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The Impact of Kinesthetic Movement on Flute Performance Musicality and Performance Anxiety in Undergraduate University Flute Students

A Thesis Submitted to
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in Candidacy for the Degree of
Doctor of Music Education

by

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THE IMPACT OF KINESTHETIC MOVEMENT ON FLUTE PERFORMANCE MUSICALITY AND PERFORMANCE ANXIETY IN UNDERGRADUATE UNIVERSITY STUDENTS

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Abstract

Kinesthetic movement has gained significant attention within the flute community over the last several decades as a performance enhancement tool. Somatic therapies such as the Alexander Technique, body mapping, Feldenkrais, and Dalcroze-Eurythmics incorporate kinesthetic movements into their practices. Although most musicians seek out these therapies solely to alleviate pain or injury, could these kinesthetic movements promote concentration and provide positive self-talk by decreasing mental distractions? Despite much research analyzing the impact of kinesthetic movements on reducing injury and pain, there is a lack of research explicitly regarding its abilities to enrich a flutist's musical performances by reducing negative self-talk. This four-tier case study examined the impact of kinesthetic movement on flute performance musicality and performance anxiety in three undergraduate flute students at CSU in North Charleston, South Carolina. Each participant performed video-recorded weekly assigned exercises from *The Flute Scale Book* by Patricia George and Phyllis Avidan Louke alternating specific kinesthetic movements with no movements over one month. Every participant also completed a weekly questionnaire containing both Likert-scale and open-ended questions. All video recordings were evaluated by three university trained evaluators for weekly review using Likert-scale questionnaires. At the end of the month, participants partook in a focus group to share their experiences. This case study gathered data from weekly questionnaires and the final focus group session. The results of this study are needed to acquire a greater understanding of the possible effects of kinesthetic movement on musicality and performance anxiety. Further, this study could encourage professors and performers of other instruments to apply the results to their performance practices and pedagogy.

Keywords: Flute Performance, Kinesthetic Movement, Performance Anxiety

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Dedication

To my parents, who encouraged my lifelong quest for musical excellence, imagination, love, and dreaming. And to my husband …my love for you is everlasting.

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Chapter One: Introduction

Overview

This chapter explores the possible impact of kinesthetic movement on flute performance musicality and performance anxiety in undergraduate university flute students. For decades, kinesthetic movement has been studied to reduce performance anxiety, alleviate injury, and strengthen inner rhythm. Yet many somatic therapies, such as the Alexander Technique (AT), Dalcroze-Eurhythmics, Feldenkrais, and yoga, have also been shown to enhance musicality in music performance. Until we understand the possible impact kinesthetic movement has on the mental aspects connected to the execution of flute performance musicality, a meaningful viable connection between movement and musicality will remain a mystery. Such knowledge can provide promising advancement to flute performance musicality and the future of flute pedagogy.

Background

Undergraduate university flute students enter universities representing various levels of musical performance aptitude and experience. Many times, flute professors have university flute students representing a variety of different majors in their studios. These majors have included performance, music education, music therapy, music and worship, music minor, and non-music majors. Some music students have had no previous experience with private flute lessons and have primarily learned to play the flute through band classes. Other students enter universities with extensive private instruction experience and believe that their teacher's pedagogy is the best. Thomas wrote, "The assumption 'I learned this way – it made sense to me, and I had fun;

this is what works' usually leads to replication of past or known practice rather than exploration of new possibilities."[1]

Regardless of the flute student's previous experiences, students have generally been taught to perfect basic flute skills such as tone, technique, articulation, and rhythm before learning to play expressively. This emphasis on correct performing originated in the beginner stage when many aspects of playing are initiated at once and can cause the student to feel overwhelmed. Although experience over time allows the flutist to comfortably execute the information without focusing intently on each point, the performance process becomes automatic rather than cognizant. Schwiebert stated, "Getting to the point of pure intention and unfettered expression involves changing your understanding of how you move, your vocabulary, your aesthetic, your thought process, and habitual movement patterns that you don't even know you have. All these elements affect your ability to increase your capacity for expression."[2]

As a result, many undergraduate university flute students have lacked expressive playing and focused mainly on perfect playing. Many music educators have believed that basic flute skills should be taught first, and expressive playing should only be taught much later. Sheri E. Jaffurs wrote, "Some educators and philosophers believe that musicality is manifested in the technical achievements of musicians."[3] Music philosopher Bennett Reimer believed that a musician must first attain successful technical ability before musicality could be achieved.[4] This

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[1] William E. Frederickson, "Music Majors' Attitudes Toward Private Lesson Teaching After Graduation," *Journal of Research in Music Education* 55, no. 4 (2007): 314.

[2] Jerald Schwiebert, *Physical Expression and the Performing Artist* (Ann Arbor, MI: The University of Michigan Press, 2012), 18.

[3] Sheri E. Jaffurs, "Developing Musicality Formal and Informal Practices," *Action, Criticism, and Theory for Music Education* 3, no. 3 (2004): 3.

[4] Jaffurs, "Developing Musicality Formal and Informal Practices," 3.

flute-skills-first pedagogy did not include kinesthetic movement exercises; thus, the students lacked kinesthetic awareness.

Researcher Dr. Henrique Meissner believed that musical pedagogy, that included expression, was presently lacking in substance. Meissner wrote, "A growing body of literature is addressing the need for research of effective methods for facilitating children's learning of expressiveness as a systematic approach has been lacking."[5] Dr. Emily Stumpf disagreed with flute-skills-first pedagogy and believed musicianship could be taught simultaneously if it included kinesthetic awareness. Stumpf stated, "Musicianship should always be the primary goal of flute pedagogy. This may be better achieved if the flute teacher emphasizes teaching musicality, which can be defined as understanding the relationships between written notation and the kinesthetic awareness of what it takes to realize that notation with sound on an instrument."[6]

Aristotle believed the human body contained five sense organs. These five sense organs were identified as sight, hearing, touch, smell, and taste. Aristotle believed these five sense organs were necessary for human "perception."[7] Barbara Conable thought the human body contained six senses instead of only five. Conable identified the sixth one as a kinesthetic sense, a movement sense. Conable wrote, "The kinesthetic sense tells you about your body: its position and its size and whether it is moving and, if so, where and how."[8]

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[5] Henrique Meissner, "Theoretical Framework for Facilitating Young Musicians' Learning of Expressive Performance," *Hypothesis and Theory* 11 (2021): 1.

[6] Emily M. Stumpf, "Teaching Musically: Incorporating Dalcroze Pedagogy into the Flute Instruction for the Elementary-Age Student" (PhD diss., University of South Carolina, 2018), ProQuest (10750751).

[7] T.K. Johansen, *Aristotle on the Sense Organs* (Cambridge, UK: Cambridge University Press, 1997), 3.

[8] Barbara Conable and William Conable, *How to Learn the Alexander Technique: A Manual for Students* (Portland, OR: Andover Press, 1995), 19.

Several research studies describe the importance of music and movement.[9] The inclusion of kinesthetic movement has proven to benefit inner rhythm and expressive playing. Dalcroze Eurhythmics has been shown to help "one understand the music and incorporate the rhythms and phrases into one's body."[10]

Movement has also been shown to influence one's emotions. In a study by Paul Ekman, participants instructed to smile felt happier than those who were not smiling.[11] In music, physical movements, or lack of movement, while practicing is intertwined with one's expressive perception of the music. Over time, many musicians become unaware of their kinesthetic sense while performing. Lam stated that "certain physical movements may serve an effective function for the musician and using the conditioned muscle-sentiment associated to ingrain and further emphasize the emotions of the piece may prove to be a helpful strategy."[12]

Statement of the Problem

Flute students are taught to value accurate technique and note perfection more than expression or musicality. Flute students are also not taught body mapping or kinesthetic movement in correlation to performing. Therefore, the possible link between kinesthetic movement and performance musicality/anxiety has not been explored. Meissner stated, "It is important to understand why children tend to focus on technique and note reading during

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[9] Heather Waters, "Integrated Movement and Music Experiences in Online Music Education Methods Courses," *International Journal on Innovations in Online Education* 5, no. 2 (2021): 1.

[10] Catrien Wentink and Liesl Van der Merwe, "Exploring the Lived Experiences of Instrumental Ensemble Performers with Dalcroze Eurythmics: An Interpretative Phenomenological Analysis," *Frontiers in Psychology* 11 (2020): 2.

[11] Paul Ekman, Richard J. Davidson, and Wallace V. Friesen, "The Duchenne Smile: Emotional Expression and Brain Physiology II," *Journal of Personality and Social Psychology* 58, no. 2 (1990): 342-353.

[12] Megan Lam, "The Physicality of Music Production: Investigating the Roles of Mindful Practice and Kinesthetic Learning," *Music Educators Journal* 106, no. 3 (2020): 25.

practice rather than on expression and communication."[13] Findings in Meissner's research reported that students identified learning both technique and note reading simultaneously as very demanding, which did not allow for focus on musical expression.[14] Yet Meissner developed a tool kit to enable students to perform musically and expressively, which contained movements and gestures. Meissner also wrote, "Although children might feel the music's direction and character in their bodies while moving, this does not necessarily imply that they can translate these feelings into expressive devices for music performance."[15] Stumpf believed teaching musicality should be the primary goal of flute pedagogy and could be achieved with the incorporation of Dalcroze-Eurhythmic kinesthetic movements. Stumpf credited technical aspects of flute pedagogy as "more easily taught, drilled, and evaluated" than musicality.[16] Lam believed the "physical aspect of playing has such an impact on a musical performance."[17] Yet, how can specific kinesthetic movements affect flute performance, musicality, and anxiety, and how can one explore them? Does lack of movement decrease concentration levels during flute performance? Does negative self-talk decrease with the addition of kinesthetic movement and enhance performance musicality and concentration? Currently, there is a gap in research connecting these specific topics.

[13] Meissner, "Theoretical Framework," 12.

[14] Ibid., 12.

[15] Ibid., 14.

[16] Stumpf, "Teaching Musically," 1.

[17] Lam, "The Physicality of Music Production," 27.

Statement of the Purpose

This case study aimed to examine whether kinesthetic movement elevated flute performance musicality by heightening concentration and decreasing negative self-talk in undergraduate university flute students. This study sought to identify how specific kinesthetic movements affected flute performance musicality, including performance anxiety, and how to explore its effects. This study also connected replacing negative self-talk with a focus on kinesthetic movement to elevate flute performance musicality. The author intended to identify the impact of raising flute performance musicality and flute pedagogy.

Significance of the Study

Flutists enter university music programs with little or no previous flute instruction associated with kinesthetic movement. Considering Meissner's research questionnaire findings of technical instrumental demands as a reason for lack of focus on musicality, it is no wonder undergraduate university flute students with no training in kinesthetic movements lack expression and musicality in their performances. What is not understood is the possible impact kinesthetic movement has on flute performance musicality, how to explore it, and what is causing the effect? Could kinesthetic movement impact concentration and self-talk? Although authors Don Greene[18], Barry Green[19], and Becky Gillespie[20] have identified the importance of self-talk and role-playing impacting performance success, the connection movement may have to self-talk was not addressed. If we could better understand the connection between kinesthetic movement and flute performance musicality, we could better identify how to assimilate it into

[18] Don Greene, *Audition Success* (New York, NY: Routledge, 2015).

[19] Barry Green, *The Inner Game of Music* (New York, NY: Doubleday, 1986).

[20] Becky Gillespie, *Singing for the Self-Conscious* (Melbourne, Australia: Thorpe-Bowker, 2020).

our pedagogy and musical performances. This study offers valuable insights into kinesthetic movements' impact on flute performance musicality.

Research Questions

Research by Teixeira, Loureiro, and Yehia connected recurring movement gestures with participants' expressive performance of the Brahms Clarinet Sonata, thus associating movement with expression.[21] Findlay stated, "To express his ideas with any degree of clarity, the child must have mastery over his movement and rhythm; he must be able to think quickly and clearly, have a lively imagination and a flair for the dramatic."[22] Therefore, if kinesthetic movement and awareness benefitted the development of expressive performance in flute playing, questions should be answered regarding how it occurs and its exploration.

The study answered the following research questions:

RQ1: How can specific kinesthetic movements affect flute performance musicality and performance anxiety in undergraduate university flute students?

RQ2: How can one explore specific kinesthetic movement effects on flute performance musicality and performance anxiety in undergraduate university flute students?

Potential Benefits of Study

Currently, much attention is given to the practice of somatic therapies by artists of all kinds. These somatic therapies included the Alexander Technique (AT), Dalcroze Eurhythmics, and Feldenkrais. Lee wrote, "As musicians, we move for a living. Refining the body's

[21] C.F. Euler Teixeira, Mauricio A. Laureiro, and Hani C. Yehia, *Linking Movement Recurrence to Expressive Patterns in Music Performance* (New York, NY: Routledge, 2017), 360.

[22] Elsa Findlay, *Rhythm and Movement: Applications of Dalcroze Eurythmics* (New York, NY: Alfred Music, 1995).

movements directly affects musicians' ability to communicate musically with their audiences."[23] Body mapping, an extension of the AT, has also gained popularity among artists. Body-mapping expert, Barbara Conable, defined somatics as "the study of human movement; the study of the coordination of mind and body in movement."[24] Many musicians originally sought somatic therapies to aid in the treatment and prevention of performance injuries. Over time, musicians discovered that by practicing kinesthetic movements and awareness that embody the pedagogy of somatic therapies, performance capabilities were also enhanced. These performance enhancements included the ability to be more musically expressive, lessen performance anxiety, and improve inner rhythm development. Dora, Conforti, and Gusewell stated, "One key element of somatic work is body awareness."[25]

Jerald Schwiebert stated, "Great performers are first and foremost good movers."[26] Undergraduate university flute students wanted to give musically expressive performances, and their professors wished to include in their pedagogy every tool possible to help their students achieve this goal. By understanding how specific kinesthetic movements impacted performance musicality, university flute pedagogy can be elevated to a higher level. Questions regarding whether kinesthetic movement while performing reduced performance anxiety by refocusing the musician's mind will be of great interest to students, professors, and performers.

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[23] Catherine Lee, "Musicians as Movers; Applying the Feldenkrais Method to Music Education," *Music Educators Journal* 104, no. 4 (2018): 15.

[24] Barbara Conable, *What Every Musician Needs to Know About the Body: The Practical Application of Body Mapping to Making Music* (Portland, OR: Andover Press, 1998), 4.

[25] Claudia Dora, Simon Conforti, and Angelika Gusewell, "Exploring the Influence of Body Awareness on Instrumental Sound," *International Journal of Music Education* 37, no. 2 (2019): 311-326.

[26] Schwiebert, *Physical Expression and the Performing Artist*, 7.

Conceptual Framework

Kinesthetic movement, performance musicality, performance anxiety, and self-talk encompassed the conceptual framework of this study. Many varying factors impeded performance musicality. One widespread problem was performance anxiety. Spahn, Walther, and Nusseck wrote, "A variety of mental and physical approaches, such as the AT, yoga, meditation, and relaxation, have already been shown to improve performance anxiety."[27] Another prevailing factor that can negatively affect musicality is performance injury. Many somatic therapies are effective in the treatment and prevention of performance injuries.

Other factors that impede performance musicality can be the lack of movement or inaccurate movements while performing. Lam wrote, "Music is the direct result of muscle movement in which the nuances of the motion convey the sentiments and emotions of the performer. However, one's emotions may be related to or even caused by muscle movements."[28]

Definition of Terms

Comprehension of this case study requires an understanding of the following terms. The **AT** is "a technique for positioning and moving the body that is believed to reduce tension."[29] **Body awareness** is one's sense of placement of one's own body "free of judgment."[30] **Body mapping** is an individual's representation of their musculoskeletal system.[31] **Concentration** was

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[27] Claudia Spahn, Julia-Caroline Walther, and Mannfred Nusseck, "The Effectiveness of a Multimodal Concept of Audition Training for Music Students in Coping with Music Performance Anxiety," *Psychology of Music* 44, no. 4 (2016): 893.

[28] Lam, "The Physicality of Music Production," 23-28.

[29] Merriam-Webster, "Alexander Technique," accessed Oct. 4, 2021, https://www.merriam-webster.com/medical/Alexander%20technique.

[30] Dora, Conforti, and Gusewell, "Exploring the Influence of Body Awareness," 311.

[31] Conable, *What Every Musician Needs to Know About the Body*, 5.

defined as the "direction of attention to a single object."[32] **Dalcroze Eurhythmics** is a somatic therapy designed by Jacques Dalcroze to produce musicality in music performance through movement, solfege, and improvisation.[33] For **distraction,** Merriam Webster's Collegiate Dictionary defined the word distract as "to draw or direct (as one's attention) to a different object or to different directions at the same time."[34] In musical performance, a distraction can be internally experienced by the performer or visually experienced by the audience. **The Feldenkrais method**, created by Moshe Feldenkrais, is a somatic method that educates "the body to move in new ways and with greater efficiency and enjoyment."[35] The word **kinesthetic** derives from kinesthesia, meaning "a sense by receptors located in the muscles, tendons, and joints stimulated by bodily movements and tensions."[36] **Kinesthetic movement** is movement in which one has an inward bodily awareness of the outer physical movement performed. It is a movement in which one had no visual perception but was internally aware of the movement. The **kinesthetic sense** is the sixth sense, described as the "sense that tells you about your body: its position and its size and whether it is moving or not."[37] **Musicality** is "the quality or state of being musical."[38] **Musical performances** in this study were defined using specific expressive elements (phrasing, vibrato, dynamics, and tone colors). **Performance anxiety** and **nervousness**

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[32] *Merriam Webster's Collegiate Dictionary*, 10th ed., s.v. "concentration."

[33] Stumpf, "Teaching Musically," 2.

[34] *Merriam Webster's Collegiate Dictionary*, 10th ed., "distract."

[35] Lee, "Musicians as Movers," 15.

[36] Merriam-Webster, s.v. "Kinesthetic," accessed Oct. 4, 2021, https://www.merriam-webster.com/dictionary/kinesthetic.

[37] Conable and Conable, *How to Learn the Alexander Technique*, 19.

[38] Merriam-Webster, s.v. "Musicality," accessed Oct. 4, 2021, https://www.meriam-webster.com/dictionary/musicality.

in music were sometimes referred to as stage fright. It is a fear of performing a specific task, in this case performing music. **Self-talk** is "the act or practice of talking to oneself, either aloud or silently and mentally."[39] Self-talk can be negative or positive in nature. **Somatics** is "the study of human movement: the study of the coordination of mind and body in movement."[40]

Research Plan

A thorough review of existing research literature was conducted. A case study was used for this research study. This case study performed research utilizing undergraduate university flute students, Likert-type scale surveys, open-ended questions, focus group participation, and data collection. This study also included peer-reviewed literature such as books, journals, magazines, and dissertations. Molumby stated, "Many articles, dissertations, and other sources focusing on different learning modalities and personality types include teaching strategies that can be used in the music classroom or private lesson."[41]

The study participants consisted of three undergraduate flute students and three trained evaluators from Charleston Southern University (CSU) in North Charleston, South Carolina. Each subject performed weekly assigned exercises from *The Flute Scale Book* by Patricia George and Phyllis Avidan Louke with specific kinesthetic movement exercises over one month. The subjects alternated between performing the exercises with no movement and specific kinesthetic movements. All participants performed with the other participants in the room. Each session was video recorded and emailed to each student and the three trained evaluators for

[39] Dictionary.com, s.v. "Self-talk," accessed Feb. 25, 2022, https://www.dictionary.com/browse/self-talk.

[40] Conable, *What Every Musician Needs to Know About the Body*, 1.

[41] Nicole L Molumby, "The Application of Different Teaching Strategies Reflective of Individual Student's Learning Modalities in the University Flute Studio Class" (PhD diss., The Ohio State University, 2004), 28.

review. All students and trained evaluators viewed the recorded session and completed a weekly questionnaire regarding their experience. The participants and trained evaluators reviewed identical questionnaires containing five-point Likert rating scale questions and two open-ended questions. During week four, one video-recorded focus group session was held composed of all research participants, trained evaluators, and the researcher. At the end of the month, data from all weekly questionnaires and the focus group session were collected and analyzed, and results were identified. These results, along with the review of existing literature explored, fostered discussion of research questions.

Summary

Music is an expressive art form. University flute professors strive to guide students in achieving the highest level of performance musicality. However, many music students entering universities are often taught that technical ability and perfect performance are more important than musicality. These students have little kinesthetic awareness or knowledge and are unaware of the possible enhancements kinesthetic movement can bring to their performance musicality. Over the last several decades, many somatic therapies have gained significant attention as enriching musical performance and preventing injury.

Nevertheless, the relationship between movement and performance musicality and anxiety remains unclear. Therefore, this case study aimed to explore the possible impact kinesthetic movement has on flute performance musicality and anxiety in undergraduate university flute students and understand its ability to heighten musical performance and decrease negative self-talk. A review of the literature at the inception of this study revealed few sources regarding this specific connection.

This study aspires to help flute students, teachers, and performers understand the possible connection between kinesthetic movement and performance musicality/anxiety to explore more significant insights for teaching and performing. Could movement also possibly aid in increased concentration and positive self-talk? If so, flute professors might consider embracing kinesthetic movement as an essential practice in their future pedagogy.

Chapter Two: Review of Literature

Introduction

The purpose of this case study was to explore the impact of kinesthetic movement on flute performance musicality and performance anxiety in undergraduate university flute students. This study sought to discover a relationship between movement and self-talk and its connection to performance musicality and anxiety. The researcher examined existing literature for greater clarification. These key elements included the meaning of kinesthetic movement, the mind/body connection, and several somatic practices. Further research of these elements provided a better understanding of the evolution of various movement-based practices in music. This chapter defines expressive elements associated with musicality and mental aspects of performance linked to anxiety, such as concentration and distraction. This chapter also discusses the origins of the specified movements in this case study.

What is Kinesthetic Movement?

"Kinesthesis refers to sensory input that occurs within the body."[42] It has also been referred to as a "feeling of movement."[43] Barbara and William Conable described kinesthetic sense as the mind's ability to perceive body positioning and movement without visual correspondence. For instance, a person could place their hand behind their head and understand its position and movement without seeing it. One's kinesthetic sense cultivated this information. The kinesthetic sense is the mind's awareness of out-of-body experiences and identified as the

[42] Encyclopedia.com, s.v. "Kinesthetic sense," accessed February 16, 2022, https://www.encyclopedia.com/medicine/encyclopedias-almanacs-transcripts-and-maps/kinesthetic-sense

[43] Psychology Dictionary, s.v. "Kinesthetic sense (movement sense)," accessed February 16, 2022, https://psychologydictionary.org/kinesthetic-sense-movement-sense/

sixth sense. The other five senses are sight, hearing, touch, taste, and smell.[44] The kinesthetic sense "allows one to detect changes in body positions and movements without reliance on the other five senses."[45] This awareness stems from activity in particular areas of the brain that link the connection between one's inner and outer experiences. Lam stated, "In fact, musicians begin experiencing the sound of their instrument mentally and physically before they are actually produced through kinesthetic sensations of adjustments in muscular tonus and the performer's own aural image of the tone."[46] Therefore, kinesthetic awareness plays an essential role in performance musicality but is often ignored.[47] Juntunen and Westerland stated, "Movement involved in music making also increases so-called bodily knowledge. Bodily knowledge refers to improved knowing through the body, which, in turn, has a direct connection to the senses and bodily awareness as well as to abilities, skills, and action."[48] Throughout history, this mind/body connection was not always considered correct.

History of Dualism

Dualism is the philosophical theory that the mind and body act independently from one another. This theory originated from the seventeenth-century French philosopher Rene Descartes and was known as Cartesian dualism. Descartes viewed the body "as purely material and subject to mechanical laws of causation, and hence separable from the domain of spiritual or moral

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[44] Conable and Conable, *How to Learn the Alexander Technique*, 19.

[45] John Michael Ross, "The Effects of Constructive Rest on Perceived Levels of Stress, Tension, and Pain in Collegiate Flutists" (PhD diss., The Ohio State University, 2018), 13.

[46] Lam, "The Physicality of Music Production," 24-25.

[47] Lam, "The Physicality of Music Production," 25.

[48] Marja-Leena Juntunen and Heidi Westerlund, "Digging Dalcroze, or, Dissolving the Mind-Body Dualism: Philosophical and Practical Remarks on the Musical Body in Action," *Music Education Research* 3, no. 2 (2010): 209.

values."[49] Historically, Cartesian dualism represented the absolute separation of mind (brain) and body (physical), yet Descartes believed the human body encompassed a soul, representing the non-dualistic Christian view of life after death. Descartes also believed a human's sensation of pain acted as a notifier to the body of illness. Both beliefs represented a possible mind/body connection, which caused reservations concerning the Cartesian dualism theory.[50] Many Western cultures nonetheless embrace the theory of Cartesian dualism. In the Christian view, there is debate about separation of body and soul in the afterlife. In discussing this life, however, the Bible provides support to the idea of body and mind working integrally together, for example, in Luke 10:27, "Love the Lord your God with all your heart and with all your soul and with all your strength and with all your mind."[51]

Nondualism

Over the last hundred years, several philosophers such as John Dewey, Friedrich Nietzsche, and Charles Sanders Peirce started questioning Cartesian dualism.[52] These philosophers believed the mind and body operated as a unit, with both components acting as one. This philosophical theory is known as nondualism. The idea of nondualism can be found in the first century as a Hindu philosophy titled *Advaita,* which means not two. *Advaita* comes from the school of Hinduism known as *Advaita Vendanta,* which believed all human beings were one with

[49] Grant Duncan, "Mind-Body Dualism and the Biopsychosocial Model of Pain: What Did Descartes Really Say?" *Journal of Medicine and Philosophy* 25, no. 4 (2000): 488.

[50] Ibid., 488-509.

[51] Luke 10:27, NIV

[52] Wayne Bowman and Ana Lucia Frega, *The Oxford Handbook of Philosophy in Music Education* (New York, NY: Oxford University Press, 2012), 42.

Brahman (God) and felt humanly separated from Brahma due to ignorance.[53] This Hindu philosophy aligned with the later principle of embodiment characteristic of Dewey, Nietzsche, and Pierce's nondualist concept. Embodiment in nondualism represented "that the self, or mind, or consciousness cannot be understood independent of concerns like the body and the human organism's relationship to its environment."[54] This view of the unification of mind and body is currently the embodiment of several somatic practices exercised by musicians seeking performance enhancement.

Somatic Practices

Somatic practices contested Cartesian philosophy and instead embraced a *body-mind* philosophy that deemed unification of the mind and body. Hartley described somatic psychology as a "holistic approach to therapy and healing that embraces body, mind, and spirit within a changing social, cultural, and spiritual context."[55] In the 1960s and 70s, many musicians turned to various somatic practices seeking to enhance their performance musicality.[56] In 1970, philosopher Thomas Hanna coined the term soma in his book *Bodies in Revolt: A Primer in Somatic Thinking*. Somatic thinking evolved into the world of dance through Juilliard-trained dancer Elaine Summers, whose belief in "let go of the thinking-self" while dancing later developed the practice of *kinetic awareness* (later known as kinesthetic awareness). This practice was cultivated to prevent dancers from developing injuries. Later, Summers' somatic

[53] Laura Maguire, "Nondualism," Philosophy Talk produced by Stanford University, June 5, 2021, https://www.philosophytalk.org/blog/nonduality.

[54] Bowman and Frega, *The Oxford Handbook of Philosophy*, 42.

[55] Linda Hartley, *Somatic Psychology: Body, Mind, and Meaning* (London, England: Whurr Publishers, 2004), 1.

[56] John Kapusta, "Pauline Oliveros, Somatics, and the New Musicology," *The Journal of Musicology* 38, no. 1 (2021): 2.

philosophies moved into the world of musicians.[57] Over time, many different somatic practices emerged. The most famous were the AT, Feldenkrais, and Dalcroze Eurythmics, including kinesthetic awareness and movement.

The Alexander Technique

Originated by Australian Shakespearian actor and reciter Frederick Matthias Alexander, the AT is a somatic method that concentrates on kinesthetic awareness and movement of the body's musculoskeletal system to alleviate injury and heighten performance. As with many somatic practices, most musicians first sought guidance from the AT to alleviate pain and injury. The origin of the AT began when Alexander lost his voice during performances. Alexander sought advice from doctors and voice teachers, prescribing rest from reciting. Unfortunately, Alexander's loss of voice continued during performances, becoming a debilitating issue. Alexander spent many months observing his kinesthetic movements and posture using several mirrors. He discovered many habitual movement patterns caused his body to become out of musculoskeletal alignment.[58] Alexander coined a term for one of these critical habitual patterns, *downward pull*, which caused tensing of the neck muscles in a downward direction. He understood that he must exercise *constructive conscious control* to alleviate this problem, representing a conscious decision to negate downward pull.[59] Over time, Alexander regained his performance voice. Many people witnessed Alexander's triumphant return to the stage and sought him out for their performance ailments. Alexander wrote many books and trained others

[57] Kapusta, "Pauline Oliveros, Somatics, and the New Musicology," 9-13.

[58] Michael J. Gelb, *Body Learning: An Introduction to the Alexander Technique* (New York, NY: Henry Holt and Company, 1994), 9-21.

[59] Conable and Conable, *How to Learn the Alexander Technique*, 1-2.

to teach and practice the AT, which further developed the link between kinesthetic awareness and movements.[60]

Body Mapping

Body mapping was an essential tool initially used in correlation with the study of the AT, yet it applies to any somatic practice. Originated by William Conable, body mapping allowed a musician to gain greater knowledge of their visual depiction of their body from their mind's perspective.[61] For instance, when a musician drew a picture of their body structure, the musician's picture often represented an inaccurate representation. Comparing the musician's drawing to a musculoskeletal picture of a body could allow the musician to understand how their body moved while performing. Body mapping allowed a musician to acquire a more profound understanding of movement and "gain access to this through self-observation and self-imagery."[62] Body mapping relied heavily on the use of the kinesthetic sense. Body-mapping expert Lea Pearson wrote, "Your body map governs your Movement. Like a road map, you follow it as you go through your daily life."[63] A musician's inaccurate body map can lead to many difficulties and possible injury. Pearson stated, "Ensuring your body map is accurate and adequate is one of the most efficient, effective, and powerful tools you have to improve and enhance your ability to play, perform, and teach an instrument."[64]

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[60] Gelb, *Body Learning*, 17-21.

[61] Lea Pearson, *Body Mapping for Flutists: What Every Flute Teacher Needs to Know About the Body* (Chicago, IL: GIA Publications, Inc., 2006), xv.

[62] Shelley M. Griffin, "Meeting Musical Experience in the Eye: Resonate Work by Teacher Candidates by Body Mapping," *Visions of Research in Music Education* 24, no. 4 (2014): 3.

[63] Pearson, *Body Mapping for Flutists*, 6.

[64] Ibid., 8.

Feldenkrais

Originated by physicist and judo master Dr. Moshe Feldenkrais, Feldenkrais was another somatic practice that relied heavily on the theory of nondualism. In 1929, after a debilitating knee injury, rather than undergoing surgery, Feldenkrais developed a specific movement learning process, where he practiced precise slow movements in a focused and effortless manner to allow himself to move without pain. He began teaching his method to others. In 1949, Feldenkrais wrote his first book about the Feldenkrais method titled, *Body and Mature Behavior*.[65] The Feldenkrais method encompassed two separate practices: awareness through movement and functional integration. Awareness through movement was a group class designed to teach slow, effortless movements and strengthen the mind/body connection. Functional integration involved one-on-one private lessons where the Feldenkrais practitioner used gentle, noninvasive touch to create a bodily awareness to suggest improved movement possibilities for improved mobility. [66]

Like the AT, the Feldenkrais method credited gravitational pull as a critical factor correlated to body alignment and movement. Feldenkrais also identified kinesthesia as a sixth sense and attributed effortless, minor adjustments to achieving ease of movement.[67] The AT focused on inhibiting bad movement habits and replacing them with new ones. In contrast, Feldenkrais concentrated on small movements without direct guidance to create a spontaneous

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[65] Moshe Feldenkrais, *Body & Mature Behavior: A Study of Anxiety, Sex, Gratification and Learning* (Berkeley, CA: North Atlantic Books, 1949), 78-132.

[66] Ross, "The Effects of Constructive Rest," 10-11.

[67] Feldenkrais, *Body & Mature Behavior*, 146.

atmosphere of exploration. Although Feldenkrais died in 1984, many practitioners worldwide still promote his method.[68]

Dalcroze Eurythmics

Dalcroze Eurythmics was a somatic practice that was developed around 1905 by Swiss professor of harmony at the Geneva Conservatory, Emile Jaques-Dalcroze.[69] While at the conservatory, Dalcroze became acutely aware that his solfege students exhibited difficulty connecting notation of rhythm and harmony to actual performance.[70] He also noticed that many instrumentalists lacked a true sense of musicality and rhythmic perceptiveness, which he called "musical arrhythmia."[71] Stumpf stated, "Dalcroze became distressed at the theoretical emphasis of music study at the conservatory and felt there was a preoccupation with learning notation and the mechanics of playing at the expense of musicality and musicianship."[72] To resolve these issues, Dalcroze developed a new approach to musical education called Dalcroze Eurythmics. This approach has three separate categories: (a) eurythmics, (b) solfege, and (c) improvisation.[73] Encyclopaedia Britannica described Eurythmics as "harmonious bodily movements - specifically, the Dalcroze system of musical education in which bodily movements are used to

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[68] Sanjiv Jain, Krissy Janssen, and Sharon DeCelle, "Alexander Technique and Feldenkrais Method: A Critical Overview," *Physical Medicine and Rehabilitation Clinics of North America* 15 (2004): 815-818.

[69] Encyclopaedia Britannica, s.v. "Eurythmics," accessed June 19, 2022, https://www.britannica.com/art/allemande.

[70] William Todd Anderson, "The Dalcroze Approach to Music Education: Theory and Application," *General Music Today* 26, no. 1 (2011): 27.

[71] Stumpf, "Teaching Musically," 1.

[72] Ibid.

[73] Anderson, "The Dalcroze Approach to Music Education," 27.

represent musical rhythms."[74] Eurhythmics developed an internalization of rhythmic patterns to allow students to "no longer rely on the complexity of thought to understand rhythm."[75] Eurhythmics was taught both as a free follow, where students created bodily movements to express music currently played, and as a canon, where students replicated music previously heard through movements. Movements could also represent changes in dynamics and tempos.[76] Thus, kinesthetic movement was a crucial element in the teaching of Dalcroze-Eurythmics. Anderson stated, "the relationship between music and movement is indeed an intimate one" and "is at the heart of Dalcroze's approach to instruction."[77]

Solfege was another category of the Dalcroze Eurythmics method used to develop the students' auditory skills. Fixed *do*, with the addition of *do*-sharp and *do*-flat, was used to sing major scales. Hand signals allowed the student to identify harmonies. Solfege became an important skill to acquire to practice the third category of Dalcroze-Eurythmics, improvisation, successfully.

The skill of improvisation identified a nondualist connection in the music student. Improvisation required a thorough understanding of the execution of Eurythmics and solfege. Using simple guidelines, students incorporated previous eurythmic and solfege instruction to create new musical compositions. In this way, nondualistic approaches toward music education produced better musical results.[78]

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[74] Encyclopaedia Britannica, s.v. "Eurythmics," accessed June 19, 2022, https://www.britannica.com/art/allemande.

[75] Anderson, "The Dalcroze Approach to Music Education," 28.

[76] Ibid.

[77] Ibid., 32.

[78] Ibid., 28-29.

Musicality

Musicality has been defined in many ways. For instance, the Merriam-Webster Dictionary defined it as "sensitivity to, knowledge of, or talent for music."[79] The Cambridge Dictionary defined musicality as "skill and good judgment in playing music."[80] Musicality referred to as a human experience often represents professional musicians with years of training and experience. Nevertheless, musicality shows that all human cultures enjoy music and exhibit musicality. Dutch professor of music cognition, Dr. Henkjan Honing, defined musicality as "a natural, spontaneously developing set of traits based on and constrained by our cognitive and biological system."[81] Honig explained that musicality existed in nonhuman species, even distantly related species such as birds and other animals.[82] However, for this study, musicality was researched in terms of human experiences of musicality during musical performances.

Performance Musicality

The exact features that constitute the defining elements of performance musicality have been difficult to classify. Psychologist Dr. John Sloboda explained that common factors defining performance musicality could not exist because of the many different disciplines of musicians. Sloboda questioned defining performance musicality using a set framework because there are "singers who cannot read music, pianists who cannot sing in tune, performers who cannot

[79] Merriam Webster, s.v. "Musicality," accessed June 20, 2022, https://www.merriam-webster.com/dictionary/musicality.

[80] Cambridge Dictionary, s.v. "Musicality," accessed June 20, 2022, https://dictionary.cambridge.org/us/dictionary/english/musicality.

[81] Henkjan Honig, *The Origins of Musicality* (Cambridge, MA: MIT Press, 2018), 4.

[82] Ibid.

compose, and music critics who can neither play an instrument or compose."[83] Under such an understanding, it would be impossible to organize one set definition. For this study, the researcher asked both the research participants (flutists) and evaluators to evaluate performance musicality utilizing the following set of expressive elements: (a) phrasing, (b) vibrato, (c) dynamics, and (d) tone colors.

Expressive Elements

Music has often been compared to language. German philosopher, Theodor W. Adorno, argued that music contained similarities to language but was not an actual language. Music and language include similar structural forms such as "sentence, phrase, period, and punctuation."[84] However, these likenesses do not substantiate music as a language and simply connect their similarities. Adorno wrote, "Questions, exclamations, subordinate clauses are everywhere, voices rise and fall, and in all of this, the gesture of music is borrowed from the speaking voice."[85] Therefore, music was a way to express language and emotions, and music performance provided a means to deliver expression. Levitin wrote, "In the end, the essence of music performance is being able to convey expression."[86] As previously stated, this study utilized specific expressive elements to evaluate musicality. The researcher explored each expressive element in greater depth for its contribution to expression.

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[83] John Sloboda, *The Origins and Development of High Ability* (West Sussex, England: John Wiley & Sons, Ltd., 1993), 106.

[84] Theodor W. Adorno and Susan Gillespie, "Music, Language, and Composition," *The Musical Quarterly* 77, no. 3 (1993): 401.

[85] Ibid.

[86] Daniel J. Levitin, *This is Your Brain on Music: The Science of a Human Obsession* (New York, NY: Dutton Publishing, 2006), 204.

Phrasing

As Adorno explained, phrasing was a similarity connecting music to language structure.[87] Musical phrasing was an element that allowed the musician to shape notation into meaning to tell a story. The selection of various musical components (tempo, dynamics, musical terms, and articulations) allowed a composer and musician to create both flow and meaning in a musical selection.[88] Musical phrasing was an essential element of expression, for, without phrasing, music would sound dull and monotone. Music phrasing gave the music a greater depth of meaning. Adorno wrote, "The person who takes music literally as language will be led astray by it."[89] Former principal oboist of the Philadelphia Orchestra, Marcel Tabuteau, created a structure of phrase-grouping methods that many flutists practiced to accentuate phrasings in the music for expressive purposes. This method contained the use of brackets, numbers, and arrows over music notation to display phrase movement and the strength and weakness of notes.[90]

Vibrato

Vibrato is "the periodic fluctuation in pitch, amplitude, and/or timbre of a musical tone."[91] Vibrato constitutes a means of musical expression in various ways. Approaches exercised include accentuating notes, the creation of warmer sounds, supporting phrasing,

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[87] Levitin, *This is Your Brain on Music*, 204.

[88] BBC, s.v. "Phrasing," accessed June 22, 2022, https://www.bbc.co.uk/bitesize/topics/zbnrmfr/articles/zb9xgwx.

[89] Adorno and Gillespie, "Music, Language, and Composition," 401.

[90] John C. Krell, *Kincaidiana: A Flute Player's Notebook* (Santa Clarita, CA: The National Flute Association, Inc., 1997), 30-47.

[91] Renee Timmers and Peter Desain, "Vibrato: Questions and Answers from Musicians and Science," *Proceedings of the Sixth ICMPC* (2000): 1.

musical contrasts, and tension and relation.[92] The use of vibrato originated in woodwind instruments in the eighteenth century, as shown in the treatises of Hotteterre and Quantz. The production of vibrato in woodwind instruments traveled through several progressions, beginning with movements of the fingers, lip/jaw, diaphragm, and throat. Approaches regarding the production of vibrato are constantly evaluated.[93]

Dynamics

Geringer defined dynamics as "a term that refers to the degree of loudness of musical sounds."[94] Dynamics provide intensity levels of expression and bring attention to different segments of phrases. According to Geringer, a listener's expectation of change in a musical performance constituted dynamics as an expressive element.[95] Nakamura wrote, "Notation of musical compositions is a conventional visual representation of auditory entries; the sounds a composer intends a performer to produce and an audience to hear."[96] Many compositions have included specific dynamic markings to indicate the composition's expressive intentions, yet other times this interpretation has been left to the performer.

Tone Colors

The term tone colors is more commonly known as timbre. Merriam Webster's Collegiate Dictionary defined timber (also known as timbre) as "the quality given to a sound by its

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[92] Timmers and Desain, "Vibrato: Questions and Answers," 12.

[93] Douglas C. Manning, "Woodwind Vibrato from the Eighteenth Century to the Present," *Performance Practice Review* 8, no. 1 (1995): 62-78.

[94] John Mark Geringer, "The Role of Dynamics in Musical Expression: A Psychological Analysis," (PhD diss., Fresno State College, 1972), 1.

[95] Ibid., 6-7.

[96] Toshie Nakamura, "The Communication of Dynamics Between Musicians and Listeners Through Musical Performance," *Perception & Psychophysics* 41, no. 6 (1987): 525.

overtones."[97] Tone colors are "a palette of colors to choose from when you play expressively."[98] English flute pedagogue, Trevor Wye, taught tone colors using actual colors, such as yellow and purple. A yellow color signified a flute tone at the first fundamental, and the purple color signified a harmonic at a higher fundamental. Trevor Wye stated, "The flute is capable of large colour differences, much more than other woodwinds."[99]

Feeling Musical vs. Actual Musical Performance Execution

Classical musicians seek to interpret the musical, emotional context initially intended by the composer. Musicians outwardly express emotions they feel while performing. Sometimes the actual sound the performer produces does not reflect their musical intent; thus, the musical expression is falsely communicated to the audience. Performance psychologist Dr. Noa Kageyama explained that musicians could perform having a misleading sense of how they sound when they have neglected to record themselves during practice. Recording practices for self-evaluation helped link two different modes of listening: the evaluating mode vs. conceiving mode. The evaluating mode was the critical mode that constantly evaluated a musician while practicing. The conceiving mode represented the ideal musical expression the performer intended to display. By recording oneself for self-evaluation, musicians obtained a better live performance display of their expressive musical intent.[100]

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[97] *Merriam Webster's Collegiate Dictionary*, 10th ed., s.v. "Timbre."

[98] Trevor Wye, *Flute Secrets: Advice for Students, Teachers, and Professionals* (Milwaukee, WI: Novello, 2017), 61.

[99] Ibid.

[100] Noa Kageyama, "Why is it so Important to Record Yourself?" *The Bulletproof Musician* (blog), 2022, https://bulletproofmusician.com/why-is-it-so-important-to-record-yourself/.

Visual Aspects of Musicality

Visual perceptions of expression can be paramount in evaluating performance musicality. Juchniewicz wrote, "The manner in which the performer presents the music to the listener and how the music is perceived by the listener is an intricate communication process that includes both musical and non-musical characteristics."[101] Research data from studies conducted by Davidson confirmed that the performer's body movements visually impacted the listener's perceptions of performance musicality. The first study evaluated the impact of three visual expressions (no expression, normal expression, and exaggerated expression) musicians conveyed to viewers while performing. The data indicated that the greater the movement the performer executed, the more significant the impact on the listener's sense of their performance musicality. This study also showed that visual vs. auditory stimuli better influenced the listener's perception of performance musicality. Davidson's second study observed viewers' impressions of performance musicality by measuring the size of a pianist's movements. Once again, more significant exaggerations of movement exhibited increased viewers' perceived performance musicality. Also, nonmusician viewers relied more heavily on the visual aspects of performance than musician-viewers.[102]

Performance Anxiety

Kenny stated, "The relationship between a performer and his audience is a very personal experience that arises through a complex interaction between the musician, his past experiences,

[101] Jay Juchniewicz, "The Influence of Physical Movement on the Perception of Musical Performance," *Psychology of Music* 36, no. 4 (2008): 424-425.

[102] Eric Clarke and Jane Davidson, "The Body in Performance," in *Composition, Performance, Reception*, ed. Wyndham Thomas (New York, NY: Routledge, 1998), 74-78.

the current performing context, and the nature of the audience."[103] Performance anxiety has been a common stressful component for athletes and performing artists. Many musicians read sports psychology books such as *The Mental Athlete, Mental Toughness, The Inner Game of Tennis*, and *The Inner Game of Golf* to gain skills to lessen performance anxiety and enhance performance. *The Inner Game of Tennis* by Timothy Gallwey gained so much attention from musicians that bassist Barry Green wrote *The Inner Game of Music*. Former sports psychologist Dr. Don Greene began his career coaching Olympic swimmers about the mental aspects of competition. Later, Greene began to coach musicians on alleviating performance anxiety and continued to write many books such as *Performance Success*, *Audition Success*, and *Fight Your Fear and Win*. All of these books are concerned with conquering the mental aspects of performance anxiety.

Mental Aspects of Performance Anxiety

Performance anxiety for many musicians contains what Green called "mental interference."[104] Mental interference is the internal obstacle that creates negative feedback. This internal dialogue in one's mind has been coined self-talk. Self-talk can be negative or positive, although primarily negative when experiencing performance anxiety. Sparrow explained that the most common detriment to flutists auditioning for orchestras was their lack of mental preparation.[105]

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[103] Dianna Kenny, *The Psychology of Music Performance Anxiety* (New York, NY: Oxford, 2011), 2.

[104] Green, *The Inner Game of Music*, 6.

[105] Sharon Sparrow, *Six Weeks to Finals* (Malvern, PA: Theodore Presser Company, 2016), 51.

Concentration and Distraction

Greene explained that concentration was crucial to performing at an optimal state and that everyone experienced distraction while performing. Greene identified three elements within concentration: (a) intensity of focus, (b) presence of focus, and (c) duration of focus. All three elements were needed to perform using one's highest concentration level. Intensity of focus represented how intensely one could focus in the moment. Intensity of focus required much energy. Presence of focus represented a measurement of the time one could keep their focus in the moment. It represented living in the here and now. Duration of focus measured the amount of time one could sustain their focus. Greene explained that the average adult maintained an attention span of four to seven seconds before distraction occurred. Even Asian masters of concentration only held a time of twelve seconds. The mastery of all three elements of concentration allowed the performer to focus solely on the task and live in the moment. This mastery required dedicated practice to acquire this level of concentration.[106]

Greene suggested a plan of action to obtain an excellent skill level in these three concentration elements. This plan of action began with creating an individual's mental boundary. Mental boundaries provided a fortress or shield surrounding the musician while performing. Mental boundaries protect the musician from distractions, allowing the mind to focus entirely in the moment. Suggestions of mental boundaries musicians could visualize were rings of fire, moats containing alligators, and a group of lions facing the audience. Next, the musician gathered sources of distraction (ex., cupcakes, radio or television sounds) to create a mental disruption while practicing. Using the sense of mental boundary, the musician practiced

[106] Don Greene, *Performance Success: Performing Your Best Under Pressure* (New York, NY: Routledge, 2002), 79-84.

observing the duration of their concentration level. The exercise was repeated, maintaining more extended periods of duration and acquiring a higher skill level of concentration.[107]

Are We Taught That Movement Causes Distraction While Performing?

Wye wrote, "Excessive movement can be distracting and even appear silly."[108] Wye explained that movement during a performance was appropriate only if it reflected the emotional content of the music and did not detract from it. He explained that the entire performance was about the music itself. Wye stated that orchestra dress codes were black "to take away the attention from both the stage and performers and to help the audience concentrate on the music."[109]

The Origins of Specified Movements Practiced in *The Flute Scale Book*

Coauthor Patricia George of *The Flute Scale Book* initially procured ideas to incorporate movement into flute exercises of her book from Robert Gerle's book *The Art of Practicing the Violin*. Gerle's book incorporated choreography of bowing patterns to establish expressive gestures in music. Gerle notated down-bows for down-beats and up-bows for up-beats. The down-bows were "more naturally suited to express the emphatic character of a heavy beat, as the up-bow is to a light beat."[110] George incorporated the down-bow and up-bow from Gerle's pedagogy to teach musical lines in her pedagogical series of flute books. George used the down-bow notation to signify a down motion with the flute and an up-bow notation to represent an up motion. George also added forward and back motions into the exercises as well. The

[107] Greene, *Performance Success*, 70-75.

[108] Wye, *Flute Secrets*, 99.

[109] Ibid.

[110] Robert Gerle, *The Art of Practising the Violin* (London, England: Strainer and Bell, 1983), 57.

forward/backward movement was practiced by shifting the weight to the left foot while moving forward and the weight to the right foot while moving backward. The movement was practiced in a rocking motion instead of turning at the waist. Besides the use of movement for teaching musical lines, George felt that "movement is healthy for musicians, and lack of movement promotes tension and perhaps eventually injury."[111]

Summary

The role of kinesthetic movement and its impact on performance musicality and anxiety has evolved throughout history. Greater acceptance of various somatic practices in the West has allowed the advancement of nondualistic theories to enter flute pedagogies and performance practices. Achieving a greater understanding of the components of self-talk and concentration has provided great resources and guidance toward mastering mental aspects of performance anxiety. Awareness of audiences' visual perceptions of movement during instrumental playing allowed musicians to thoughtfully allocate movements for more musical performances.

[111] Patricia George, "Teaching Informed Movement," *Flute Talk Magazine* 35, no. 2 (2013): 34-36.

Chapter Three: Methodology

Introduction

This chapter discusses the research design of this study as well as the method of investigation. This chapter also examines the selection and number of participants, research setting, and procedure in detail and includes a complete description of how the data were analyzed. This case study examined the impact of kinesthetic movement on flute performance musicality in undergraduate university students. This researcher encourages future analysis and continued research of the subject.

Design

The design of this research employed a case study methodology. Mcleod stated, "Case studies are in-depth investigations of a single person, group, event or community. Typically, data are gathered from a variety of sources and by using several different methods."[112] A case study was the most appropriate method for this research, for it provides a more extensive exploration of research concerning a small group of participants that could not be evaluated as thoroughly with a larger participant pool.[113] This study was conducted within a specific timeframe and space. Miles, Huberman, and Saldana described this as "a phenomenon of some sort in a bounded context."[114] Case studies offer more outstanding "transferability" and provide the researcher with various forms of data collecting arenas.[115] The data collected in this case study

[112] Saul A. McLeod, "Case Study Method," *Simply Psychology*, accessed Feb. 25, 2022, https://www.simplypsychology.ord/case-study.html.

[113]Ibid.

[114] Matthew B. Miles, A.M. Huberman, and Johnny Saldana, *Qualitative Data Analysis: A Methods Sourcebook* (Thousand Oaks, CA: Sage, 2014), 28.

[115] Kurt Schoch, *Research Design and Methods* (Thousand Oaks, CA: Sage, 2020), 246.

used five-point Likert-scale questionnaires, open-ended questions, video recordings, and a focus group session.

A Likert scale is a "rating system, used in questionnaires, designed to measure people's attitudes, opinions, or perceptions. Subjects choose from a range of possible responses to a specific question or statement; responses typically include 'strongly agree,' 'agree,' 'neutral,' 'disagree,' and 'strongly disagree.'" Often, the response categories are coded numerically, so the numerical values must be defined for that specific study, such as 1 = strongly agree, 2 = agree, and so on. The Likert scale was named after American social scientist Rensis Likert, who devised the approach in 1932. [116]

Research Questions and Hypotheses

The researcher addressed the following research questions and hypotheses in this study:

RQ1: How can specific kinesthetic movements affect flute performance in undergraduate university flute students?

H1: Specific kinesthetic movements can affect flute performance musicality in undergraduate university students by creating heightened kinesthetic awareness, muscle relaxation, concentration, and positive self-talk.

RQ2: How can one explore specific kinesthetic movement effects on flute performance musicality in undergraduate university flute students?

H2: One can explore specific kinesthetic movement effects on flute performance musicality in undergraduate university flute students by practicing assigned movements with exercises; noticing if movements cause an audible, visual, and personal perception difference in musicality; concentration; and promoting positive self-talk.

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[116] Britannica, s.v. "Likert Scale," accessed Oct. 4, 2021, https://www.britannica.com/topic/Likert-Scale.

Participants

This case study used purposeful sampling in its selection of participants. Schoch described the goal of purposeful sampling as finding "individuals or cases that provide insights into the specific situation under study, regardless of the general population."[117] In this study, the researcher selected three undergraduate university flute students as participants and three trained evaluators. All three trained evaluators are university professors in the CSU's Horton School of Music and are skilled music educators. Participation in the research was voluntary, and all participants were free to leave the research at any time without consequence.

Setting

This case study research location was the CSU Whittington Hall, Room 109. The room was the piano lab, filled with several rows of electronic pianos. An iPad on a tripod was placed in front of the room by the chalkboard. Each flutist performed facing the video recording device with a music stand angled slightly to the left so their entire body could be in view. The video-recorded research occurred between 8:00–8:30 pm on April 4, 11, 18, and 25, 2022. Each flute student performed a ten-minute window with the other flute student participants present. At the end of each weekly session, the researcher emailed each flute student participant a questionnaire containing a set of Likert-scale questions plus two open-ended questions. The questionnaires were returned via email to the researcher by the following Friday (April 8, 15, 22, and 29, 2022). One video-recorded focus group session for flute student participants was scheduled in CSU's Whittington Hall from 8:30–9:30 pm on April 25, 2022.

Before the above video-recorded research, the trained evaluators completed a thirty-minute evaluator training session meeting on April 3, 2022 at CSU. Each trained evaluator then

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[117] Schoch, *Research Design and Methods*, 249.

received weekly thirty-minute video recordings from the flute participant sessions to evaluate on April 5, 12, 19, and 26, 2022. Each trained evaluator received a weekly questionnaire identical to the flute student participant's five-point Likert-scale questionnaires, completed by April 8, 15, 22, and 29, 2022, respectively.

Procedures

The researcher applied to the Institutional Review Board (IRB) at Liberty University and CSU. The American Psychological Association defined an IRB as "a committee within a university or other organization receiving federal funds to conduct research that reviews research proposals."[118] This case study required an IRB review, for it engaged the use of video recording of human subjects. Upon receiving IRB approval from both institutions, the researcher began the case study research recruitment and procedures as provided below.

Procedures and Recruitment of Trained Evaluators

The researcher conducted case study research at CSU's Horton School of Music. Three trained evaluators were selected from the university. All were university professors at the CSU's Horton School of Music and skilled music educators. On April 3, 2022, the three chosen evaluators met for a training meeting and signed their consent forms to participate in the research. Signing the form indicated that the participant had read the consent information and agreed to participate in the survey. The researcher explained the requirements to the research participants in great detail. Each trained evaluator received four separate thirty-minute video-recorded sessions over one month. Each trained evaluator viewed each video and was required to fill out a weekly questionnaire complete with five-point Likert-scale questions and two open-

[118] "Privacy Policy," Privacy & Terms, American Psychological Association, last modified March 3, 2022, https://www.apa.org/advocacy/research/defending-research/review-boards.

ended questions. The evaluators completed the questionnaires and sent them to the researcher via email. All trained evaluators promised complete confidentiality of all video-recorded material and not to share video-recorded material with anyone. Trained evaluators also promised the complete anonymity of all research participants. It took the trained evaluators approximately five weeks to complete the procedures listed. The researcher explained that names and other identifying information would be requested as part of this study, but the information would remain confidential. To protect anonymity, all participants were given a pseudonym in data collection and in the written dissertation/thesis. To ensure confidentiality, the data from this research were not shared with the other evaluators and were stored in an encrypted password file within three years of the completion of the research.

Procedures and Recruitment of Research Participants

Three undergraduate flute students from CSU were selected as participants for this research study. The researcher gave the flute students consent forms to sign regarding participation on April 4, 2022. Signing the form indicated that the participant had read the consent information and agreed to participate in the study. The researcher explained that all participation was voluntary and the students could leave the research study at any time without consequence. Participation or lack of participation had no relevance to their grades at the university.

The researcher explained the requirements of the research in detail. Each participant participated in a thirty-minute weekly research session (8:00–8:30 pm) on April 4, 11, 18, and 25, 2022 in the CSU's Whittington Hall. Each participant agreed to be video recorded on an iPad in front of the other research participants during each thirty-minute session performing the required flute repertoire with and without specified movements. Movements comprised of both

up and down movements and forward and back movements using the flute. As provided by the researcher, all required music selections were found in *The Flute Scale Book* by Phyllis George and Patricia Avidian Louke. The up and down movements were executed as notated in the book. The researcher altered the forward and back movements from the author's directions. Instead of a weight-shifting motion, the researcher had the flutists rotate forward and back from the waist, figuratively envisioning a clock's hands in fifteen-minute increments. Each participant performed for ten minutes and was required to stay for the entire thirty-minute allocated time, listening to the other participants perform. Each participant prepared the assigned flute repertoire material prior to each research session. Each participant agreed to allow the video-recorded material to be viewed weekly by three trained university evaluators for review. Each participant filled out and submitted via email weekly Likert-scale questionnaires containing two open-ended questions by Friday of each week.

Finally, each participant participated in a focus group research session on April 25, 2022 from 8:30–9:30 pm. The research took approximately four weeks to complete. Names and other identifying information were requested for this study, but the information remained confidential. To protect anonymity, all participants were given a pseudonym in data collection and in the written dissertation/thesis. To ensure confidentiality, the data from this research were not shared with the other evaluators and were stored in an encrypted password file that was deleted on March 26, 2022. Each participant received $100 for the complete research project (April 4–25, 2022). The researcher provided the money.

Instrumentation

The researcher developed the survey instrument implemented for this case study. Below is a list of five-point Likert-scale, open-ended, and focus group questions presented by research participants and trained evaluators.

Weekly Five-Point Likert-scale Questions for Both Trained Evaluators and Research Participants

1. Performing without movement created a more musical performance by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors).
2. Performing with movement made the performance sound more musical by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors).
3. Performing with movement created a visual distraction from the music performance.
4. The performer seemed more confident when moving.
5. The performer seemed to be distracted while performing without movement.
6. The performer seemed to concentrate better when moving while performing.
7. The performer seemed more nervous when performing without movement.

Weekly Open-Ended Research Questions for Trained Evaluators

1. Can you identify a difference in the flutist's musicality between the performances without movement and ones with movement today? If so, please describe the difference.
2. Does the flutist appear to be nervous while performing with movement or without movement today? If so, describe what you perceive.

Weekly Open-Ended Research Questions for Research Participants

1. Do you feel your performances were more musical without or with movement? Please explain why or why not.

2. Did you experience self-talk while performing with and/or without movement today? If so, describe your self-talk. For instance, what words were you thinking?

Focus Group Questions for Participants

1. Do you feel performing with movement made a difference in how musically you played? If so, why?
2. Did you feel nervous or distracted while performing in front of the other flutists?
3. Did you encounter any self-talk (negative or positive) while performing? If so, did the self-talk happen when you were performing with or without movement (or both)?
4. Did you feel that performing with movement helped your concentration?
5. Do you feel it is helpful to perform using movement?
6. Will you incorporate movement into your future performances?
7. Did you feel movements while performing helped negate negative self-talk?

Data Analysis

The researcher collected multiple sources of data for this case study. This case study included a mixed-methods approach (qualitative/quantitative). The researcher analyzed peer-reviewed books, journals, magazines, and dissertations through qualitative analysis. Quantitative analysis was conducted by research utilizing human participants. Weekly video recordings of flute students were provided for evaluation by the trained evaluators. Also, identical weekly five-point Likert-scale questionnaires were given to the flute student participants and trained evaluators. Psychologist Rensis Likert invented Likert-scale questionnaires in 1932 to measure "people's opinions or attitudes on a variety of items."[119] In this case study, the five-point Likert-

[119] "Privacy Policy," Privacy & Terms, Question Pro, last modified March 3, 2022, https://www.questionpro.com/blog/rensis-likert-and-the-likert-scale/.

scale provided the options strongly disagree, disagree, neutral, agree, and strongly agree. The negative options were listed first to help avoid bias. Trained evaluators and research participants were given a different set of weekly open-ended questions. Lastly, the researcher evaluated a video-recorded focus group session of the flute student participants with a set of discussion questions for further data. The researcher identified an emergence of findings through possible similarities or patterns found in questionnaire answers. Comparisons concerning the various data sources were applied to the data analysis. The researcher recorded data analysis using an Excel spreadsheet.

Chapter Four: Results

Introduction

This case study aimed to examine whether kinesthetic movement elevated flute performance musicality by heightening concentration and decreasing negative self-talk in undergraduate university flute students. This study also sought to provide insight concerning a possible connection between self-talk and kinesthetic movement, exploring its effects. The following research questions were presented for this study:

1. How can specific kinesthetic movements affect flute performance musicality and performance anxiety in undergraduate university flute students?
2. How can one explore specific kinesthetic movement effects on flute performance musicality and performance anxiety in undergraduate university flute students?

This chapter presents the results and discusses the major themes that emerged from the data collection results. Data were collected through weekly five-point Likert-type scale questionnaires, open-ended questions, and one focus group session.

Summary of the Study Location and Research Participants/Trained Evaluators

The researcher conducted this case study at Charleston Southern University (CSU), located in North Charleston, South Carolina. CSU is a private university affiliated with the South Carolina Baptist Convention. It is the only Christian university in Charleston, SC. CSU's primary student racial demographic is approximately 60 percent White, 20 percent Black, and 10 percent other (Asian, Hispanic, multiracial), ranking the university above average in racial minority demographics. CSU’s gender demographics contain more females than males, both as students

and faculty members.[120] For this study, all research participants (flutists) and trained evaluators were White in ethnicity. All research participants (flutists) were female in gender, yet the gender of the trained evaluators was male and female. The mean age of the research participants (flutists) was approximately nineteen years old, and the mean age of the trained evaluators was approximately fifty-two years. The research participants' (flutists) mean years of flute-playing experience was approximately ten years. All three flutists were undergraduate flute students at CSU. All three trained evaluators were full-time professors in the CSU's Horton School of Music and specialists in music education. Pseudonyms were used for all research participants (Flute 1, Flute 2, Flute 3) and trained evaluators (Evaluator 1, Evaluator 2, Evaluator 3).

Findings

Descriptive Statistics for Research Participants' Self-Evaluation Scores

Table 1: Overall Statistics for Research Participants (Flutists) Five-Point Likert-type Scale Survey Data

		FQ1	FQ2	FQ3	FQ4	FQ5	FQ6	FQ7
N	Valid	12	12	12	12	12	12	12
Mean		2.92	4.25	2.83	4.08	2.58	4.08	3.50
Median		3.00	4.00	3.00	4.00	2.00	4.00	3.00
Std. Deviation		1.084	.452	.835	.515	.793	.515	.674
Minimum		1	4	2	3	2	3	3
Maximum		5	5	4	5	4	5	5

Table 1 provides statistics for participants' self-evaluation scores. Separate columns represent each of the seven questions. FQ represents Flute Question, followed by the numerical

[120] "Privacy Policy," Privacy & Terms, College Factual, last modified May 23, 2022, https://www.collegefactual.com/colleges/charleston-southern-university/student-life/diversity/#gender_diversity.

value representing the question number. These statistics combine the four separate surveys completed over four weeks.

Reliability of Survey Data

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.331	28

Cronbach's Alpha was utilized to establish the internal consistency of the five-point Likert-type scale survey responses. The Cronbach Alpha score was .331. Although the Cronbach Alpha score is somewhat low, this case study collected multiple data sources from survey instruments (five-point Likert-type scale surveys, open-ended questions, and focus group questions). This study also displayed collective coding to examine a cross-comparison between the student and evaluator data in words and numbers over time.

Research Question 1 – Performance Musicality and Anxiety

RQ1: How can specific kinesthetic movements affect flute performance in undergraduate university flute students?

H1: Specific kinesthetic movements can affect flute performance musicality in undergraduate university students by creating heightened kinesthetic awareness, muscle relaxation, concentration, and promoting positive self-talk.

Research Participants' (Flutists) Five-Point Likert-type Scale Questions and Responses

The five-point Likert-type scale rating ranged from one (strongly disagree), two (disagree), three (neutral), four (agree), and five (strongly agree). Data were viewed by

combining all three research participants' (Flutists) weekly survey scores over four weeks to obtain twelve survey results.

Five-Point Likert-type Scale Question 1 (FQ1)

FQ1: Performing without movement created a more musical performance by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors.)

Table 3: FQ1 (Expression)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	8.3	8.3	8.3
	2	3	25.0	25.0	33.3
	3	5	41.7	41.7	75.0
	4	2	16.7	16.7	91.7
	5	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

Table 3 illustrates participants' responses to FQ1. Ratings ranged between one and five. The most frequently recorded response to FQ1 was three (neutral), 41.7 percent (n = 5). The least frequent reported responses were one (strongly disagree) and five (strongly agree), both 8.3 percent (n = 1).

Five-Point Likert-type Scale Question 2 (FQ2)

FQ2: Performing with movement made the performance sound more musical by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors).

Table 4: FQ2 (Sound)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	9	75.0	75.0	75.0
	5	3	25.0	25.0	100.0

	Total	12	100.0	100.0

Table 4 illustrates participants' responses to FQ2. Ratings ranged between four and five, with no ratings of one, two, or three. The most frequently recorded response to FQ2 was four (agree), 75 percent (n = 9). Fewer participants reported a score of five (strongly agree), 25 percent (n = 3).

Five-Point Likert-type Scale Question 3 (FQ3)

FQ3: Performing with movement created a visual distraction from the music performance.

Table 5: FQ3 (Visual Distraction with Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	5	41.7	41.7	41.7
	3	4	33.3	33.3	75.0
	4	3	25.0	25.0	100.0
	Total	12	100.0	100.0	

Table 5 illustrates participants' responses to FQ3. Ratings ranged between two and four, with no ratings of one, three, or five. The most frequently recorded response to FQ3 was two (disagree), 41. 7 percent (n = 5). The least frequently reported response was four (agree), 25 percent (n = 3).

Five-Point Likert-type Scale Question 4 (FQ4)

FQ4: The performer seemed more confident when moving.

Table 6: FQ4 (Confidence with Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	8.3	8.3	8.3
	4	9	75.0	75.0	83.3
	5	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

Table 6 illustrates participants' responses to FQ4. Ratings ranged from three to five, with no ratings of one or two. The most frequently recorded response to FQ4 was four (agree), 75 percent (*n* = 9). The least frequently response was three (neutral), 8.3 percent (*n* = 1).

Five-Point Likert-type Scale Question 5 (FQ5)

FQ5: The performer seemed to be distracted while performing without movement.

Table 7: FQ5 (Distracted without Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	7	58.3	58.3	58.3
	3	3	25.0	25.0	83.3
	4	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

Table 7 illustrates participants' responses to FQ5. Ratings ranged between two to four, with no ratings of one or five. The most frequently recorded response to FQ5 was two (disagree), 58.3 percent (*n* = 7). The least frequently reported response was four (agree), 16.7 percent (*n* = 2).

Five-Point Likert-type Scale Question 6 (FQ6)

FQ6: The performer seemed to concentrate better when moving while performing.

Table 8: FQ6 (Concentration with Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	8.3	8.3	8.3
	4	9	75.0	75.0	83.3
	5	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

Table 8 illustrates participants' responses to FQ6. Ratings ranged from three to five, with no ratings of one or two. The most frequently recorded response to FQ6 was four (agree), 75 percent (*n* = 9). The least frequently recorded response was three (neutral), 8.3 percent (*n* = 1).

Five-Point Likert-type Scale Question 7 (FQ7)

FQ7: The performer seemed more nervous when performing without movement.

Table 9: FQ7 (Nervous without Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	7	58.3	58.3	58.3
	4	4	33.3	33.3	91.7
	5	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

Table 9 illustrates participants' responses to FQ7. Ratings ranged from three to five, with no ratings of one or two. The most frequently recorded response to FQ7 was three (neutral), 58.3 percent (*n* = 7). The least frequent recorded response was five (strongly agree), 8.3 percent (*n* = 1).

Descriptive Statistics for Evaluators Scores

Table 10: Overall Statistics Evaluators Mean, Five-Point Likert-type Scale Survey Data

	EQ1M	EQ2M	EQ3M	EQ4M	EQ5M	EQ6M	EQ7M

N	Valid	12	12	12	12	12	12	12
Mean		1.8917	4.1700	2.5867	4.1150	2.6717	3.7525	3.0308
Median		1.8350	4.1700	2.5050	4.1700	2.5050	3.8350	3.0000
Std. Deviation		.26003	.39003	.60646	.41064	.65041	.37880	.55903
Minimum		1.67	3.67	1.67	3.34	2.34	3.00	2.00
Maximum		2.34	4.67	3.34	4.67	4.67	4.34	4.00

Table 10 provides the evaluator mean scores of the five-point Likert-type scale survey data for each question. Separate columns represent each of the seven questions. EQ represents Evaluator Question, followed by the numerical value representing the question number. These statistics combine the four separate surveys completed over four weeks.

Evaluator Five-Point Likert Scale Question 1 (EQ1)

A five-point Likert-type scale ranged from one (strongly disagree), two (disagree), three (neutral), four (agree), and five (strongly agree). Data were calculated by combining all three evaluators' weekly survey scores over four weeks to obtain a total of twelve survey results.

Five-Point Likert-Scale Question 1 (EQ1)

EQ1: Performing without movement created a more musical performance by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors.)

Table 11: EQ1M (Expression)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.67	6	50.0	50.0	50.0
	2.00	4	33.3	33.3	83.3
	2.34	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

Table 11 illustrates mean evaluator scores concerning EQ1. Average ratings ranged between 1.67 (*n* = 6) and 2.34 (*n* = 2). The most frequently reported average rating of 1.67 (*n* = 6) indicated the evaluators disagreed that performing without movement created a more musical performance.

Five-Point Likert-type Scale Question 2 (EQ2)

EQ2: Performing with movement made the performance sound more musical by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors).

Table 12: EQ2M (Sound)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.67	3	25.0	25.0	25.0
	4.00	3	25.0	25.0	50.0
	4.34	3	25.0	25.0	75.0
	4.67	3	25.0	25.0	100.0
	Total	12	100.0	100.0	

Table 12 reveals mean evaluator scores concerning EQ2. Average ratings ranged between 3.67 (*n* = 3) and 4.67 (*n* = 3). Average scores of 3.67, 4.0, 4.34, and 4.67 possessed the same frequency of responses (*n* = 3). The range of scores indicated that evaluators both agreed and strongly agreed that performing with movement enhanced musicality.

Five-Point Likert-type Scale Question 3 (EQ3)

EQ3: Performing with movement created a visual distraction from the music performance.

Table 13: EQ3M (Visual Distraction with Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.67	1	8.3	8.3	8.3

	2.00	3	25.0	25.0	33.3
	2.34	2	16.7	16.7	50.0
	2.67	1	8.3	8.3	58.3
	3.00	2	16.7	16.7	75.0
	3.34	3	25.0	25.0	100.0
	Total	12	100.0	100.0	

Table 13 illustrates mean evaluator scores concerning EQ3. Average ratings ranged between 1.67 (*n* = 1) and 3.34 (*n* = 3). Average scores of 2.00 and 3.34 possessed the same frequency of responses (*n* = 3). Average scores of 2.34 and 3.00 had the same response frequency (*n* = 2). Average scores of 1.67 and 2.67 had the same response frequency (*n* = 1). Based on these data, strongly disagree to neutral ratings, the evaluators did not feel movement created a visual distraction.

Five-Point Likert-type Scale Question 4 (EQ4)

EQ4: The performer seemed more confident when moving.

Table 14: EQ4M (Confidence with Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.34	1	8.3	8.3	8.3
	3.67	2	16.7	16.7	25.0
	4.00	3	25.0	25.0	50.0
	4.34	4	33.3	33.3	83.3
	4.67	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

Table 14 reveals mean evaluator scores concerning EQ4. Average ratings ranged between 3.34 (*n* = 1) and 4.67 (*n* = 2). The most frequently reported average rating of 4.34 (*n* = 4)

indicated the evaluators agreed the performers seemed more confident performing with movement.

Five-Point Likert-type Scale Question 5 (EQ5)

EQ5: The performer seemed to be distracted while performing without movement.

Table 15: EQ5M (Distracted without Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.34	6	50.0	50.0	50.0
	2.67	5	41.7	41.7	91.7
	4.67	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

Table 15 illustrates mean evaluator scores concerning EQ5. Average ratings ranged between 2.34 (n= 6) and 4.67 (n = 1). The most frequently reported average rating of 2.34 (n = 6) and second most frequently reported average of 2.67 (n = 5) indicated the evaluators did not think performers seemed distracted performing without movement.

Five-Point Likert-type Scale Question 6 (EQ6)

EQ6: The performer seemed to concentrate better when moving while performing.

Table 16: EQ6 (Concentration with Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	8.3	8.3	8.3
	4	9	75.0	75.0	83.3
	5	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

Table 16 reveals mean evaluator scores concerning EQ6. Average ratings ranged between three (*n* = 1) and five (*n* = 2). The most frequently reported average rating of four (n = 9) indicated the evaluators agreed performers concentrated better performing with movement.

Five-Point Likert-type Scale Question 7 (EQ7)

EQ7: The performer seemed more nervous when performing without movement.

Table 17: EQ7 (Nervous without Movement)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	7	58.3	58.3	58.3
	4	4	33.3	33.3	91.7
	5	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

Table 17 illustrates mean evaluator scores concerning EQ7. Average ratings ranged between three (n = 7) and five (n = 1). The most frequently reported average rating of three (n = 7) indicated the evaluators had a neutral opinion regarding flutists' nervousness when performing without movement.

Research Question 2 - Exploration

RQ2: How can one explore specific kinesthetic movement effects on flute performance musicality in undergraduate university flute students?

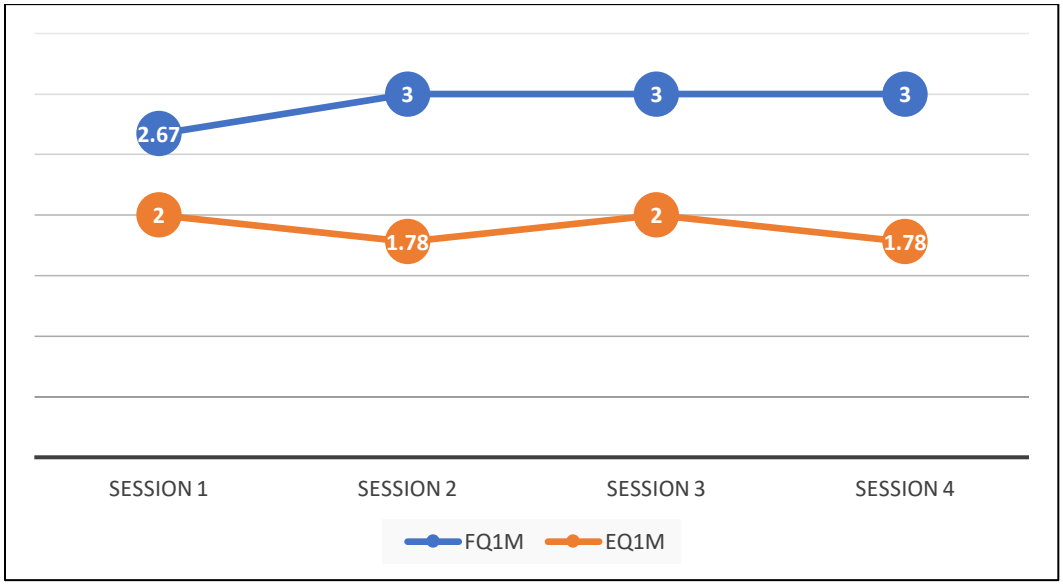
H2: One can explore specific kinesthetic movement effects on flute performance musicality in undergraduate university flute students by practicing assigned movements with exercises, noticing if movements cause an audible, visual, and personal perception difference in musicality, concentration, and promoting positive self-talk.

Statistical Comparison of Flute Student and Evaluator Responses

The following Figures (1–7) illustrate the statistical comparison of data between flute students and evaluators as reported after four individual sessions over one month. Each score is an average or mean for a specific question, session, and group. Each figure displays the mean flute student scores in blue and corresponding mean evaluator scores in orange.

Figure 1

Expression



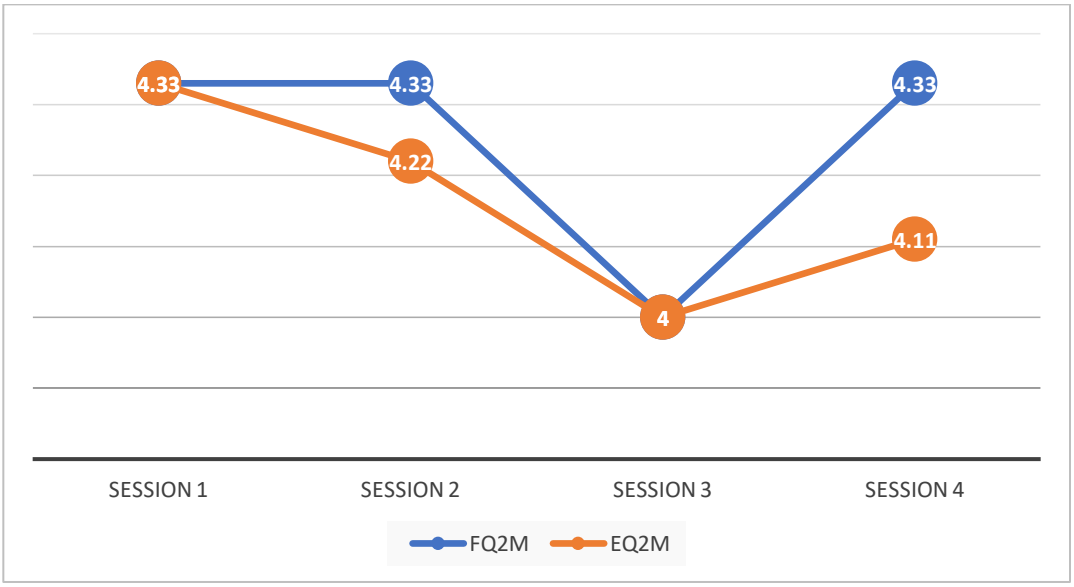
Note. Performing without movement created a more musical performance by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors.)

Figure 1 shows the comparison of the average flute student responses (FQ1M) and average evaluator responses (EQ1M) for survey questions over the four individual sessions. The FQ1M data raised from 2.67 (disagree) to a solid three (neutral), as opposed to the EQ1M, which fluctuated between two (disagree) and 1.78 (strongly disagree). The highest increase in the average between the FQ1M and EQ1M was in both sessions 2 and 4 at 1.22. Overall, the FQ1M data were slightly statistically higher over all four sessions than the EQ1M data. This data

established that the evaluators consistently disagreed that performing without movement created a more musical performance, whereas the research participants' data provided neutral responses.

Figure 2

Sound

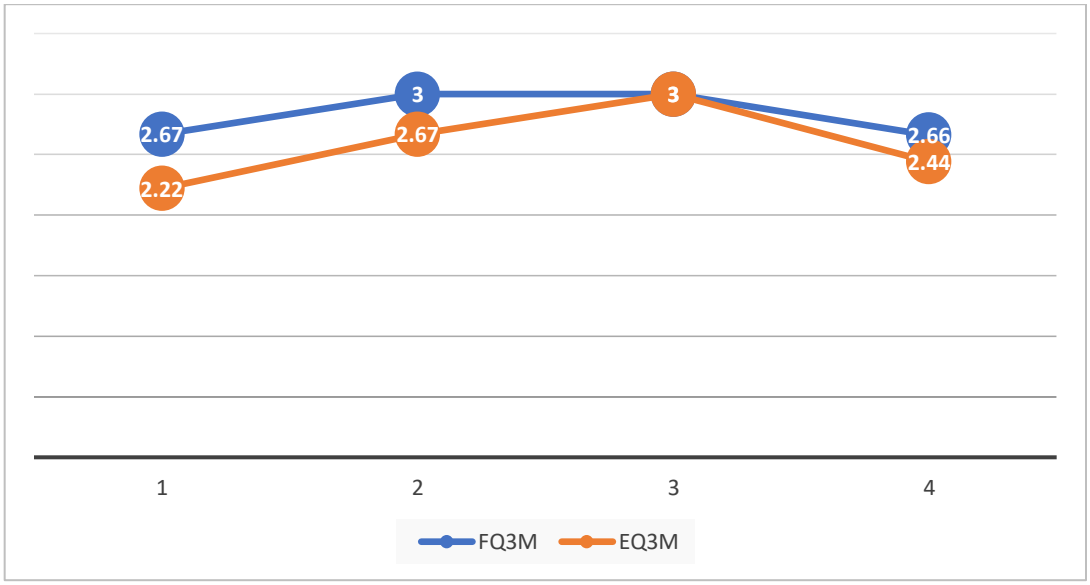


Note. Performing with movement made the performance sound more musical by utilizing expressive elements (phrasing, vibrato, dynamics, and/or tone colors).

Figure 2 shows the comparison of the average flute student responses (FQ2M) and average evaluator responses (EQ2M) for survey question 2 over the four individual sessions. The FQ2M data were primarily a 4.33 (agree) except in session 3, where it slightly lowered to a four (agree). The EQ2M, on the other hand, changed slightly for each session (session 1 = 4.33, session 2 = 4.22, session 3= four, and session 4 = 4.11). Overall, both the FQ2M and EQ2M scored a four (agree) or above, which established that both the flutists and evaluators agreed that performing with movement made the performance sound more musical by utilizing expressive elements throughout all the sessions.

Figure 3

Visual Distraction with Movement

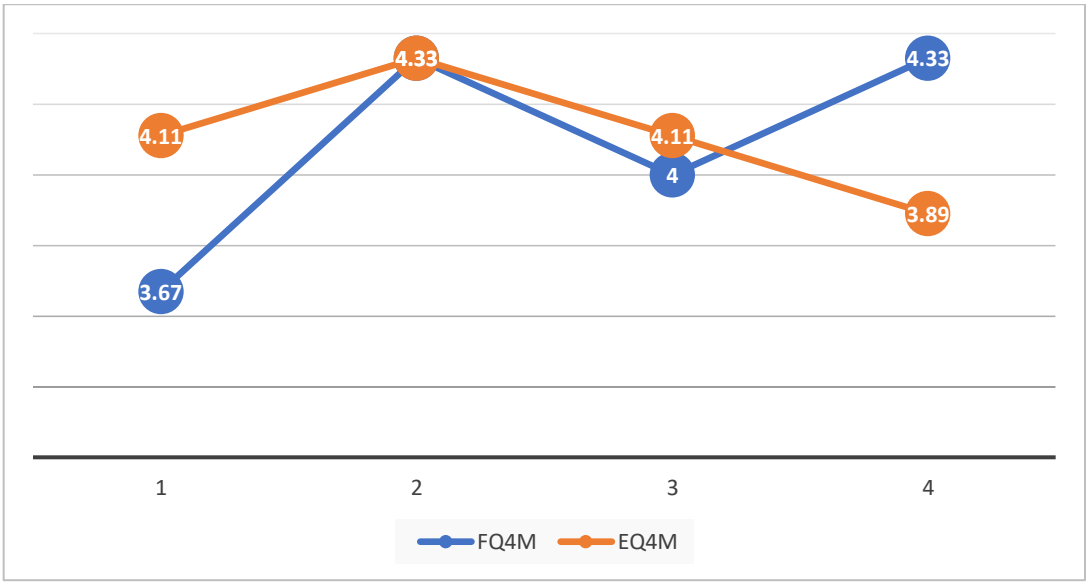


Note. Performing with movement created a visual distraction from the music performance.

Figure 3 shows the comparison of the average flute student responses (FQ2M) and average evaluator responses (EQ2M) for survey question 3 over the four individual sessions. The FQ3M data began in session 1 with a 2.67 (disagree) score rising to a three (neutral) score in sessions 2 and 3 and descending to a 2.66 (disagree) score in session 4. The EQ3M data provided primarily two and above (disagree) scores, except in session 3 when the data rose to three (neutral). Overall, the data exhibited that the evaluators credited movement with creating less visual distraction to the performance than the flutists.

Figure 4

Confidence with Movement

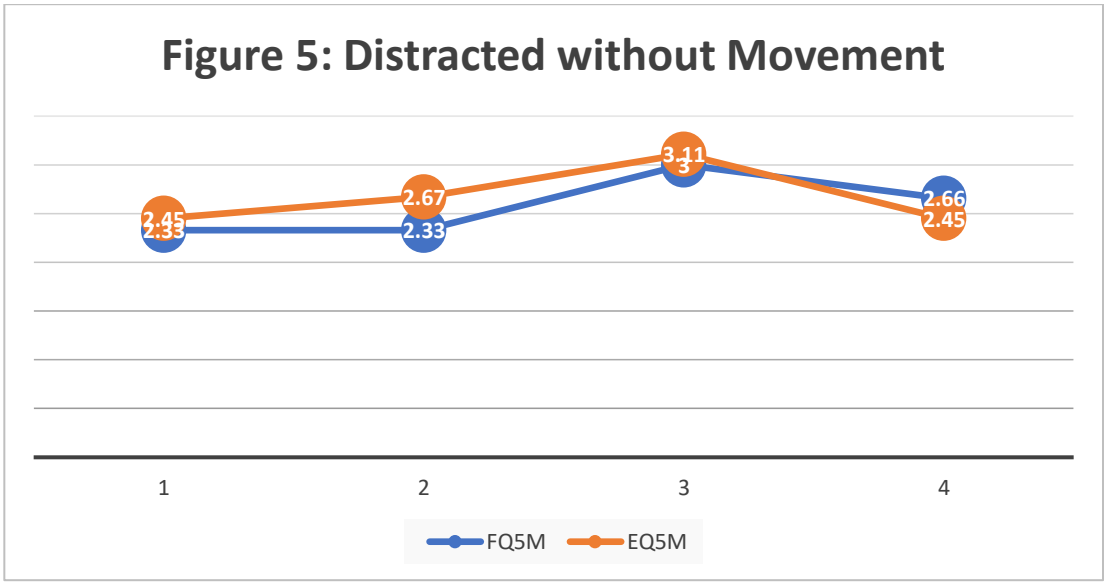


Note. The performer seemed more confident when moving.

Figure 4 shows the comparison of the average flute student responses (FQ2M) and average evaluator responses (EQ2M) for survey question 4 over the four individual sessions. The FQ4M data established that the flutists gained confidence while performing with movement over the four sessions, with a slight decline in score in sessions 3 to 4 (agree). The EQ3M data, though, began in session 1 with a 4.11 (agree), altering slightly in session 2 to 4.33 (agree) and session 3 to 4.11 (agree), yet dropping significantly in session 4 to 3.89 (neutral). These data established that the flutists gained confidence between session 1 and session 4 with the highest increase of the average between these two sessions of .66. The evaluator data are opposite in that they established that the evaluators perceived the flutists' confidence levels dropped between sessions 1 and 4 with a decrease in the average of .22.

Figure 5

Distracted without Movement

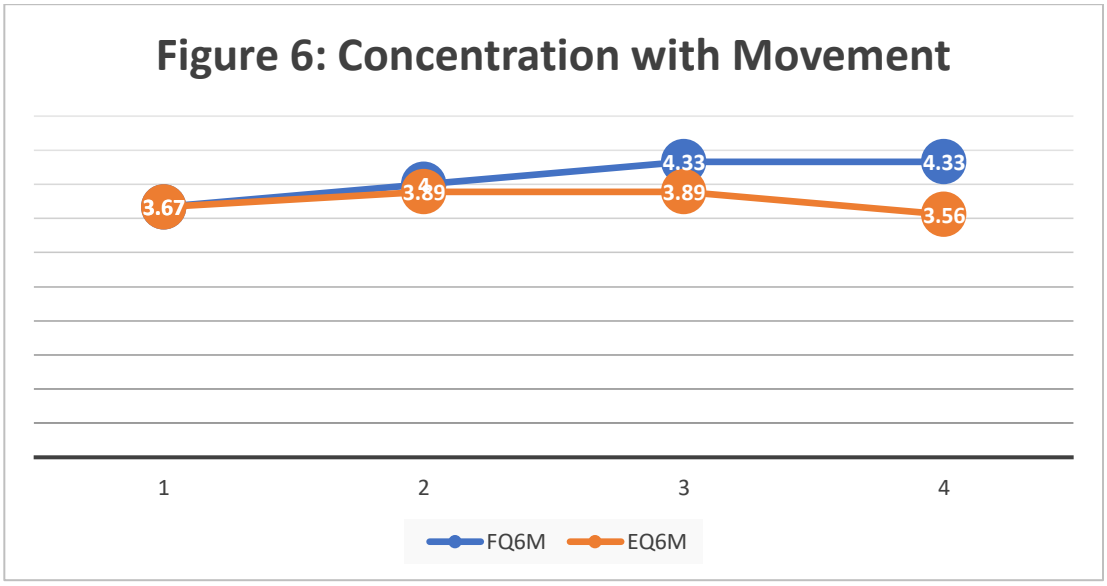


Note. The performer seemed to be distracted while performing without movement.

Figure 5 shows the comparison of the average flute student responses (FQ2M) and average evaluator responses (EQ2M) for survey question 5 over the four individual sessions. The FQ5M and FQ5M overall established that the flutists and evaluators agreed that the flutists did not seem distracted when performing without movement except in session 3, where both the FQ5M and EQ5M data raised to neutral scores.

Figure 6

Concentration with Movement

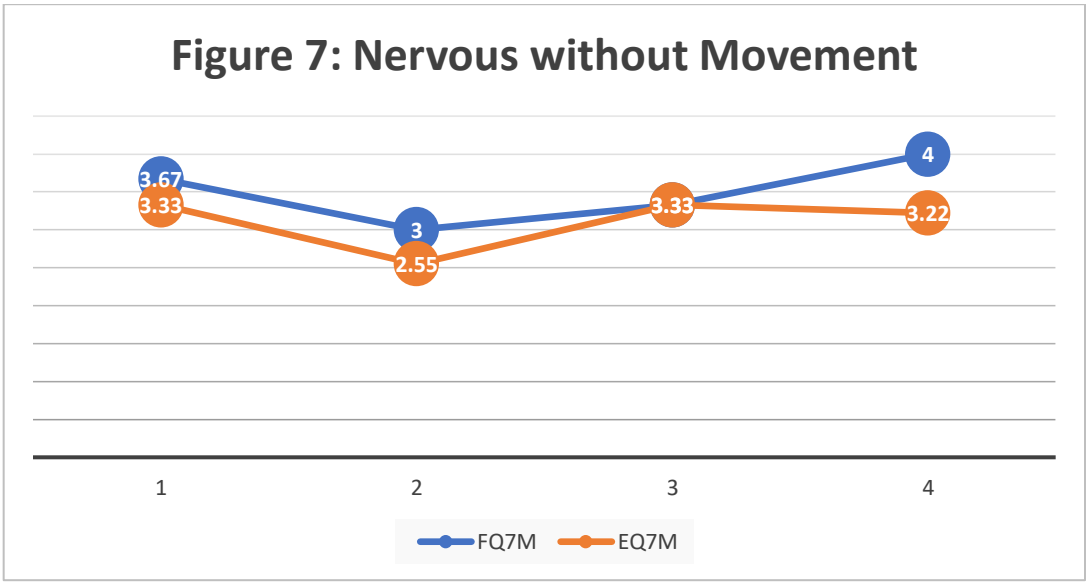


Note. The performer seemed to concentrate better when moving while performing.

Figure 6 shows the comparison of the average flute student responses (FQ2M) and average evaluator responses (EQ2M) for survey question 6 over the four individual sessions. The FQ6M data demonstrated a constant upward trend from session 1 data recorded at 3.67 (neutral), session 2 at four (agree), and sessions 3 and 4 at 4.33 (agree). The EQ6M data began with session 1 recorded at 3.67 (neutral), sessions 2 and 3 at 3.89 (neutral), and session 4 declining to 3.56 (neutral). Overall, the FQ6M and EQ6M both started with 3.67 (neutral) in session 1, but the EQ6M raised to four (agree) in the following sessions, where the EQ6M remained at three (neutral). This data demonstrated that the flutists gained concentration while moving over time, but the evaluators' data declined between sessions 3 and 4.

Figure 7

Nervous without Movement



Note. The performer seemed more nervous when performing without movement.

Figure 7 shows the comparison of the average flute student responses (FQ2M) and average evaluator responses (EQ2M) for survey question 7 over the four individual sessions. The FQ7M data began in session 1 at 3.67 (neutral), declined in session 2 to three (neutral), consistently raised in sessions 3 and 4, ending in session 4 with four (agree). The EQ7M data began in session 1 at 3.33 (neutral), declined in session 2 to 2.55 (disagree), and raised to a neutral score for sessions 3 and 4. Overall, the flutists' data were neutral yet raised to agree by session 4, where the evaluators' data were neutral except in session 2 (disagree).

Research Participants' (Flutists) Responses to Open-Ended Questions

In this case study, the researcher compiled research participants' (flutists) responses from two open-ended questions presented in the weekly questionnaires. Utilizing the Delve software tool to analyze qualitative data, the researcher applied an inductive coding approach, selecting codes from raw data to identify thematic content. The researcher categorized codes by

similarities to produce overall thematic content. The following open-ended question responses were analyzed.

Question 1: Do you feel your performances were more musical without movement or with movement? Please explain why or why not.

Question 2: Did you experience self-talk while performing with movement and without movement today? If so, describe what you perceive.

Research Participants' (Flutists) Open-Ended Themes and Subthemes

Table 18: Research Participants' (Flutists) Open-Ended Themes and Subthemes

Themes	Subtheme
Movement	• With movement • Without movement • Reminders
Anxiety	• Natural and relaxed
Self-talk	• Positive self-talk • Negative self-talk

Table 18 displays three themes and eight corresponding subthemes that emerged from the research participants' (flutists) answers to the open-ended questions. The three themes were movement, anxiety, and self-talk. The first theme, movement, embodied three subthemes: with movement, without movement, and reminders. The second theme, anxiety, was associated with one subtheme: natural and relaxed. The third theme, self-talk, included two subthemes: positive self-talk and negative self-talk.

Movement

Movement and its effects on performance musicality and anxiety was a crucial focus in this research study. The research participants' (flutists) open-ended questions were selected to better understand a possible connection between performing with movement, musicality, and anxiety. For instance, when a flutist performs more musically when moving, is this result connected to a decrease in performance anxiety? If there is a decrease in performance anxiety, is the result related to a reduction of negative self-talk? Therefore, is performance movement linked to better concentration, and why? Is negative self-talk being replaced with positive self-talk when moving?

With Movement

All three research participants (flutists) agreed that performing with movement provided a more musical performance than performing without movement. All flutists connected performing with movement to an increase in feeling more natural and relaxed and having more excellent expressive qualities. For instance, flutist 2 wrote, "I felt more musical with movement because I was able to add a whole new level of expression to my performance." Flutist 3 stated, "I felt that my performances were more musical with the addition of some movement because it made them feel more natural and expressive." Flutist 1 wrote, "I feel more musical when I move while I perform, and it distracts me from my audience!"

Without Movement

Several research participants commented that performing without movement decreased musicality and was difficult to accomplish. Flutist 2 wrote, "It was difficult for me to not move while playing." Flutists connected negative self-talk often with trying to remember not to move.

Flutist 2 also wrote, “My self-talk when I was not supposed to be moving was *Don’t move* because I kept moving when I was supposed to stay still.”

Reminders

Although it was easy to predict the subthemes associated with performing with and without movement from the open-ended questions presented, another subtheme titled *reminders* gave an unexpected variation. Flutist 1 stated, “I was trying to remind myself to move while playing.” Many reminders were also associated with remembering the specific movements identified in the required music, such as *up and down* and *forward and back*. The reminders subtheme was also linked to anxiety. Flutist 1 stated, “I have to remind myself to move because I get so nervous.”

Anxiety

The theme of anxiety surprisingly emerged as a feeling of relaxation when moving while performing. Flutists’ responses did not include the words “nervous” or “not nervous” but instead had the terms “natural and relaxed.” This response made the researcher ponder if moving was producing positive self-talk as “natural and relaxed” as opposed to negative self-talk such as “nervous” or “not nervous.”

Natural and Relaxed

All research participants (flutists) experienced a more natural and relaxed feeling when performing with movement. Flutist 2 wrote, “It feels natural to move around while making music.” Research participants (flutists) often expressed this feeling and aided in a more musical performance. Flutist 3 stated, “I feel that my performances were more musical with movement because having some element(s) of motion while playing the flute made them feel more natural and relaxed.” Flutist 1 wrote, “It makes it feel more natural and helps with phrases.” The flutists

focused overwhelmingly on how natural and relaxed performing with movement made them feel and commented very little on nervousness or lack of nervousness.

Self-Talk

All research participants (flutists) experienced positive and negative self-talk when performing. Flutist 3 stated, “I did experience self-talk while performing with and without movement today, as each time I played, I felt that there were both positive and negative aspects of my performance.” Flutist 2 wrote, “Yes, I did experience self-talk when performing with and without movement today.” The identity of the self-talk took two separate roles in the subthemes of positive and negative self-talk.

Positive Self-Talk

Positive self-talk generally was associated with performing with movement. Self-talk also generated many comments related to performing the required specific movements. Flutist 2 wrote, “When I was moving my brain told me *switch direction, this is the next phrase* and it felt very natural and like I could relax.” As with the other themes and subthemes, a connection between musicality, anxiety, and self-talk seemed prevalent.

Negative Self-Talk

Negative self-talk was more associated with performing without movement. Flutist 2 wrote, “When I was not moving, I was telling myself *don’t move* over and over again because I love to move and get a physical feeling for a phrase.” The researcher noticed that performing without movement appeared to create frustration within the flutists during their performances.

Evaluators’ Responses to Open-Ended Questions

The researcher compiled the evaluators’ responses from two open-ended questions in the weekly questionnaires. Again, utilizing the Delve software tool to analyze qualitative data, the

researcher applied the inductive coding approach to select codes and identify themes. Codes were categorized by similarities to produce overall thematic content. The following open-ended question responses were analyzed.

Question 1: Can you identify a difference in the flutist's musicality between the performances without movement and ones with movement today? If so, please describe the difference.

Question 2: Does the flutist appear to be nervous while performing with movement or without movement today? If so, describe what you perceive.

Evaluators' Open-Ended Themes and Subthemes

Table 19: Evaluators' Open-Ended Themes and Subthemes

Themes	Subtheme
Limitations to Specified Movements	• Repetition • Alterations to movements • Less freedom
Musicality	• Ease • Accuracy • Less musical • More musical
Movement	• With movement • Without movement
Anxiety	

Table 19 represents four emerging themes and thirteen subthemes from the evaluators' open-ended questionnaire responses. The four themes identified were limitations to specified movements, musicality, movement, and anxiety. From the first theme, limitations to specified movements, emerged three subthemes: repetition, alterations to movements, and less freedom. From the second theme, musicality, materialized four subthemes: ease, accuracy, less musical, and more musical. The third theme, movement, contained two subthemes: with movement and without movement.

Limitations to Specified Movements

This case study required the research participants (flutists) to perform specific movements when performing with movement over four separate sessions. The required specific movements were detailed in *The Flute Scale Book* as "down and up," "forward," or "back." Overall, the evaluators credited performing with movement as enhancing performance musicality yet felt the musicality could be developed more by allowing the participants to move freely. The evaluators believed the required specific movements felt unnatural to the research participants' (flutists) performances and thus detracted from their musical experience. Evaluator 1 stated,

> The shaping and musicality of each gesture are more significant when moving. Without moving, the gestures sound more exercise-like and mechanical. This player also wants to move but seems distracted at times by being attentive to realizing the specific movements indicated, and the musicality wanes in those moments. Nevertheless, it is clear she would like to move vs. not move, and the performance is more musical when she does.

Evaluator 3 added, "Some movements improved breath and phrasing for the flutist. It seemed to depend on the correlation of the movement with the type of phrasing."

Repetition

Another limitation discussed was associated with repetition. Every week, each flutist was asked to perform specific exercises first without movement and then with movement. Some evaluators wondered if the mere repetition of the exercise was increasing its musicality because

the performer felt more comfortable the second time. Evaluator 3 wrote, “However, the movement was the second time through each part. That may be a factor. Repetition also affects quality. Easier the second time?”

Alterations to Movements

The evaluators commented that the required specific movements sometimes did not allow the flutists to express the musical phrase effectively. They contemplated altering the movements to provide the flutist with movements to be more successfully aligned with the presented music. Evaluator 1 wrote, “Given that specific movements to be made are indicated in the score, at times her musicality seemed a bit limited by this specific detail (i.e., like she would like to make a different movement than the one specifically indicated in the score), but the movement seemed overall conducive to the musicality.” Evaluator 3 commented, “These movements seemed unrelated to the music and did not enhance the musical elements but were awkward.” Evaluator 1 commented, “It would be interesting to see what movements she would prefer vs. those indicated.”

Less Freedom

Overall, the evaluators preferred the flutists to perform with movement rather than without. They noticed that the flutists embodied less musical freedom without movement. Evaluator 1 stated, “Not moving made the result more ‘stiff’ sounding.” Evaluator 2 wrote, “She did appear more constricted when not moving like she had to actively resist (like a child forced to sit very still).” Less musical freedom was also noticed when performing with the specified movements. Evaluator 2 commented that the flutist was “stiff when doing odd movements.”

Musicality

The evaluators agreed that performance musicality was enhanced in all three flutists when performing with movement. Four subthemes emerged regarding the theme of musicality: ease, accuracy, less musical, and more musical.

Ease

The evaluators believed the flutists appeared more at ease when performing with movement. Evaluator 1 stated, “Overall, she seemed more at ease as well as more expressive when she played with movement.” Like evaluator 1, evaluator 2 implied this feeling of relaxation positively affected performance musicality: “In my opinion, she seemed to relax a bit (and play more expressively) when moving.” Evaluator 1 also commented, “She seemed more at ease with the music and playing with moving.”

Accuracy

Evaluator 3 believed strongly that performing with movement produced more musical accuracy. Phrasing, breath support, correct notes, pitch, and musicality all improved due to the addition of movement. Evaluator 3 wrote, “She had better note accuracy and breath support with movement.” Evaluator 3 indicated that the amount of movement could be critical, stating, “this little movement made her more accurate with breath support.” Evaluator 3 also believed “movement helped pitch and phrasing to be more accurate and musically shaped.”

Less Musical

All evaluators agreed that performing without movement resulted in a less musical performance. Without movement, evaluator 1 noticed “the tone and expressivity seemed much less, drier, more mechanical, with a narrower expressive range/variety.” Evaluator 2 recognized

that there “was a marked difference” in musicality and expression between performances without and with movement.

More Musical

All evaluators felt that performing with movement enhanced performance musicality. Evaluator 2 stated, “When the student moved, the musicality seemed better.” Evaluator 1 wrote, “The flow of the music, the dynamic and expressive range, even things like phrase endings, etc., all are significantly more musical when the player moves.” Evaluator 3 stated, “Movement helped pitch to be more accurate and musically shaped.”

Movement

As with the above results, one can quickly identify that movement encompasses many intertwining themes and subthemes. As stated earlier, all evaluators unanimously felt that performing with movement greatly enhanced performance musicality. All evaluators also believed that performing without movement produced suboptimal results. The evaluators commented more frequently, mentioning the attributes of performing with movement than without. Yet these two subthemes (with and without movement) are essential for distinguishing critical differences between the two.

With Movement

The evaluators mentioned the following items improved when performing with movement: tone, musicality, vibrato, expression, flow of music, dynamics, note accuracy, breath support, pitch, nuance, character, and phrasing. Given the extensive list of improvements, one wonders why musicians perform without movement. As evaluator 1 said, “When moving, the overall musicality is superior.”

Without Movement

All evaluators felt that performing without movement presented inferior results. Evaluators described the results as limiting, less expressive, more mechanical, and exercise-like. Evaluator 1 commented, “When not moving, the expression, dynamics, shaping, etc. are all much more limited.”

Anxiety

Performance anxiety was a crucial element in this research study, which sought to identify its possible connection to movement and performance musicality. This study focused on the performer’s perception of anxiety rather than the evaluator’s perception. The performer’s internal anxiety while performing and an evaluator’s perception of the flutist’s anxiety or lack of anxiety may be different. Although a flutist may have been nervous while performing, the same flutist may have excellent skills at hiding that anxiety from an audience. Therefore, the perception of nervousness or lack of nervousness may not be as relevant to this study as the actual amount of anxiety and reasoning for the flutist’s anxiety.

Overwhelmingly, week after week, the evaluators commented that they did not perceive any of the flutists to be nervous. Whether performing with or without movement, the evaluators perceived no performance anxiety from all the flutists.

Focus Group

The research participants (flutists) participated in a one-hour focus group session after the four-week performing sessions and discussed the answers to seven assigned questions. Data from the focus group were collected via video recording. The researcher then transcribed the video-recorded data and pasted them into the Delve software tool to analyze, select codes, and identify

themes. Codes were categorized by similarities to produce overall thematic content. The following focus group question responses were analyzed:

Question 1: Do you feel performing with movement made a difference in how musically you played? If so, why?

Question 2: Did you feel nervous or distracted while performing in front of the other flutists?

Question 3: Did you encounter any self-talk (negative or positive) while performing? If so, did the self-talk happen when you were performing with or without movement (or both)?

Question 4: Did you feel that performing with movement helped your concentration?

Question 5: Do you feel it is helpful to perform using movement?

Question 6: Will you incorporate movement into your future performances?

Question 7: Did you feel that performing with movement helped negate negative self-talk?

Focus Group Themes and Codes

Table 20: Focus Group Themes and Codes

Themes	Subthemes
Movement	• Visual perspective • Issues with specified movements • With movement • Without movement
Performance Anxiety	• Experience • Natural and relaxed

Musicality	
Self-talk	
Concentration	

Table 20 illustrates five emerging themes and fourteen corresponding subthemes from the data collected from the focus group session with the research participants (flutists). The five emerging themes were movement, performance anxiety, musicality, self-talk, and concentration. Four subthemes emerged from the first theme (movement): visual perspective, issues with specified movements, with movement, and without movement. The second theme, performance anxiety, was associated with two subthemes: experience and natural and relaxed.

Movement

Because movement was a crucial topic in this research study, it was no surprise that it once again was listed as a central theme. Nor was it surprising that *with* and *without movement* would be listed as subthemes. On the other hand, the subthemes of *visual perspective* and *issues with specified movements* emerged unexpectedly.

Visual Perspective

Although this research study was designed to understand the many thoughts traveling through a flutist's mind while performing and whether movement affected self-talk, self-talk related to the outward appearance of performance was unexpected. Every research participant (flutist) mentioned thinking about the visual perspective from the audience at some point. Some of that visual perspective was directed at how the audience would perceive the quality of their performance regarding movement. For instance, when performing with movement, flutist 2 thinks, "Oh, look at me! Look at me play! I can play more beautifully because I look more

beautiful." Flutist 1 believed performing with music was "a lot more pleasing to the eye" and looked "prettier" to the audience. Judgment from the audience was also a factor. Flutist 1 said, "I felt like if I looked like I knew what I was doing, then the audience will think I know what I am doing." Flutist 3 was concerned that the audience would become distracted from the music if too much movement was used.

Issues with Specified Movements

The research participants (flutists) identified several issues they experienced with the required specified movements in this research study. The flutists felt the specific movements were too strict and not the movements they would have chosen to perform with the music. Flutist 2 commented, "Sometimes the movements seemed too big or not enough. It wasn't where I wanted to go. This exercise wanted specific movements, but with other solo pieces there aren't specific movement instructions, so I can interpret the music how I want to and how I feel it." The flutists also had much negative self-talk regarding the specified movements. Flutist 1 commented, "Some of the movement instructions were weird. They would have you move backward at really weird times in the music. The movements would feel more natural and lessen negative self-talk if we were allowed to create our own movements." Flutist 3 commented, "I had to figure out where I was going to move and where you're supposed to go, a certain direction, forwards and backward. The programming of the movement did not feel as natural to me as I normally move."

With Movement

All research participants (flutists) believed performing with movement enhanced their performance musicality. Flutist 1 said, "I feel I sound better when I move," and flutist 2 commented, "moving made performing better to phrase." They also attributed movement with

decreased negative self-talk and increased concentration skills. Flutist 1 commented, “When I’m moving a little more, it makes me feel more comfortable because of the presence I am in. When I have a lot of performance anxiety, and I notice when I am moving when I am playing, it kind of distracts me from this anxiety. I still have the anxiety, but I use it in a different way.” Flutist 2 believed moving helped her concentrate better and made her “really focused on the music.”

Without Movement

All research participants (flutists) felt that performing without movement negatively affected their performance musicality. This negativity was especially evident in the areas of performance anxiety and self-talk. All flutists mentioned negative-self talk and its connection to lack of movement. Flutist 1 believed she had more negative self-talk without movement, which was focused on note mistakes. Flutist 3 commented that she had “a little bit more negative self-talk when I wasn’t moving.” The flutists also commented on previously being taught not to move when performing in their earlier studies of music. Flutist 1 commented, “When I started to play the flute, I came from a place where you couldn’t move when playing because we were all seated so close together. Since I came here it’s much different.” Flutist 2 said, “When I was in elementary band, we were told not to move because they were just trying to get you in your seats and learn the instrument. I remember when I got to high school, I started taking private lessons and my instructor told me to stop being so stiff because your sound isn’t good. Your air support isn’t good.”

Performance Anxiety

Performance anxiety and its relationship to self-talk and movement were vital to this research study. Through the data analysis, the results suggested that there was a significant connection between movement and its effect on performance anxiety. There was also a strong

correlation between movement and self-talk. These connections also weighed heavily on the results of the flutists' performance musicality. Two of the flutists admitted to experiencing performance anxiety every time they performed. The other flutist experienced less performance anxiety.

Experience

This case study utilized the same research participants (flutists) to perform weekly. All flutists and evaluators participated 100 percent in this research. The flutists had been performing together in person in other university ensembles since August 2020. They also had attended other university classes together. CSU is a small private university. The subtheme of *experience* emerged, highlighting the close connection and bond these students had before the research sessions began for this study.

The element of experience was linked to performance anxiety, whether the flutist was nervous or not. Flutist 2 commented, "I did not feel nervous. I do a lot of performing. I know these two like really well. I play with them every day … I may be a little nervous if I was playing in front of people that I didn't know." Two of the flutists reported experiencing performance anxiety regularly, yet that anxiety waned over time with experience. Flutist 1 said, "When we first started, I thought oh I'm going to do really bad. But as time went on, I started to tell myself that I was prepared because it's not hard … I was a lot more positive towards the end." Flutist 3 commented, "I do get a little bit nervous when performing, but as I got to know them a little bit more, I got a little less nervous because I play with them all the time. I got a little less nervous as we progressed through the four sessions."

Natural and Relaxed

All the research participants (flutists) agreed that performing with movement made them feel more natural and relaxed. Flutist 3 also added that performing with movement allowed her to "be more musical and little bit more comfortable and feel not as stressed." Flutist 2 said, "I think moving while playing makes you feel more natural." Flutist 1 commented that performing with movement made her feel "more relaxed."

Musicality

Performance musicality in this research study had been previously defined in the five-point Likert-scale questionnaires by how each flutist utilized expressive elements (phrasing, vibrato, dynamics, and tone colors). All research participants (flutists) agreed that performing with movement aided them in more excellent performance musicality. Flutist 3 felt that performing with movement "helped me express more dynamics." Flutist 2 felt that performing with movement made her "more able to express the phrases." Flutist 1 said that performing with movement helped her "sound better and improve." Flutist 3 also identified that "the amount of movement is key" to ensuring enhanced performance musicality and felt that "too much movement could be distracting to the music." All flutists felt that performing without movement inhibited their ability to fully express the music because performing with movement felt more natural.

Self-Talk

All research participants admitted having experienced negative and positive self-talk when performing with and without movement. The negative self-talk experienced when performing without movement was focused on worrying about playing inaccurate notes or judgment from others. The negative self-talk experienced when performing with movement was

focused on performing the required specific movements. Yet, all flutists felt that performing with movement aided in reducing or eliminating negative self-talk. Flutist 1 commented, “I did feel like movement did help me get rid of negative self-talk because I was more focused on moving. The movements would feel more natural and lessen negative self-talk if we were allowed to create our own movements.” Flutist 2 agreed with flutist 1 and added, “I think it helped with the note part. It helped me lessen the negative self-talk but did not remove it completely.” Flutist 3 commented, “I agree that the negative self-talk could be eliminated or lessened if the flutists were allowed to choose their own movements.”

Concentration

All research participants (flutists) felt that performing with movement helped with concentration. Flutist 2 commented, “I think performing with movement did help my concentration because when people were talking outside, I was really focused on the music and the movement. I wasn’t thinking about all of the people around me or that you were all watching me.” Flutist 1 agreed stating, “It helps you stay focused on what you’re playing as opposed to what’s going on with your surroundings.” Overall, the flutists stated that they did not feel distracted while performing in front of others.

Summary

This case study examined whether kinesthetic movement elevated flute performance musicality by heightening concentration and decreasing negative self-talk in undergraduate university flute students at CSU. It also explored a connection between self-talk and kinesthetic movement and its effects on performance musicality and anxiety. This case study consisted of three research participants (flutists) and three evaluators. All research participants (flutists) were

female. Two of the evaluators were male and one was female. All evaluators were full-time music professors at CSU's Horton School of Music.

Three different forms of data collection were utilized (five-point Likert-scale questionnaires, open-ended questions, and a focus group). This case study applied a mixed-methods approach that integrated quantitative and qualitative methods, triangulating data sources.[121] Research participants (flutists) and evaluators had identical weekly five-point Likert-scale questions but separate open-ended questions. The five-point Likert-scale and open-ended questionnaire responses were collected using Survey Monkey. The focus group session was video recorded using an iPad in a room at CSU to create a comfortable location for the flutists to share their experiences. The researcher then transcribed the data from the focus group session onto a Microsoft Word document. The results of the data, as well as a discussion of the significant themes and subthemes that emerged, were discussed.

The researcher utilized Excel to analyze the quantitative data. Tables were created to explore each five-point Likert-scale question. All three research participants' (flutists) data were combined to calculate the results. Evaluator data were combined and calculated as a mean. The research participants (flutists) and evaluator tables were presented separately. Seven figures were created using Excel to compare the research participants' (flutists) mean scores to the evaluator's mean scores for each Likert-scale question over the four-session period.

The researcher utilized the Delve software tool to analyze the qualitative data from the open-ended questions and focus group data. The researcher used an inductive coding approach to identify themes and subthemes. Separate tables identifying themes and subthemes were used for

[121] John W. Creswell and J. David Creswell, *Research Design Qualitative, Quantitative, and Mixed Methods Approaches* (Los Angeles, CA: Sage, 2020), 32.

the research participant (flutists) open-ended question data, evaluator open-ended question data, and focus group session data. Each theme and subtheme presented were discussed with supporting quotes.

Chapter Five: Conclusions

Overview

This study explored the impact of kinesthetic movement on flute performance musicality and performance anxiety in undergraduate university flute students. Specifically, this study sought a significant correlation between movement and self-talk to identify if movements had a positive impact on decreasing performance anxiety and increasing musicality. Chapter 5 provides a summary of the study, purpose, and procedures. It also summarizes the findings and prior research and provides an overview of its significance. This chapter discusses implications for practice and limitations and concludes with recommendations for future study.

Summary of Study

This study aimed to examine whether kinesthetic movement impacted flute performance musicality and performance anxiety in undergraduate flute students while performing. The researcher utilized a case study methodology that relied on multiple data sources bound by time and space for evidence.[122] Data from five-point Likert-scale questionnaires, open-ended questions, and a focus group were examined. Three research participants (flutists) and three trained evaluators from CSU were employed for this study over four weeks. The researcher also thoroughly reviewed prior existing literature connecting movement to musicality. Limited research exists concerning the link between movement and self-talk, affecting performance anxiety and thus impacting performance musicality. This study can aid flute performers and teachers in improving musicality and easing performance anxiety.

[122] Schoch, *Research Design and Methods*, 245-256.

Summary of Purpose

The purpose of this study was to examine the impact kinesthetic movement had on flute performance musicality and performance anxiety in undergraduate university flute students. This case study aimed to explore whether kinesthetic movement elevated flute performance musicality by heightening concentration and decreasing negative self-talk in undergraduate university flute students. The exploration of prior research, although limited, sought to gain a greater understanding of the relationship movement has on musicality and anxiety in a performance environment.

Summary of Procedures

The Liberty University IRB and CSU IRB were approved before recruiting research participants (flutists) and evaluators. Three research participants (flutists) and three trained evaluators from CSU agreed to participate in this case study covering four weeks. Before the study began, the researcher trained the three evaluators in a sixty-minute meeting to demonstrate procedures, answer questions, and sign consent forms. The researcher also met with the three research participants (flutists) in a similar format prior to the first session.

The research consisted of weekly iPad video-recorded sessions in which each of the research participants (flutists) performed assigned music selections in front of each other. Each selection was performed twice, once without movement and once with a specified movement (either down/up or forward/backward). The iPad video-recorded sessions were edited in iMovie and uploaded to unlisted YouTube links. These links were shared with the evaluators for evaluation. Weekly questionnaires containing seven identical five-point Likert-scale questions and two different open-ended questions were sent to both the research participants (flutists) and evaluators following each video-recorded session. To eliminate bias, the researcher did not

complete any questionnaires. Immediately following the last video-recorded session, the research participants (flutists) participated in a sixty-minute video-recorded focus group session to discuss their experiences. Data were recorded using an Excel spreadsheet and analyzed to identify an "emergence of findings" through possible similarities of patterns.[123] The Delve software tool was used to analyze data, select codes, and identify themes from the open-ended questions and focus group research transcription.

Summary of Findings and Prior Research

The following research questions were presented for this study:

1. How can specific kinesthetic movements affect flute performance musicality and performance anxiety in undergraduate university flute students?
2. How can one explore specific kinesthetic movement effects on flute performance musicality and performance anxiety in undergraduate university flute students?

Movement Impacts Musicality

Results indicated that both flutists and evaluators agreed that kinesthetic movement affected flute performance musicality positively. Figures 1 and 2 exhibited that both flutists and evaluators believed that movement impacted flute performance musicality more than performing without movement. Evaluators commented in open-ended questions that performing with movement improved dynamics, expressive range, the flow of the music, and pitch. Both flutists and evaluators felt the performances sounded more expressive with movement (see Figure 2). As shown in the data of the flutist's open-ended question and focus group results, flutists felt that performing with movement allowed them to perform more expressively. Data from the evaluator's open-ended questionnaires revealed that performing with movement also improved

[123] Schoch, *Research Design and Methods*, 252.

tone, musicality, vibrato, expression, flow of music, dynamics, note accuracy, breath support, pitch, nuance, character, and phrasing. Researchers Thompson and Luck clarified that musical movements should be classified into two categories: movements that produce sound (ex., fingers and lips) and movements created to express the musician's musical intentions.[124] This research signified an improvement in both musical movement categories. Thompson and Luck stated, "Body movement in music performance attains significance when contextualized within the musician's intended musical expression."[125]

Performance Without Movement

Both evaluators and flutists felt performance without movement affected flutists' playing negatively and displayed decreased musicality. Flutists 2 and 3 thought it was much more difficult to play without movement because they naturally performed using movement. This lack of movement instilled negative self-talk in flutists 2 and 3, producing negative judgments such as "don't move." Their minds were filled with negative self-talk concerning correctly completing the required instructions. Although the concept of movement was newer to flutist 1, they still preferred the musical results movement produced and felt more comfortable using movement over time. During the focus group session, flutists 1 and 2 mentioned they were both taught not to move initially when learning to play the flute. This lack of movement training was due to a lack of space in rehearsal rooms and the fact that the band directors were focusing on teaching the main mechanics of the instrument. Flutist 1 was starting to learn performance movement concepts at the university before this research. In contrast, flutist 2 had prior experience with

[124] Marc R. Thompson and Geoff Luck, "Exploring Relationships Between Expressive and Structural Elements of Music and Pianists' Gestures," *Musicae Scientiae* 16, no. 1 (2012): 3.

[125] Ibid.

performance movement, which was taught to her by her private teacher before enrollment with the university.

Evaluators also felt flutists seemed to embody less musical freedom without movement. This resulted in flutists appearing visually stiff and uncomfortable. Flutist 2 recalled in the focus group session of a high school private flute teacher requiring less body stiffness when performing for it was affecting tone negatively. Evaluators described the negative results they noticed caused by nonmovement as limiting, less expressive, more mechanic, and exercise-like.

Movement Impacting Self-Talk

All flutists reported experiencing negative and positive self-talk when performing with and without movement. Positive self-talk was associated with performing with movement. Flutists' positive self-talk while moving was about movement direction, instructing them how and when to move. Thoughts about movement direction were also connected with how to phrase the music musically. This positive self-talk helped the flutists feel more natural and relaxed. Negative self-talk was more associated with performing without movement. Flutists' minds repeatedly judged thoughts such as "don't move" often, as the flutists felt frustrated by the lack of movement. Negative self-talk during nonmovement performance also focused on concern about judgment from others and worrying about playing inaccurate notes. The researcher concluded that performing with movement elevated positive self-talk and decreased negative self-talk. Movement also reduced performance anxiety by decreasing negative self-talk as the flutists' minds concentrated on movement directions and music production rather than negative thoughts that could create anxiety. Even if the negative thoughts had not been eliminated completely, their reduction made a noticeable impact on performance musicality, thus connected to a decrease in performance anxiety. Thompson and Luck stated, "Embodied musical cognition

takes into account that music is a multi-modal experience, elegantly suited for the cross-modal capacities of the human mind."[126]

Concentration and Distraction

Flutists overall believed that performing with movement helped their concentration levels. As shown in figure 6, flutists also felt their concentration levels increased over the four-week sessions. Flutists shared in the focus group session their belief that not only did performing with movement help their concentration, but it aided in decreasing distraction. The additional focus helped the flutists pay less attention to any surrounding distractions that might have diverted their attention from the music. The flutists also stated they did not feel incredibly distracted when performing in front of their colleagues, for they performed daily with these individuals.

On the other hand, evaluators felt the flutists' concentration levels were not that affected by performing with movement and slightly declined between sessions 3 and 4. The researcher interpreted these results to connect movement with enhanced concentration levels and link experience with the rise of concentration levels over time. The more comfortable and experienced the flutists felt with the movement exercises, the easier the act of concentrating came to fruition, anxiety levels dropped, and performance musicality elevated. Because the flutists were performing, concentration levels were visually more difficult to detect by evaluators. Evaluators' raised performance expectations over time may have clouded their visual perception of flutists' concentration levels. Evaluator 3 often commented on repetition as a possible limitation on results, believing that repetition of exercises could make performing easier over time.

[126] Thompson and Luck, "Exploring Relationships," 2.

Performance Anxiety

All flutists stated they experienced anxiety when performing. Flutist 2 felt less anxiety when performing due to their history of performance experience. Flutists felt more nervous performing without movement over time (see Figure 7) and more confident performing with movement over time (see Figure 6). The researcher thought experience might have played a factor in these results. The more experienced and comfortable the flutists felt performing with movement, the more uncomfortable performing without movement they felt, which created more anxiety. Greene stated, "A principle of psychology is that what gets reinforced gets replayed."[127]

The flutists often used the terms "natural and relaxed" to describe their feelings when performing with movement. Although the flutists all admitted to feeling nervous when performing, the evaluators never detected their nervousness. Every week over the entire four-session period, the evaluators would comment that none of the flutists were perceived to be nervous. The researcher attributed these results to the difference between the evaluators' visual perception of nervousness and actual feeling of anxiety by the flutists. The flutists were experienced performers and, therefore, could convince the evaluators of their lack of nervousness.

Summary of Significance

This study provided essential evidence of a direct correlation between kinesthetic movement and self-talk, identifying movement as an impact on performance anxiety, thus impacting performance musicality. Reducing or negating negative self-talk and replacing it with positive self-talk or movement directions provides musicians with a valuable tool for better concentration. Although studies related to movement and its positive impact on musicality

[127] Greene, Performance Success, 30.

already exist, studies identifying the connection of movement to self-talk as a link do not. This crucial connection can be an excellent resource for enhancing performance musicality and pedagogy and providing valuable information for future studies.

Implications for Practice

There are several implications for the practice of the incorporation of movement into flute performance and pedagogy. First, it is essential to change the mindset of music educators and the assessment of music education. Instead of focusing primarily on assessing technical skills only, assigning more importance to evaluate musicality and expression at all levels of instrumental music learning is vital. Secondly, incorporating movement into daily practice assignments and music sessions would allow students from a young age to understand the value of movement and its role in musicality and aid in the prevention of future injury. Encouraging students to practice with movements is also crucial. Next, teaching students about self-talk and providing them with daily exercises to strengthen positive self-talk while performing is necessary. Music educators must help students understand that successful music performance is not just about playing the right notes but also about playing musically. Lastly, educators should include movement in future music performance pedagogy books.

Limitations

This research study presented a few potential limitations. First, although all evaluators and flutists felt performing with movement enhanced both performance musicality and decreased anxiety, they felt the required specified movements created limitations to the extent of the results. Both evaluators and flutists believed the performance musicality (and reduced stress) would be enhanced by allowing the flutists to move freely. The specified movements were seen as restricting, unnatural, and distracting to the music performance. The flutists believed negative

self-talk would decrease more if they were free to choose their movements to accompany their musical intentions. Thompson and Luck stated, "Body movement in musical performance attains significance when contextualized within the musician's intended musical expression."[128] The researcher used specific movements to form a control group for evaluation only among flutists for this study. George created the movements in *The Flute Scale Book* to educate students about musical lines and allow students to feel comfortable with movement to prevent injury. George originally notated the movements as suggestions in her music, later eliminating them as the phrasing became comfortable.[129]

Another limitation was caused by order of repetition in the study. The flutists performed each exercise twice, beginning with the nonmovement performance and ending with the addition of movement. Some evaluators wondered if the mere repetition of the exercise was causing the movement version to be performed more musically.

Lastly, the flutists not only performed together at the university daily but were also friends. If research had been conducted using flutists from different universities or even different flutists for every session, would the results concerning performance anxiety be different? Did too much familiarity result in less anxiety?

Recommendations for Future Study

Based on the limitations presented in this study, there are several recommendations for future research concerning this subject. First, because familiarity posed a cause for concern, conducting a similar study using different research participants each week (or different instrument types) could provide more significant results. Research using other age groups and

[128] Thompson and Luck, "Exploring Relationships," 3.

[129] George, "Teaching Informed Movement," 36.

experience levels could also provide valuable insight into the connection between movement and self-talk and its link to performance musicality and anxiety. Research allowing participants to express their musical intentions freely instead of using specified movement patterns would be another option. If a study conducted a nonmovement versus movement comparison, alternating movement patterns could eliminate the "experience due to repetition" question. Providing more heightened anxiety experiences, such as performing for a grade or different audience each week, could provide valuable insight concerning movement and performance anxiety.

Summary

This case study aimed to explore kinesthetic movement's impact on performance musicality and anxiety in undergraduate flute students. It also sought to examine a possible link between movement and self-talk. Garner wrote, "True artistry lies in the marriage of technical skill and musical expression. Communication and artistry cannot be achieved if stage fright is a factor in performance."[130] Like the many somatic practices, musical performance encompasses a nondualistic philosophy of mind and body working as one. Many factors contribute to a successful musical performance beyond mere note and rhythm accuracy. This case study explored the impact of kinesthetic movement on performance musicality and anxiety and the many factors in which they were intricately linked. Kinesthetic movement could be seen as the key that linked these layers. Performing with movement replaced negative self-talk with thoughts focused on movements and musical intentions, thus decreasing performance anxiety by creating a more natural and relaxed state. Lessened performance anxiety heightened performance musicality, allowing performers to express the music thoroughly and successfully. Several

[130] Allison Maerker Garner, "Performance Anxiety: Treatment Options for Stage Fright," *American String Teacher* 62, no. 1 (2012): 37.

factors were incorporated as one to enhance performance musicality. Detailed data analysis from multiple research sources provided valid and credible results and supportive research literature. Additional research is needed to support these results further and expand the understanding of the impact kinesthetic movement could have on performance musicality by exploring new studies regarding the stated limitations.

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