Irish Suite	Leroy Anderson	-Rakes of Mallow -Minstrel Boy -Irish Washerwoman	Ireland

Repertoire Title	Arranger	Tunes Utilized	Music Nationality
Minstrel of Kells	Dan Welcher	-Loch na gCaor -Port na bPucai -Blind Mary -Come West Along the Road -Ger the Rigger -Gypsy Princess -Road to Lisdoonvarna -The Wild Irishman -The Humours of Ennistymon	Ireland
Molly on the Shore	Percy Grainger	-Molly on the Shore -Temple Hill	Ireland
Song of Lir	Fergall Carroll	-Captain O-Kaine	Ireland
Tune from County Derry	Percy Grainger	-Tune from County Derry	Ireland
Two Celtic Folksongs	Paul Lavender	-The Maids of Mourne Shore -The Star of the County Down	Ireland
The Willow Tree	Michael Sweeney	-The Willow Tree	Ireland
Black is the Color…	Robert Sheldon	-Black is the Color of my True Loves Hair	Scotland
Four Scottish Dances	Malcolm Arnold	-Strathspey -Reel -Waltz -Reel	Scotland
Gathering in the Glen	Michael Sweeney	-Scotland the Brave -Loch Lomond	Scotland
Loch Lomond	Frank Ticheli	-Loch Lomond	Scotland
Mountain Thyme	Samuel Hazo	-Wild Mountain Thyme	Scotland
Pipe and Thistle	Carol Brittin Chambers	-Scotland the Brave -Comin' Thro the Rye -Clean Pease Strae -Scots Wha Hae	Scotland
Piper's Rhapsody	James Hosay	-Scotland the Brave -Loch Lomond -Sailor's Hornpipe	Scotland
A Scottish Ballade	Robert Sheldon	-Annie Laurie	Scotland
A Scottish Portrait	James Swearingen	-Will Ye No Come Back Again -Scotland the Brave -The Highlander's Farewell	Scotland

Repertoire Title	Arranger	Tunes Utilized	Music Nationality
A Scottish Rhapsody	Clare Grundman	-Auld Lang Syne -Scotland the Brave -The Bluebells of Scotland -An Eriskay Love Lilt, The Cockell Gatherer -Will Ye No Come Back Again	Scotland
Ye Banks and Braes o Bonnie Doon	Percy Grainger	-Ye Banks and Braes O'Bonnie Doon	Scotland
English Country Settings	Pierre La Plante	-May Day Carol -O Waly Waly -The Ash Grove	England
English Folk Song Suite	Ralph Vaughn Williams	-Seventeen Come Sunday -Pretty Caroline -My Bonny Boy -Green Bushes -Blow Away the Morning Dew -High Germany -Cloudy Banks	England
Lincolnshire Posy	Percy Grainger	-Lisbon -Horkstow Grange -Rufford Park Poachers -The Brisk Young Sailor -Lord Melbourne -The Lost Lady found	England
Sea Songs	Ralph Vaughn Williams	-Princess Royal -Admiral Benbow -Portsmouth	England
Suite in F	Gustav Holst	-Morris Dance -Swansea Town -Cloudy Banks -Song without Words -Song of the Blacksmith -Dargason -Greensleeves	England
Suite of English Country Dances	Pierre La Plante	-Robin Hood's Dance -Polly and Jen -The curly Headed Plowboy	England
Rhosymedre	Ralph Vaughn Williams	-Rhosymedre	Wales

Repertoire Title	Arranger	Tunes Utilized	Music Nationality
Three Welsh Songs	Todd Stalter	-A Gentle Maid in Secret Sigh'd -St. David's Day -The Ash Grove	Wales
Welsh folk Suite	Albert Davis	-Jenny Jones -All Through the Night -Men of Harlech	Wales
A Welsh Rhapsody	Clare Grundman	-All Through the Night -Jenny Jones -To Towyn with Deio -Two Hearts	Wales
Welsh Rhapsody	James Curnow	-Welsh Carol -Spin, Wheel, Spin -The Milking Song	Wales
Within the Castle Walls	Brian Balmages	-A Mighty Warrior -Over the Stone -Men of Harlech -The rising of the Lark	Wales

Appendix B

Data Collection Protocol and Teaching Documents

Willow Tree ABC Notation Aural Help Sheet
Pádraigín Ní Uallacháin

C Instruments

Phrase A:

M. 1 M. 2 (pick-up) M. 3 (pick-up) M. 4 M.5 -6 (pick-up)

A D E D C D E F G F E F/E/D D E D C A G A C D F A G F A G A/Bb/A

Phrase B:

M. 7-8 (pick-up) M. 9 (pick-up) M. 10 M. 11-12 (pick-up)

A G F E F/G/F F/E D C D D E D C A G A C D F A G F A G F/E/F

Bb Instruments

Phrase A:

M. 1 M. 2 (pick-up) M. 3 (pick-up) M. 4 M.5 -6 (pick-up)

B E F# E D E F# G A G F# G/F#/E E F# E D B A B D E G B A G B A B/C/B

Phrase B:

M. 7-8 (pick-up) M. 9 (pick-up) M. 10 M. 11-12 (pick-up)

B A G F# G/A/G G/F# E D E E F# E D B A B D E G B A G B A G/F#/G

Willow Tree ABC Notation Aural Help Sheet
Pádraigín Ní Uallacháin

F Instruments

Phrase A:

M. 1 M. 2 (pick-up) M. 3 (pick-up) M. 4 M.5 -6 (pick-up)

E A B A G A B C D C B C/B/A A B A G E D E G A C E D C E D E/F/E

Phrase B:

M. 7-8 (pick-up) M. 9 (pick-up) M. 10 M. 11-12 (pick-up)

E D C B C/D/C C/B A G A A B A G E D E G A C E D C E D C/B/C

Eb Instruments

Phrase A:

M. 1 M. 2 (pick-up). M. 3 (pick-up) M. 4 M.5--6 (pick-up)

F# B C# B A B C# D E D C# D/C#/B B C# B A F# E F# A B D F# E D F# E F#/G/F#

Phrase B:

M. 7-8 (pick-up) M. 9 (pick-up) M. 10 M. 11-12 (pick-up)

F# E D C# D/E/D D/C# B A B B C# B A F# E F# A B D F# E D F# E D/C#/D

Willow Tree Aural Learning Reference Playlist

https://www.youtube.com/playlist?list=PL7o4ETB2iK6fw8jRnJHEhb0ifCptwy4tA

The Willow Tree lyrics

Down by the river there's a tall willow tree
Who weeps all night for you and me.
[Chorus:]
And it's lay down low, my love.
And it's lay you down, my own true love.
The shadows are falling and the night has come,
And it's lay down low, my love.

Under the branches of the brown thorn tree,
The wild bird is watching over Lios na Sí
[Chorus]

On Lake Derravaragh there's a white-feathered swan
Who sings of sorrow the whole night long.
[Chorus]

The moon is moving over Poll na mBrón
Where two lovers are lying on their bed of stone.
[Chorus]

Down by the river there's a tall willow tree
Who weeps all night for you and me.
[Chorus]

Mise Eire ABC Notation Aural Help Sheet
Sean O'Riada

C Instruments

Phrase A:

Eb C Eb Ab C Eb Bb C Bb/C/Bb Ab F/Eb/C Bb Ab Bb C Bb/C/Bb Ab

Phrase B:

Ab Bb C Db C/Bb/Ab/Bb Ab G Eb Eb/F/Eb C Eb Bb C Bb/C/Bb Ab

Phrase B':

Ab Bb C Db C/Bb/Ab/Bb Ab G Eb Eb/F/Eb C Eb Bb C Bb/C/Bb Ab F Eb C Eb Ab

Bb Instruments

Phrase A:

F D F Bb D F C D C/D/C Bb C Bb C D C/D/C Bb

Phrase B:

Bb C D Eb D/C/Bb/C Bb Ab F F/G/F D F C D C/D/C Bb

Phrase B':

Bb C D Eb D/C/Bb/C Bb Ab F F/G/F D F C D C/D/C Bb G F D F Bb

Mise Eire ABC Notation Aural Help Sheet
Sean O'Riada

F Instruments

Phrase A:

Bb G Bb Eb G Bb F G F/G/F Eb C/Bb/G F Eb F G F/G/F Eb

Phrase B:

Eb F G Ab G/F/Eb/F Eb D Bb Bb/C/Bb G Bb F G F/G/F Eb

Phrase B':

Eb F G Ab G/F/Eb/F Eb D Bb Bb/C/Bb G Bb F G F/G/F Eb C Bb G Bb Eb

Eb Instruments

Phrase A:

C A C F A C G A G/A/G F D/C/A G F G A G/A/G F

Phrase B:

F G A Bb A/G/F/G F E C C/D/C A C G A G/A/G F

Phrase B':

F G A Bb A/G/F/G F E C C/D/C A C G A G/A/G F D C A C F

Mise Eire Aural Learning Reference Playlist

https://www.youtube.com/playlist?list=PL7o4ETB2iK6dHr3cL6LX4Kz8eFviiCU5s

Irish[2]	English
A Róisín ná bíodh brón ort fé'r éirigh dhuit: Tá na bráithre 'teacht thar sáile 's iad ag triall ar muir, Tiocfaidh do phárdún ón bPápa is ón Róimh anoir 'S ní spárálfar fíon Spáinneach ar mo Róisín Dubh. Is fada an réim a léig mé léi ó inné 'dtí inniu, Trasna sléibhte go ndeachas léi, fé sheolta ar muir; An éirne is chaith mé 'léim í, cé gur mór é an sruth; 'S bhí ceol téad ar gach taobh díom is mo Róisín Dubh. Mhairbh tú mé, a bhrídeach, is nárbh fhearrde dhuit, Is go bhfuil m'anam istigh i ngean ort 's ní inné ná inniu; D'fhág tú lag anbhfann mé i ngné is i gcruth- Ná feall orm is mé i ngean ort, a Róisín Dubh. Shiubhalfainn féin an drúcht leat is fásaigh ghuirt, Mar shúil go bhfaighinn rún uait nó páirt dem thoil. A chraoibhín chumhra, gheallais domhsa go raibh grá agat dom -'S gurab í fíor-scoth na Mumhan í, mo Róisín Dubh. Dá mbeadh seisreach agam threabhfainn in aghaidh na gcnoc, is dhéanfainn soiscéal i lár an aifrinn do mo Róisín Dubh, bhéarfainn póg don chailín óg a bhéarfadh a hóighe dhom,	Roisin, have no sorrow for all that has happened to you The Friars are out on the brine. They are travelling the sea Your pardon from the Pope will come, from Rome in the East And we won't spare the Spanish wine for my Roisin Dubh Far have we journeyed together, since days gone by. I've crossed over mountains with her, and sailed the sea I have cleared the Erne, though in spate, at a single leap And like music of the strings all about me, my Roisin Dubh You have driven me mad, fickle girl- may it do you no good! My soul is in thrall, not just yesterday nor today You have left me weary and weak in body and mind O deceive not the one who loves you, my Roisin Dubh I would walk in the dew beside you, or the bitter desert In hopes I might have your affection, or part of your love Fragrant small branch, you have given your word you love me The choicest flower of Munster, my Roisin Dubh If I had six horses, I would plough against the hill I'd make Roisin Dubh my Gospel in the middle of Mass I'd kiss the young girl who would grant me her maidenhead

is dhéanfainn cleas ar chúl an leasa le mo Róisín Dubh. Beidh an Éirne 'na tuiltibh tréana is réabfar cnoic, Beidh an fharraige 'na tonntaibh dearga is doirtfear fuil, Beidh gach gleann sléibhe ar fud éireann is móinte ar crith, Lá éigin sul a n-éagfaidh mo Róisín Dubh.	And do deeds behind the *lios* with my Roisin Dubh! The Erne will be strong in flood, the hills be torn The ocean will be all red waves, the sky all blood, Every mountain and bog in Ireland will shake One day, before she shall perish, my Roisin Dubh.

Aural Learning Pedagogy Project
Post Rehearsal Reflection Protocol and Audio Analysis

After each rehearsal, the researcher will take post-rehearsal reflection notes in a digital journal that is stored in a secure place. These notes will be reflections on the process, what is going well and what is not working in the pedagogy. These reflections will include the researcher's own response to teaching in this method, as well as his observations on how the students are reacting to this teaching method.

The reflection process will highlight the following areas: the Researcher's perception of teaching success (delivery of pedagogy), the Researcher's experiences of failures in delivering the pedagogy, the Researcher's observations of ensemble reaction to the pedagogy, and the Researchers observations of ensemble growth and accuracy in relation to matching the initial aural model. Examples of the Researcher-centered reflection on success of teaching could be notes about sequencing success, feelings of frustration or joy in the teaching process, and other elements of teaching such as pacing and correct vocabulary used. Examples of Participant-centered reflection would be general observations about the accuracy of the ensemble's execution, their perceived mood in class (either globally or from their larger sections), as well as their engagement level via their body posture and demeanor.

All these post rehearsal observations will focus on the ensemble as a whole, not narrowing in on specific students, but trying to understand the collective experience of this pedagogy. This relates the group-dynamic found within ensemble rehearsals as musicians try to reach a common musical goal with their teacher.

After each rehearsal, the researcher will listen to the audio recording of the ensembles final group performance of the music to compare to their previous rendition as well as the sample audio files the ensemble is learning from. The researcher will use the provided analysis template to track growth in several elements of music. During this analysis the researcher will focus on the full ensemble or larger instrument sections, not focusing on any individual or notating any identifiable information.

Aural Learning Pedagogy Rehearsal Reflection Template

Date of Rehearsal:

Date of Reflection:

Focus Material/Music:

Reflection Elements

Timbre:

Pitch Accuracy:

Rhythmic Nuance:

Articulation/Emphasis:

Dynamics/Phrasing:

IRB NUMBER: 16875
IRB APPROVAL DATE: 02/01/2024

Aural Learning Project Consent/Survey Spring 2024

Consent to Participate in Research
University of Oklahoma

Would you like to be involved in research at the University of Oklahoma?
I am Tyler Stark from the OU Band Department, and I invite you to participate in my research entitled Aural Learning Pedagogy in Wind Band. This research is being conducted at the University of Oklahoma. You were selected as a possible participant because you are a member of the OU Wind Symphony or Boomer Campus Band who participated in an Aural Learning Pedagogy product this school year. You must be at least 18 years of age to participate in this research.

Please read this document and contact me to ask any questions you may have BEFORE agreeing to participate in my research.

What is the purpose of this research?
This research aims to understand the impact of learning music by ear before receiving notated music in rehearsals. It hopes to explore a new tool for teaching music drawn from other genres and cultures outside of Western Art Music by investigating the effectiveness of this pedagogical tool.

What will I be asked to do?
If you agree to be in this research, you will take part in music rehearsals emphasizing learning by ear before receiving notation. Also, if you agree to be in this research, you will complete a 20-minute online survey. Participation in this survey is completely voluntary and you will be asked questions about your perceptions of the aural learning project and feedback on its effectiveness.

What are the risks and benefits if I participate?
There is a potential risk for re-identification given the data collected in the survey and the observations in class. The researcher will minimize this risk by de-identifying all observed interactions in class, as well as only presenting generic information in the findings of the research so that participants remain anonymous.

Data are collected via an online platform not hosted by OU that has its own privacy and security policies for keeping your information confidential (Qualtrics). No assurance can be made as to their use of the data you provide.

Will I be compensated?
You will not be reimbursed for your time and participation in this research.

Who will see my information?
There will be no information in research reports that will make it possible to identify you. Research records will be stored securely, and only approved researchers and the OU Institutional Review Board will have access to the records.

Do I have to participate?
No. If you do not participate, you will not be penalized or lose benefits or services unrelated to the research. If you decide to participate, you don't have to answer any questions and can stop participating at any time.

Will my identity be anonymous or confidential?
Your name will not be retained or linked with your responses. All survey responses are anonymous.

What will happen to my data in the future?
All data (including audio files) will be retained indefinitely for use in future research and publication at the consent of participants.

Who do I contact with further questions, concerns, or complaints?
If you have questions, concerns or complaints about the research or have experienced a research-related injury, contact the advisor for this research, Dr. Chris Baumgartner, and he can be contacted at 405-325-2081 or cbaumgartner@ou.edu. You can also contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu if you have questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than the researcher(s) or if you cannot reach the researcher(s).

Please print this document for your records. By providing information to the researcher(s), I am agreeing to participate in this research.

Consent Are you 18 years of age or older and wish to participate?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If Are you 18 years of age or older and wish to participate? = No

Page Break

Q30 What Ensemble are you performing in during the Spring 2024 Aural Learning Project?

- ○ OU Wind Symphony (1)
- ○ OU Campus Band (4)

Instrument What type of instrument do you play?

- ○ Woodwind (1)
- ○ Brass (2)
- ○ Percussion/Other (3)

Year at OU What year are you at OU

- ○ 1st year (3)
- ○ 2nd year (4)
- ○ 3rd year (5)
- ○ 4th year (6)
- ○ 5th year (7)
- ○ Graduate Student/Other (8)

Major Are you a music major, music minor, or non-music major?

- ○ Music Major (1)
- ○ Music Minor (2)
- ○ Non-music major (3)

Q10 Have you had any experience in music making outside of formal orchestra, choir, or band classes?

- ○ Yes (4)
- ○ No (5)

Display This Question:

If Have you had any experience in music making outside of formal orchestra, choir, or band classes? = Yes

Q20 Please describe your outside class music making experiences.

_____

_____

_____

_____

_____

Page Break

Q11 Describe your thoughts about the aural learning process.

_____

_____

_____

_____

_____

Q12 What did you like about learning music by ear?

_____

_____

_____

_____

_____

Q13 What, if anything, was frustrating about learning music by ear?

_____

_____

_____

_____

_____

Page Break

Q14 What components of music did you find easier when learned by ear? Select all that apply.

- [ ] Timbre (1)
- [ ] Pitch (2)
- [ ] Articulation (3)
- [ ] Rhythm (4)
- [ ] Dynamics (5)

Q32 How did aural learning impact the stylistic qualities (a combination of the musical elements of ornamentation, articulation, lift, weight, emphasis, phrasing, and dynamics) of your performance of the Irish melody?

_____

_____

_____

_____

_____

Page Break

Q15 What impact did aural learning have on your experience with the piece?

_____

_____

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_____

Q17 In what ways was learning music by ear helpful to you as a musician? (If none, write "none.")

_____

_____

_____

_____

_____

Q16 Would you be open to using this learning method again?

- ○ Yes (1)
- ○ No (2)
- ○ Unsure (3)

Page Break

Q18 What changes, if any, would you recommend to improve this teaching method? (If none, write "none.")

_____

_____

_____

_____

_____

Q21 Please listen to the first audio file (original learning track) followed by the second audio file (band performance) and compare the band's performance to the original track in the following questions. Feel free to listen as many times as you need when answering the questions below.

Campus Band Audio Files
Learning Track [IMPORTED AUDIO FILE PLAYER]

Band Melody Performance [IMPORTED AUDIO FILE PLAYER]

Wind Symphony Audio Files
Learning Track [IMPORTED AUDIO FILE PLAYER]

Band Melody Performance [IMPORTE AUDIO FILE PLAYER]

Q22 Please rate how well the TIMBRE of the first audio file compares to the band's performance in the second audio file.

- ○ Not Well at All (1)
- ○ Slightly Well (2)
- ○ Moderately Well (3)
- ○ Very Well (4)
- ○ Extremely Well (5)

Q23 Please rate how well the PITCH of the first audio file compares to the band's performance in the second audio file.

- ○ Not Well at All (1)
- ○ Slightly Well (2)
- ○ Moderately Well (3)
- ○ Very Well (4)
- ○ Extremely Well (5)

Q24 Please rate how well the RHYTHMIC nuance of the first audio file compares to the band's performance in the second audio file.

- ○ Not Well at All (1)
- ○ Slightly Well (2)
- ○ Moderately Well (3)
- ○ Very Well (4)
- ○ Extremely Well (5)

Q25 Please rate how well the ARTICULATION/EMPHASIS of the first audio file compares to the band's performance in the second audio file.

- ○ Not Well at All (1)
- ○ Slightly Well (2)
- ○ Moderately Well (3)
- ○ Very Well (4)
- ○ Extremely Well (5)

Q26 Please rate how well the DYNAMICS/PHRASING of the first audio file compares to the band's performance in the second audio file.

- ○ Not Well at All (1)
- ○ Slightly Well (2)
- ○ Moderately Well (3)
- ○ Very Well (4)
- ○ Extremely Well (5)

Page Break

Q27 Please listen to the original learning audio file compared with excerpts of the band performance that you took part in (campus band or wind symphony) of the full work and reflect on what if any impact learning the original melody by ear had on the band's performance.

Campus Band Full Performance Audio [IMPORTED AUDIO FILE PLAYER]

Wind Symphony Full Performance Audio [IMPORTED AUDIO FILE PLAYER]

Q28 Please reflect on the impact you may hear of learning the melody by ear had in the full concert performance by the band.

_____

_____

_____

_____

_____

End of Block: Block 1

Aural Learning Project Recruitment Announcement

Good day. During this concert rehearsal cycle we will be experimenting with Aural Learning as a primary tool for learning music. Tyler Stark, a DMA conducting student, will be researching how this method impacts musical rehearsals and performance. As part of this research, the ensemble will be learning music by ear first, followed by the usual notation and rehearsal cycle practices, emphasizing aural learning methods. This research involves recording the performance of the melodies and performances throughout the rehearsal process for analysis, having Tyler record post-rehearsal reflection notes about the interactions in class and effectiveness of the pedagogy. As part of the analysis, Tyler will analyze final recording of your performed melodies to compare to the original audio learning tracks. Finally, there will be a voluntary exit survey that you can partake in to let him know your thoughts on the process. Notes on the audio recordings and post-rehearsal reflection notes will not focus on any students in particular and will not collect any identifiable information, but instead focus on global and whole ensemble observations. He will not identify anyone in the room. We have supplied research participant consent forms for you to read and sign to take part in this research. Thank you for your help and let me know if you have any questions.

IRB APPROVED
IRB NUMBER: 16875
IRB APPROVAL DATE: 02/01/2024

Aural Learning Project Survey Recruiting Email Text

Good day,

Thank you so much for all of the work you have put into the aural learning project. I wanted to share a link to a consent form and survey that allows you to share your thoughts on the aural learning project for my research. The survey is completely anonymous and voluntary. You will be asked to reflect on the aural learning, as well as listen to our recordings and analyze what you believe was successfully transmitted via aural learning. Your feedback is greatly appreciated in understanding your experience as a musician with this pedagogical tool. Thank you for your time.

Survey Link:

Sincerely,
Tyler Stark



IRB NUMBER: 16875
IRB APPROVAL DATE: 02/01/2024

Consent to Participate in Research
University of Oklahoma

Would you like to be involved in research at the University of Oklahoma?

I am Tyler Stark from the OU Band Department, and I invite you to participate in my research entitled Aural Learning Pedagogy in Wind Band. This research is being conducted at the University of Oklahoma. You were selected as a possible participant because you are a member of the OU Wind Symphony or Boomer Campus Band who participated in an Aural Learning Pedagogy product this school year. You must be at least 18 years of age to participate in this research.

Please read this document and contact Dr. Baumgartner to ask any questions you may have BEFORE agreeing to participate in my research.

What is the purpose of this research? This research aims to understand the impact of learning music by ear before receiving notated music in rehearsals. It hopes to explore a new tool for teaching music drawn from other genres and cultures outside of Western Art Music by investigating the effectiveness of this pedagogical tool, as well as the teacher's and students' perceptions of the method.

What will I be asked to do? If you agree to be in this research, you agree to be observed in class and via end of class recordings to analyze your response to aural learning pedagogy. The final group audio file of the learned melodies will be shared with experienced band directors to analyze and compare the performance with the original Irish musician recording. Participation is completely voluntary and does not impact your ability to participate in learning the music and being a part of the ensemble.

What are the risks and benefits if I participate? There is a potential risk due to possible re-identification from class observation and audio recording. The researcher will not be including any identifiable information in the observations and will keep all data records in a secure online platform. All observations will be holistic and not use any references that could lead to individual identification.

Will I be compensated? You will not be reimbursed for your time and participation in this research.

Who will see my information? There will be no information in research reports that will make it possible to identify you. Research records will be stored securely, and only approved researchers and the OU Institutional Review Board will have access to the records.

Do I have to participate? No. If you do not participate, you will not be penalized or lose benefits or services unrelated to the research. If you decide to participate, you can stop participating at any time by informing Dr. Baumgartner.

Will my identity be anonymous or confidential? Your name will not be retained or linked with your responses. All observation notes will not include identifiable information. All survey responses are anonymous.

What will happen to my data in the future? Audio files and survey responses will be retained indefinitely for use in future research and publication at the consent of participants.

Who do I contact with further questions, concerns, or complaints? If you have questions, concerns or complaints about the research or have experienced a research-related injury, contact me at 919-219-7946 or Tyler.D.Stark-1@ou.edu. Advisor for this research is Dr. Chris Baumgartner and he can be contacted at 405-325-2081 or cbaumgartner@ou.edu.

You can also contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405-325-8110 or irb@ou.edu if you have questions about your rights as a research participant, concerns, or complaints about the research and wish to talk to someone other than the researcher(s) or if you cannot reach the researcher(s).

Please check all of the options that you agree to:

I consent to audio recording. ___Yes ___ No

I agree to have my data used in future research and publications. ___Yes ___ No

Final Confirmation and Consent:

By providing information to the researcher(s), I am agreeing to participate in this research.

Participant Signature:	Print Name:	Date:
Signature of Researcher Obtaining Consent:	Print Name:	Date:

IRB #_____ IRB Approval Date_____

Appendix C

Teacher Reflection Fieldnotes

Campus Band Rehearsal March 6 (1st Aural Learning Day)

The first rehearsal began with an introduction to the project and initial learning of the melody. Students were given an ABC notation help sheet with the melodies transposed for ease of reading (this was something students requested in the feedback from the pilot study). Students seemed a little hesitant, but very attentive. The first learning session involved listening to the whole piece and then breaking each measure down. This included listening, listening while humming, listening and singing back (diddles and fingering), and then listening and playing back on their instruments. I think the ABC notation in transposed pitches helped students find the pitches easier, which helped with intonation. I noted that since this melody is longer, students had some issues with recalling the rhythm and when to change notes in larger chunks.

I began conducting in a 4/4 pattern but slowly switched to gestures that showed the rhythm and contour of the line, which I think helped them find more success (maybe I can get them to copy me and carve out lines with their hands in the air). I did note that there were times when I counted off with the wrong pick-up which led to some confusion. The singing started timidly and will be something we need to continue to encourage singing out. I also found that on the longer phrases (like mm. 1-3) students had a hard time recalling the first half of the musical excerpt (m. 1) but were able to recall the last part because it was most fresh in their minds. I also observed that students struggled to find the first pitch when singing, especially when the listening excerpt ended on a pitch different than the beginning. I think I will modify it to sing/or play the starting pitch first before singing to give them more confidence.

Students' body posture was attentive, with students sitting tall in their seats and with their eyes on me, the screen, or the ABC notation (I do think that giving the ABC notation sheet made them more successful in finding the pitch, but I wonder if it is the same issue as sheet music where they are tied to their music stand… maybe I will try near the end without sheet music to get them up and out of their stands when they feel comfortable with their pitches). Students were quiet and listened attentively during the teaching. You could tell they were a little tired since the rehearsal was at the end of the day and they had been working for 30 minutes. They responded quickly to each instruction and I didn't have to wait between reps for them to prepare to play/sing. Overall I would say the first day was very successful. I did notice sometimes the releases were too early, but I think we have a foundation to build from (their performance was mostly related to pitch/rhythm, but I will draw their attention to other musical elements in future rehearsals).

Campus Band Rehearsal March 11 (2nd Aural Learning Day)

Today was a good day. I was more tired, but the students were very attentive (and quiet, with little talking). We started reviewing the first phrase and I encouraged them to listen deeper and find other elements of music (articulation, phrasing, dynamics). I encouraged the students to use their hands while singing if it helped, but very few took me up on the offer (they preferred to finger along while they sang). The review of the material went well and they were good at

singing. I could sense they were a little tired (today is a Monday and we just had a time change). Body posture remained upright and they appeared attentive.

After reviewing at a faster tempo, I asked the students to listen to the track at a slower tempo and identify the ornament parts that are not on their ABC notation. We highlighted individual measures and students were able to describe them! The winds caught the grace note in the downbeat of m. 2 and in m. 5. A percussionist was able to identify the triplet "noodling" in m. 3. I tried to explain it to the students, stumbling on finding it in the ABC notation. I eventually fell back to having them listen and showing with my hands the melodic shapes because it was easier to understand than getting lost in the ABC notation.

We reviewed/learned the rest of the tune and it also went well. Some woodwinds were starting to go after the ornaments of the 2nd phrase, but we need to do this as a group so everyone feels comfortable. At the end, we listened to all of it and played all of the tune. Overall, I am proud of the work they have done and noted they were more attentive to phrasing (better releases together) and the horizontal line. They sounded more expressive today.

We still need to practice playing without looking at any notation, but I am saving this for the 3rd day when they feel most confident. I did hear some students whistling and humming the tune in the transition so I believe it is getting more in their head.

Campus Band Rehearsal March 13 (3rd Aural Learning Day/Sightreading)

I started by asking students to capture more of the energy of the tune and drawing their attention to the grace note ornaments (I circled them in the PowerPoint ABC notation for ease). The students hummed along with the track, then sang it back, then played it. Much of the ornamentation and the rhythmic content were great. Some of the ornaments still seem a little half-hearted, but I did note great musical responses and mimicking from the tuba/euphonium/trumpet sections. We isolated some of the new ornaments and then I challenged them to play without their notation and to look up and out, listening to each other and in the room (I also took the notation off the screen with the PowerPoint). I was worried this exercise would fail, but they did a really good job without the notation and it was nice to see their eyes and communicate with them non-verbally.

When sightreading, the students did well, but you can tell reading the notation was new and they will need time to look at the accompaniment parts. Balance was an issue, and students were not necessarily making space for the melody, but this may just come from the act of sightreading on the spot. I will be curious to see how they do after time with both the notation and the audio tracks (I encouraged them to use both when they practice). I also found that many students (especially trumpet, clarinet, and saxophone) applied the added ornaments to the tune when they got their chance to play it. Sweeney's arrangement plays on the idea of variation of a tune as it is repeated, with him changing some of the rhythmic figures so some notes are held instead of filling in with melodic content. Because of their strong attention to detail, many of the students, even while reading the specific notation, played their aural version instead of the variations! This shows the strength of the transmission modality because that version of the tune is in their ears and their muscle memory (instead of the written material). We now get to work on adding in ornamentation while also exploring the notated variations! They have spring break next week so we will see how much is retained.

Campus Band Rehearsal March 27 (Rehearsal)

We began by reviewing the aural learning track and having students play back to it. They did well, but throughout the class, I needed to remind them about the added ornamentation (woodwinds, especially flutes did better remembering and executing these ornaments than the brass). I also noted that the students seemed very tired today. They were attentive, but not as responsive or excited in rehearsal (some slumped body posture as well) which may be the midweek slump after spring break.

Shifting into rehearsals, the students made good progress. I continued to use metaphors while teaching, drawing their attention to the nature of the lullaby to gently rock a child to sleep. I also drew upon Irish landscape images of majestic mountains and forests for the bolder section with the brass midway through the piece. I think the students responded well to these images. I also noted that balance is better in regards to making space for the melody. We also discussed how the arranger varied the notated versions of the melody in the vein of Irish variation and for the students to bring out these variations, as well as the added ornamentation from the learning track. I felt that I was able to show the smooth connection of pitch contour and placement of the rhythms with my conducting, but did not expressively reinforce the lift/lilt evident in the aural learning track in my gestures. I encouraged them to continue to listen to the different trad music tracks as we continue to embody the music.

Campus Band Rehearsal April 8 (Rehearsal)

I started rehearsal by singing chunks of the lullaby with the words and having them respond back (I had to encourage them to sing out). I told them I would like us to sing the melody before playing the work on the concert and asked if that was ok. They said yes collectively. I almost completed the A phrase with them, but was unsure of my singing capabilities for the tag at the end of this phrase and told them we would learn the rest on Wednesday when I was more confident to lead the learning process.

Overall, the rehearsal was good. The students were attentive and we were able to fix some balance and tuning moments in the accompaniment. I still wish they would be bolder with the ornaments. My mentor told me they were playing well and they believed that the students had retained a lot in regards to pitch, intonation, and feel (due to weather, I had not rehearsed with them in 1.5 weeks) because of the aural learning they had done that embedded the melody, tonal center, and style in their brains. I did remind the students that their performance felt like they were prioritizing the vertical nature of music (alignment of notes/rhythms) and encouraged them to think of the horizontal nature of the note connections (reinforcing this with my conducting gestures in long sweeping legato movements side to side). Much improvement was made and we are planning on learning the rest of the singing and addressing the back half of the piece on Wednesday.

Campus Band Rehearsal April 10 (Rehearsal)

We began by reviewing and learning the whole lullaby with singing. They sang boldly, although there was some confusion because I gave them a set of printed lyrics and each recording of the actual song says slightly different words (which is common in folk singing). I encouraged them that the nature of folk singing allows for this departure of everything being exactly the same and I was ok if they changed the words slightly (favoring heterophony even when singing). They said they were comfortable with singing and we will try this singing before playing the full band piece.

I was very encouraged by the work and progress we made. I spent time isolating certain parts to make sure alignment was good and to bring out some of the tension-release moments in the harmony (emphasizing horizontal lines and singing examples for them). The energy in the room felt very good and we were working efficiently. We did have to work on some intonation issues with the key change to Ab major/F minor, but overall, I felt that the more they played and listened to each other, the more in tune it became.

We finished rehearsal by playing through the entire piece. I reminded them again that they should go after the ornamentation not in the notated parts. (I had an interesting conversation with a student prior to rehearsal when I noticed they was not playing the ornaments when practicing. I encouraged them and they said it was confusing and that they are not someone who can hear it and play it, they needed a visual representation. I then showed them on their sheet music what they could add and sang the ornament to them. As I walked away, I heard the ornament being played beautifully and I turned around and gave them a big smile and thumbs up. Hopefully, they continue to incorporate it for the performance. The run-thru went well, although there are still some questions about how the piece ends that we will need to clarify.

Campus Band Rehearsal April 15 (Rehearsal)

This rehearsal was mostly spent on full runs of the piece, but we did go over the ending to make sure students understood how each musical phrase connects. The students were very attentive (it is concert week) with engaged upright body posture and good eye contact during the rehearsals. I continue to hear groups go after the ornamentation, specifically flutes, clarinets, and trumpets. During the full runs, the students added in singing the lullaby's first verse/chorus before playing the band piece. They did so boldly and with great execution (probably because they had been singing the melody on neutral syllables within the aural learning process). We highlighted some balance and tuning issues in rehearsal. I did hear a lift and expressivity within all of the iterations of the melody. I think it will be a very moving and meaningful expression of the music.

Campus Band Rehearsal April 17 (Rehearsal)

This was the final rehearsal and it went well. We spent time focusing on intonation and not rushing through melodic figures. The students have made much progress, but you could tell they were very tired. They still played very expressively and have been doing a great job with ornamentation and singing the lullaby. I feel like they are still connected with the aural learning and look forward to the final performance.

Campus Band Rehearsal Concert Reflection

I was very impressed by the growth and expressivity of the ensemble throughout concert week. I feel the final performance was connected, musical, and technically accurate. The students' singing was very resonant and effective in the hall and I continued to hear students adding in the triplet ornaments and moving between notes, focusing on the horizontal aspect of musicality. I noted that there was a lot of eye contact between me and the band. I count the performance as a major success and am very proud of their efforts.

Wind Symphony Rehearsal March 11 (1st Aural Learning Day)

Today went well, even though I was very tired and stumbled over some of my words. It did feel a little strange/redundant since many of these students participated in the aural learning pilot project. This meant setting up the project for everyone felt repetitive, but overall they were attentive. The students seemed interested in the background of the piece, but some individuals started to sit back/more relaxed in their chairs (a little disengaged) because I had been talking for a bit. During the playing portion, we did not start with complete ABC notation. Given some members of the ensemble felt it was too easy to have all of the ABC notation, I only put the starts of phrases on the PowerPoint screen in concert pitch. I made ABC notation help sheets with each transposition and offered them for anyone to grab at the end of rehearsal if the needed extra support learning aurally.

Overall, the aural learning went well. We started listening to the whole tune, then listening in small chunks while humming, listening then singing/diddling, then listening and playing. I encouraged people that if they wanted to use their hands to show the rise and fall of pitches in the music they could. I made sure to not conduct the meter, but the rise and fall of pitches like Sean Nos singing teachers. This was an attempt to help them feel the unmetered nature of the air and help with the contour of the melody (which I believe was moderately successful, although created some ambiguity on where to release long notes). Also, instead of just learning chunks, I used an additive method of adding on material so learning the tune was more fluid than segmented.

I noted that students were generally quiet and attentive in the initial phases, but became more talkative and were noodling more often after the cut-off once we started playing the tune. This rehearsal came after a concert the day before, so there was positive and joking energy, as well as a desire to try to figure out and practice the melody in between call-and-response chunks (leading to a learning environment with good energy, but sometimes not as focused). Some musicians seemed stressed with frowns and blank faces (these are students that I assume prefer sheet music and this method of learning may make them uncomfortable/frustrated), but generally the brass and saxes were super excited about the process. When I asked if the group needed more listening's or were ready to continue, these groups always enthusiastically said things like "we've got it!" or "let's do it!"

The ensemble did very well finding the pitches not presented in the ABC notation on the PowerPoint. I was worried it would fail, but they were able to do well with minimal support.

After class many students informally commented they tried not to look at the PowerPoint because they wanted to learn it all aurally. I also heard a student say they didn't want to use the help sheet, jokingly referring to it as a "cheat sheet." Many students in all sections were going after the intricate ornaments and the ensemble did a good job of thinking of the horizontal direction of long notes. There were some issues of rhythmic clarity coming out of long notes, but overall I was very pleased with the progress. We were able to learn the whole first phrase and half of the second phrase.

Dr. Simon did give me a note that there feels like too much talking at the beginning of the presentation. We both agree that a project in the future should break this up. Ideally, using the first rehearsal to set up the precedent and structure of aural learning, saving the background of the tune and composer for the second day. There was a noticeable drop in energy once we got to the background, so this change would help get students get to listening and playing sooner.

Wind Symphony Rehearsal March 13 (2nd Aural Learning Day)

The second rehearsal went well, with me challenging them to try to capture not just rhythm and pitch, but also articulations, energy, dynamics, phrasing, and anything else they could hear. All students joined in humming and singing actively without any need for encouragement. We began by reviewing the first phrase, which was pretty accurate, even the ornamentations were being played by most of the band. I drew their attention to the ornament pacing that was more carefree in m. 2 into beat 3 (just asking them to listen and not guiding them with my words) and they were able to bring about the slower unraveling of the graces that add buoyancy. I also helped them clarify the triplet ornaments in m. 3 and the slide/pitch bend into m. 4. I noticed they were playing a longer/jazz style gliss into m. 4 instead of the nuanced slight raise from the aural learning track. Once I asked them to listen to the pacing, they were able to copy it back immediately. I did not need to give them any pitches for the ornaments, they figured them out on their own. It helps that the ornaments are all stepwise and scalar.

I also found students kept playing while rehearsing (after the cut off), and I realized they wanted to practice these ornaments on their instruments to get a better handle on them. I switched to letting them listen and sing and then take 30 seconds to practice before bringing everyone back together. This seemed very effective and the musicians appreciated the opportunity to try it out before playing it again as a group. We then reviewed and finished learning the second phrase, clarifying the ornaments in mm. 5 and 6. I asked them to listen to the triplet at the end of the phrase (m. 8) and compare them to the earlier triplets. They were able to correctly identify that the earlier ones were quicker rhythmically and the second phrase was more even and drawn out. They were able to make this switch, but in the final run of the whole tune, some reverted back. I asked the students what they noticed about the last measure and they were able to articulate that it was the same as the first measure. I brought their attention to the circular nature of time and artwork in Celtic culture, which may or may not have influenced the ending of this tune to match the beginning.

The musicians sung boldly, were actively responding to the questions, and sat with attentive upright postures. Their tone of voice was cheerful and they seemed happy with the learning process. Since there was no use of notation (very little ABC notation on the screen and very few individuals took the sheet), I was able to see students' eyes and felt that connection when rehearsing. I used my gesture to reinforce the pitch contour as well as the horizontal energy of the phrase from note to note. I loved these moments because we were listening to each other,

responding, and playing with what I believe was expressivity. At the end, I encouraged them to keep listening to all Irish music in the playlist to further embody the style and to connect with the culture, hopefully producing a culturally mindful engagement with the music.

Wind Symphony Rehearsal March 15 (3rd Aural Learning Day/Sightread)

When asked who was ready for "aural learning" at the beginning of rehearsal, a large portion of students shouts, "yeah!" They were excited and we started by listening and humming, then singing, then playing. I continued to encourage them to listen deeply and capture all the musical elements they could. It went very well and I proceeded to discuss ornamentation practices in ITM. I brought my whistle and played a waltz without ornamentation, letting them know this may appear in a tunebook but it would rarely be played in such a plain style. I then played the tune with ornamentation. They applauded my rendition and we discussed how it is good that they have been matching the ornaments in the aural learning track, but they are encouraged to explore and add their own ornaments within the music to create heterophony. The heterophony would allow us to coalesce around a common skeletal tune, united in our playing together, but where each individual is free to express their self through their own ornamentation.

I presented the whole array of ornaments common in ITM (pats, cuts, rolls, crans, double taps, triplets, slides/pitch bends, and finger vibrato). We noted that the brass players are limited and cannot partake in anything that has a cut due to the construction of the instrument. I presented and described each and then let them practice, exploring them on their instrument for a few seconds. We then handed out the sheet music and read the piece. I noted that balance was not specifically great, more of a mass of sound, but the melody still had the life and grace it did when practicing aurally. Just like the pilot project, it is the accompaniment now that will need the most attention in rehearsals.

I then rehearsed the beginning with those who just played sustained chords underneath the horn solo, drawing their attention to balancing to the melody, but also giving them the image/metaphor of sounding like "gentle sunshine on a mist, creating a warm haze." I am going to continue to use metaphors that draw the musicians to the landscape of Ireland, as much of the music of Ireland draws energy and inspiration from the landscape. Indeed, the film score presentation of this tune is titled "Mise Eire," meaning "I [am] Ireland."

Wind Symphony Rehearsal March 27 (Setting Circle/Rehearsal/Memory Work)

We experimented with putting students in a large circle that they will perform the work for the concert. It caused a little confusion at first, but I think it will be a great way to pay homage to the circle in sessions and encourage connection and fostering eye contact around the circle (we are memorizing the piece for the concert!) We started with listening and reviewing the melody as a group, followed by a brief rehearsal on the first half of the piece.

During the rehearsal, I tried to bring in metaphors about the Irish landscape, asking the flutes and clarinets to imagine their undulating 16ths as gentle waves on the Irish coast (I referenced the image of the Cliffs of Moher I had on the TV screens). I also reminded the brass at the beginning that they need to listen for the horn, playing as if they were a haze brought on by the sun on mist.

The listening environment was very hard for me in the circle and at times I felt lost and that things were not working. I am going to try just rehearsing in the middle of the circle to get a

better listening vantage point and then joining the circle for the memory work. We were able to do a rep on both sections of the first half with memory and they seemed ok with the memory section (they voiced no concerns when I asked). The energy was low coming off of spring break and at the end of a challenging rehearsal.

Wind Symphony Rehearsal March 29 (Setting Circle/Rehearsal/Memory Work)

This rehearsal went much smoother than Wednesday (the last rehearsal). The students were in a positive mood and you could see a change in their upright/relaxed posture versus the slumping and defeated look they had on Wednesday. We found the circle easier and I reminded them that the circle comes from the Irish session and that they will need to listen and communicate more with the people nearby instead of watching the conductor, who may be further away. We also discussed how our presentation of the work starts with a single voice, and then adds voices until everyone joins in, playing tutti and singing our joy out to the world.

We started at the climax, or the second iteration of the air, where there are two counter melodies and other interjections. I described the weaving nature of Celtic knots and how this section was a large conversation of moving parts interacting with each other. This includes making sure to balance and make way for the melody, but also playing less on long notes and listening for moving lines. I felt the carefree lift and life of the music today in how they approach the peaks of phrasing, driving to them and letting the melody soar. After isolating each section so everyone could hear all the parts (melody, counter melody 1, counter melody 2, and interjections), we put it back together and I constantly referenced the act of conversations that are dialogic and where space needs to be made for other voices. I thought the balance was much better today and I kept reminding them of intonation with similar parts (which also improved). I also noted all of the places they could add ornamentation into their parts and encouraged them to do so.

We did more work on memorizing the whole piece and finished with a very moving full run of the work. I felt attention and connection around the circle and the air seemed to buzz with this energy. When I stepped into the circle to hear balances better, I found joy in pivoting around to connect with all the musicians in the circle (although I will perform the piece as a member of the circle in the presentation of the work). Overall, a very successful day.

Wind Symphony Rehearsal April 1 (Staging Rehearsal/Memory Work)

The rehearsal was mostly spent on staging the large circle and how students entered the circle in the performance. The work begins with solo horn and some long-held chords, and then gradually adds in more people as the work progresses to the hit. I find this a beautiful representation of how sessions usually start with a few players and then more filter in as the night goes on. While we did not do much aural learning today, it is interesting to note this change of setting to incorporate the Irish session circle. In this set up, I can help start and stop the piece, yet because of the distance in this large circle, I have less control to impact the entirety of the ensemble. Instead, I can interact with the students closer to me and hopefully grab the attention of some other players. It is up to them to play together, listen to one another, and feed off the musical energy in the room. Hopefully this creates a more egalitarian and connected performance of the music, even though balance and timings are a point of concern at the moment.

Wind Symphony Rehearsal April 8 (Last Regular Rehearsal)

Today we worked on the transition and some restaging elements. I encouraged them to embody the character of a proud and hopeful people (the Irish) looking across the Irish landscape (thinking about the title, I am Ireland). I continue to note that the circle creates challenges for me as a conductor to hear what the balance since I am within the circle (most of the recordings of rehearsal show that the ensemble balance is good, but my vantage point within the circle makes it hard to hear this). I have also noted that the memorization aspect and the fact that they are jumbled (trumpets mixed in with trombones, etc) creates some lack of confidence they are struggling against.

A majority of the students have done a great job memorizing, but there are still some that are having to work on this aspect, which is proving frustrating on my end because we are having to spend more time memorizing than fixing musical issues. I do think the payoff of presenting the music in this new set-up will be worth it, but the struggle is worth noting for those hoping to replicate such setups. Maybe if the circles were concentric or the music more rhythmic and repetitive it would be easier for students to master the memorization elements.

Wind Symphony Rehearsal April 12 (Full Run in class)

We performed the work in the context of the full concert run today. I gave them more instructions: about staying in the character of the music during the presentation, guidance in the logistics of getting to the circle, and when to turn on their personal lights for an added multi-media/sensory effect.

I felt that the musicians came more prepared with their parts, and while there were some missed entrances and hesitant moments, the memorization was much better. I also heard the heterophony of added ornaments from the individuals around me and felt the deeper connection, with them moving their bodies to the music and looking at each other around the circle. It was a beautiful moment and I felt that similar connection that I get in session circles! I also felt I was more prepared and was able to help throughout the performance. I found joy in communicating around the circle and hope they continue to do the same for the final performance. Colleagues came up and said that it was a beautifully organized presentation and think it will be very effective and musical.

Wind Symphony Concert Reflection

The concert was truly a wonderful experience. The students played well and I loved seeing them look around the circle and move with the music and each other. They were swaying and looking each other in the eyes, looking at audience members seated within the circle, and looking at me. Multiple audience members came up to me and said it was their favorite piece on the concert because they were immersed in the music and felt its raw power. The lighting may have contributed to this, but I do feel that how the students presented this work and their musical choices (adding in their own embellishments and taking on the unmetered, vibrant, and lilting nature of the music) was also compelling. Their performance was very much in the style of trad and I told them that I felt they captured the connection I experienced around the circle in Irish sessions.

Appendix D

Student Survey Responses

Campus Band Aural Learning Survey Responses
(Organized by instrument type and experience level)

Brass 1
Year: 1st year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I thought it was a very neat process. I have never learned music that way and I thought it was a neat way to learn music.
Likes: I like the challenge it presented at first I have never done something like that so it was a unique experience.
Frustrations: [The Pitches at first where somewhat difficult to get at first.
Music Elements Easily Transferred by Ear: Timbre, Pitch
Impact on Style: It made me listen more and it pay more attention to all the stylistic qualities since I didn't have the music in front of me.
Experience Impact on Music Making: It made me listen more and pay more attention to the articulation and pitches and blend with my section more.
How it Helped: None
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)
Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]
Reflection on Impact from Final Performance: [No Response]

Brass 2
Year: 1st year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: Background guitar for church band/ self-learning guitar, piano lessons.
Initial Thoughts: It was a new and fun experience.
Likes: It was a good challenge against the normal way of reading music. I appreciated learning how much you can learn from listening and imitation
Frustrations: Nailing the small ornaments was hard to do when I was focusing on getting the melody right.
Music Elements Easily Transferred by Ear: Timbre, Pitch, Dynamics

Impact on Style: This style if learning better conveyed the overall tone of the piece. Usually it takes a while for the tone/ mood to click after multiple rehearsals, but by learning by ear we were able to imitate that mood directly.
Experience Impact on Music Making: It made it easier to piece together the sheet music after we learned the tune by ear
How it Helped: It opened up a new avenue to explore. I actually prefer to learn by ear as it helps me to see a goal and imitate it.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Moderately Well
Pitch: Very Well
Rhythmic Nuance: Extremely Well
Articulation/Emphasis: Very Well
Dynamics Phrasing: Very Well

Reflection on Impact from Final Performance: Overall, learning the melody by ear allowed the bands to express much deeper emotion through these pieces than if only learned by sheet music.

Brass 3
Year: 1st year
Major: Non-music major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: At first it was slow learning and trying to get used to the new process, but once I got it, singing/playing the given melody felt more like muscle memory than reading the music.
Likes: I enjoyed getting to piece together parts of the melody, and it felt more rewarding when we put the parts back together.
Frustrations: Trying to learn all the extra non-notated parts of the music ended up being a little bit difficult because I am still not entirely used to playing by ear.
Music Elements Easily Transferred by Ear: Timbre, Pitch, Rhythm, Dynamics
Impact on Style: I felt like the piece started much more stylized than pieces that we are reading usually do. It felt like we were trying to learn the style and the notes as one rather than as separate pieces.
Experience Impact on Music Making: I ended up enjoying the piece more than I would have without aural learning. I was also able to place when/where the melody was easier than I usually can.
How it Helped: Learning music by ear made me focus on my tuning, style, and sound more because I was focusing on my instrument instead of focusing on the written notes.
Would you do it again: YES
Recommended Changes: I would recommend trying to lean more into the method over time. Although we didn't have enough time to fully implement this, I think it would be a cool idea to try to eventually learn a piece entirely by ear rather than using the note letters.

Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Brass 4
Year: 2nd year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I thought it was a unique experience to play music without actually reading it.
Likes: Being able to play a song without sheet music.
Frustrations: Repetition
Music Elements Easily Transferred by Ear: Timbre, Pitch, Dynamics
Impact on Style: I played softer most times when needed and was very fluid when I had eighth note rhythms.
Experience Impact on Music Making: I think it helped me understand the background of the piece and really appreciate how the music is played. I think it also helped me listen to the other people around me and find the melody where I did not have it.
How it Helped: I think if you're in a rush or don't have access to sheet music, this form of learning is very helpful.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Slightly Well
Pitch: Slightly Well
Rhythmic Nuance: Slightly Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Moderately Well

Reflection on Impact of Final Performance: I think playing it by ear really helped us to fully get behind the style of the melody and helped us use our ears to balance to it. It also felt like the timbre of the melody was very accurate.

Brass 5
Year: 2nd year
Major: Music Major
Music Making Experience Outside Large Ensemble: Primarily just trying to use informal teaching methods to learn instruments that aren't my primary, to varying degrees of success.
Initial Thoughts: I found it to be fairly useful, to hear what was meant to be the main, most important line of the piece. By taking time to learn the melody by sight rather than by ear we could hear the directionality of what we were playing, knowing where it was going before we had the notation in our hands.

Likes: I was surprised at how easy it was, but that may just be because we were only dealing with the melody, if I had to listen to the full piece and learn my part specifically by ear I imagine that would be more of a challenge to nail down.
Frustrations: I think the main thing is how often you have to repeat the thing you are trying to learn before you really have it down. With sheet music you can quickly read over whatever line you have to play at your own pace, but if you want to hear the line in practice you have to go at the music's pace which takes up significantly more time and repetitions.
Music Elements Easily Transferred by Ear: Timbre, Articulation, Rhythm, Dynamics
Impact on Style: I think hearing the way it was meant to sound and learning how to play the melody based on that helped us lean more into the big swells and sort of lifted feel of the piece. Rather than just playing it like every other wind band piece we were more easily able to draw out its character.
Experience Impact on Music Making: I had a much easier time picking out which instruments were playing the lead line and when to back off to let them take that lead.
How it Helped: For me specifically, it will probably help with a project I'm working on wherein I have to transcribe a piece that only has a singular recording of it, here's hoping anyway.
Would you do it again: YES
Recommended Changes: I don't know if it applies to the piece we played specifically, but in the future it might help to also have the performers learn any countermelodies and move through the harmonies to get a more full picture of the piece.
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Slightly Well
Pitch: Moderately Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Slightly Well

Reflection on Impact from Final Performance: I think overall it helped us catch some of the subtler things in the melodic lines we may have missed or overlooked, mostly with the expressions.

Brass 6
Year: 3rd Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: Playing in a church orchestra
Initial Thoughts: It was much simpler than I expected. Granted we had more help than someone who is experienced in aura learning, but overall it was a simple playback exercise.
Likes: I love that it made transiting style so much easier. One of our greatest struggles as musicians is to convey the style with words and notation, even though different musicians often write in different ways. Getting to simply hear the style and mimic it was much more streamlined for learning the rhythms.
Frustrations: I am not someone with perfect pitch, so I relied heavily on the note name sheet we were given. Without memorizing it, I could not repeat the note names simply from hearing them.
Music Elements Easily Transferred by Ear: Timbre, Articulation, Rhythm, Dynamics

Impact on Style: I think it gave us the heart of the piece in a way. Since we learned by hearing an example, it helped us as an ensemble to stay true to the intended sound of the melody. Since this was such a traditional, Irish folk piece, I feel that was important.
Experience Impact on Music Making: It was a lot of fun to learn something in a new way. Since we were not given the sheet music initially, it was exciting once we did get it to see how all of the pieces fit together. I also loved getting a small piece of the experience of how traditional folk musicians learn their music.
How it Helped: Translating the style
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

- **Timbre:** Very Well
- **Pitch:** Very Well
- **Rhythmic Nuance:** Very Well
- **Articulation/Emphasis:** Very Well
- **Dynamics Phrasing:** Very Well

Reflection on Impact from Final Performance: The lifted style of the piece is very prevalent throughout the ensemble.

Brass 7
Year: 4th Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I thought it was interesting learning the chords/notes before seeing the actual music. Throughout the piece I could hear the melody better than any of the other pieces we played.
Likes: I enjoyed singing first
Frustrations: Nothing
Easy Music Aspects by Ear: Rhythm
Impact on Style: I could hear the melody throughout the song.
Experience Impact on Music Making: I was able to have a better understanding of how the song should sound.
How it Helped: None
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

- **Timbre:** Very Well
- **Pitch:** Moderately Well
- **Rhythmic Nuance:** Moderately Well
- **Articulation/Emphasis:** Moderately Well
- **Dynamics Phrasing:** Moderately Well

Reflection on Impact from Final Performance: N/A

Brass 8
Year: 4th Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: I have performed in a few ensembles outside of actual band class. Including smaller groups and larger region groups.
Initial Thoughts: I thought this was a really cool experience! I'm definitely an audiovisual learner, and with music especially it helps to hear the music before looking at the actual piece. I do this type of thing when I am trying to figure out how to play themes and other songs. So it was cool to use that skill in a band environment.
Likes: It's a very useful skill and I feel like we should use it in more works
Frustrations: I enjoyed my times with this process I was never really frustrated.
Easy Music Aspects by Ear: Rhythm
Impact on Style: Hearing the example lead how I wanted to express the music. It also showed me different ways to express the notes as well
Experience Impact on Music Making: It helped a lot. Especially when we sang the lyrics it was a really helpful visual and audio tool
How it Helped: It's simply a new way to learn and experience music. It made things feel different as spider to learning a piece in the normal way.
Would you do it again: YES
Recommended Changes: Maybe not giving us the cheat sheet at the beginning and making us truly go by ear. But in an ensemble experience it made sense why we had that. But to make it more official the lack of cheat sheet would be cool to experience
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

- **Timbre:** Moderately Well
- **Pitch:** Very Well
- **Rhythmic Nuance:** Extremely Well
- **Articulation/Emphasis:** Moderately Well
- **Dynamics Phrasing:** Moderately Well

Reflection on Impact from Final Performance: It's crazy to think we started with just listening to the piece. It was truly a profound and interesting way to learn music. I am glad do had the opportunity to be a part of this. We really did end up sounding really great!

Brass 9
Year: 4th Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I thought the process was slow but effective for getting a basic understanding of the melody and motifs for the larger piece
Likes: Singing the Melody
Frustrations: Reading the sheet handed out and trying to remember the length of each note
Easy Music Aspects by Ear: Rhythm
Impact on Style: Hearing someone who knows the piece well play it made it immensely easier to get a feel of the music of it
Experience Impact on Music Making: Generally positive
How it Helped: None.

Would you do it again: YES
Recommended Changes: Go without the notes sheet and just use a prerecorded track
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Slightly Well
Pitch: Very Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Very Well
Dynamics Phrasing: Slightly Well

Reflection on Impact from Final Performance: [No Response]

Percussion/Other 1
Year: 1st Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: It was fun. Learning the melody through listening to it was fun, and I enjoyed it.
Likes: Picking out the little things like pick-up notes or flammed notes.
Frustrations: Nothing really.
Easy Music Aspects by Ear: Articulation, Rhythm, Dynamics
Impact on Style: It didn't change it much, as I was on [a drum] during the piece.
Experience Impact on Music Making: It made it much easier to find the melody during the piece
How it Helped: It should help me find the melody easier in the future.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Woodwind 1
Year: 1st Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: Private lessons
Initial Thoughts: Seemed largely redundant
Likes: None
Frustrations: Finding how it was useful
Easy Music Aspects by Ear: Articulation, Rhythm
Impact on Style: Inclusion of non-written articulations.
Experience Impact on Music Making: Dampened my excitement to participate
How it Helped: None

Would you do it again: NO
Recommended Changes: The arrangement performed needs to better fit the way students learn it aurally.
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Moderately Well
Pitch: Not Well at All
Rhythmic Nuance: Very Well
Articulation/Emphasis: Very Well
Dynamics Phrasing: Slightly Well

Reflection on Impact from Final Performance: I don't think learning this piece aurally had an impact on our performance that would not have been gathered from traditional rehearsal.

Woodwind 2
Year: 1st year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: Amateur guitarist, if that counts. I am also learning violin and piano in my own time.
Initial Thoughts: Very intuitive. There was focus on rhythm and style rather than just he basic notes.
Likes: I felt like I was able to emulate what the piece was supposed to sound like much betterer. What I mean by that is getting the specific stylistic choices that may have been harder to identify otherwise
Frustrations: It was a very nice experience, no complaints here.
Easy Music Aspects by Ear: Pitch, Articulation ,Rhythm
Impact on Style: I feel like things like ornamentation and various stylistic choices such as emphasis and phrasing were easier. The main thing I found more difficult was getting the dynamics as the effective range is harder to hear through recording.
Experience Impact on Music Making: It was unique and I think it gave us a stronger start when reading the sheet music, but after getting the music for a bit it was the same as any other piece.
Would you do it again: YES
Recommended Changes: I sort of felt like we could have spent more time listening before we started reading the sheet music but overall I think what we did was effective
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Woodwind 3
Year: 1st Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: Jazz band
Initial Thoughts: I thought it was a really interesting way of learning music and I'm surprised that kids in Ireland only learn this way.
Likes: I thought made me get a feel for the music first rather than just reading off a page.
Frustrations: Sometimes it was hard to get the articulation down.
Easy Music Aspects by Ear: Dynamics
Impact on Style: It made my add more to the piece with dynamics and phrasing.
Experience Impact on Music Making: It made me appreciate the music more.
How it Helped: It made me use my ears more rather than just reading off a page.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Woodwind 4
Year: 2nd Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: I was involved in drum corps this past summer, I have been apart of many small groups over the years, and since middle school I have done gigs with my dad ranging from classical to jazz.
Initial Thoughts: The aural learning process is very similar to my own so I thoroughly enjoyed it. Whenever I first get my music I have to sit down and listen to it to better understand my rhythms and the color of the piece I am about to play. Learning the history and hearing a sample from someone who is very familiar with that color of music was very helpful in creating what I believed the end product should sound like for my part. 10/10 would do again!
Likes: I enjoyed the opportunity to test my music skills as a musician. We are taught to play what is on the page for so many years of our education and I feel that playing by ear is an invaluable skill that creates a much more soulful musical performance. I also feel that learning by ear relieves so many anxieties that have been created by trying to play exactly what is in front of you. I truly believe that this makes you a better and more confident musician.
Frustrations: In the process that I partook in for this experiment there was nothing frustrating about learning this music by ear. Whenever this process takes place I always get anxious that I won't be able to place the pitches like other musicians are able to and so having the sheet with the notes made me feel 100% confident that I would be successful in this process.
Easy Music Aspects by Ear: Timbre, Articulation, Rhythm, Dynamics
Impact on Style: The learning greatly impacted me with the ornamentation specifically. Hearing the recording that we listened to helped me know where to place them. Imagine if the phrase was

a sentence, listening to someone say it helps me place the punctuation and the emphasis on where it needs to go to make the sentence make the most sense possible when repeating it. All of the aspects listed above were embedded in my mind after listening to the recording and then that became my goal for how I wanted my part to sound.
Experience Impact on Music Making: It made me appreciate the piece so much more. I grew up going to Irish gigs with my dad who was a musician in the group and it was a big part of my life growing up listening to Irish music. They always learned tunes by ear or would say a name and every musician in the circle was able to recall it. It felt authentic to learn an Irish lullaby such as this by ear and gave a story I felt to the piece that we were able to play
How it Helped: It was helpful in the way of giving me a goal for my sound and making me think more intensively as a musician about every aspect of what I was trying to recreate with the piece we played.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Extremely Well
Pitch: Very Well
Rhythmic Nuance: Very Well
Articulation/Emphasis: Extremely Well
Dynamics Phrasing: Moderately Well

Reflection on Impact from Final Performance: I feel that there is so much more soul and intentionality within these recordings after learning the ear by melody

Woodwind 5
Year: 2nd Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: I have taught myself guitar and ukulele and taken piano lessons and self taught piano for the past few years.
Initial Thoughts: I really enjoyed it! I've only done it with singing in the past, but it was interesting to actually find the notes on my instrument (although they were really given on the sheet). It was a great way to learn more of the feel of the piece and incorporate different inflections.
Likes: I thought it was a great way to connect to the music, especially when we finally got our full sheet music. Learning it by ear first gave us a reason to play the music because there was more or less a story behind it. It was easier to find and listen to the melody when played by other instruments. I believe it really helped with balance as well.
Frustrations: No! I thought it was a very good way to connect with the music.
Easy Music Aspects by Ear: Timbre, Pitch, Articulation, Rhythm, Dynamics
Impact on Style: Learning it without sheet music required us to really listen to the melody we were given. I feel like it didn't resonate through the entire band from my seat, but I personally noticed all the lifts and ornamentations in the melody.
Experience Impact on Music Making: My connection to the piece was much stronger because we had an established past with the melody.
How it Helped: Because I had never learned a piece by ear on an instrument, putting the fingerings with the pitches was more challenging and it helped me familiarize pitches with notes.

Would you do it again: YES
Recommended Changes: I think trying it in smaller settings without giving note names would be fun!
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Woodwind 6
Year: 2nd Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: At first, I was pretty nervous about it because I've never done aural learning before, and I thought that it was something that only people studying music could do. However, once we received the sheet with at least the note names written on it, I started to feel better. Additionally, it was nice to work on the music broken up and go phrase by phrase. It made the aural learning much less overwhelming and more manageable.
Likes: I feel like learning music by ear forced me to focus more on the style of the music and the emotion behind it. I feel like sometimes when I'm using sheet music, I get so focused on what's on the page that I forget to put any kind of emotion or my own style behind the music.
Frustrations: I did not find the process too frustrating. I think the hardest part was adding the grace notes in and trying to remember those on each rep. I feel like my reps were not always the most consistent.
Easy Music Aspects by Ear: Rhythm
Impact on Style: I feel like articulation was a little bit harder to pick up from the recording of the music than it is on sheet music. However, I feel like my phrasing was better because of the aural learning as well as the weight and lift for each note throughout the piece.
Experience Impact on Music Making: After we got the sheet music, I thought the sheet music was much easier to sightread than usual because we already knew the rhythms. Additionally, I felt like I was able to play more expressively and with more emotion after the aural learning project.
How it Helped: I thought it was helpful for learning rhythms. I also think there were a lot of stylistic things that I picked up that I would not have been able to using only the sheet music.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Slightly Well
Pitch: Slightly Well
Rhythmic Nuance: Very Well
Articulation/Emphasis: Not Well at All
Dynamics Phrasing: Moderately Well

Reflection on Impact from Final Performance: I thought that learning the melody by ear allowed for better understanding of the phrasing as well as better addition of ornaments to the piece.

Woodwind 7
Year: 2nd Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I really liked the whole process in general. I had never learned anything by ear, but it was a very interesting experience. I was a bit wary in the beginning, but it turned out to be easier than I thought it would be and I feel like I knew and felt the melody much better when performing it.
Likes: I like learning the melody and getting that really ingrained into my thoughts and feelings about the piece. I also liked singing together as a group because I felt more confident with my peers also singing.
Frustrations: The one frustrating thing about learning music by ear is really having to remember notes, how long to hold them for, and any ornamentations. Practice really helped me with this though.
Easy Music Aspects by Ear: Timbre, Pitch, Articulation, Rhythm, Dynamics
Impact on Style: I think it really helped with my weight, phrasing, and dynamics because I felt that those qualities in particular seemed ingrained in my performance.
Experience Impact on Music Making: It allowed me to have a deeper connection with and understanding of the piece and Irish music in general. Learning it by singing it and playing it on an instrument allowed me to feel the music more and rely less on the markings on the page.
How it Helped: Learning music by ear was helpful because it allowed me to learn and practice the music in one way and then learn, practice, and perform in a different but similar way..
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

- **Timbre:** Very Well
- **Pitch:** Very Well
- **Rhythmic Nuance:** Extremely Well
- **Articulation/Emphasis:** Very Well
- **Dynamics Phrasing:** Very Well

Reflection on Impact from Final Performance: Learning the music by ear seemed to positively affect the full concert performance. Both pieces seemed to be really impacted by the reference recordings.

Woodwind 8
Year: 3rd Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: Pride of Oklahoma
Initial Thoughts: It was a fun experience, but I feel it would've been nice not to rely on the note "cheat sheet" provided. I enjoyed trying to figure out the small decorations to the music that weren't provided to us on the cheat sheet though.

Likes: I like the effort of learning on my own instead of relying on the music provided. I feel like I have more freedom to play how I feel instead of obeying a piece of paper.
Frustrations: I didn't find anything frustrating about it because I like the process of trial and error when it comes to music-making. It helps me become more in tune with the feel of the music instead of just playing notes on a page.
Easy Music Aspects by Ear: Rhythm
Impact on Style: It helped me focus more on how to style the music on my own instead of staying too rigid
Experience Impact on Music Making: It helped me understand the style of the piece and made me feel like I grew a relationship with the piece before getting the sheet music
How it Helped: I've grown more comfortable with tuning without a tuner, figuring out music notes comfortably, and knowing what notes to play immediately without needing to guess much.
Would you do it again: YES
Recommended Changes: I would've preferred not to have the cheat sheet and had time in class to figure it out on my own.
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Extremely Well
Pitch: Very Well
Rhythmic Nuance: Extremely Well
Articulation/Emphasis: Very Well
Dynamics Phrasing: Slightly Well

Reflection on Impact from Final Performance: [No Response]

Woodwind 9
Year: 3rd Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I thought it was interesting. In a way, I have done aural learning when I was in high school when I would audition for honor bands. Vocalization of the notes and rhythms aided in my performance of the piece.
Likes: It helped me learn the rhythms and allowed me to know when I make mistakes when playing music since having the audio is a place of reference.
Frustrations: For me, it was hearing the little additions the flautists would make in the recording and then looking at the paper music and not having the little accents on paper.
Easy Music Aspects by Ear: Pitch, Rhythm
Impact on Style: It allowed little accents made within the audio recording to be translated to the performance of piece.
Experience Impact on Music Making: A positive impact
How it Helped: None
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]

Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]
Reflection on Impact from Final Performance: [No Response]

Woodwind 10
Year: 4th Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: Private piano lessons, private clarinet lessons, singing in church.
Initial Thoughts: I had a lot of fun learning a song this way. I felt more connected to the music after learning the melody aurally, and when looking back on my boomer band experience I will definitely remember The Willow Tree better years from now compared to another song we played for the concert.
Likes: I'm someone who has always been able to play by ear, but this experience strengthened that ability for me. This specific experience has inspired me to stay involved music after I graduate this semester. Learning music by ear was easy in the large group. I wish my high school and middle school band directors had tried this method because it trains your ear and strengthens one's ability to connect with music.
Frustrations: What I found frustrating was the varying levels of interest among the ensemble. We were provided with a playlist, photos of Ireland, and other resources to help us in the process of learning by ear; however, I don't know anyone else who accessed them outside of class. It's frustrating when the effort given back is not necessarily matched, although I would say by the end of the concert cycle, the entire ensemble was completely locked in with The Willow Tree.
Easy Music Aspects by Ear: Pitch, Articulation, Rhythm
Impact on Style: It was easier to understand the unique characteristics of Irish melodies when it was broken down and taught.
Experience Impact on Music Making: I have a stronger connection to The Willow Tree over other songs from this concert cycle because we engaged with it in two different ways.
How it Helped: Helpful when learning the melody and understanding how to learn a style of music I am unfamiliar with.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)
Timbre: Moderately Well
Pitch: Very Well
Rhythmic Nuance: Slightly Well
Articulation/Emphasis: Slightly Well
Dynamics Phrasing: Not Well at All
Reflection on Impact from Final Performance: You could tell that it went beyond paying the right notes and markings on the page. There's a soul created during this performance; the band was able to bring the performance and music to life because we learned the melody by ear.

Woodwind 11
Year: 4th Year
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: I've played in some recording sessions for my dad in his studio. I've also sung with a fraternity organization on campus for various things, like performing at a retirement home and dramatic performances.
Initial Thoughts: I thought it was really interesting in that I could better discern and appreciate the melody throughout the whole composition.
Likes: I didn't have to worry about notes on the page, and could better focus on the sounds going on around me, rather than really worry about my own sound.
Frustrations: It was difficult to follow the entire piece at times and remembering what came next due to it essentially having to be memorized. But even then, it was still fun and you could get used to the notes and playing style pretty quickly.
Easy Music Aspects by Ear: Timbre, Pitch
Impact on Style: I thought that acquiring and implementing the ornaments was easier, as you have a reference recording to hear how other people play it. I guess that goes for most things in the list above, as you don't have a sheet of paper forcing you to follow certain notations.
Experience Impact on Music Making: I definitely thought I had a deeper connection to the piece when learning it aurally. It's hard to describe, but I appreciated it much more than I would usually with learning a piece in a classical manner.
How it Helped: I think tuning-wise it helped, and helping me discern the moving parts from every instrument was much easier moving forward with the piece. And I definitely think that it helped in small cases in other pieces where I learned them in a written manner.
Would you do it again: YES
Recommended Changes: Helping people acquire their vision of the piece could help them in interpreting and performing the piece in an even more sincere manner. I appreciate the comment of thinking about "mountains and forests" at one portion of the music, but helping people find their OWN vision and representation of the performance could help accentuate the feelings that the music tries to convey.
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Moderately Well
Pitch: Moderately Well
Rhythmic Nuance: Very Well
Articulation/Emphasis: Slightly Well
Dynamics Phrasing: Slightly Well

Reflection on Impact from Final Performance: I believe learning the melody by ear helps in not only finding the melody when it is played, but when you only have your ears to learn the melody (and are not distracted by a piece of paper), you can better discern the story you want to tell in the performance. You have more liberty to interpret the music as you feel it, instead of the paper telling you what you need to do. I felt that the piece was more of a creation of me and the ensemble, rather than it being a creation of a simply the composer.

Woodwind 12
Year: Grad Student/Other
Major: Non-Music Major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I enjoyed learning the music by ear, and then adding our knowledge to the music on paper.
Likes: I liked how I was able to picture the story being told by the music in my head, and made it more personal to feel the music and identify what we previously learned once we got our sheet music.
Frustrations: I didn't find it frustrating.
Easy Music Aspects by Ear: Pitch, Articulation, Rhythm, Dynamics
Impact on Style: I felt more accurate when we sang and then went into playing the music. I noticed my dynamics and phrasing was more accurate.
Experience Impact on Music Making: I think I enjoyed the piece more than I would have if we just learned it the "normal" way.
How it Helped: I played more accurately with emphasis on stylistic aspects.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Moderately Well
Pitch: Moderately Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Very Well

Reflection on Impact from Final Performance: [No Response]

Wind Symphony Aural Learning Survey Responses

(Organized by instrument type and experience level)

Brass 1
Year: 1st year
Major: Music
Music Making Experience Outside Large Ensemble: I've briefly started and played in a jazz band, played in a show choir band, and played in a local youth orchestra.
Initial Thoughts: I thought it was a really good way to collectively learn a melody with all the nuances in style and embellishments
Likes: It really allowed the band to unify its sound and idea of the melody
Frustrations: [No Response]
Music Elements Easily Transferred by Ear: Timbre, Rhythm
Impact on Style: [No Response
Experience Impact on Music Making: It made me understand the structure and the ideas behind it more. Having a traditional Irish musician play the melody, It also allowed me to understand its idea and meaning more
How it Helped: Helpful in improving my ear, and improvisation through ornaments
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Moderately Well
Pitch: Very Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Very Well

Reflection on Impact from Final Performance: [No Response]

Brass 2
Year: 1st year
Major: Music Major
Music Making Experience Outside Large Ensemble: I have taken piano lessons in the past/self-study prior to starting high school and participating in the band.
Initial Thoughts: Overall, I enjoyed the Aural Learning process, I thought it was very intuitive and helpful in being able to adopt the general style associated with Irish traditional music. There were times where it was slightly frustrating, particularly in the memorization aspect, and with the melody not being very idiomatic on trombone. Mostly though, this was overshadowed in that it allowed me to "connect" more than I would simply reading from a page.
Likes: Getting to learn the melody prior to playing my harmonic trombone part afforded me a greater sense of "connection" with the music; I feel like it made it easier to strive for the stylistic components of traditional Irish music, more so than if I were simply reading from a page or score, or even listening to it on Youtube. (The breaking it up into pieces forced me to think more in depth about what was going on).
Frustrations: The memorization aspect was somewhat frustrating. Although the music was quite easy from a rhythmic and harmonic sense, it was still difficult to remember exactly when I was

supposed to change chords, and it became even more challenging in Sharp when I could not hear the rest of the ensemble as easily.
Music Elements Easily Transferred by Ear: Timbre, Pitch, Articulation, Dynamics
Impact on Style: It made them far easier to adopt these components, as listening to the melodic model, although on a different instrument, gave me something to strive for in my own playing. Furthermore, it allowed me to adopt them as a whole unit, rather than simply working on one of these aspects at a time, as I might have to do if reading from a page (or even listening to a track of it as a whole).
Experience Impact on Music Making: As mentioned before, I believe it allowed me to feel a greater sense of "connection" with the piece, as I knew a lot about what to strive for stylistically. In the more literal sense, for some reason that I can't quite put my finger on, it also made me feel as though I was part of the piece, rather than just separated from it.
How it Helped: Helpful in the following ways: Stylistically, Pitch/Intonation, Dynamics (big impact), Phrasing (big impact), Articulation, Playing as a group/ensembleship
Would you do it again: YES
Recommended Changes: I might recommend more clear cues about when to change chords/harmonies. I might also suggest that students be allowed a paper copy of the music (but only AFTER learning the melody by ear, of course). The paper would solely be for knowing harmonic rhythms. (One could even notate it as a single-line rhythmic staff). Overall, I felt like it was fairly well orchestrated (no pun intended).
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Very Well
Pitch: Moderately Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Very Well
Dynamics Phrasing: Extremely Well

Reflection on Impact from Final Performance: In the full context of the band, the elements of stylistic components and intonation that I previously discussed can largely be seen. I might add that it seems more resonant and beautiful than I expected.

Brass 3
Year: 1st year
Major: Non-music major
Music Making Experience Outside Large Ensemble: [No Response]
Initial Thoughts: I have done things like this many times before having to sing a melody and transition it to my horn in my band classes in high school.
Likes: I liked the singing aspect. Sometimes I will sing my music to help the nuances and get the pitches in my ear better.
Frustrations: I am not good and moving the melody over to my horn without any notation. I find it frustrating to do without music in front of me, and I all the work of learning the nuances of the music goes out the door for me because I am so focused on just trying to figure out the notes.
Music Elements Easily Transferred by Ear: Pitch
Impact on Style: It helped my phrasing and the little nuances of the music the most.

Experience Impact on Music Making: I would prefer to read the music first so I do not have to focus on figuring out the notes on my horn, then sing and learn aurally so then I can gain all the benefits without me messing around trying to find the notes on my horn.
How it Helped: It helped with the subtle nuances.
Would you do it again: NO
Recommended Changes: Have the sheet music out first so I can know the actual notes of the melody. All of my time during the aural learning section was just me trying to figure out the notes to play. Even by the end I barely had just figured out the notes on my horn, and I was able to experience any of the benefits of singing it orally. I was too focused on the actual notes and not the subtle nuances.
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Slightly Well
Pitch: Moderately Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Very Well
Dynamics Phrasing: Very Well

Reflection on Impact from Final Performance: Learning by ear helped us to gain insight into the source material of the piece and helped us play it more authentically.

Brass 4
Year: 1st year
Major: Music Major
Music Making Experience Outside Large Ensemble: I have performed for churches, events, and other things.
Initial Thoughts: I thought it was very interesting, new, and immersive.
Likes: It made it a lot easier to play the entire piece in the style of the excerpt, rather than learning the whole thing from paper.
Frustrations: It was difficult to remember the fingers at first without my music, but I came along.
Music Elements Easily Transferred by Ear: Pitch, Rhythm, Dynamics
Impact on Style: It made play it like I heard it on the flute the first day. Every time the melody played a passage from the original flute recording, it made me hear that and play it accordingly.
Experience Impact on Music Making: I think it had a very positive impact and provided a unique and interest-piquing experience.
How it Helped: It helped train my ear - by the end of the project, I felt much more comfortable pinpointing a note in the key based off of aural.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Very Well
Pitch: Moderately Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Moderately Well

Reflection on Impact of Final Performance: [No Response]

Brass 5
Year: 2nd year
Major: Music Major
Music Making Experience Outside Large Ensemble: Church band
Initial Thoughts: It was a really cool experience that i do every once in a while in my free time.
Likes: It got you to really think about you and your instrument being one and the ability to translate notes from you ear to the horn.
Frustrations: Just trying to find the notes, wouldn't say it was so frustrating.
Music Elements Easily Transferred by Ear: Pitch, Rhythm
Impact on Style: It made us want to sound like what you heard. made us want to put passion and natural dynamics into the piece.
Experience Impact on Music Making: It made me think about everything i was playing and made me connect with each note i played.
How it Helped: It gets you to really think about your instrument and ear and got you to hear the notes before playing.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)
Timbre: Very Well
Pitch: Moderately Well
Rhythmic Nuance: Moderately Well
Articulation/Emphasis: Slightly Well
Dynamics Phrasing: Slightly Well
Reflection on Impact from Final Performance: It brought everyone together and made us all know what the melody was.

Brass 6
Year: 2nd Year
Major: Music Major
Music Making Experience Outside Large Ensemble: Private lessons
Initial Thoughts: I think it was a cool process that helped me develop my ear. I think it helped with stylistic things but I am not sure if it helped in other ways for the actualy performance.
Likes: It was a fun challenge sometimes
Frustrations: It was frustrating when I wasnt remembering or getting it quickly, especially when other people were.
Music Elements Easily Transferred by Ear: Rhythm, Dynamics
Impact on Style: I understood ornamentation and phrasing easier with aural learning instead of trying to interpret notation.
Experience Impact on Music Making: I understood the history and cultural components more than normal.
How it Helped: Helped develop my ear which is a vital skill to have as a musician
Would you do it again: YES
Recommended Changes: None

Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Brass 7
Year: 2nd Year
Major: Music Major
Music Making Experience Outside Large Ensemble: I have played bass guitar in a worship band for seven years now. I had one formal lesson, and I learned the instrument by myself. The only type of music I had to learn was from a lead sheet, and this helped develop my ear when the sheet didn't necessarily line up with I was hearing. Over the years, I began to learn the songs by ear, and I began a little bit of improvisation. I believe this is a contributor to my strong aural skills, and it helped in the experience of this aural learning process.
Initial Thoughts: I like being able to learn music, especially since it is the way that traditional Irish musicians learn how to play their instruments and the songs. It is also possible to replicate the not-so easily notated elements.
Likes: I like that it was a non-traditional way to do band. It brought something fresh and new to rehearsal. I also like aural learning since it is sort of like a fun puzzle to try and piece together.
Frustrations: It does seem slow paced at times, but this is probably because I got the music easily.
Easy Music Aspects by Ear: Articulation, Dynamics
Impact on Style: I think it just makes everything more authentic. It's just like having a model constantly, and it's hard to unlearn when you rep it so many times this way.
Experience Impact on Music Making: It made me more connected to it and with the other musicians. The big hit in the concert was one of the best musical moments I've had in college. This was also because of how we were staged.
How it Helped: It helped me replicate style more easily. We all had to listen to an example and not each start with a predetermined idea.
Would you do it again: YES
Recommended Changes: Maybe faster pacing, maybe small group sessions to work together
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Slightly Well
Pitch: Very Well
Rhythmic Nuance: Slightly Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Moderately Well

Reflection on Impact from Final Performance: The community bond in how we listen together shows. I think the phrasing, dynamics, and embellishments show as well.

Brass 8
Year: 3rd Year
Major: Music Major
Music Making Experience Outside Large Ensemble: Brass Quintet, Woodwind Quintet, Church gigs
Initial Thoughts: I enjoyed the aural learning process a lot more this time than last semester because it was easier with the transposition sheet provided.
Likes: I liked the freedom behind the aural learning by being allowed to add the grace notes and any ornaments.
Frustrations: It would have been a lot more frustrating for me if I had not had the transposition sheet because its hard to think about the notes in concert pitch and then having to transpose on the spot.
Easy Music Aspects by Ear: Timbre, Articulation, Rhythm, Dynamics
Impact on Style: The aural learning forced me to listen to more aspects of the music rather than just focusing on the notes on the page. I also was able to listen to more things going on in other instruments across the room that I normally wouldn't pay attention to.
Experience Impact on Music Making: It positively impacted me as a musician and as a future music educator to start learning to listen more to other voices in the ensemble.
How it Helped: Listen more closely to intonation, expressing freedom in melodies through ornaments, and listening across the ensemble to other instrument families.
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

- **Timbre:** Very Well
- **Pitch:** Extremely Well
- **Rhythmic Nuance:** Very Well
- **Articulation/Emphasis:** Moderately Well
- **Dynamics Phrasing:** Moderately Well

Reflection on Impact from Final Performance: By learning aurally we were able to just become more aware of our sounds as an ensemble rather than individuals.

Percussion/Other 1
Year: Grad
Major: Music Major
Music Making Experience Outside Large Ensemble: Giging musician, teach lessons
Initial Thoughts: It was a nice change of pace to do something outside the normal "classical" music learning system
Likes: It chalenged me to learn in a new way and listen more than read.
Frustrations: [No Response]
Easy Music Aspects by Ear: Timbre, Articulation, Rhythm
Impact on Style: My part did not have any of the melody, but I could listen for where the music was going instead of watching a conductor.
Experience Impact on Music Making: [No Response]
How it Helped: Much easier way to learn style.
Would you do it again: YES

Recommended Changes: It would be nice for all instruments to have a chance to play the melodies learned. As a low instrument I learned the melodies but never got to incorporate what I learned with the music for a performance.

Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Very Well
Pitch: Very Well
Rhythmic Nuance: Very Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Moderately Well

Reflection on Impact from Final Performance: [No Response]

Woodwind 1
Year: 1st Year
Major: Music Major
Music Making Experience Outside Large Ensemble: singing in church choir
Initial Thoughts: [No Response]
Likes: It was easier to memorize the music later on
Frustrations: [No Response]
Easy Music Aspects by Ear: Pitch
Impact on Style: I thought that it gave me more liberty to embellish the melody when I had learned it by ear rather than looking at a piece of music
Experience Impact on Music Making: [No Response]
How it Helped: It will help with ear training later on.
Would you do it again: YES
Recommended Changes: [No Response]

Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Woodwind 2
Year: 1st year
Major: Music Major
Music Making Experience Outside Large Ensemble: Chamber ensembles
Initial Thoughts: I enjoyed it and definitely think it helped improve our sound.
Likes: The ability to play stylistically
Frustrations: The amount of time we spent without sheet music was frustrating since we had it down by the first rehearsal. This would have been more fun if it wasn't in a school setting.
Easy Music Aspects by Ear: Rhythm, Dynamics
Impact on Style: The phrasing and style were more interpretive and the band was able to understand the style of the piece.

Experience Impact on Music Making: It made it more interesting to perform
How it Helped: Makes me listen to other sections
Would you do it again: YES
Recommended Changes: None
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Woodwind 3
Year: 2nd Year
Major: Music Major
Music Making Experience Outside Large Ensemble: I play some acoustic guitar, however I am not very good!
Initial Thoughts: I enjoyed getting to participate in the aural learning process as it was my first experience with this method. Having almost exclusively learned music via notation, I appreciated the ways in which this project challenged my ear to be precise and my brain to remember from one day to the next. Though this was a great introduction to the method, I am very curious how the process and product of the experience would be affected if it was completed in an individual or small group setting.
Likes: I liked how learning by ear made the rhythms, style, and ornamentation of the melody much less objective and limiting. Making way for more individualism and artistry, it allowed me to focus purely on the sound I produced and how it related to that of the recording/group.
Frustrations: The biggest struggle I had with the aural learning project was remembering the music from one rehearsal to the next. Admitting that I wish I would've spent much more time and effort on the project outside of the rehearsal as well as the fact that this cycle was so short, I don't think I was given the proper amount of repetition of the melody to truly commit it to memory. Additionally, I found it very challenging to have success in the learning process while I wasn't 100% focused (or for a lack of a better term, "locked in"). If I came into a rehearsal tired or distracted by an external factor (even slightly), it greatly affected my ability to learn and retain the melody effectively.
Easy Music Aspects by Ear: Pitch
Impact on Style: I believe that the aural learning style allowed us as players to capture, consider, and display ideas and/or techniques that aren't explicitly covered through the use of standard notation. Not having the conception beforehand of what adding a staccato marking to a note (for example), meant we had the artistic and technical freedom to experiment in different ways to achieve a "lifted" note.
Experience Impact on Music Making: I found that once I received the notation (while I played the melody) I used the markings fairly conservatively as to not affect my playing of what we worked on. In an effort to maintain as much of the musicality and purity of the melody as I could, I allowed myself to not follow the notation very strictly and instead relied more on my aural image to guide my playing.

How it Helped: Improved my listening skills, Improved my ability to recreate what I heard, Improved my ability to internalize/memorize music
Would you do it again: UNSURE
Recommended Changes: If it would be realistic and accessible, I believe spending some time breaking down the group and having a rotation of "sectionals" (or small group rehearsals- 1 on a part) would lend itself to more intentional and successful memorization of the music. It is obviously very important to have the whole group rehearse, but providing an opportunity for a more intimate and direct line of communication and feedback would likely be helpful in adding to the quality of the final product (and student's comfortability).
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Very Well
Pitch: Very Well
Rhythmic Nuance: Very Well
Articulation/Emphasis: Slightly Well
Dynamics Phrasing: Moderately Well

Reflection on Impact from Final Performance: Wow! The concert performance honestly sounded a lot better than I had originally thought. I believe learning the melody by ear gave the ensemble the rhythmic freedom I had described earlier and allowed us to perform the melody in a musical and intentional way.

Woodwind 4
Year: 3rd Year
Major: Music Major
Music Making Experience Outside Large Ensemble: Solo work, chamber ensembles (trio, quartet, among other groups)
Initial Thoughts: I think the whole process was helpful. The number of listenings we had was the perfect amount matched with the amount of noodling we were allowed. The more we worked on the listenings, the easier it got to get the ornamentations.
Likes: It was helpful in the memorization of music. The whole process was an interesting experiment, especially being in a circle, because it allowed us to be more aware of the people around us. This awareness helped to create a deeper connection through the music.
Frustrations: Sometimes the ornaments were slightly frustrating to get at the beginning but it was helpful to get an example from Tyler.
Easy Music Aspects by Ear: Timbre, Pitch, Articulation, Rhythm
Impact on Style: It improved my ability to add ornamentations to the melody more immediately. Being able to watch my colleagues instead of the music helped with the feel of the weight, lift, and emphasis. Listening to everyone and being able to have the extra awareness that would've been used to read the music helped enhance all the extra musical elements.
Experience Impact on Music Making: Gave me a deeper sense of connection with the piece. I was able to embody being apart of a proud people.
How it Helped: Obviously, it was great ear training and helped me be able to have a better sense of pitch as well as being able to adapt quicker to obtain the correct style and match with my colleagues.
Would you do it again: YES
Recommended Changes: None

Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: [No Response]
Pitch: [No Response]
Rhythmic Nuance: [No Response]
Articulation/Emphasis: [No Response]
Dynamics Phrasing: [No Response]

Reflection on Impact from Final Performance: [No Response]

Woodwind 5
Year: 3rd Year
Major: Music Major
Music Making Experience Outside Large Ensemble: I compose piano music, participate in jam sessions with various non-school related groups, I play guitar, and I've played keyboard in an "indie" band.
Initial Thoughts: The process was not only educational but also simply fun! Our ability to connect with each other and ultimately the audience increased exponentially without the added factor of having physical music in front of us. Tyler did an amazing job of explaining why this method of learning music is not only relevant but also important to our sheet music- heavy environment.
Likes: Something I enjoyed about the aural learning project was our ability to focus on more fine details within the music such as timbre and ornamentation. In traditional wind band settings, I believe the music can create a barrier between the performer and our ability to play expressively (because we are so focused on what replicating the composer's intent). With aural learning, we were able to understand the composer's intent while also respecting the Irish cultural tradition of improvisation and collaboration.
Frustrations: I had no frustrations with the process of learning by ear. As someone who started making music through playing by ear, I felt that certain repetitions of sections could have been skipped. However, this is reflective of only my experiences, not everyone's!
Easy Music Aspects by Ear: Timbre, Pitch, Articulation, Rhythm, Dynamics
Impact on Style: Aural learning helped me hear ornamentation and dynamic changes that are very hard to interpret on sheet music. I've read music that has tried to achieve similar style to the piece we learned, and there was always confusion about exactly how the ornaments should sound. Having an aural model not only gave me a concrete example of how it should sound (and not just how it should look on the page) but it also gave me the ability to think about other contexts in which these ornaments may complement the music (and Tyler encouraged adding our own ornaments!)
Experience Impact on Music Making: Aural learning allowed me to internalize aspects of Irish music and culture that I otherwise would not have experienced. From collaboration, to improvisations, ornamentation, and even emotional connections with ensemble members and audience members. I firmly believe I would not have experienced these aspects of the music as such a deep and intuitive level had we learned the piece traditionally, with sheet music.
How it Helped: Learning music was helpful in increasing my awareness of pitch, tuning, intonation, dynamics, ans articulation.
Would you do it again: YES

Recommended Changes: I would like to see this process done entirely without sheet music. This may be difficult for a large ensemble but I think it would increase the positive effects of aural learning.

Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Slightly Well
Pitch: Moderately Well
Rhythmic Nuance: Extremely Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Very Well

Reflection on Impact from Final Performance: The band made musical decisions as a collective- dynamics were consistent throughout the ensemble, ritardandos always landed together, and ornamentation were present and easily identifiable.

Woodwind 6
Year: 3rd Year
Major: Music Major
Music Making Experience Outside Large Ensemble: There are a bunch of music making experiences I have been a part of. The most notable is my chamber group, and we rehearse at least 8 hours a week. I also sing songs with my fraternity and at church, where we sing various hymnals and other songs. I also like to sing in my car as I commute to and from places, and since I often leave to visit my friend who lives in the countryside, I like to listen to and sing along with full-length albums. I also dabble in composing.
Initial Thoughts: I naturally have a good ear, so I was able to connect the notes very well. One challenge I had was with the rhythm/meter, as Irish music is not as metrically strict as the typical Western arts music. Once I understood the nuances, it was easier for me to grasp.
Likes: Similar to transcribing in jazz, I felt I was able to integrate phrasing more naturally when leaning music by ear. The ornamentations, vibrato, and direction of the phrases were things I tried to latch onto once I had a grasp of the notes and rhythms.
Frustrations: Learning music by ear is difficult in the sense that the brain can only memorize so much at a time. There wasn't anything frustrating to me by having to repeat sections over and over again, however.
Easy Music Aspects by Ear: Timbre, Pitch, Articulation, Dynamics
Impact on Style: Aural learning made it much easier to implement these stylistic qualities into my performance of the melody. Especially with the audio example, the inflections of the flute helped guide my interpretation of the melody. Although I stayed pretty close to what I heard, playing the same ornamentations that the audio recording did, I could still connect on a personal level to each ornamentation, making them mine in a sense.
Experience Impact on Music Making: Aural learning didn't have much impact on the piece; it only really helped me come in at the right time since I knew the other musicians' parts. I played the bassline, so I felt like I couldn't contribute via ornamentations. It was a bit disappointing, especially since I love Celtic music (Anya in particular), but knowing I was serving the ensemble by providing the harmonic foundation, I did my best to fulfill that role.
How it Helped: Like I said earlier, learning music by ear is something I already do due to my trained and well-developed aural skills. It helps me because I understand nuance and how to

implement it depending on the piece I am playing/singing. I feel like I am able to wear my heart on my sleeve, so to speak, when not looking at sheet music when I perform.
Would you do it again: YES
Recommended Changes: One thing that would be potentially helpful for some is to give us a tool in order to memorize the contour/rhythm of the melody a bit faster. I use a method similar to protonotation if I am given a sheet of paper, and if I am unable to write it down, I try to visualize the contour in my head while also gesturing with my hand in real time as I listen to the phrase.
Audio Analysis (Rating Each by "Not Well at All, Slightly Well, Moderately Well, Very Well, Extremely Well)

Timbre: Very Well
Pitch: Extremely Well
Rhythmic Nuance: Very Well
Articulation/Emphasis: Moderately Well
Dynamics Phrasing: Moderately Well

Reflection on Impact from Final Performance: Wow. It's so nice to hear the band from a holistic point of view rather than from just where I was standing and playing. It sounded as if the performance held a deeper sense of emotion, of nuance, and of meaning.