A COMPARATIVE CASE STUDY ON THE EFFECTIVENESS OF A MULTISENSORY INSTRUCTIONAL METHOD FOR LEARNING MUSICAL EXPRESSION

by

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A Dissertation
Submitted to the
Graduate Faculty
of
George Mason University
in Partial Fulfillment of
The Requirements for the Degree
of
Doctor of Arts
Community College Education

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Date: _____ Fall Semester 2014
George Mason University
Fairfax, VA

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A Dissertation submitted in partial fulfillment of the requirements for the degree of Doctorate of Arts in Community College Education at George Mason University

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DEDICATION

This dissertation is dedicated to my grandmother, Josephine Genovese, for her unending support and motivation throughout this process, to the memory of my mother, Judith Lapple, for inspiring me to follow my dreams and continue on the path of excellence and to my loving fiancé, Graham Wootten, for his support through late nights and challenging times. I couldn't have done this without you!

ACKNOWLEDGEMENTS

I would like to thank my family and friends who have supported me throughout this process. Dr. Lisa Billingham for her continued support and words of encouragement. Dr. Brian Wuttke for his insights into research and education and to the other members of my committee who were of invaluable help. Finally, thanks to Dr. Dennis Layendecker and Dr. Linda Monson for encouraging me on the pursuit of this important step in my professional career.

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ABSTRACT

A COMPARATIVE CASE STUDY ON THE EFFECTIVENESS OF A MULTISENSORY INSTRUCTIONAL METHOD FOR LEARNING MUSICAL EXPRESSION

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This study sought to investigate the perceptions of five undergraduate students and their private teachers using the Multisensory Music Making (MSMM) approach for teaching and learning musical expression. Musicians interacted with a combination of visual and auditory stimuli to inspire new concepts about the music they were learning. Through this approach, musicians learned to connect with music on a deeper level and to expand their range of emotional and expressive performing. The MSMM approach employs three methods for playing expressively, which include: (1) Artistic Representation; (2) Aural Modeling; and (3) Improvisatory Storytelling. These methods were intended to help musicians play more expressively in relation to several musical components.

Keywords: Artistic ways of knowing, interpretation, metaperception, emotion, expression

CHAPTER I—INTRODUCTION

Statement of the Problem

"…conveying the nuances and the emotions as clearly as you want to… (Karlsson and Juslin, 2008, pp. 325)," "…communicating an emotion…(p. 325)," "…to dare to devote oneself…to squeeze out as much emotion as possible…(p. 325)," "…it's self-explanatory, isn't it (p. 326)?" or "…there is no technique to perform expressively. You have to use your soul (Woody, 2000, p. 21)." All of these statements are common references to playing expressively. Teachers often use these phrases to elicit emotionally-charged, sensory-heightened displays of musical expression from their students in hopes of helping them to connect on a deeper level with the music-making process. While they are all well-intentioned and full of wisdom and insight, often times their value and meaning are lost in translation.

Figurative language, which includes analogy, metaphor, simile and verbal imagery is one of the most common methods for teaching musical expression; however, the ability to transfer such profound analogies as "You have to be moved yourself to move others (Karlsson and Juslin, 2008, p. 322)" into tangible expressive moments poses a few challenges. How does an 18-year old know how to "be moved" and how might she interpret this musically? Perhaps her idea of "being moved" evokes memories of a dramatic and emotional break-up with a past boyfriend, while for another student it might

evoke painful memories of having lost a parent. In these examples, the expressive experiences or memories are very different and produce very different expressive results. The anger and drama of having broken up with a boyfriend is quite different from the sorrow and pain of having lost a parent. Furthermore, these result in different musical interpretations. Drama and anger are interpreted as a more intense and dramatic performance compared with the heaviness and weight given to the more sorrowful performance. Each experience unleashes a unique and distinct set of emotional guidelines that are transferred through the music.

Another concern with using figurative language to elicit specific expressive results is that students might approach the realization of the expressive emotion in misdirected, or inconsistent musical gestures. The first student might use a heavier attack at the start of her notes, or push the tempo to create a sense of drama or rage, whereas the second student might slow the tempo, or use a more sustained, legato articulation to portray grief and sorrow. In some cases, these musical gestures might be appropriate, but other times they may not, and are therefore prone to inconsistency or an inability to accurately portray the desired musical intention.

The value in researching alternative strategies for teaching musical expression, especially to younger students, is critical because of the implicit nature of musical expression. Younger students often have difficulty identifying and embodying expressive musical gestures because they lack the tools necessary for translating abstract expressive ideas into tangible expressive moments. Musical expression is most commonly taught using profound metaphors, such as, “Play that passage in the color blue,” “Think

expressively, as though you just lost your best friend in the whole world," "Play from your heart!" or "You have to be moved yourself to move others," which can sometimes be more confusing than helpful. In many cases, these statements may elicit very different responses among students and therefore may not be true to the nuances of the intended expressive gesture.

Other common pedagogical approaches for eliciting musical expression include aural modeling; behaviorist-dominated teaching methods, or master/apprentice approaches; and expression limited to technical mastery. While these methods offer useful starting points for understanding and cultivating musical expression, they tend to neglect the student's exploratory possibilities within the learning process because they are teacher-centered methods. Ultimately, students imitate their teachers or follow their expressive cues in literal terms for application in similar musical examples. Certainly, these are critical steps in the learning process; however, they are best supplemented with methods that challenge students to pursue their own interpretative instincts.

Further exploration of different strategies for learning musical expression requires research on the design of experiential models that engage students beyond the limitations of these current techniques. The learning must be derived from the individual experiences of the learner and geared towards the translation process of those experiences into tangible musical statements. In this way, learners will have direct access to their emotions and the tools to connect those emotions with distinct musical ideas through a clearly defined translation process. As a result, teachers will be able to reach students on deeper emotional levels and ensure that learning is both active and personalized. Experiential

models will aid teachers in the assessment process by helping students to create a language for musical expression that guides their thought process and makes it known to the teacher in real-time. In turn, the teacher can filter his or her feedback through a creative lens and language that is unique to the student.

Research along these lines should attempt to define the learner's role within the expressive process by providing him or her the tools for making interpretative decisions. Through the pedagogical avenues of experiential and multisensory learning, students are provided the opportunity to actively explore and personalize the interpretive process. Ultimately, this will allow them to take intellectual ownership over the process and gain a musical authenticity that is unique to their experiences and knowledge base.

A multisensory approach for learning musical expression attempts to fill this gap in the research by placing the learner in an active role of making interpretative decisions about the expressive nuances in music. Through three specific methods, which include Artistic Representation, Aural Modeling and Improvisatory Storytelling, the learner will engage in various ways of aligning expressive gestures with external visual and auditory cues. This will require decisions on the part of the learner about the appropriateness of these cues in a musical context and a vocabulary for clarifying these relationships. Furthermore, the learner will develop a translation process for connecting this language with tangible musical gestures. This approach keeps the learner at the center of the process and engages him or her beyond the limitations of the current methods for learning musical expression.

Research Questions

The effectiveness of a multisensory approach for learning musical expression will be explored through the following research questions:

1. How does the MSMM approach develop a *vocabulary* for the process of learning musical expression, and what role does metaperception[1] play in this process?
2. What is the student's *experience* like using the MSMM approach to develop a deeper emotional connection with the music?
3. What is the *quality of performance* demonstrated by students using the MSMM approach?

Researcher Perspective and Background

The researcher comes from a musical background of performance and education. As an educator, the researcher has considerable experience in private instruction and has encountered the challenges of teaching musical expression to students. Because of its implicit nature, expression is a very abstract and profound concept for students of all ages and skill levels to grasp. Thus, I sought the opportunity to explore a unique instructional method to better acclimate students to the subtleties and nuances of musical expression. The researcher intends to explore the effectiveness of a multisensory approach incorporating three instructional methods: Artistic Representation, Aural Modeling and Improvisatory Storytelling. The three methods of this approach are intended to encourage

[1] 'Metaperception' describes the cognitive/perceptual functioning of a musician or any artist while making interpretive decisions. It is 'perceiving/thinking about artistic intent'—the process of filtering and manipulating sensory perceptions combined with cognitive and expressive decision-making in order to create artistic solutions

students to interact with the music they are learning in ways that will help them understand how expression is manifest in five components of music, including: (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and (5) articulation. It is my hope that the results obtained from this study will also be of use in assisting students of all ages in reframing their exploration of musical expression through this multisensory approach.

CHAPTER II—LITERATURE REVIEW

The Role of Expression in Music Education

Of interest to this study is the role of expression in music education, particularly in private lessons, as these insights will prove valuable for small groups and large ensembles of instrumentalists and vocalists. Lehmann, Sloboda, & Woody (2007) list the following points about expression:

1. Music of expressive behavior can be captured by relatively simple rules….[that] communicate structural information (such as accent and metrical structure), as well as basic emotional information (happiness, sadness, tenderness, anger);
2. Many aspects of musical performance are rooted in expressive experiences outside music (e.g., the human body in motion, human speech and emotional vocalizations);
3. The management of expectancy and surprise is a key component of aesthetically powerful performances;
4. Reliable and reproducible interpretations can be developed through deliberate learning; and

5. Interpretation, which is the selection and combination of expressive decisions across an entire piece, remains at its core an individual artistic and aesthetic enterprise (p. 87)

All of the items speak to the importance of expression in the learning process and the notion that expression is learnable through distinct methods that go beyond technical directions, yet it is often disregarded until much later in the learning process, approached from an obscure mindset, or overlooked altogether.

Why, then, is expression neglected in music education? One explanation is the emotional character of musical expression, which is derived from a very personal domain of the individual musician (Hultberg, 2007). This makes it difficult for the musician to verbalize expression and therefore limits his or her ability to translate emotion into the music. In this argument, the inherent musicianship of the individual is at stake creating a perceived vulnerability linked to the expressive process.

Karlsson and Juslin (2008) offer two explanations: (1) the ability to perform expressively is often regarded as a skill that reflects only musical talent and that thus cannot be learnt [*sic*]; and (2) much knowledge concerning expression is tacit and therefore difficult to convey in words (p. 310). The second explanation refers to the cognitivist argument of "artistic ways of knowing," which states that "…general knowledge exists tacitly in the form of mental structures and schemata. In order for these schemata to be made known to the individual, they must be given concrete form. The arts provide one means by which these mental structures are given form" (Madeja, 1978, p. 8).

Artistic Ways of Knowing

In the visual arts, concepts are taught from a sensory perspective and experientially rather than verbally. Students acquire concepts in the nonverbal forms of "mental structures and schemata," which are then revealed through art productions as concrete evidence of the existence of these conceptual structures in their minds (Brigham, 1979). These integrated sensory images are the mind's fundamental representations of objects from the world in which they live. The sensory and experiential processes of learning actively involve students in sensory perceptual thinking. In music, this process is referred to as *metaperception*. Metaperception "…describes the cognitive/perceptual functioning of a musician or any artist while making interpretive decisions….it is the process of filtering and manipulating sensory perceptions combined with cognitive and expressive decision-making in order to create artistic solutions" (Haroutounian, 2002, p. xvi). It is an artistic way of knowing for expressive ideals. Along these same lines is *creative interpretation*, which Haroutounian (2002) describes as "…the process of [reworking] and [refining] interpretive decisions, using elements of perceptual discrimination and metaperception (p. 60). As in visual arts, musicians also have an "art product" which is the musical output, or the performance. It serves as concrete evidence for the existence of expressive ideas acting as conceptual structures in a musical context. Training for musical expression lacks the sensory and experiential processes for realizing the "mental structures and schemata" in direct and tangible ways.

Further evidence for the importance of sensory and metaperceptive learning comes from research in neuroscience. In Hodges' (2010) investigation on the role of

neuroscience in teaching music, he refers to Zull's simplified learning cycle—Sense → Integrate → Act—as the way the brain organizes incoming sensory information into a meaningful musical experience. In summary, the brain receives information from the outside world, integrates it into a meaningful whole and transforms these meaningful wholes into plans for action. In this view, learning begins with concrete experiences, which are followed by reflection, then the formulation of abstract hypotheses, and finally the active testing of these hypotheses in concrete experiences to complete the cycle (Hodges, 2010). These are the very processes, sensory and experiential, that are activated through artistic ways of knowing in the visual arts and are lacking in the instructional approaches for developing musical expression in students.

Hodges (2010) further discusses the importance of active rather than passive learning and an important neuronal connection that has strong implications for music and active learning:

> First, there are audio-motor networks. This explains why it is so natural to move to music, whether playing or listening. Furthermore, brain systems that link perceptual and motor areas help the two mechanisms to reinforce each other. Looking at images or listening to sounds characteristic of action activates motor systems (p. 5).

Hodges (2000) indicates that the musical brain is modularized:

> That is, musical experiences are multimodal, involving at the least the auditory, visual, cognitive, affective, memory, and motor systems. Beyond that, each component of music processing and responding is likely to be handled by different neural mechanisms (p. 21).

Lehmann, Sloboda, & Woody (2007) further this notion in a summary of findings by neuropsychologists who have found that hearing and imagining music activate the same brain areas (Halpern, 2003). Thus, "...when representing the external world

internally, we partly draw on those mechanisms that are involved in its perception. However, musical representations need not be solely of an auditory nature. We can think in terms of music theory, emotions, images, kinesthetic and other aspects" (Lehmann, Sloboda & Woody, 2007, p. 20). Therefore, artistic ways of knowing rely on the collaboration of several internal mechanisms for successively realizing mental schemata.

Current Methods for Teaching Musical Expression

Figurative Language

The most common approach to teaching musical expression is figurative language, which takes many forms and has varying degrees of effectiveness. Sheldon (2004) states:

> The effectiveness of figurative language in music instruction can be attributed to brevity, students' prior figurative language experiences in non-music venues, and the opportunities for problem-solving and transfer (since language forces one to connect seemingly unrelated entities) p. 358.

In a scientific context, the study of the relationship between music and emotion is difficult to pinpoint due to "…the variety of complex…individual sociocultural, historical, educational, and contextual variables" (Zatorre, 2003). In accordance with this thought, Thiele (1994) cautions "…analogies may cause problems if the students are not sufficiently familiar with a particular analogue, or have inadequate analogical reasoning ability to relate the analogue to the target. Occasionally, students may transfer incorrect analogue attributes to the target" (p. 18).

In a study on the effect of various instructional conditions on expressive music performances, Woody (2006) states, "The metaphor/imagery approach often produced considerable change in performance, but not necessarily in the direction of an accepted

expert-like interpretation" (p. 33). Researchers content that the use of verbal metaphors and images were best suited to convey a broad expressive idea, but lacked in the specifics of how an expressive idea might accurately be realized through a musical gesture.

In a study conducted by Upham (1993), "…a review of musical rehearsal strategies to determine the effectiveness of transformational verbal imagery and verbal explanation in eliciting expressive performance and greater appreciation for a composition…" (Upham, 1993) revealed no significant difference between methods; however, the study did indicate that the use of imagery motivated students to complete their tasks more effectively. Furthermore, Sheldon's study in 2008 revealed that listeners were successful at identifying overall expressive ideas in performances having been directed through the use of figurative statements and terminology; however, when outcomes were reviewed for accuracy in terms of specific intended expression, accuracy levels dropped.

Ebie (2004) conducted an investigation on middle-school students' ability to convey through singing the emotions of happiness, sadness, anger, and fear within the context of four treatment situations. The treatment situations included verbal instruction, aural modeling, kinesthetic exploration, and audio-visual learning. Results indicated that verbal instruction was rated the lowest in terms of effectively teaching participants to perform a musical passage with a desired emotion.

Aural Modeling

Within the realm of private instruction, modeling is a popular technique for teaching expressivity (Woody, 2000). Aural modeling is a form of imitation in which

students try to match their teacher's demonstration of an expressive gesture. This approach helps students to hear/observe the intended expressive gesture in their teacher's demonstration, try to do it on their own, and then recall for future use in similar expressive examples. Studies suggest that as an instructional method, aural modeling may not always produce large changes in performance, but it does result in performances that are very similar to the teacher demonstration used in the instructive process (Woody, 2006; 2000). Ultimately, students may focus more on matching the demonstrated gesture exactly, rather than using the demonstration as a starting point from which to create their own expressivity.

Behaviorist-dominated Teaching Methods

Research has shown that many teachers adapt the master/apprentice model for teaching musical expression (McPhee, 2011; Broomhead, 2005; Karlsson, 2008; Hultberg, 2007). Karlsson (2008) measured language use and feedback strategies in private lessons, which revealed 61%, were dominated by talk and 39% by playing. Word counts revealed that the teacher spoke 73% of the words used in the lesson, and the student for 27%. The overall conclusion of this study indicated:

> …the typical pattern in instrumental teaching consists of the teacher telling the student what to do and the student responding briefly to these instructions. The results further suggest that the questions, analyses, and discussion with regard to expressive aspects of performance occur rarely (p. 28).

This approach limits the student's role in the learning process to that of a responsorial role rather than an active participant. Teachers should attempt to "…enable their students to take the initiative to make their own musically-expressive choices rather than didactically delivering an approach to the student" (McPhee, 2011, p. 336).

In an effort to engage students in achieving independent expressiveness, Broomhead (2005) compared both behaviorist and constructivist theories as models for teaching musical expression. According to Broomhead, behaviorist approaches, which are most commonly incorporated for teaching musical expression, "…are far too passive on the part of the learner to result in deeper levels of understanding. Conceptual understandings must be actively constructed by students themselves, not by teachers for students" (p. 64). Hultberg (2007) concurs, explaining that teachers tend to address their own mental representations of the music rather than exploring those of their students. Theses studies imply that many students are simply responding to expressive directions implemented by teachers, rather than actively thinking through the interpretative process themselves. Conversely, a constructivist approach would "…[emphasize] learner autonomy through active construction of conceptual structures…" (Broomhead, 2001, p. 80), and therefore engage students in the interpretative process through self-regulated learning.

A Limited Focus on Technical Mastery

Traditional methods alone are not effective in teaching musical expression, yet they dominate the instructional realm of private and ensemble teaching. In an observational study on musical expression in instrumental teaching, Karlsson and Juslin (2008) suggested that the focus of teaching was mainly on technique and the analysis of written notation. Lessons were dominated by talk, with the teacher doing most of the talking in a 'master-apprentice' approach (p. 321). Issues concerning expression and emotion were mostly dealt with implicitly rather than explicitly. When expression was

dealt with explicitly, it was usually through vague statements, such as "bring the music to life" or "tell a story," which provided little concrete advice about the playing to the student (p. 324). Even more revealing was that teachers rarely used words such as expression, communication, emotion, and interpretation. In the few cases expression was mentioned, the focus appeared to be more on helping the student to *dare* to play expressively than on explaining *how* to play expressively. One explanation for the lack of an expressive language may be that "…instead of helping the music student at each level of technical growth to try express musical emotion in sound, music pedagogy has gotten stuck trying first to perfect the student's technical control of his instrument" (Kaplan, 2003, p. 31).

Karlsson (2008) revealed six themes that occurred repeatedly during observed, one-to-one lessons (presented in order of frequency):

1. 'Technique' (focuses on technical problems of the performance e.g., intonation, fingering);
2. 'Notation' (focuses on some aspect of the music notation, e.g., different editions or analysis);
3. 'Practical issues' (focuses on practical issues that concern the lessons, e.g., deciding about the next meeting);
4. 'Expression' (focuses on expressive aspects of the performance, e.g., communication, emotions, interpretation, shaping);
5. 'Self-confidence' (focuses on boosting a student's self-confidence through encouragement or challenge); and,

6. ‘Instrumental problems’ (focuses on problems related to the student’s instrument or ergonomics) (pp. 30-31).

This list confirms that expression is addressed later in the process, and as a separate focus.

In a study on the ways that students experience learning music, Reid (2001), revealed five categories of learning ranging from limited views based on technique to expansive views inclusive of musical meaning:

1. Instrument: learning an instrument;
2. Elements: learning an instrument and some musical elements;
3. Musical meaning: learning musical meaning;
4. Communicating: learning to communicate musical meaning; and,
5. Expressing meaning: learning to express personal meaning (p. 28).

The hierarchy of categories involves an increasing awareness of musical meaning and integration of technical and expressive ideas. Reid concludes, “Students who describe their learning from the more inclusive categories are also able to use attributes of the less inclusive if their learning situation demands it” (p. 36).

A similar study conducted by Anemone, Zijl, & Sloboda (2010) indicates four phases in the process of constructing an expressive performance:

1. Initial exploration of the piece;
2. Mastering of technical difficulties;
3. Construction of an expressive interpretation; and
4. Construction of an expressive performance (pp. 206-211)

A similar hierarchy is present in that students work up to the level of expressive meaning after a certain level of technical proficiency has been attained. In this study, the components are once again explored independently of one another, rather than through an integrative approach. This study also unveiled several techniques used by music students for realizing musical expression, of which the most common were: (1) imagination (i.e., metaphor, visualization, character); (2) focus on sound/tone color; (3) concentration/focus in general; and (4) body movement (p. 214).

In a series of case studies carried out on student's practice strategies (Hultberg, 2007; Nielsen, 1998; Nielsen, 1996; Anemone, Zijl, & Sloboda, 2010), results revealed that few students paid attention to strategies for developing musical expressivity, and when they did, it was briefly rather than thoroughly—almost as an after thought. Instead, they focused mainly on solving instrumental-technical problems in order to play correctly and accurately. It was also discovered that students gave priority to the printed score for further development in the interpretative process (Hultberg, 2007), thereby limiting their expressivity to that of written notation. Reference to other expressive tools included: over-arching musical structures, melodic and harmonic gestures, and the capabilities of the instrument as facilitators in the interpretative process.

Technique certainly plays a critical role in the learning process, yet it seems to be taught (and practiced) independently of expression, as a separate entity, and late in the learning process, which may lead students to believe that expression is a secondary, or a less important aspect of the musical product. It may be useful to consider expression and technique as one and the same with a focus on teaching them as a single unit, "Like a

fishing rod and reel, perhaps expressive and technical performance are different in form and function but are strongly dependent on and predictive of each other, and must function in tandem for the most effective performing to take place" (Broomhead, 2012, p. 79).

Essential Components of Learning

Experiential

Research points to a meta-cognitive approach for experiential learning in a context that is not far from the concepts for developing musical expression, and is similar to The Experiential Learning Cycle that includes four stages of learning: (1) Concrete experience (experiencing); (2) Reflective observation (reflecting); (3) Abstract conceptualization (thinking); and (4) Active experimentation (acting), or in short, feeling, watching, thinking, and doing, and back to feeling (Kolb and Kolb, 2009; Hodge, 2010; & Zull, 2002). Active engagement in this cycle is "…the process whereby knowledge is created through the transformation of experience. [Experiential] knowledge results from the combination of grasping and transforming experience" (Kolb, D., 1984, p. 41). In the final stage when knowledge is transformed through experience, the role of sensory learning becomes a mandate within the context of this cycle.

Rojcewicz (1998) discusses the importance of hands-on experience in a context similar to that of the Kolb's Experiential Learning Cycle: "Hands-on, non-discursive learning is more permanent than learning through explicit verbal instruction since it employs the senses and the intellect together, leading to insights that immediately become part of the students' knowing…" (p. 98). Hands-on experience requires concrete

experience and active experimentation, and according to Kolb and Rojcewicz, results in a greater learning experience.

Intellectual Ownership

To connect active learning with positive feelings is to refer to Csikszentmihalyi's (1990) concept of flow, which occurs when a person is completely engaged in a task and the level of the challenge matches the person's level of skill. "Memory and intention (which postulate past and future) and intuition (which indicates the eternal presented) are fused. (Stephen Nachmanovitch, 1990, p. 18). A person so engaged is likely to feel energized, deeply satisfied, less self-conscious, fulfilled, and happy. In this way, active learning becomes personally meaningful and elicits a combination of "…active involvement, positive emotions, flow, and meaningful learning" (Hodges, 2010, p. 6). Through this transformative learning experience, the autonomy of the learner is established:

> Taking intellectual ownership of musical materials by transforming them into something individually meaningful provides both aesthetic delight and a means to learning. By transferring knowledge from an imitated model to a source of original thought…one can demonstrate the depth of their understanding (Custodero, 2002, p. 7).

A constructivist approach further supports this notion:

> …a conceptual understanding is a mental structure (a schema) that has been built in one's mind. We learn by combining new structural (conceptual) material with what we already have. This may mean building new mental structures (schemata) or reconfiguring existing ones in order to accommodate new material. We must construct concepts ourselves; it cannot be done for us (p. 64).

Broomhead (2005) surmises that constructivism is a great fit for teaching musical expression, which requires complex skills and understanding. The underlying theme from

constructivist theory is: "…students do not simply absorb conceptual knowledge; they actively *construct* it by combining and reorganizing preexisting bodies of knowledge" (Spiro, Feltovich, Jacobson, & Coulson, 1995, as cited in Broomhead, 2005, p. 64). Furthermore, "To avoid alienating students from their learning, their power, *themselves*, we must provide them with opportunities...that allow them to act directly upon their inner knowledge in concrete, meaningful ways which vitalize the body and fuse rational inquiry with emotion and spirit (Rojcewicz, 1998, p. 99). The culmination of these statements indicates the importance of using the student's existing knowledge as a basis for new learning to take place.

Marchese (2010) posits a similar idea to Csikszentmihaly's concept of flow, which is referred to as *deep learning*. The concept of deep learning builds on the idea of personalizing the learning process by the student in order to connect with the information on an intimate level. Marchese discusses the indicators of deep learning as manifested in learner independence, feedback and reflection, evidence of critical thinking, and active involvement and application of material to real-world tasks. Initially, the brain organizes information as patterns or observed behaviors. Next, the brain begins to make this information meaningful and personal by relating it to past experience or incorporating it in future experiences. Therefore, on a basic level, organization and meaning are critical to the successful integration and retention of new information into the brain. Boardman (2001) describes a similar theory of instruction that is inclusive of four stages:

1. Music learning is the construction of musical meaning;

2. Music learning will occur only to the extent that music is experienced holistically;
3. Music learning occurs within a social-cultural context; and
4. Music is a unique mode of representation: "…three modes of representation: the *enactive*—representation through action; the *iconic*—representation through some form of imagery; and the *symbolic*—representation through a symbolic system (Bruner, 1996, p. 155 as cited in Boardman, 2001, p. 52).

Studies conducted by Woody (1999, 2003) suggest that students need to be actively engaged in the interpretative process for the effectiveness of learning to take place. Woody (1999) examined the relationship between explicit planning and expressive performance of dynamic variations in an aural modeling task. The results revealed, "…subjects who identified features consistently performed the features differently than did the subjects who did not identify them. Subjects who identified features played nonidiomatic features more accurately and played idiomatic features at more pronounced overall levels" (p. 331). A follow-up study in 2003 confirmed these results, indicating that students needed an "…explicit goal performance plan" to enhance their automatically applied performance conventions (p. 50).

Similarly, Lehmann, Sloboda & Woody (2007) list three main objectives for learning and improving expressivity and interpretation: (1) observation and imitation; (2) developing an explicit representational system; and (3) obtaining appropriate feedback (p. 100). These three processes are critical for the assimilation of expressive concepts and their accompanying musical gestures. Currently, students rely solely on technical

feedback for improvement of expressive ideas. This does not allow the student to make informed interpretative decisions, but rather memorize expressive templates in relation to specific gestures.

These findings suggest a foundation upon which to build teaching strategies, especially those related to musical expression, the most intimate and complex phase of the learning process in musical creativity. It is within this context that learning is maximized and where musical expression transcends the abstract and intangible and begins to take shape through vivid and tangible sensory experiences.

Multisensory

> Image-making is the mind's fundamental activity of knowing; no cognitive operation is more central to consciousness. New learning results when experiences provide, confirm, or modify images of oneself and the world. Whatever we are conscious of exists in the mind as an image….images exist in all the sensory modes of perception. Images of sight, sound, taste, touch, and smell abound in the mind. Not simply metaphors for ideas, images relate to how people acquire, organize, retrieve, and use information. Imagistic thinking is a profitable mode of learning and knowing (Rojcewicz, 1998, p. 100).

Through a multisensory approach, the arrival of sensory information via our neuronal pathways is integrated into a coherent whole and the brain begins to link different pieces of information together to understand relationships.

The multisensory requirements of music demand our full involvement: "We simultaneously hear sound, see movement-based and notation-based representations of that sound, and are kinesthetically responsive to what we hear and see as we play instruments, sing, and move" (Custodero, 2002, p. 3). Furthermore, Hultberg (2007) emphasizes the combination of attention and action required in interpretation-finding:

> While [musicians] are reading the score (visual orientation) musicians play the music with their instruments (motor orientation), underline intended expression with bodily gestures (physical orientation) and listen to what they are playing (aural orientation)….Emotional experience of the music is combined with reflection *in* action, as well as *on* action. In order to develop their individual image and understanding of the music and to perform it as interpreted, they need to coordinate all of these aspects (p. 10).

What we know, what we can do, and how we feel about this information will reveal itself to us in tangible ways, including a variety of ideas about what music may express, such as "…emotion, physical aspects (motion, force), tension and release, personality characteristics, beauty, events, objects, musical conventions, religious belief and social conditions" (Juslin, 2003, p. 276). Finally, "Sensory systems, the physical channels for every piece of information we have about the world, do not naturally function independent of each other physiologically or culturally" (Higgins, 2002, p. 64), and ultimately require a combination of elements to function efficiently. These statements confirm the need to receive information from various sensory inputs in ways that can be overlapped and observed within a feedback cycle to achieve maximum learning and emotional connection.

Along the lines of multisensory learning is a holistic approach to learning in which students approach learning from a contextual standpoint:

> Learning outcomes, or ways of understanding which include the more complete ways of conceiving of something, are of higher quality than those involving more limited conceptions. Students who are able to see relations between elements of their understanding in a subject and are aware of how that understanding and those relationships can be applied in new and abstract contexts have a higher quality learning outcome than students who cannot (Prosser & Trigwell, 1994, p. 4).

In this view, learning is described from a holistic standpoint, inclusive of contexts that exist outside of the specific subject matter. In music, this requires that students cultivate their ability to recognize musical expression or expressive gestures outside of the context of the written score. In order to do so, they need multiple learning contexts or reference points. Multisensory and holistic learning fall within these perimeters and provide students with more than the literal contexts for learning. One example of this type of learning is referred to as "noetic learning." Noetic refers to:

> …all encompassing ways of knowing, including rational and aesthetic, discursive and nondiscursive. Noetic education….seeks development of the faculties of human cognition, including the perceiving, feeling, and imagining that are necessary for developing a wide repertoire of learning modes…. The holistic approach of Noetic education can help students learn to interpret the literal and metaphoric aspects of thought, feeling, sound, movement, vision, and intersubjectivity…" (Rojcewicz, 1998, p. 97).

Perhaps the most compelling argument for noetic learning is expressed in the following statement:

> At the heart of Noetic education is the practice of freedom—freedom to think imaginatively beyond ideologies of authoritarian systems, freedom to express creative energies that propel and direct the human spirit, freedom to become one's own intellectual authority (p. 111).

The concepts of multisensory, holistic, and noetic learning lend themselves to an approach for learning that is sensory-dependent, context-driven, and self-regulated. These are key factors for realizing the intangible and abstract components of musical expression. Through hands-on learning, students can begin to develop a sensory and kinesthetic vocabulary with which to communicate and understand musical expression on a deeper level.

A Multisensory Instructional Method

What might a multisensory instructional method look like for teaching musical expression to musicians and how could it be developed? Referred to as "Multisensory Music Making" (MSMM), musicians interact with a combination of visual and auditory stimuli to inspire new concepts about the music they are learning. Through this approach, musicians learn to connect with music on a deeper level and to expand their range of emotional and expressive playing. Additionally, students glean insights into the necessary translation process for realizing abstract musical ideas into recognizable musical features. The researcher was inspired by the work of Farkas (2003) who completed a study testing the difference in learning between traditional and multimedia methods. Students who received supplementary multimedia teaching methods scored higher as well as enjoyed the lesson more. The study engaged students in a series of multisensory activities that helped to deepen the learning material, including watching videos, reading stories and drawing pictures. The researcher created the methods of the MSMM approach (Artistic Representation, Aural Modeling and Improvisatory Storytelling) from the concepts of multisensory learning used in the Farkas study.

An important focus of the MSMM approach is the development of a translation process from abstract expression into tangible musical gestures. Previous studies speak to the natural tendencies of specific emotions and their salient musical counterparts. Mohn, Argstatter, & Wilker (2010) conducted a study on the perception of six basic emotions in music and the characteristics of each emotion as adapted musically. Fear, for example, was realized in several performances of short, 'shivering' vibrato, low volume, fast

tempi, and ascending volume. The emotion of anger was performed using a hard touch, staccato, loud volume, dissonant harmony, minor mode, strong vibrato and rapid tempo. Happiness was demonstrated through the major mode, jumping, ascending melodies, large intervals, vivid expression and high volume. Disgust was also among the emotions identified musically and included a weak touch, subdued timbre, slow tempo, low volume, *diminuendo*, 'screeching', and changing expression and emphasis (p. 507).

Van Zijl & Sloboda (2010) performed an exploratory study on performers' experienced emotions in the construction of expressive musical performance. The subjects were instructed to keep an individual playing diary to document their expressive process. Of particular interest were the subject's 'strategies' and 'inner techniques' for constructing an expressive performance. The study revealed a progression of learning in four phases: (1) the initial exploration of the piece; (2) the mastering of technical difficulties; (3) the construction of an expressive interpretation; and (4) the construction of an expressive performance (pp. 207-211). An important distinction was discovered:

> There was found to be a difference between 'emotional playing' and 'expressive performance'. Emotional playing was described as 'just feeling and enjoying the music' and seemed to be primarily present during the first and third phase within the construction process. An expressive performance seemed to include a sense of awareness of the act of performing while being (mentally) engaged with the emotions found to be present in the music (p. 213).

It is useful to note the various stages of learning and that the technical process and expressive process are addressed separately. Through the use of the MSMM approach, students and teachers will gain insights into the expressive process and the ways in which it draws upon more emotional and expressive playing by targeting the nuances of the translation process from technique to music, or analogy to expression.

Another focus of the MSMM approach is to help students develop a language for speaking about their expressive gestures. In a questionnaire study of music students' perspectives on expressivity, Lindstrom, E., et al. (2003) investigated four themes of expressivity: (1) conceptualizing expressivity; (2) expressivity in everyday practice; (3) expressivity in music teaching; and (4) novel teaching strategies. One component of the study addressed the inability of performers to articulate their knowledge about expressive features of performance, due in part to its implicit nature. The in-depth interviews revealed that while music students unanimously regard expressivity as an important aspect of music performance, they currently do not regularly cultivate the skill, nor do they believe the curriculums for music teaching, which emphasize cognitive aspects, provide the necessary training. Additionally, the use of metaphors was indicated as the most common teaching strategy for developing expressivity. The common thread is that musical expression seems lost in the translation process due in part to the inability to recognize, articulate and incorporate appropriate expressive ideas into tangible musical gestures. This is the gap that the MSMM approach attempts to close, by giving students the tools to realize their own expressivity in a given musical product.

CHAPTER III—RESEARCH DESIGN AND METHODOLOGY

Purpose of the Study

The purpose of this study is to investigate the perceptions of students using the Multisensory Music Making (MSMM) approach for learning musical expression. The MSMM approach employs three method*s* for playing expressively, which includes Artistic Representation, Aural Modeling and Improvisatory Storytelling. These methods are intended to help students play more expressively in relation to five components of music, which include: (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and (5) articulation. The three methods are built out of the MSMM approach and use both auditory and visual stimuli to inform students' understanding about the music they are learning and the expressive gestures they wish to create.

MSMM Methods

Artistic Representation

Artistic Representation refers to the student's interaction with a chosen image and the ways in which certain features of the image relate to and/or portray the characteristics of the musical selection from which the student is trying to elicit an expressive gesture. A student might refer to an image of a mountain with an expansive background just before sunset. This image might help the student to better understand the feelings of

expansiveness, openness, or freedom that are associated with a particular melodic figure in his or her musical selection.

Aural Modeling

Aural Modeling refers to the simultaneous experience of listening to a music recording while playing a different piece to absorb and imitate the musical characteristics of the musical recording and apply them to the musical performance in real-time.[2] A piano student who wishes to play Handel with a lighter articulation might play a passage from a piece he or she is currently learning along with a recording of a harpist or a flutist to absorb and imitate the characteristics of the lighter articulation demonstrated by the flutist or harpist in the recording. The process of simultaneously layering a musical recording (chosen by either the student or teacher) against a real-time performance of a musical selection from which the student is trying to elicit an expressive gesture is best achieved by carefully selecting appropriate recordings so as not to distract the performer from the musical task at hand.

Improvisatory Storytelling

Improvisatory Storytelling refers to the creation of a storyline or narrative that is based on the combination of auditory and visual stimuli in relation to specific structural components of the musical selection from which the student is trying to elicit an expressive gesture. If a student is trying to gain a better understanding of the expressive term *brivido* (shivering, trembling), he or she chooses an image of two deer standing amidst a blazing forest fire. They have a look of fright and terror in their eyes. The

[2] Aural Modeling in this approach differs from the traditional definition of aural modeling, which refers to the imitation of a teacher's performance by the student.

teacher will play a recording of Samuel Barber's "Adagio for Strings," to intensify the visual experience and induce further emotional engagement with the student through the additional layer of music. Students are also encouraged to improvise using both aural and visual stimuli to create an emotional mood or feeling that can easily be transferred to the musical selection they are preparing.

Research Components

Research Design

This is a comparative case study on the effectiveness of a multisensory instructional method for learning musical expression. In the MSMM approach, each subject worked within the same context; however, using a comparative case study method allowed the researcher to observe the effectiveness of the approach from a variety of different perspectives.

Participants

This study employed five undergraduate George Mason University students studying music education or performance (referred to as Students A, B, C, D and E). Students B, C and D were new to the MSMM approach, Student E had some exposure to MSMM prior to the study (through participation in a group setting workshop) and Student A had worked closely with the researcher and the MSMM approach in several individual sessions one year prior to the study as part of a MSMM project. The researcher chose the students from the following woodwind studios: flute (1); clarinet (2); oboe (1) and bassoon (1). All five students interacted with the MSMM approach under the guidance of the researcher. Students ranged in ability from very competent (period of

study on their instrument ranging from five to seven years and degrees in music performance) to moderately competent (period of study on their instrument ranging from one to five years and degrees in music education or a bachelor of music).[3] The researcher utilized the methods of Artistic Representation, Aural Modeling and Improvisatory Storytelling to elicit and develop musical expression within a specific musical selection that was studied by all five students. The selection was an arietta entitled, "Se tu m'ami, se sospiri [If thou lov'st me]" (1894) by Giovanni B. Pergolesi (1710-1736)[4] from *24 Arias and Songs of the Seventeenth and Eighteenth Centuries for Medium and High Voice* (See Appendix H). The selection was unfamiliar to the students, as it was chosen from a genre that is separate from their line of study. This helped to prevent any one student having the advantage over another of previously studying the music.

Setting and Materials

This study was conducted on the Fairfax campus of George Mason University in the school's private practice and ensemble rooms in the School of Music and in conference rooms at the university over a 14-week period in the spring semester of 2013. The researcher recorded and used a series of technological devices to aid in the interactive approach, including the Internet (Google Images); iTunes (various musical selections); projector and projector screen (to provide full size images for students to use

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[3] Students considered "moderately competent" on their instruments were less familiar with the instrument used in this study (e.g., new to their instrument in college), but had studied music on other instruments (or in other capacities) for a number of years comparable to students considered "very competent" on their instruments.

[4] Some sources list Alessandro Parisotti (1853-1913) as the original composer, indicating the song was misattributed to Pergolesi.

as a reference); Bose Stereo (for musical selections); and Sony video camera (to record all sessions).

Data Collection

The researcher collected data through six methods: (1) researcher observations; (2) student interviews; (3) surveys from students' applied instrumental teachers in observation of their student's progress in terms of expressive playing; (4) student documents (such as notes in music, journal entries, etc.); (5) audiovisual materials (as gathered from videotaped and audio sessions); and (6) observations/evaluations gathered from third-party judges in assessment of performance quality of recorded performances of the participants. The data obtained from these methods was intended to provide an in-depth exploration of how effective the MSMM approach was in helping students recognize and incorporate musical expression in relation to five musical components, including: (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and (5) articulation.

Procedures

1. The researcher obtained permission from the Institutional Review Board (See Appendix A, "Script A: Student Group Meeting").
2. Each student performed / recorded a musical selection of his or her choice (Music A). The student had studied the selection with his/her applied instrumental teacher during the Fall 2012 semester in preparation for the Fall 2012 Jury (final musical examination). The researcher recorded the student's performance of this selection and used as an initial assessment of his or her

current level of musical expression (Recording 1). This recording served as a baseline performance to give the researcher an overall idea of the students' current level of expressivity.

3. The applied instrumental teacher for each student then completed a short survey about the student's strengths and weaknesses in the area of musical expression prior to the student receiving the MSMM instruction (See Appendix B, "Teacher Survey Prior to Student's Interaction with the MSMM Treatment").
4. Each student met with the researcher to discuss his or her understanding of musical expression in this particular piece in relation to: (1) process of learning (metaperception); (2) the experience of the learning; and (3) the quality of the performance. The student also notated specific references to expression on the sheet music. In this initial interview, the researcher asked the following questions (See Appendix C, "Summary of Interview Questions"):
    a. How long have you worked on this piece, and in what context (e.g., lessons, performances, independently)?
    b. Describe your approach to practicing this piece.
    c. How did you practice expression in this piece?
    d. Identify the expressive moments in the music.
    e. Discuss and provide examples for how you achieved musical expression in this piece.

f. How would you describe your means of expression in relation to the following five components of music: (1) overall mood/emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and (5) articulation?

g. How would you rate your overall performance?

5. The researcher then provided each student with the Arietta from *24 Arias and Songs of the Seventeenth and Eighteenth Centuries for Medium and High Voice* and asked the student to sight read/perform and record the selection (Music B / Recording 2). Students were allotted 30 minutes to review the selection prior to their performance.

6. The student met with the researcher to discuss his or her understanding of musical expression in this particular piece in relation to (1) process of learning (metaperception); (2) the experience of the learning; and (3) the quality of the performance. The student also wrote specific references to expression in the piece. In the interview, the researcher provided the following prompts:

    a. Identify the expressive moments in the music.

    b. Discuss and provide examples of how you achieved musical expression in the piece.

    c. How would you rate your performance?

7. The student and researcher worked together using the Multisensory Music Making (MSMM) approach on the piece the student performed in step 3 (Music B).

a. The researcher worked with the student twice a month over the course of a 14-week semester using the MSMM approach for a total of seven sessions (See Appendix D, "Script B: MSMM Guidelines and Questions").[5]

b. During this time, the researcher recorded all interactions with the student using audiovisual resources to document the student's process of learning.

c. Additionally, the student was asked to keep a journal documenting his or her learning experience and to keep records of the various images and song titles used in the process (See Appendix E, "Journal Guidelines and Prompts").

8. After the fourteen-week period, the student re-recorded a performance of the Arietta from *24 Arias and Songs of the Seventeenth and Eighteenth Centuries for Medium and High Voice* (Music B / Recording 3).

9. The student met with the researcher to discuss his or her understanding of musical expression in this particular piece in relation to (1) process of learning (metaperception); (2) the experience of the learning; and (3) the quality of the performance. The student also notated specific references to expression on the sheet music. In this final interview, the researcher asked the following questions:

[5] Sessions were scheduled according to the students' availability at two-week intervals to allow for individual work using the MSMM approach.

a. How long have you worked on this piece, and in what context (lessons, performances, independently)?
b. What is your approach for practicing this piece?
c. How did you practice expression in this piece?
d. Where do you feel the expressive moments are in the music?
e. How well do you feel you achieved the musical expression in the piece?
f. How would you describe your means of expression in relation to the following five components of music: (1) overall mood/emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and, (5) articulation.
g. How would you rate your performance?

10. The researcher randomized the final recordings and presented them to a panel of judges for evaluation of the levels of musical expression using a Likert scale referred to in other articles for measuring musical expression (See Appendix F, "Performance Assessment Tool"). Judges were chosen from local music teachers in Northern Virginia[6]. The first judge teaches high school and collegiate clarinet students and is an active orchestral musician and performer. The second judge teaches middle and high school flute students. The components of musical expression in consideration included: (1) overall

[6] Initially, the researcher chose three judges for the panel; however, due to a breach in confidentiality, the researcher omitted the results for the third judge and used data only from the two judges described in the procedures.

mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and (5) articulation. The list of recordings includes:

a. Student Recording 1 (from step 2); performance of prepared jury piece (Music A), prior to MSMM
    i. Includes recordings from all students' jury performances (total of five);
b. Student Recording 2 (from step 5); sight-read performance of selection from *24 Arias and Songs of the Seventeenth and Eighteenth Centuries for Medium and High Voice* (Music B) prior to MSMM
    i. Includes recordings of sight-reading performances from all students (total of five); and
c. Student Recording 3 (from step 8); selection from *24 Arias and Songs of the Seventeenth and Eighteenth Centuries for Medium and High Voice* (Music B) after MSMM treatment with researcher guidance
    i. Includes recordings of students after the MSMM treatment (total of five)
    ii. In total, the judges received a total of 15 recordings to evaluate (all recordings remained anonymous). The judges were asked to rate each recording on an individual basis.

11. The applied instrumental teacher for each student completed a short survey about the student's strengths and weaknesses in the area of musical expression after the student had received the MSMM instruction (See Appendix G,

"Teacher Survey After the Student's Interaction with the MSMM Treatment").

MSMM Sessions

The six interactive sessions (including one final interview session) sought to explore answers to the following research questions: (1) how does the MSMM approach develop a *vocabulary* for the process of learning musical expression, and what role does metaperception play in this process; (2) what is the student's *experience* like using the MSMM approach to develop a deeper emotional connection with the music; and (3) what is the *quality of performance* demonstrated by students using the MSMM approach?

The sessions focused on the three methods for playing expressively, which included Artistic Representation, Aural Modeling, and Improvisatory Storytelling, and were designed to assist students in playing more expressively in areas of overall mood and emotion; rhythmic inflection; style; dynamics and articulation. The MSMM approach incorporated both auditory and visual stimuli to inform students' understanding about the music they are learning and the expressive gestures they wish to create.

Students prepared Music B ("Se tu m'ami se sospiri," from *24 Arias and Songs of the Seventeenth and Eighteenth Centuries for Medium and High Voice*) in preparation for session one (See Appendix H, "'Se tu m'ami se sospiri'"). They were not given the title of the work, only told it was an Italian arietta and to prepare to the best of their ability, without any guidance from their private teachers. The researcher asked students to keep a journal documenting their learning experience and to keep records of the various images and song titles that were used in the process. The researcher also asked students to record

their ideas about expression as they related to their individual practicing and any discoveries they made in and out of the MSMM sessions (See Appendix E, "Journal Guidelines and Prompts"). Students met individually with the researcher for 45-minute sessions over the course of fourteen weeks. All sessions, including the corresponding images and musical selections, were recorded throughout this time. Students were also provided a link to their own individual website, which served as a summary of each session. The website included the images and musical selections used in the sessions, as well as some initial explorations and connections made by the student in the sessions. Students were also given guidelines on how to follow up after each session so that their work could continue beyond the sessions into their own practice sessions (See Appendix E, "Journal Guidelines and Prompts").

Session one. The main goal for session one was to introduce the students to the MSMM approach by having them complete an introduction cycle and to utilize the first two methods of the MSMM approach (Artistic Representation and Aural Modeling) in consideration of the expressive ideas associated with the overall mood/emotion of Music B, herein referred to as Arietta. Additionally, the phrase "musical selection" will denote any composition used/performed by students throughout the study that was from their own library of repertoire.

Students were shown a three-part introduction cycle that layered words with images and finally music. Students were asked to discuss their reactions to the layering of these three levels of sensory cues and to consider how their emotional engagement with

the initial word changed with the addition of images and music. This was intended to prepare students for the type of work they would be doing throughout the study.

After completing the brief introduction cycle, the researcher asked the students to perform a run-through of the Arietta on their instrument. Following the performance, the researcher asked the students to respond to a series of prompts:

1. Let's begin with your overall understanding of the music. Please describe your overall expressive sense of the music.
2. How have you practiced expression with this piece so far?
3. Discuss and provide examples of how you demonstrated expression in your performance.
4. How would you describe the overall mood or emotion of the selection?
5. How are you currently portraying the overall mood or emotion of the selection?

Using the answers from these questions as a starting point, the researcher worked with the student to build an Artistic Representation of the overall mood/emotion of the Arietta. Each student was shown five categories, each containing several images unique to the category. The categories included: Peaceful, Dark, Energizing, Agitated and Playful (See Figure 1, *MSMM Slide…*).

Figure 1. MSMM slide. Five categories of overall mood/emotion.

The researcher asked each student to choose a category that closely related to his or her initial description of the overall mood/emotion of the Arietta. From within that category, the student chose one to three images that best matched his or her description of the overall mood/emotion.[7] After choosing the image, the student discussed how it portrayed the overall mood/emotion of the Arietta, and to consider the colors, characters, textures, directions, lines and other artistic clues to enhance the connection between the music and the image. Finally, with the assistance of the researcher, the student engaged in a series of mini-performances linking specific aspects of the chosen image to specific musical gestures or expressive ideas.

The student and researcher worked together in a series of mini-performances comparing different musical gestures to various artistic cues in the images to further develop the expressive nuances that make the overall mood/emotion more identifiable musically. Students used a variety of musical tools to highlight the artistic nuances:

[7] Each category contained 10 to 15 images. Students were initially shown all of the images and asked to narrow down their selection to two or three images. From those two or three images, the researcher and student would discuss which images best portrayed his or her expressive goals.

vibrato (varying the speed to create more urgency in the sound); articulation (give more weight to certain notes); tempo (taking more time approaching important phrases, and to represent longing or sadness); and sound (creating a darker sound to embody the sadness of the music). Upon completion of these mini-performances, the researcher asked the student to complete the following prompts:

1. Perform the selection again, all the way through with these new expressive concepts related to the overall mood/emotion of the music in your memory.
2. Discuss your thoughts on the performance. How well did you achieve the expressive ideas?

Due to time constraints of session one, the researcher was only able to introduce Artistic Representation to the students.

Sessions two and three. The main goal for sessions two and three was to continue with Artistic Representation and introduce Aural Modeling in association with (1) the Arietta; and (2) a musical selection chosen by the student to achieve expressive concepts related to overall mood/emotion, style, articulation and dynamics in both musical selections.

While the title and words were still unknown to the students at this stage, they were given the genre from which the Arietta originated—an Italian aria from the eighteenth century. Students were asked to choose an image from Google Images that best portrayed the Italian aria style through Artistic Representation. Additionally, students listened to one to two recordings (from the researcher's iTunes library) and were asked to play the Arietta along with the recording to engage in Aural Modeling.

In addition to working specifically with the Arietta, students were also given the opportunity to create a style profile[8] using a musical selection from their current repertoire. Students provided a clearly articulated expressive goal, chose an image and song to portray the expressive goal; and, then commented on how effectively their performance portrayed the intended expressive goal. Three of the five students had another selection to perform, while the remaining two wished to continue their work with Music B only.

In these sessions, students also explored the attention to detail that is possible through the components of articulation and dynamics using the MSMM approach. By pairing the sounds of specific instruments with a desired musical nuance (lightness of mallet percussion, or string *pizzicato* for *staccato* notes; or the bow strokes of a cello for *tenuto* passages and greater connectivity between notes) a level of greater musical detail and clarity can be achieved. Students also used artistic features from the images to link to specific musical gestures in the music. Examples included linking colors to specific dynamics (reds = *forte*; blue = *mezzo forte*, etc.), textures to articulation (water = fluidity, tenuto; rocks = accents; waves = lifting), or weather elements (wind = sudden direction or movement in the line; lightening = *sfz*; fog = more transparent sound). These combinations revealed many creative possibilities and more authentic performance outputs.

[8] A style profile refers to the visual and auditory stimuli the student used to realize the stylistic features of his/her musical selection.

Session four. The main goal for session four was to continue Aural Modeling in association with a musical selection chosen by the student to achieve expressive nuances in relation to Rhythmic Inflection and Stability.

Session four focused solely on Aural Modeling to develop the internal time mechanisms which students deemed as challenging in their current solo repertoire. In most cases, music that was familiar to the student (something they have listened to on a regular basis; or have heard many times before) proved the most effective in focusing the student on aligning the passage from their musical selection with the song playing in the background. The students used a variety of different layering techniques or response mechanisms to help establish an internal pulse, rhythmic inflection, or rhythmic stability, which are discussed in detail in Chapter IV.

Sessions five and six. The main goal of these sessions was to introduce Improvisatory Storytelling as an outlet for students to engage in an improvisatory performance setting and to spontaneously interact with images and background music to inspire a higher level of emotional engagement than was possible with printed music. These sessions were comprised of several, three- to five- minute intervals of improvisatory performances, in which students were shown an image and asked to improvise a musical line to the image. Students were asked to discuss which elements of the image they were referring to in their performance (e.g., colors, characters, lines, patterns, textures, evidence of movement, objects, landscape) and to highlight the connections between the musical gestures in their performance and visual aspects of the image (e.g., how these elements related to their choice of key, the rhythms they used, the

melodies they created). The same process took place with background music in which students spontaneously responded to the subtleties of the music they were hearing and improvised to the music they were hearing. In session six, students were provided both a visual and aural backdrop from which to create a musical story, and in some cases the researcher joined in as a third variable (in addition to the image and background music) to initiate the student's response to yet another live variable in the MSMM approach for developing and learning expression.

These two sessions were particularly demanding due to the cognitive and emotional challenges of spontaneously eliciting emotional reactions to visual and aural stimuli and portraying them in performance.

Session seven. Session seven took place at the end of the fourteen-week period. Students re-recorded a performance of the Arietta from *24 Arias and Songs of the Seventeenth and Eighteenth Centuries for Medium and High Voice* (Music B / Recording 3). Then, the student met with the researcher to discuss his or her understanding of musical expression in this particular piece in relation to (1) process of learning (*metaperception*); (2) the *experience* of the learning; and, (3) the *quality of the performance*. In the interview, the researcher asked the following questions related to Music B:

1. How long have you worked on this piece, and in what context (lessons, performances, independently, etc.)?
2. What is your approach for practicing this piece?
3. How did you "practice" expression in this piece?

4. Where do you feel the expressive moments are in the music?
5. How well do you feel you achieved the musical expression in the piece?
6. How would you describe your means of expression in relation to the following five components of music: (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and, (5) articulation.
7. How would you rate your overall performance?

Finally, the researcher discussed with the student his or her overall impression of the MSMM approach and to highlight some of the most memorable moments. These final comments provided the researcher with important insights into the experiences of individual students with the MSMM approach and how integrated it was in their practicing and understanding of musical expression.

Data Analysis

After the recorded materials were transcribed, the data was analyzed using three methods: (1) coding and theme generation; (2) constant comparison; and, (3) triangulation. The combination of these methods for data analysis ensured that all information was reviewed frequently, thoroughly, and from several perspectives. As the validity and quality of the MSMM approach are of interest to this particular study, these data analyses ensured proper investigation of the effectiveness and ease in using this MSMM approach for teaching and learning musical expression.

CHAPTER IV—RESEARCH QUESTION ONE RESULTS

The results of this study are organized by the data that supports each of the three research questions. The first research question sought to explore the role of metaperception in the expressive process; the second, the experience of the student in using the MSMM approach; and third, the quality of the performance before and after the MSMM approach.

Metaperception

The first research question centers on how the MSMM approach can help students develop a vocabulary for the process of learning musical expression and the role that metaperception plays in this process. Haroutounian (2002) provides a more in-depth explanation of metaperception:

> Metaperception describes the cognitive/perceptual functioning of a musician or any artist while making interpretive decisions. It is the artistic counterpoint to *metacognition*, which describes the monitoring of thought while making cognitive decisions in the academics. Metacognition may be described as the process of 'thinking about thinking – mapping out ways to think in order to solve problems effectively. Metaperception describes 'perceiving/thinking about artistic intent'—the process of filtering and manipulating sensory perceptions combined with cognitive and expressive decision-making in order to create artistic solutions (p. xvi).

Of particular interest to this study is the idea that "in the arts, we internally manipulate perceptions of sound, movement, color, or texture as well as through emotion to create an artistic statement through a particular arts medium….We listen, adjust, and adapt sounds

and their physical production until we mesh the sound with our interpretive intent" (Haroutounian, 2002, p. xvi). Students in this study engaged in a similar interpretative process of aligning images and background tracks with their expressive intents. The process by which an expressive goal is realized as a musical gesture reflects the role of metaperception in the MSMM approach and the language and actions that facilitate the translation from one medium (emotional, cognitive, intangible) to another (physical, musical, tangible).

Overall Mood and Emotion

The results that support the role of metaperception in the MSMM approach are explored within the context of the five components of music throughout the six interactive sessions (not including the final, seventh interview). These results demonstrate the development of an expressive vocabulary amongst the five subjects who participated in the MSMM study. The data used to support this question was derived from researcher observations, student interviews and comments, student documents (such as notes in music, journal entries) and transcriptions from audiovisual materials.

Using the method of Artistic Representation, students first explored the expressive nuances of the overall mood/emotion in the Arietta (Music B). While the choice of images and descriptive language varied amongst the five students, there were notable similarities in the overall sentiment of the Arietta. Collectively, the students described the mood as dark and mysterious and the overall emotion as one of sadness and longing. The images were chosen mainly from the Dark and Peaceful categories and contained shades of grey and black and light and dark, underscoring the hints of sadness

and mystery that were described by the students. They also perceived the contrast of light and dark—that was present in all of the chosen images—as a progression from one point to another (from the opening sigh gestures in measure five to the arrival of the first cadence point and its corresponding *ritardando*, *fermata*, and descending melodic line in measures nine and ten), and as a representation of both the pure and sinister qualities of the melody.

Students used a variety of musical gestures to demonstrate this distinct contrast between light and dark, including the change from a lighter, more transparent tone color to one that was rich with overtones, from a shimmery, narrow vibrato to a heavier, wider vibrato, or from a long *crescendo* into the final cadence and slowing of tempo leading to the end of each consecutive phrase. The traces of longing and sadness were conveyed by students' manipulation of the sigh gestures (measures five and six and nineteen and twenty in the Arietta), by leaning into and giving more weight to the shorter rhythmic unit and lifting on the final notes, thus giving the impression of small cries, whimpering, or sighs.

Additionally, the students' descriptions of the overall emotion reflected sentiments of the Arietta's prose, including sorrow, deception and suffering. The title and meaning of the Arietta (unknown to the students) was reflected in the images and descriptions chosen by the students—in their own words and with their own expressive language. Not only did the students share similarities in descriptions across the five of them (mysterious, dark), but they all experienced and described the emotional intent of

the composer through the realization of their chosen images (sadness, longing) (See Appendix J, "Translation of 'Se tu m'ami se sospiri'").

Table 1 compares student comments of the Arietta after only having studied the piece for 30 minutes (in preparation for Recording 2, sight-read performance of the Arietta) with comments from the first two MSMM Sessions (overall mood/emotion) and prose from the Arietta. These findings demonstrate similarities in descriptive language that were initially described by the students, later developed in Sessions One and Two, and remarkably similar to the Arietta's prose. The implications here are that students are more attuned to the emotional and expressive language in music (even without context) than is often acknowledged, and furthermore demonstrate an untapped potential for fully exploring their musical sensibilities for musical expression in its fullest capacity.

Table 1

Comparison of Students Comments on the Arietta Before and During the MSMM Study for Overall Mood/Emotion

Student	30-minutes	Sessions One and Two	Arietta Prose
Student A	I think it feels dark…medieval, hollow, wooden-esque…peasant-y.	Sinister	If you love me, if you sigh Only for me, dear shepherd, I am sorrowful for your sufferings; yet I delight in your love. But if you think that I must in return love only you, Little shepherd, you are subject To deceiving yourself easily. The beautiful purple rose Will Silvia choose today; With the excuse of its thorns, Tomorrow, then, will she despise it? But the advice of the men I will not follow – Just because the lily pleases me, I do not have to despise the other flowers.
Student B	There is kind of an unrest…like waiting for something or someone.	Longing	
Student C	There is sort of a feeling of backing off…	Hesitation	
Student D	The overall mood to me is very sad.	Coming out of nowhere	
Student E	I am getting a disappointment or a longing for something.	Lamenting	

Note. Student comments were obtained from the initial interview and from the transcriptions of Sessions One and Two. Words of interest from the Arietta's prose are "sorrowful," "deceiving," "despise," and "thorns" in addition to the overall idea that the subject in the prose is deceiving the shepherd, who is unaware of his intentions to love another. Furthermore, a sense of longing is implied from innocent pursuit of his (distracted) love for her.

In addition to establishing an overall mood/emotion through Artistic Representation, students also identified potential characters or events associated with the Arietta to which they applied direct musical gestures. Two students described a single female as an important character in the Arietta who they viewed as longing or lamenting. These students portrayed the female's disposition through sigh gestures; a lighter, more transparent tone color; insistence of repeated notes/phrases to mimic her footsteps; and hesitation of certain notes and slowing down to represent her hesitation and uncertainty (See Table 2).

Table 2

Use of Artistic Representation for Overall Mood/Emotion of the Arietta

Image description and title	Overall mood/emotion	Student description	Researcher observations
Moonbeams on the ocean (Figure 2, *Moonbeams on the Water…*)	Sinister	I think of the mood as dark. It's pretty, but becomes so sinister. (Student A)	*Crescendo* with the phrase and wider, slower vibrato on the last note.
Woman wearing a hood, eyes hidden (Figure 3, *Between Darkness & Wonder…*)	Longing	I feel like there is a woman waiting for someone to come back. Longing for something. (Student B)	*Decrescendo* and slowing down at the end of the phrase.
Girl standing in a dark alley (Figure 4, *Goodbye Darkness…*)	Hesitation	There is a hesitation; she is a small girl alone in an alley. I pictured her walking…she is several paces ahead of me, then she disappears around the curve. [I'm] backing off, like a *morendo*. (Student C)	*Decrescendo* and slowing down at the end of the phrase.
Snow-covered forest (Figure 5, *Winter Wonderland…*)	Coming out of nowhere	I really want to make the piece sound like it is coming out of nowhere. I want [my tone] to be…more transparent. (Student D)	Experimenting with dynamics; starting softer.
Sea of molten lava (Figure 6, *Lava Flow…*)	Lamenting	It's not angry, it's not sad. I guess lamenting; it is kind of a gray area…disappointed, anguish. It is hot and I am trying to rush to the cooler side of things…some sort of [a] resolution. (Student E)	*Crescendo* into the end of the phrase.

Note. Student comments were obtained from the transcriptions of Sessions One and Two. Student descriptions refer to the visual features of his or her chosen image to represent the Overall Mood/Emotion of the Arietta. Researcher observations note the salient musical gestures of the student's performance. To view images, see Appendix I, "Catalogue of Figures."

Through the process of metaperception, students began to specify the meaning of the music through these gestures and started to draw more specific conclusions about how they wished to portray the expressive ideas in the music. Students approached the

translation process from the initial description of the overall mood/emotion to the actual musical gesture through trial and error and by using specific cues in the images as focal points to bring subtle changes to their interpretation and performance.

Style

Using the methods of Artistic Representation and Aural Modeling, students furthered their expressive exploration of the Arietta through the component of style. With the addition of Aural Modeling in these sessions, students were able to develop a more intimate understanding of the Arietta as it related to specific stylistic nuances. Students were first asked to share their thoughts on the general style features of an Italian aria to help them apply these style features to their musical performance of the Arietta. Overall, students spoke to the beauty, tenderness and simplicity of the tuneful melodies; *rubato* in tempo; and a focus on the singer. Four out of the five students chose an image of a single female representing poise, grace and simplicity (underscoring their initial descriptions of a single female as central subject in the overall mood/emotion). Additionally, the female appears to be lost in a "gaze" in each of these images, which also speaks to the sense of longing that was described by the students. Table 3 illustrates examples specific to Artistic Representation.

Table 3

Use of Artistic Representation for Style of an Italian Aria

Student description of an Italian aria	Image description and title	Student observations of image and performance	Researcher observations of performance
Melodic, more like a reflection, and focused on the singer. More *rubato* in the tempo. (Student A)	Woman dressed in a gown, reading on a couch (Figure 7, *Lovely Lady…*)	The colors [in the image] are serene, tranquil...very languid…a relaxed setting. My music is the backdrop to her thoughts….I tried to use more color in the beginning. (Student A)	Student took more time; played with a greater sense of tenderness and was more transparent in tone color.
Slow, beautiful…and melodic. Lots of *rubato*…especially in the slower passages. Emotional. Minor key-ish." (Student B)	Woman sitting on a chair looking out the window (Figure 8, *Morning…*)	Sadder, longing…she is looking out the window…looking at something…longing in a sense, like a sigh. I [played with a lifted style because] it is like the moment before going into something else…I played kind of loud and then backed away….[the] greatest part of the sigh is the beginning. (Student B)	Student lingered on certain notes.
Ornamentation and phrasing to move the affections…more tuneful, like a cadenza. Renaissance fair, just the whole atmosphere, the simplicity of it. (Student C)	Leonardo da Vinci's, *Mona Lisa* (Figure 9, *Mona Lisa…*)	Mona Lisa's seductive facial expression…is graceful…light-hearted…[I played] more *la dah* between slur and tonguing. More fluid, connected…and graceful. (Student C)	More connected, *legato* playing.
I think of the delicacy [of the Italian Renaissance]. (Student D)	Sandro Botticelli's, *The Birth of Venus* (Figure 10, *The Birth of Venus…*)	This [image shows] the birth of a Goddess who has just been brought into this world and there is a sense of naivety. There is a delicate and tender feeling. (Student D)	Used a more transparent tone color, softer dynamics and more of a *dolce* quality to her performance.

Note. Student comments were obtained from the transcriptions of Session Three. Student description refers to the visual features of his or her chosen image to represent the general style of an Italian aria. Researcher observations note the salient musical gestures of the student's performance. To view images, see Appendix I, "Catalogue of Figures."

For the Aural Modeling portion of the approach, all the students were given the same background track, “Come Sail Away” from the album *We All Love Ennio Morricone* performed by Renee Fleming. The researcher chose this selection because it contained several of the features described by the students as relating to the style of an Italian aria. Students commented on the use of sighs, intense emotion, varying dynamics, sense of longing, and use of *rubato* in the song as indicators of the style of an Italian aria and the Arietta for this study, in particular. Students also used similar musical gestures to portray their descriptive style features, such as lingering on (lengthening) certain notes over others, use of a darker (heavier) tone, sigh gestures, and incorporating a lift at the ends of phrases to indicate tenderness. Table 4 illustrates these results.

Table 4

Use of Aural Modeling for Style of the Arietta

Background track	Student description of style	Student observation of background track	Researcher observations
Ennio Morricone, "Come Sail Away"	Melodic, more like a reflection….focused on the singer….with more *rubato* in tempo. (Student A)	[The use] of swells…it was more active….very emotional the way she sang it. Very full. (Student A)	Student lingered on each phrase. More at ease, sound was more relaxed.
Ennio Morricone, "Come Sail Away"	Slow, beautiful…and melodic…Lots of *rubato*…especially in the slower passage. Emotional. Minor key-ish." (Student B)	It was very longing…slow, *rubato*, varying dynamics. (Student B)	Student slowed down to match the movement and heaviness of the music; brought out sigh gestures.
Ennio Morricone, "Come Sail Away"	Ornamentation and phrasing to move the affections…more tuneful, like a cadenza. Renaissance fair, just the whole atmosphere, the simplicity of it. (Student C)	It was very longing…slow, *rubato*, varying dynamics….I felt more of the longing. Before she falls from the higher note, before she fell down. (Student C)	Student slowed down to match the movement and heaviness of the music; brought out sigh gestures.
Ennio Morricone, "Come Sail Away	I think of the delicacy [of the Italian Renaissance]. (Student D)	I kind of drew back a bit instead of playing in this dark rich tone; I didn't put too much power behind my playing. (Student D)	Student played with more of a lift at the ends of the sigh gestures to reflect the tenderness.

Note. Student comments were obtained from the transcriptions of Session Three. Student description refers to the aural features of the background track to represent the style of the Arietta (Music B). Researcher observations note the salient musical gestures of the student's performance. To view images, see Appendix I, "Catalogue of Figures." To view background tracks, see Appendix K, "Catalogue of Background Tracks."

The exploration of style revealed two important learning outcomes. The first was a deeper understanding of the style and corresponding musical gestures from which the aria originated (eighteenth-century Italian aria), as described above in student comments referring to sigh gestures, use of *rubato*, singing, *legato* quality to the phrases and an

overall sense of tenderness and lyricism. The second was the ability to link an expressive goal with clearly articulated and performable musical gestures. Both learning outcomes were facilitated by a chosen image (Artistic Representation) and an accompanying song(s) (Aural Modeling).

The students used a specific translation process to achieve these learning outcomes: (1) articulate their expressive goal; (2) choose an image and song to portray the expressive goal; and (3) comment on how effectively they believed their performance portrayed the intended expressive goal. Three of the five students used a musical selection from their current repertoire, while the remaining two continued their work with the Arietta only. Note the various ways the students allowed the expressive process to unfold: using a musically technical language (e.g., adjust this pitch; more of this dynamic here) as in Student B; a physically descriptive language ("forward motion"; "sense of gliding"; "walking") as in Students A, C, and D; and, a very illustrative and metaphoric language ("waves between the rocks are like air between the notes"; "a soliloquy") as in Student E. Students also referenced the use (or lack of) movement in images to portray expressive goals. "Light playfulness" (bubbling circles); "flowing quality" (birds flying); "greater sense of energy" (waves crashing) represented expressive goals with motion or movement, while "sense of reserved darkness" (winter tree in a desolate location); or "feeling of serenity" (Japanese garden) represented expressive goals with no motion and more ambient expressive concepts. The processes by which the students linked their expressive goals to the actual performance output varied considerably, revealing just how personalized the expressive process of translation was from one student to the next.

Tables 5 and 6 illustrate these findings for Artistic Representation and Aural Modeling. Note how students sometimes used more than one image to achieve the same expressive goal, to perhaps deepen or expand their understanding[9] of the nuances of that goal through other images and different perspectives.

[9] Students demonstrated a deeper understanding of their expressive goal by using a more advanced expressive vocabulary with the addition of each image (e.g., from "forward motion" to "drifting"; "water" to "reflectiveness"; "agitated" to "destruction") (See Table 5).

Table 5

Use of Artistic Representation to Achieve Expressive Goals for Style in Individual Musical Selections

Expressive goal	Image(s)	Student observations of image and performance	Researcher observations
I want to convey a sense of light, playfulness and ease off the feeling of bearing down on the notes. (Student A)	Floating balloon bubbles (Figure 11, *Whimsical Art…*)	When I look at it different ones just pop out at you…I just think of little pops. I feel that [I played] more [sings in a more lyrical/sustained way while gesturing hand forward]…What I did was just ground everything more, and kept the forward motion. (Student A)	Student played in a more effortless manner, in the same way she gestured upward, with more motion. The upward gestures were improved in terms of evenness.
	Birds flying over ocean (Figure 12, *Birds Flying…*)	Calm…phrases are drifting and are from afar…I felt better about it. I think [sings the difficult passage] comes out better. It is clearer. (Student A)	
Convey a sense of reserved darkness with some…light. (Student B)	Barren tree in open field (Figure 13, *Dark Tree…*)	It's very reserved…[like in the excerpt]. It's dark in the beginning, but then when the strings come in, it's not. I used phrasing and dynamics to create more growth in the music…started louder to prepare the softer passages and then built up again. (Student B)	Student referenced the roots of the tree to help darken the sound, which helped strengthen the beginning of the excerpt and better prepare the *piano* passages.
Explore the fluid, flowing quality of the music. (Student C)	Birds flying over ocean (Figure 12, *Birds Flying…*)	The flight [of the birds]; flight in the sense that it is motionless, but you are still moving…like gliding. I thought of the word gliding when I thought of the long run. (Student C)	Student seemed to move differently when playing, more horizontally in line with the flow of the music. Student visualized the first note like that of a bird, in-flight. The result was a note that sounded already in motion, flowing into the music, with a nice color and shape.
Develop a feeling of serenity in my	Peaceful Japanese garden with bridge and	The destination is the water, because that is where I end. It	(Table continues)

playing. (Student D)	water (Figure 14, *Japanese Garden…*)	is like traveling, like walking across the bridge [student sings the opening motive while moving hand across the bridge] to connect the ideas in a more flowing manner. (Student D)	
	Snow-covered forest (Figure 5, *Winter Wonderland…*)	It is really the whiteness that hits you. I really want to make this piece sound like it is coming out of nowhere…it is all blended together…like mysterious, not like it is one particular color. It is the reflectiveness in the water, instead of having a complete dark sound; I wanted it to be a little more transparent. (Student D)	Student plays in a more connected, flowing, and moving manner and uses a more transparent tone color.
Achieve a greater sense of energy in the music. (Student E)	Stormy sea with a lighthouse (Figure 15, *Angry Sea II…*)	It is a bit more agitated…where the waves are breaking on the rock. The waves are not stopping, the waves are moving over the land and over the rock, so the air could be moving between the notes. (Student E)	Student played more fluidly and in a connected manner.
	Explosive lightening cloud (Figure 16, *Chile…*)	There is a lot of energy, there is a lot going on. I'm agitated…because I see all of this destruction and commotion that is happening…the mood of the air and the energy have changed a lot. (Student E)	Student brought more intensity to the rhythmic inflection and movement of the line.

Note. Student comments were obtained from the transcriptions of Session Three. Student observations refer to the visual features of the image to represent the expressive goal for style. Researcher observations note the salient musical gestures of the student's performance. To view images, see Appendix I, "Catalogue of Figures." The expressive goals were explored through the Arietta (Music B) as well as individual musical selections chosen by the students from their current repertoire used for individual instruction or in preparation for an upcoming jury or recital.

Table 6

Use of Aural Modeling to Achieve Expressive Goals for Style in Individual Musical Selections

Expressive goal	Background track	Student observations of background track and performance	Researcher observations
I want to convey a sense of light, playfulness and ease off the feeling of bearing down on the notes. (Student A)	CH2, "Spanish Guitar" (solo guitar)		Student responded to the constant groove and steadiness of the rhythm by relaxing her playing a bit, and maintaining a steadier pulse.
	Music for Deep Sleep, "Meditation on Tranquility – The Hang with Ocean Waves" (sounds of ocean waves with steel drums)	It felt like I had more freedom within the notes, not bound by the rhythm. It is like the pushing and pulling of the waves. (Student A)	Student takes one phrase at a time with the music, in a repetitive manner. She elongates certain notes; plays more lyrically, less pecky. Internal clock seems to slow down with the sound of the waves. Took her time with the notes.
Convey a sense of reserved darkness with some…light. (Student B)	Kronos Quartet, "Close Your Eyes" (string quartet)	I used dynamics, [and thought about] where to lean. What notes to learn on…like *tenutos*, or how long a note really is. Like it is a quarter note, so lean into it, don't just cut it off. There was a lot more *ritard*. [I focused] on the minor…and it worked because they are both dark…less about tonality, more emotionally similar. (Student B)	Student was responsive to the music and seemed to "place" the notes in a more deliberate manner. Took more time to start notes; used more colors and nuance, which gave the performance more depth.
Explore the fluid, flowing quality of the music. (Student C)	Nature Sounds, "Wind & Waves (Vent et vagues)" (sounds of wind and ocean waves)	The wind rushing felt…free…not tethered. I felt a lot more connected…longer phrases. (Student C)	Student seemed much more at ease and played in a connected and fluid way.
Develop a feeling of serenity in my playing. (Student D)	Music for Deep Sleep, "Meditation On Tranquility -The Hang with Ocean Waves	I just kind of fell into the music. In spa music and meditation music…there are spots where you breathe in and out. The	Student seemed to slow down and relax the pace.

(Table continues)

	(steel drums and ocean waves)	sound…of ocean crashes [had me moving] my [instrument] in a circle…and I was able to pull back and give and pull back and give so I created this wave kind of feeling….like I was cradling the music. (Student D)	
Achieve a greater sense of energy in the music. (Student E)	Nature Sounds, "Wind & Waves (Vent et vagues)" (sounds of wind and ocean waves)	When the wind intensified, I moved more air through the notes…I can't increase the dynamics because that is not what is written but I can ignite the air between the notes." (Student E)	Pulling from the description of the water going over the rocks and onto the land, as well as the calming effect of the wind and waves, the student played more fluidly.
	Yanni, "The Storm" (solo cello)	I waited for the cellist…kind of separated the event…he was playing the event [the storm in the image] so then I could concentrate on playing and really surrender to fate. (Student E)	Student was able to focus on the reflective nature of his playing as a separate event from the energy in the piece, so that the more energetic parts could stand out.

Note. Student comments were obtained from the transcriptions of Session Three. Student observations of the background track and performance refer to the aural features of the track to represent the expressive goal for style. Researcher observations note the salient musical gestures of the student's performance. To view background tracks, see Appendix K, "Catalogue of Background Tracks." The expressive goals were explored through the Arietta (Music B) as well as individual musical selections chosen by the students from their current repertoire used for individual instruction or in preparation for an upcoming jury or recital.

In cases where the expressive goal was not established, students were more likely to go off on tangents using expressive words that were either inappropriate to the musical context or went in several other directions. This made it difficult to stay on track and keep the student focused on a particular passage or expressive concept. With an explicit expressive goal in mind, students were more proficient at achieving a performance result that was consistent with each performance and more likely to be recalled at a later time.

Rhythmic Inflection

Through Aural Modeling, students used a variety of response mechanisms to internally align themselves with the rhythmic components of the music. Because of the simplicity of the rhythm in the Arietta, four out of the five students chose to work with other musical selections from their individual studies, while the fifth subject continued work with the Arietta. Of the response mechanisms used for Aural Modeling, the ones most commonly used were *matching style*, *aligning motivic/musical gestures*, *looping,* and *providing a steady beat*.

Matching style. The stylistic features of a background track provided a framework for students on articulation, phrasing, melodic contour, and dynamics. These features were among the most salient aural components of the background track that students absorbed and mimicked in their performances. For this reason, matching overall style features resulted in the most dramatic changes in their performances (i.e., going from an initially choppy performance, to a smoother, more lyrical performance; changing the overall weight placement; difference in articulation).

Student E wanted to establish a better waltz feeling in his etude. By choosing a background track in the style of a Schubert waltz, he was able to align the etude with the waltz to get a better sense of weight placement on beat one, along with a lighter feeling through beats two and three, and an overall "dance quality" of the waltz with forward motion. This process helped the student play more in the character and style of a waltz.

Student B wished to create more lyricism in his performance by lengthening the overall phrasing structure of his performance and playing through the rests (or

maintaining movement through the rests), "It made the segments work better…I was able to forget about the melody and just go with the music."

Aligning motivic/musical gestures. Nearly as common as matching style was aligning motivic/musical gestures[10]. While this response mechanism was similar to matching style, it differed with regard to *what* the students matched and *how* they interacted with the approach. Matching style was more about realizing the bigger picture feel and did not engage students in repetitions, but rather longer run-throughs. In this technique, students focused on principal motives, such as pick-up gestures, grand moments in the dynamic spectrum, the ebb and flow of the rhythmic motion (and distinct rhythmic inflections), or attention to the weight and length of certain notes. Students performed these motivic gestures against the background track through several repetitions until they established a consistent performance of the musical idea and were able to recall it without the background track playing. Students were better at recalling specific motivic gestures without the music (likely due to the number of repetitions), whereas they were less likely to sustain the stylistic features without the background track. Therefore, matching style was a listening action, whereas aligning motivic/musical gestures was a participatory action.

Student C wanted to explore the use of accents in a particular passage, but was not clear on how much of an accent to use. By playing a longer passage against the steady background music, he was able to match the weight of the accent with the weight of the beat in the music until he could perform with consistency the same weighted accents

[10] A motive or musical gesture is a rhythmic or melodic pattern that is repeated throughout a phrase.

throughout. He was able to maintain this consistency without the assistance of the background music after several repetitions.

Students A and B developed a greater sense of purpose for a series of notes that functioned better as pick-up gestures[11]. They discovered this by placing the notes against different sections in the background music until the gesture made sense coming in on a pick-up motive in the background music. With each repetition, their approach to the notes changed and felt the most natural when they aligned their performance of with that of a pick-up gesture in the background music. The students responded by playing the gesture in accordance with the nuances of the background music, by putting more weight on the first note, creating more forward motion, and adding a slight lift at the end of the gesture to further define the role of the notes as a pick-up gesture. The students were able to recall these elements in their performance without the background music playing. In cases where the background music provided a steady pulse, students were able to develop a greater sense of consistency in the rhythmic ideas they had started to explore.

Looping rhythmic figures. The looping technique involved performing a single rhythmic (or melodic) figure several times (in a looping/repeated fashion) against a changing or steadying pulse in the background music. In cases where the background changed in pulse, groove, or rhythmic flow/energy, the repeated rhythmic idea performed by the student also changed, along with the music to reflect differences in purpose/intention, rhythmic weight, and overall character.

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[11] A pick-up gesture (also referred to as an anacrusis) is the note or sequence of notes that precedes the first downbeat in a bar (as in "*Happy*" from "Happy Birthday" or "*O!*" from the Star Spangled Banner.

Student E was having difficulty playing a series of grace notes evenly and consistently, so he layered them against the heavy backbeat of Usher's "Yeah!" in a series of looped repetitions, until they became steady and even. He was able to maintain this feeling within the context of the musical selection without the background track (due to the number of repetitions and familiarity of the song).

Providing a steady beat. Using a background track to provide a steady beat was also very common among the students, and perhaps the most intuitive response mechanism used. Tempo was easy for students to latch onto when navigating the background track. In some cases, the tempo aligned perfectly with that of the student's musical selection, while other times tempi that were slightly faster or slower also worked well. When done at half tempo, students were able to feel the bigger beats, which resulted in a more relaxed and expressive performance rather than one that was compressed, frantic, labored, and rushed. Overall, the results of this approach yielded a variety of changes in the overall feeling of expression, steadiness of overall tempo (prompting a more controlled and relaxed performance by the student), and the development of a groove performed by the student whereby the music proceeded in a more fluid manner, with fewer stops and a stylistic consistency that was distinct throughout longer phrases (i.e., the music seemed to play itself in a more natural and effortless way).

Student A wanted to address compression and rushing in the sixteenth notes. By playing Coldplay's "Viva la Vida" (which has a very steady and strong backbeat), she was able to align her sixteenth notes against the tempo and pulse. The result was a steadier and smoother performance.

A similar result was achieved with Student B, who wished to give the sixteenths notes more momentum within the phrase without rushing. In this case, we used Usher's "Yeah!," which had a very heavy backbeat, giving the student a reference point against which to place the notes, helping with momentum and steadiness.

Student D was seeking a more fluid performance of the Arietta, which she felt was lacking due to cutting off of held notes too early resulting in a choppy performance. When the student layered the Arietta against Douglas Spotted Eagle, "Closer Still" (piano and Native American flute, in half the tempo of the Arietta), she was able to stretch out the inner rhythms, resulting in a more connected, sustained, and relaxed performance: "I felt like I was an accompaniment…when you accompany someone you always have to be sensitive to how they are playing…like two people dancing together….push and pull."

The processes by which students internalized the rhythmic variants of their musical selections revealed a series of techniques that directly impacted their connection with the rhythmic inflection and style in their music. Students made interpretative decisions about the rhythmic energy, inflection, style, groove, pulse, direction, momentum, and expressive intent through a series of trial and error experiments that defined the relationship between their music and that of the background music. The development of these habits can lead to expressive tendencies in musical performance,

> …rhythm is dependent upon motion…and the more motion there is in music the more rhythm [ebb and flow in music], and consequently the more *expression*; since "expression" in music—the same as any art—may be defined as a quality or impression of movement, warmth and life resulting from rhythmic change… (Thurmond, 1982, p. 38)

The pulse of the meter, the ebb and flow of phrases, dynamic contrast, and the rise of fall of moving note groups are all a part of this concept of music in motion (Thurmond, 1982) and were incorporated in one way or another through rhythmic inflection and Aural Modeling.

Dynamics and Articulation

Dynamics and articulation lend themselves to infinite possibilities for musical expression. Students used the two methods of Artistic Representation and Aural Modeling to further their understanding of how to convey these possibilities using both the Arietta and musical selections from their own repertoire.

The examples in Tables 7 and 8 reveal how specific the MSMM approach is for helping students broaden their spectrum of dynamics and clarify the nuances of articulation. By layering specially chosen images and background tracks for each expressive goal, students achieved a level of greater musical detail and clarity in their interpretative process and corresponding performances. Students used specific artistic characteristics from the images to link to exact musical gestures in the music, as well as features from the background music to help heighten their musical delivery. Various combinations of images and background music revealed many creative possibilities and unique performance outputs.

Table 7 provides specific examples related to students' observations of how images and music played a role in the interpretative process related to dynamics. In some cases, students used specific elements of the image, such as the shape of a bridge to help contour a phrase; the movement of the waves of the ocean in developing the ebb and flow

the musical line; or the reflection of trees in the water as a cue to play with a more transparent tone color and a softer dynamic. Student E envisioned himself as part of the event occurring in the image and referenced the response emotions as guidelines for a range of dynamics.

Table 7

Use of Artistic Representation and Aural Modeling for Dynamics

Image description and title and/or background track	Expressive goal	Student observations of the image and/or background track
Music for Deep Sleep, "Meditation on Tranquility – The Hang with Ocean Waves" (sounds of ocean waves with steel drums)	Create a sense that the dynamics are happening naturally [throughout the phrase]. (Student A)	[I matched] the motion of the waves as I played [gestures with hand long strokes back and forth]…pushing and pulling. (Student A)
Woman wearing a hood, eyes hidden (Figure 3, *Between Darkness & Wonder…*)	Create more distinction between tone colors to enhance dynamics in the Arietta. (Student B)	Tone color…maybe white in the beginning and dark toward the end. (Student B)
Peaceful Japanese garden with bridge and water (Figure 14, *Japanese Garden…*)	Achieve more of a build-up in the opening phrase of the Arietta. (Student D)	The bridge is grand and it is in three humps, and the middle one is the longest. Dynamically speaking, it would just be an overall *crescendo* with just a few *crescendos* in the middle. (Student D)
Snow-covered forest (Figure 5, *Winter Wonderland…*)	Create a more transparent, gentle *piano* in the Arietta. (Student D)	The sense of serenity…it is so white…the reflectiveness in the water. Instead of having a complete dark sound, I wanted it to be a little more transparent. (Student D)
Stormy sea with a lighthouse (Figure 15, *Angry Sea II…*)	Establish more of a push and pull in the dynamics in the Arietta. (Student E)	This wave is moving into the island and the other waves are moving away from it [like a] push and pull in terms of dynamics. (Student E)
Explosive lightening cloud (Figure 16, *Chile…*)	Create contrast in repeated measures in the Arietta. (Student E)	I think of this as a soliloquy. You can see the two measures are repeating, the first measure is forceful, like, 'Why is this happening to me?', and the second is like an echo effect, softer, more like, 'Why is this happening to *me*?'. (Student E) [Student imagined himself directly in the image

(Table continues)

		watching the ensuing explosion coming toward him]
Beastly creature overtaking a man; Carl Orff, "O Fortuna" from *Carmina Burana* (Figure 17, *Horns Wings…*)	Play with a heightened dynamic range in the Arietta. (Student E)	I used more air with the faster, more aggressive passages to help exaggerate the *crescendos*, but at the beginning I tried to be as lyrical and as beautiful as possible, considering I am about to be eaten by a beast. (Student E) [Assumed the identity of the character to enhance the dynamics]

Note. Student comments were obtained from the transcriptions of Sessions Two and Three. Student C was excluded from this table as his focus was more directly related to articulation. Table 7 demonstrates the interpretative process by which students chose a visual cue and/or event (as with Student E) to inform their decisions about how to use a spectrum of dynamics from a subtle, soft *piano* to an aggressive, emotional *forte*. To view images, see Appendix I, "Catalogue of Figures." To view background tracks, see Appendix K, "Catalogue of Background Tracks."

Table 8 provides specific examples related to students' observations of the images and background tracks that played a role in the interpretative process for expression of articulation. A common expressive goal for this component was the shaping of repeated notes through various types of movement. Students referred to a variety of visual cues, including a stone path to represent each note stretching out into the woods; a young girl's footsteps around a winding road representing a mounting sense of increased motion to reach her; water passing between jagged rocks; and a troop marching to battle with a giant beast to help convey movement and direction in a repeated passage. Table 8 illustrates the variety of approaches that were used for achieving this expressive goal.

Table 8

Use of Artistic Representation and Aural Modeling for Articulation

Image description and title and/or background track	Expressive goal	Student observations of the image and/or background track
Stone path in the forest (Figure 18, *Peaceful…*)	Give more direction to repeated notes in the Arietta. (Student A)	The repeated passages imply walking forward as in the pathway in the picture. Also, the trees are going up, the flowers are going up; they are reaching. (Student A)
Woman wearing a hood, eyes hidden (Figure 3, *Between Darkness & Wonder…*)	Use weight to give more inflection to the phrase in the Arietta. (Student B)	The dotted notes in the first two measures are the same notes, [they] keep trying to find something. (Student B) [Student imagined the woman in the image is looking for, or longing for someone and translated that into weight on the shorter rhythmic values of the opening dotted rhythm in the Arietta in measure five]
Girl standing in a dark alley (Figure 4, *Goodbye Darkness…*)	Give more direction to the repeated notes in the Arietta. (Student C)	Every eighth note, every beat is a step in my mind. It is her just starting to walk down the road…she is several paces ahead of me…it is like a written *accelerando*...I am trying to catch up to her and she is getting ahead so I don't want to lose her. (Student C)
Stormy sea with a lighthouse (Figure 15, *Angry Sea II…*)	Play staccato notes with more life and space while keeping the air moving between the notes in the Arietta. (Student E)	I focused on the rocks on the far right corner. It looks like there are rocks all over and there is space between the rocks...the rocks look jagged…so I'm just trying play in between the jaggedness. The waves are not stopping, the waves are moving over the land and over the rock, and not stopping…[same as] the air moving between the notes. (Student E)
Beastly creature overtaking a man; Orff, "O Fortuna" from *Carmina Burana* (Figure 17, *Horns Wings…*)	Greater sense of movement in the repeated notes in the Arietta. (Student E)	There is a whole undying army just marching [toward the beast], and you can hear them marching [in the Arietta]. I am still moving my air, so it is not clipped…there is still connectivity. The image creates a sense of movement and war and I think that is applicable. (Student E)

Note. Student comments were obtained from the transcriptions of Sessions Two and Three. Student D was excluded from this table as her focus was more directly related to dynamics. Table 7 demonstrates the interpretative process by which students chose a visual cue and/or experience in the image to inform their decisions about how to use articulation to apply emphasis, length and direction within certain passages. To view images, see Appendix I, "Catalogue of Figures." To view background tracks, see Appendix K, "Catalogue of Background Tracks."

It is imperative that the instructor work closely with the student in the initial stages of these explorations as the possibilities for creating parallels between images, background music and the expressive details linked to dynamics and articulation are infinite. Students may explore a single image by aligning the details of texture, color, character, figure, line, and story that exist within the image with specific musical gestures, or use several images to explore a single musical idea from a variety of visual perspectives. These explorations are most successful when the pairings are appropriate to the musical context and are performed consistently (through verbal acknowledgment of the details of the pairings) throughout the session. This will ensure students are productive in their expressive work and can recreate their ideas between sessions without the guidance of the teacher.

Improvisatory Storytelling

In this stage of the MSMM approach, students were asked to spontaneously improvise to a chosen image and/or background track. This aspect of the MSMM approach is referred to as Improvisatory Storytelling, and was used to elicit instinctive emotional responses from the students for translation into tangible musical gestures. These improvised performances were used for independent analysis (translation of visual and aural cues into gestures performed by the student) and in some cases applied to and layered with a section in the Arietta or the student's chosen musical selection. As a result, students developed a translation process for transferring their initial emotional reactions through tangible musical gestures and descriptive labels for use in other appropriate contexts.

Phase One: Initial experiment. The first session of Improvisatory Storytelling sought to introduce students to the process as a whole while keeping the focus on the image and less on the emotional experience. The researcher showed the students three images and asked them to choose and improvise to an image without the researcher knowing. The researcher was to guess which image the student chose and to discuss which elements of the image the researcher felt were portrayed in the student's improvisation/performance. The three images that were used are shown in Figures 19, 20, and 21.

Figure 19. Vincent van Gogh, *Sorrowing Old Man ('At Eternity's Gate')*. Improvisatory Storytelling experiment.

Figure 20. Mark Spain, *Sevilla*. Improvisatory Storytelling experiment.

Figure 21. Untitled photograph of a roaming man. Improvisatory Storytelling experiment.

This exercise was intended to further develop the interpretative process of pulling visual cues from the image and portraying them in musical gestures without the context or confines of notation and rhythm linked to a musical selection. As a result of not having these limitations, students revealed much more detail in the way of expressive gestures. All students chose the image in Figure 19, Vincent van Gogh's *Sorrowing Old Man ('At Eternity's Gate')*, for Improvisatory Storytelling experiment. Similar gestures included the use of pitch bends, chromaticism, and other similar effects (i.e. vibrato, multiphonics) to portray a sense of sorrow, or crying; however, the student's interpretations varied in their perspective of the image.

Some students viewed the overall emotion (sadness) as the central focus of their improvisation; other students noted the colors and distinct visual components of the image (the color blue, man with face in his face in his hands, roaring fire in the background); and still others focused more on the action in the image (crying, sighing, wailing). Students also varied in their approach to the improvisation. Some focused on use of keys to tell the story; others compared the experience in the image to their current mental state; and still others referred to broader and more metaphorical concepts of

sorrow such as heartache or despondence to tell the story. Table 9 summarizes the researcher and student observations of students' initial improvisations to the image only.

Table 9

Use of Improvisatory Storytelling with Vincent van Gogh's, Sorrowing Old Man… (Phase One)

Student observations of improvisation	Researcher observations of student improvisation
I was just trying to think about heartache. That you can feel it…it is this sigh going through you and he's like facing downward and you feel everything drops and then you have pangs of pain. [Pitch bends] represented when you're really sad, you have these tiny convulsions…and you are just like, 'Ahh!' (Student A)	Used pitch bends (seemed to represent a wailing, or crying); wide vibrato; very gestural (started and stopped); little cries, almost tribal sounding; meandered through a series of unrelated ideas that eventually developed into a melody as the improvisation continued; some repeated figures; musical cries seemed to get more exaggerated as the improvisation continues.
I kind of played around with parallel majors and minors…I went to the major key and then back down to B, which is a half step below, so that was even [sadder]. [I used both major and minor keys to show he was] reminiscing…happy memories…of someone who just died…then he goes back to sadness. I used a melodic, long, legato-ish series of lines. (Student B)	Started slowly, wandering up to held/sustained notes; moderate tempo throughout; ascending lines; chromaticism (switched between minor and major keys); a bit of a lingering and wandering; used trills; seemed sadder as the improvisation went on (slower tempo, more lingering than wandering).
I'm just going through the end-of-the semester mental breakdown, which I am guessing is what has happened here [in the image]. [The pitch bending] represented the head falling into the hands. Total exhaustion. (Student C)	Used pitch bends; long, slow melody; started with smaller ideas that built into a longer melodic line; ascending and descending; pitch bends intensified throughout, almost sounded like wailing; a few repeated figures, sounded like smaller cries.
I used a motive that I've quoted several times before. This image just kind of spoke to me. I've always said that blue was in the key of E-flat. Using the key of E-flat to emote sorrow is difficult because I've always thought it was more of a celebratory key, I used multiphonics and pitch bends and chromaticism. [I wanted to represent] despondence and stasis…I tried to hold back…but I also allowed myself to wander. (Student E)	Used pitch bends; took time to state a melodic idea, then developed that idea into a phrase; used chromaticism; repeated/developed a particularly memorable figure and continued to use that figure in different registers, octaves and rhythms; felt like he was telling a story.

Note. Student comments were obtained from the transcriptions of Session Five. Student D was absent from this session and unable to make it up. Researcher observations were noted at the time of the improvisation and again when transcribing the audio/visual footage to ensure observations were similar. Only repeated notes were included in this table.

Phase Two: Transference of gestures from initial improvisation to the Arietta. The second part of this experiment was to take the emotional reaction and musical gestures from the initial improvisation (Figure 19, *Sorrowing Old Man…*) and apply them to the Arietta. Table 10 summarizes the transfer of specific musical gestures that the students' deemed appropriate for the context of the opening phrase (measures five through ten) in the Arietta.

Table 10

Use of Improvisatory Storytelling to Transfer Musical Gestures from Initial Improvisation to the Arietta (Phase Two)

Student observations of performance	Researcher observations of performance
I was focusing on the push and pull. When you are in the situation the man appears to be in, your pain compounds and an intense agony builds. (Student A)	Student used more of a sigh gesture; took more time at the end of the phrase; used a wider vibrato and exaggerated the peaks of the phrases.
Long…trying to connect everything. (Student B)	Student slowed slightly at the end of the line and played through the notes in a more connected way.
The sixteenth-dotted eighth in measure four [represents] the head falling into the hands. (Student C)	Student played with more weight and vibrato on the sixteenth-note.
When I was playing the first two measures, I was thinking of the pitch bends and translated them into weight and intensity…it helps with the feeling of stasis to give weight and suspension to the note. (Student E)	Student plays with slightly more emphasis on the sixteenth-note.

Note. Student comments were obtained from the transcriptions of Session Five. Student D was absent from this session and not able to make it up. Student observations are in reference to the performance that took place after the initial improvisation in Phase One. Students noted how their performance changed after performing the improvisation to reflect the style features of the Arietta.

In all four examples, the researcher correctly identified the image (Figure 19, *Sorrowing Old Man…*) that was chosen by the students and was able to recall the nuances in the performance that were intended by the student to portray specific elements of the

image. This reveals a surprising clarity in the improvisatory process and in a student's ability to convincingly communicate/translate visual cues into actual musical gestures.

This initial experiment showed students the importance of exploring a single emotion and its corresponding musical gestures in an improvisatory setting so that it could later be applied to an appropriate context in the Arietta. Additionally, students made note of their instinctive reactions to certain features in the image and how those played out in musical gestures (i.e. pitch bending indicates cries, or sorrow; weight or stress on a note portrays longing). Students made instant decisions about how to execute even the slightest details in the image as distinct musical gestures.

Phase Three: Image/sound pairing improvisation. The next stage in this session focused on building an image/sound profile as a basis for improvisation. Students chose another image and background track upon which to improvise to a greater extent. This allowed the students to explore the improvisatory process a bit further by using two variables.

Student A improvised to an image of a dancing woman with a fiery red and gold background (Figure 20, *Sevilla*…). She commented, "I imagine that she is twisting and there is a lot of energy…exotic!" The student's improvisation featured isolated, syncopated jazzy figures that developed into longer phrases. It was a very playful and energized improvisation, and the student was moving and dancing as she played. She commented that her performance was, "Jazzier than I expected…through the harmonic minor [key], chromaticism and leading tones." The image was paired with Kenny G's "Tango," a rhythmically upbeat song selection, to which the student commented, "I was

trying to use the techniques I learned in jazz…leading tones and leaving out more than you put in," she said. Her performance featured a spinning vibrato, a darker sound and a general singing out (tonal projection and confidence).

Student B explored a slightly darker scenario through a dark and grey image of a boy and his father standing over a gravestone on a snowy afternoon (Figure 49, *A New Day, Has Come…*). He described the image as "…black and gray. There is a child in this one…and he doesn't know the person who died. The key [of my improvisation] should be something heavier, like E minor…to portray the boy looking and not understanding what is going on." The student's performance featured a tender improvisation with a softer, more transparent sound, lifted higher notes, and deliberate arrival notes. He seemed to be exploring the situation as in the boy in the image through his various expressive gestures. The paired background track was a solo piano work, Best of New Age Piano Music's "Waterfall." It inspired slower gestures and more frequent resting points along with the piano music. Later in that session, Student B improvised to an image of a blazing forest fire featuring two frightened dear in the foreground (Figure 22, *Wildfire…*). He responded, "This image, with the blazing fire, makes me think of some Nielsen-inspired playing I could do. This really fits Nielsen; like two parallel worlds. It is still green and happy in the front and then destruction in the background." His descriptive summary of his performance reveals how he portrayed this contrast:

> I was in E-flat major...like a chorale of happiness…then all of a sudden going to a high E-natural and going down to nothingness...kind of like the fire. I went between the spans of E-flat major in shorter and shorter spans…but the fire is coming…shorter spans...then I did different major keys and atonal...it is fire, so it could be any key. I moved between E-flat, E-natural, then F, then A, A-flat.

The researcher observed the contrast in what started as the playful character of the deer—lighter, more melodic, sort of wandering—to a minor key, which was slower, featuring high notes with falling figures and chromaticism. The background track of strings and organ was Tomaso Albinoni's "Adagio in G Minor," which featured a "gypsy-like mood," according to the Student, and provoked a more lyrical performance with a greater build up of energy (as induced by the swells in the strings) and a descending chromatic motive that worked well as its own solo line. Student B commented on his performance:

> I painted a more lyrical, *legato* section when the music came on, because before it was just notes, but then, with the music [more legato], then I went back to sporadic Nielsen-inspired playing. I latched onto the chromaticism in the music and played the ascending line.

These examples provide some insight into the process by which students translated visual features into observable musical gestures and depictions of the subjects and events that were visible in the image and evoked in the background track.

Several improvisatory techniques were used throughout this stage of the MSMM approach. Those unique to the *visual* portion of the experience, included:

1. Using color to determine key.
2. Portraying actions associated with the character(s) in the image in musical gestures.
3. Placing oneself in the image/experience and viewing/reacting from that perspective, musically.
4. Assuming the identity and emotional state of the character(s) in the image.
5. Relating the characters or experience in the image to a personal memory.

6. Creating a story out of the character or scene portrayed in the image (before/after).

Improvisatory techniques unique to the *aural* portion of the experience, included:

1. Imitating or mimicking the melodic, harmonic, or rhythmic ideas in the music.
2. Matching the key of the music.
3. Using critical diatonic pitches (dominant, tonic, leading tone) to add to the drama of the music.
4. Playing along as a soloist/accompanist to the background music.
5. Playing a duet with the recording (responding to gestures, rather than playing along).
6. Matching the tempo, timing and *rubato* in the music.
7. Matching the stylistic nuances of the music (articulation, dynamics, motion, character).
8. Interacting with and filling in resting points in the music.
9. Assuming melodically independent and melodically dependent roles (soloist versus accompanist).
10. Participant's emotional reaction to the background music as a guide to the improvisation.

Additionally, several *scenarios* were created for students to explore Improvisatory Storytelling:

1. Improvisation to an image only.

2. Improvisation with a single background track only (intended for, but not used in this study).
3. Improvisation with an image at first; then supplemented with a single background musical track.
4. Improvisation on an image and with the researcher playing as well.
5. Improvisation on an image, with the researcher, and to a background track.

The change in variables provided the students with a wealth of opportunities for exploring the subtleties of improvisation as it required full attention of their visual and listening skill sets. Students were asked to respond to any of these given variables (either independently or all at once) to inform their improvisation. This required a heightened sense of musical awareness and sensitivity. The students' experience during this process was also heightened (e.g., by considering different perspectives and/or rethinking initial reactions to image/sound pairings students were urged to consider alternate expressive options through their musical output) and a level of vulnerability reached that was unexpected and surprising to the students (e.g., students experimented with various musical output that may have been outside of their comfort zone (use of jazz-inspired improvisation (Student A) or a more tender, intimate improvisation (Student B)) to truly embrace what was appropriate for the expressive depth of the image/sound pairing).

CHAPTER V—RESEARCH QUESTION TWO RESULTS

Experience

The second research question centers on the students' experience using the MSMM approach for learning musical expression. It seeks to explore the students' experience using the MSMM approach to develop a deeper emotional connection with the music. The four points of exploration include: (1) *how* the students used the approach (within each of the three methods); (2) *the ease and accessibility* with which the students used the approach in a variety of contexts; (3) the development of a *deeper emotional connection* to the music; and (4) student *overall reaction* to the approach as a whole. The data used to support these questions was derived from researcher observations, student interviews and comments, student documents (such as notes in music, journal entries), and transcriptions from audiovisual materials. The experiential impressions were explored within the three methodologies of the MSMM approach (Artistic Representation, Aural Modeling, Improvisatory Storytelling).

How Students Used the Approach

The three methods of the MSMM approach yielded results that were unique to the mode of learning and are discussed as such. Some students found Artistic Representation to be more intuitive, while others preferred Aural Modeling to absorb new ideas and musical concepts about the music they were performing. Improvisatory Storytelling

yielded perhaps the most revealing themes about the student experience using the MSMM approach due to the revelatory nature of improvisation in general. These three methods are explored independently through a set of learning outcomes/themes that are unique to each method.

Artistic Representation. Students used Artistic Representation as a tool for developing musical gestures that were guided by distinct visual cues in the image. In general, students found it to be a straightforward process: (1) choose an image; (2) describe why the image is appropriate for the musical context; and (3) navigate the visual cues of the image for translation into musical gestures. Eight themes emerged for *how* students used Artistic Representation throughout the study:

1. Aligned specific visual features with performable musical gestures.
2. Considered the use of movement in image selection.
3. Considered the role of color in image selection.
4. Explored character development.
5. Created a narrative beyond the image.
6. Considered realistic and unrealistic images.
7. Used relatability[12] to gain insight into the image.
8. Practiced recall to strengthen visual-musical pairings.

Aligned specific visual features with performable musical gestures. Aligning visual features with musical gestures was the most natural starting point for students to begin the translation process from image to music. Visual features included colors, lines,

[12] The quality or state of being relatable.

textures, shapes, facial expressions, postures, points of movement, energy, and tension, to name a few, that were unique to a single image. There were numerous visual cues available to the students for consideration as musical gestures.

Student B prepared the solo orchestral excerpt from Felix Mendelssohn's, "Scherzo" from *Midsummer Night's Dream* and wished to create more clarity in the opening, articulated passage. He used the image in Figure 23 (*Dark Blue 3D Mosaic…*), featuring a series of tiles in various shades of black, white and grey to align the various staccato notes. The student was asked to think of each note as a separate tile. The researcher and student also experimented with going in different directions for each series of tiles closely related in color (up/down, side to side, across) to help shape the line in the excerpt in different ways.

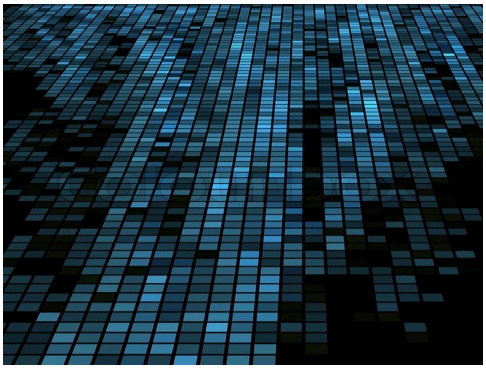

Figure 23. Vector, *Dark Blue 3D Mosaic Technology Background*. Chosen by Student B from Google Images using the search word, mosaic.

Student E used an image of a frame featuring ornate curves and circles to represent the Italian Renaissance: "I was thinking of the ornamentation and the curvature of this image, it is very elegant." The student's subsequent performances improved in

their continuity of the line from the shorter, more abrupt phrases in her first run-through. The attention to the build-up of the ascending lines also helped to create longer overall phrases: "…I was just thinking of these circles, just feeding off of one another."

Considered the use of movement in image selection. Depending on the musical context and expressive goal, students chose images that either facilitated movement in, or provided a backdrop for their musical selection. Images with a great sense of movement yielded a specific language (momentum, direction, energy) and application for movement from the image to the musical gesture a series of physical responses (increase of airstream, emphasis of certain notes over others to indicate forward motion, use of *crescendo*). For example, the image of the raging sea in Figure 15 (*Angry Sea II*…) prompted Student E to use the "…ebb and flow of the waves…a sort of push and pull…" to create more movement in the eighth notes in measures 11-15 the Arietta (Figure 24). The student further indicated, "…the waves give me momentum…they are breaking out and releasing energy and water is just flying out everywhere." The researcher observed a slightly faster tempo in the student's performance, as well as more direction through the repeated notes. The noticeable momentum of the eighth notes was also due in part to the student's association of the water as the airstream: "the waves are not stopping, [they] are moving over the land and over the rock, so the air could be moving between the notes," which helped in the connection of the notes and overall direction of the line.

Figure 15. Frankief, *Angry Sea II*. Chosen by Student E from the Agitated Category.

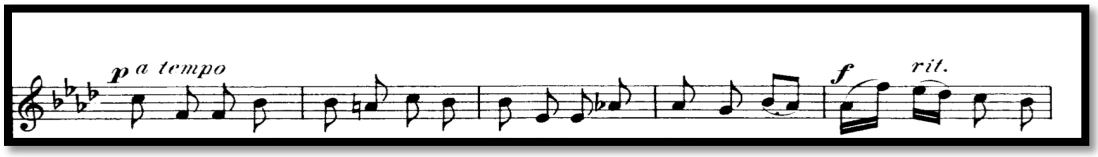

Figure 24. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 11 – 15 from the Arietta (See Appendix H).

The same student observed another incidence of forward motion (in the rhythmic figures in measures five and six, Figure 25) in an image of a sea of molten lava culminating in a focal point of the setting sun off in the distance (Figure 6, *Lava Flow*...). The student explained, "…The rhythm is very distinct…like hot potatoes…I was thinking about playing through the notes in conjunction with the image…hopping from…jumping from one piece of hot land to another hot piece of land." The researcher observed that in the second repetition of this sequence, the performance was more fluid and connected.

The student also considered the image from another perspective, "…when I look at this…it brings my end point at the *fermata*…the sun with its shape is my goal…I am going toward the sun…it is telling me to go and *crescendo*…it is hot…I am trying to rush to the cooler side of things…to some sort of resolution." This statement was in reference

to the first phrase and the arrival at the *fermata* in measure ten. The student used a focal point in the image to create an arrival point, thereby inferring movement. In these examples, the student used a natural element (water, waves), the physical activity of walking (from one land mass to another) and a focal point (the setting sun) as incentives for movement.

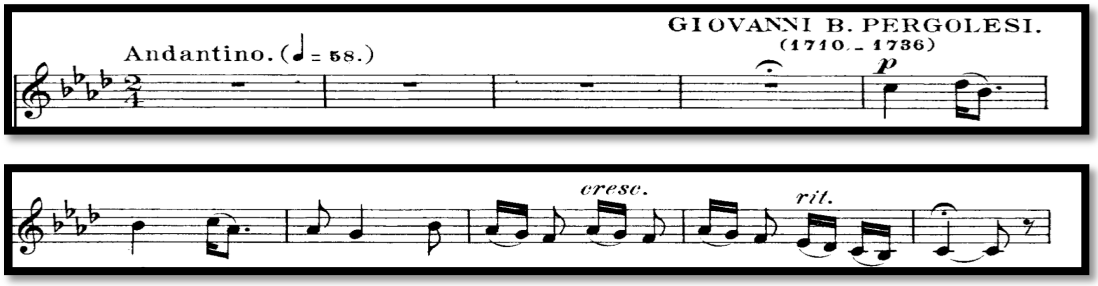

Figure 25. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures five through ten from the Arietta (See Appendix H).

Figure 6. Lava Flow. Chosen by Student E from the Agitated Category.

Other students described similar relationships, as stated in the following examples. Student C described birds flying over the ocean as "gliding," resulting in a more fluid, linear, and less sporadic performance. Student A described the same birds as "calming," resulting in phrases that sounded like they were drifting from afar and were

more settled. An image of a lightening cloud caused Student E to feel "…agitated because I see all of this destruction and commotion…it evokes an emotional feeling that something is coming and at some point I have to run or I am going to be consumed by whatever is coming…" resulting in a slightly faster and more angular (agitated) performance. An image of a vortex was perceived by Student A as "…an *accelerando* with great intensity…getting gradually more intense…it is a build up," resulting in a greater trajectory as observed by the researcher in the context of a freely stated cadenza. An image of a large creature about to overtake a powerless soldier was perceived as "an impending war (or marching)…[creating] a sense of movement" by Student E, resulting in more rhythmic stability and forward motion.

The movement images also induced physical responses such as feelings of urgency, agitation, or building of momentum by the students and translated into generally more flowing, connected, forward moving lines. Visual triggers such as focal or arrival points (setting sun, moon in the sky, the horizon), objects, animals or persons moving, and natural elements (wind, ocean, rain) all played a role in helping students to strengthen the connection between individual notes and moving the overall direction of the line. The use of movement in images helped to elicit strong performance results in terms of helping student engage in more movement of the line and specifying arrival points as they related to the image.

Images that lacked evident motion evoked responses that related to the overall mood or feeling of the music and allowed students to absorb bigger picture feelings and emotions. Student B wanted to achieve a mood that was "…reserved…dark…with shades

of light and dark" to portray the character and dynamics of the opening clarinet solo from Jean Sibelius's *Symphony No. 1 in E Minor, Op. 39*, "Andante, ma non troppo - Allegro energico." In this instance, the student chose a solitary tree that is barren and situated in the middle of an empty landscape in the middle of winter (Figure 13, *Dark Tree*…). The colors of gray and white seemed true to the expressive goal of the contrast between light and dark, and the stillness of the image resided in the landscape and the presence of the barren tree. According to the researcher, the student started much stronger and with a darker tone color, which provided greater contrast in the *piano* sections. In this way, the student was able to maintain the "reserved" quality of the excerpt's overall character and in using the shades of light and dark in the image, was able to achieve more dynamic contrast in a single dimension.

Figure 13. Zach Stern, *Dark Tree*. Chosen by Student B from the Dark Category.

Other students used stationary images to portray similar expressive intents. Student D used an image of a snow-covered forest (Figure 5, *Winter Wonderland*…) to portray a sense of "serenity." The student referenced color and the expansiveness of the image as the two main visual cues upon which to express serenity. The student was

attempting to portray the first phrase of the Arietta (Figure 8, *Morning*...) through this image. The student stated, "When you look at it overall, it is really the whiteness that hits you. I want to make this piece sound like it is coming out of nowhere…and the quietness…it is a little mysterious because you don't know exactly where it ends."

Figure 5. Untitled photograph of a winter wonderland. Chosen by Student D from the Peaceful Category.

The decision to chose an image with or without motion was disclosed by the students as a means of achieving an expressive intent related to a specific concept or idea in the music and played an important role in their expressive discourse.

Considered the role of color in image selection. Other than subject matter, color seemed to strike a chord with several students' selections of the images to portray their specific expressive goal. In the case of Student E, who has perfect pitch, an interesting reference to synesthesia[13] was present in which the student would experience distinct reactions to certain colors and their association with a specific emotion or mood. The

[13] Synesthesia is a neurological phenomenon in which stimulation of one sensory or cognitive pathway leads to automatic, involuntary experiences in a second sensory or cognitive pathway.

following description from Student E's initial interview describes the sensation in more detail:

> I have perfect pitch…each key signature for me has a color. Bb carries weight…it is a very regal and powerful key…and so for me Bb is black. I'll do things related to color because that is how I see music, especially things with a strong tonal center. It is just there. In the 11th grade I was playing Holst, *1st Suite in Eb* and I said the key signature is in blue. I will see color first before anything else. E-flat is blue and very jovial and jolly. If I am asked to compose something happy or light, E-flat is one of the key signatures I use. G major is a yellow color and g minor is a darker shad, kind of like a gold, so I associate with this more aggressive articulations.

This student used color as a leading resource for choosing images as they pertained to the key signature, modality, and tonality of the musical selection. The key of the Arietta is G minor, which guided the student's decision toward images with darker gold tones (see Figures 6, *Lava Flow…*" and 15, *Lighthouse in an Angry Sea…*"). The student associated "intense energy" with the darker gold tones and chose images containing fire and flames, and golden sunsets to explore and portray the nuances of the G minor Arietta through the golden color association.

While the color association[14] was not as intimately linked for the other students in the study, there were distinct reactions to colors in images, which played an important role in the initial selection of an image to portray an expressive idea. Student D, for example, referenced the color green on several occasions as a color that "…has this earthy feeling…it is meant to be very grounded." The student seemed to be drawn to this

[14] Olivier Messiaen was one of many composers who experienced synesthesia. Paul Dworak's paper, "Color Harmonies and Color Spaces Used by Olivier Messiaen in *Couleurs de la cite celeste*" explores Messiaen's association of colors with voicing and instrumentation of chords (Dworak, 2010). Other composers included Franz Liszt, Jean Sibelius, and Gyorgy Ligeti.

color when choosing images ("One thing that I noticed is that these images have a lot of green in them") as perhaps an associative tool for image selection. See Figure 26 for frequency of colors used throughout the study, and Table 12 for examples of expressive goals (overall mood, emotion or character) that students linked to specific colors. Note that black dominated the color variety, which is in accordance with the overall mood and emotion of the Arietta as observed by the students to be dark and mysterious. The nuances of green, white, gold and pink reflect aspects of style and articulation as observed by the students (e.g., gold = more aggressive articulations; pink = more serene tone colors).

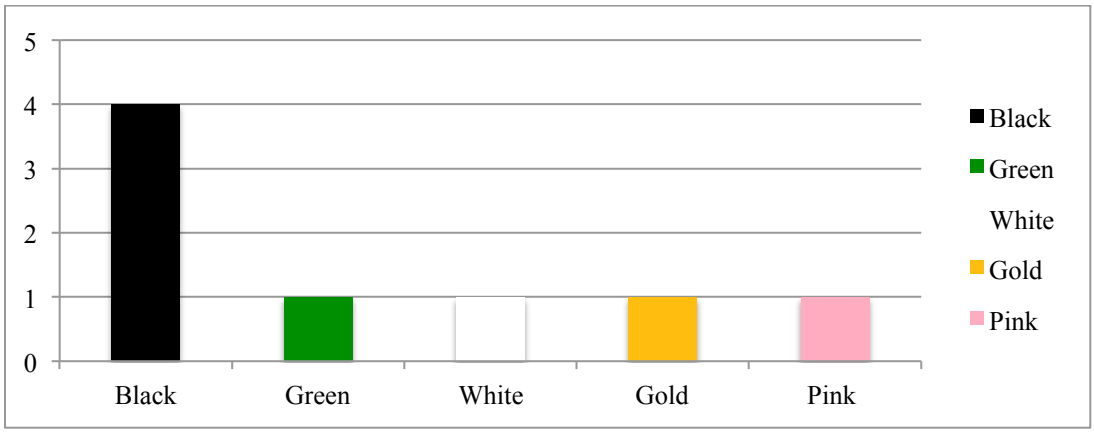

Figure 26. Frequency of colors used with Artistic Representation in Sessions One—Three. Range is from one to four. These color selections were mainly in reference to the Arietta for overall mood/emotion, style and articulation.

Table 11

Colors and Expressive Goals Used in Artistic Representation

Color	Expressive goal
Black	Mysterious (A, B, C); reserved (B)
Green	Majestic (D); earthy (D); grounding (D)
White	Serenity; quiet; peaceful (D)
Gold	Aggressive articulations; agitated (E)
Pink	Serene; tranquil (A)

Note. Student comments were obtained from the transcriptions and student notation on musical score from Sessions One—Three. Colors and expressive goals reflect actual words and phrases used by the students for Artistic Representation in reference to the overall mood/emotion, style and articulation of the Arietta. Students used colors to explore moods, emotions or characters in their musical performances. Some colors include several expressive goals to reflect the variety of associations used by the students. Notice that while the vocabulary is different amongst the students, the overall themes are similar. Students who used the phrases are included in parenthesis. See Appendix I, "Catalogue of Figures," figures 1-18 for examples of images and representative colors.

Explored character development. A consistent theme amongst the students was the development of a character(s) in an image to deliver or communicate specific expressive gestures within the music. Students often used the main subject (person, animal) to develop a musical narrative true to the nature of the subject. In the initial sessions dealing with the overall mood/emotion and style of the Arietta, students chose a female character as the object of the Arietta, and described her as someone who was "longing" or "waiting for someone to come back." These themes were portrayed through weighted, sigh gestures in measures five and six on the sixteenth-dotted eighth rhythm, and the use of a darker tone color to bring out the sadness associated with this character in several student performances. Table 3 (images of female characters) lists visual examples and corresponding student descriptions.

Other students created more specific character traits through their performances. Student C described an interaction with the perceived female character associated with the Arietta, and did so through a variety of images. Figure 4 (*Goodbye Darkness*…), an image featuring a girl standing in a dark alley, evoked the following interaction from the student, "…[I'm] walking up to the girl…[I hesitate] because she is a small girl…alone in an alley. Is something wrong? I picture myself tapping her on the shoulder to get her attention….she turns around [in a creepy way, slowly] like in a horror movie. The scene starts to feel more ominous and I start to get a bad feeling in my stomach."

Figure 4. Goodbye Darkness. Chosen by Student C from the Dark Category.

This interaction with the female character played out in distinct musical gestures performed by the student (as observed by the researcher) in measures five through ten (Figure 25): (1) "…walking up to the girl…" translated to a noticeable lean on the sixteenth-note in measures five and six; (2) "I hesitate" translated into slightly more time on the same notes; (3) "she turns around [in a creepy way, slowly]" translated into more time on the *ritard* in measures nine and ten as compared with the first several run-

throughs; and, (4) "…felt more ominous…" translated to a darkening of the sound, especially going into the *ritard*.

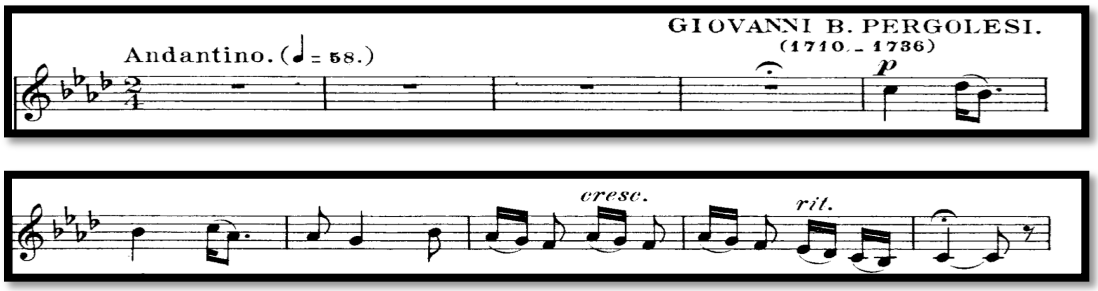

Figure 25. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures five through ten from the Arietta (See Appendix H).

Another image chosen by Student C shows Meryl Streep in her role as Miranda Priestly from the movie, *The Devil Wears Prada*, in which she acts as a demanding boss to her nervous assistant. Figure 27 shows Miranda in a pose that accurately captures her character to use as a symbol of "uncertainty (Student C)" of the final statement (measures 39 – 46, Figure 28). The student described Miranda's character as, "…intimidating…she strikes me as Cruella Deville [from *101 Dalmatians*], like she is coming at me…her expression is like the elf queen lady from *Lord of the Rings* who has that kind of attitude…like I know what I am doing and you've fallen for it…you've been deceived." The researcher observed noticeable forward movement and a more dramatic ending as the main features in the student's performance portrayed intimidation and deception. In measures 45 and 46 leading up to the G, the student slowed down in tempo and took more time on the second-to-last note to portray the idea of deception going into the final leading tone of F minor.

Figure 27. Meryl Streep as Miranda Priestly in the 20th Century Fox's The Devil Wears Prada. Chosen by Student C.

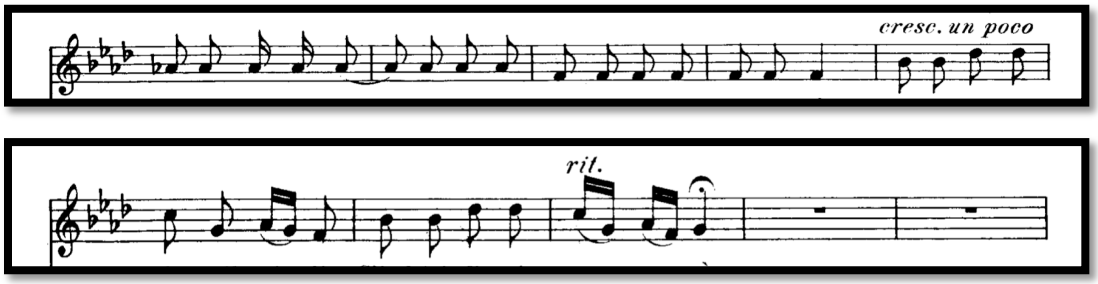

Figure 28. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 39 – 46 from the Arietta (See Appendix H).

Student E focused on character interaction as symbolism for good versus evil to develop the musical narrative in measures 11 – 46 in the Arietta (Figure 29). The student described the image (Figure 17, *Horns Wings…*) as portraying two opposing forces, "…this beastly-looking thing and the hero…it is a battle of good versus evil….I am trying to figure out if [the beast] is even human. It is foreboding…something is about to happen and I'm not sure which side is going to win." The student described his portrayal of this battle of good versus evil by "playing more lyrically…and beautiful" (particularly starting in measure 29) and "leaning on the longer notes" to represent the good, and by

playing more "aggressively in the faster passages…using more air and making a bigger deal of the *crescendos*" (particularly in measures 24 – 28) to represent evil.

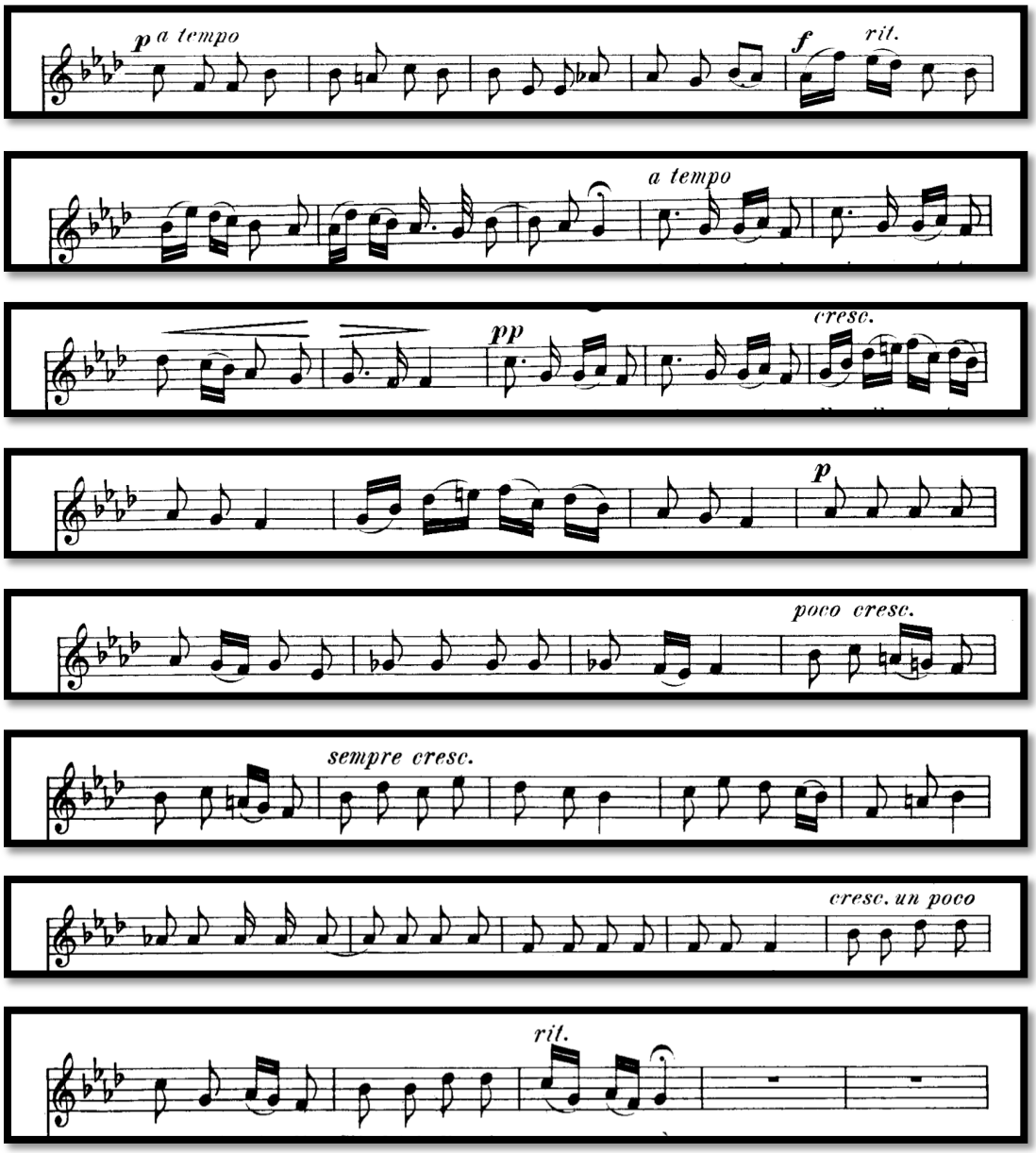

Figure 29. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 11 – 46 in the Arietta (See Appendix H).

Figure 17. Yoshitaka Amano, *Horns Wings*. Chosen by Student E from the Dark Category to portray good versus evil.

Student D referenced a child from her chosen image to inspire a more tender performance:

> This time I was looking at the child playing around, and then he comes up to me with his big, innocent eyes. He doesn't know about the darker side of the world, he just wants to be happy. When I played just now, I kind of drew back a bit instead of playing in this dark, rich tone. I also lingered a bit, which is what you do when you are tender with a child.

The importance of character development is supported by the student intimate descriptions of the characters and attempts at relating to the characters or subjects in their chosen images.

Created a narrative beyond the image. In some cases, students explored beyond the moment of the image (or the scene itself) to a story that supported the image. This allowed students to create a narrative and thread that narrative through their musical performance. Student A, for example, was working with an image of moonbeams reflecting on the ocean water to portray a darker emotion for one of the passages in the Arietta:

> I think the mood is dark…I'm just trying to follow [the ray of light] somewhere and it starts lighter and then gets darker….I think it is from limited perspective to

> larger perspective….or as sweet, but then it is not. I'm trying to make a story about this one, trying to make it relate directly to the image, like, [a boy saying], 'I don't know how I feel about you girl'…like you have a feeling about someone, and this hurts, but this kind of hurts…this image works for darker and for perspective…it is so pretty [like the Arietta] but it becomes so sinister.

Considered realistic and unrealistic images. Another point of interest was the types of images that students chose for the translation of visual cues into musical gestures. Of all the images used for Artistic Representation (in Sessions One through Three), the majority were realistic images. These included photographs, or in some cases paintings that represented a realistic person, setting or event. Unrealistic images included fictitious paintings or digitally altered photography. Of the 27 images either presented to, or chosen by the students in Artistic Representation, 23 were realistic images of real people, landscapes or aspects of nature. The remaining four were fictitious paintings or digitally created images of unusual creatures, objects, or digital creations (See Figure 30). One explanation for choosing realistic images could be that students relate more directly to the persons or landscapes in those images, therefore making the translation process more accessible to actual musical gestures. Student C responded to the question of why he chose realistic images, "I guess, like maybe I could see it actually happening right before me, rather than a pink rabbit floating through a rock."

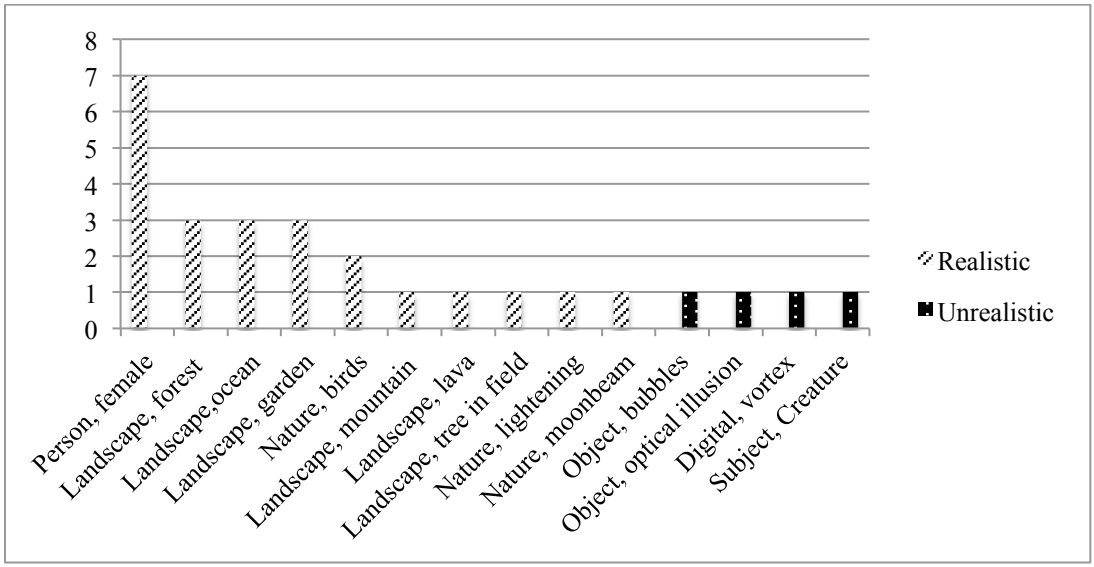

Figure 30. Frequency and types of realistic and unrealistic images used in Artistic Representation. Range is from one to seven. All of the realistic images were either photographs or very detailed paintings that looked realistic. Unrealistic images were paintings or digitally altered photographs. Images that were used by more than one student or were used for different purposes (i.e., an image featuring birds and ocean were used in two different sessions to explore two different expressive goals) were counted as different images because they were used for different expressive purposes.

Tables 12 and 13 show how realistic and unrealistic images were considered for expressive goals in relation to the components of music. Realistic images tended to explore expressive goals related to the overall mood and emotion of either the Arietta, or a musical selection of the student's choice. Unrealistic images explored expressive goals that were more specific, especially style (pacing and articulation), and use of motion (playfulness, agitation, *accelerando*).

Table 12

Use of Realistic Images and Expressive Goals Used in Artistic Representation

Type of image	Expressive goal	Component of music
Person, female (Figures 3, 4, 7-10, 27, 31)	Mysterious (B, C); serene (A); Longing (B); seductive (C); delicate (D); intimidating (C); graceful (C)	Overall mood/emotion; style
Landscape, forest (Figures 5, 18, 32)	Mysterious; tranquil; serenity (D); spring (A); nostalgic (B)	Overall mood/emotion
Landscape, ocean (Figures 12, 15)	Calm (A, C); agitated (E)	Overall mood/emotion
Landscape, garden (Figures 14, 35, 36)	Serenity (D); ease/falling (A); upward, lifted gestures (A)	Overall mood/emotion; style
Nature, birds (Figure 12)	Calm (A, C); freedom; gliding; flight (C)	Overall mood/emotion; style
Landscape, mountain (Figure 45)	Show direction; create dialogue; dynamics (A)	Dynamics
Landscape, lava (Figure 6)	Darkness of tone color; movement (E)	Overall mood/emotion; articulation
Landscape, tree in a field (Figure 13)	Tonal contrast between light and dark (B)	Overall mood/emotion; style; dynamics
Nature, lightening (Figure 16)	Agitation (E)	Overall mood/emotion; articulation
Nature, moonbeam (Figure 2)	Calm; perspective (A)	Overall mood/emotion

Note. Student comments were obtained from the transcriptions and student notation on musical score from Sessions One—Three. All of the realistic images were photographs or very detailed paintings that looked realistic. Images that were used by more than one student, or were used for different purposes (i.e., an image featuring birds and the ocean were used in two different sessions to explore two different expressive goals) were counted as different images because they were used for different expressive purposes. Figures/images are in the same order as paired student descriptions. The expressive goals were actual words and phrases used by students for Artistic Representation. See Appendix I, "Catalogue of Figures" for complete listing of figures.

Table 13

Use of Unrealistic Images and Expressive Goals Used in Artistic Representation

Type of image	Expressive goal	Component of music
Object, bubbles (Figure 11, *Whimsical Art…*)	Playfulness; lightness (A)	Style
Object, optical illusion (Figure 43, *Star Chart…*)	Focus; perspective (A)	Style
Digital, vortex (Figure 47, *Accelerator of Change…*)	*Accelerando* (A)	Style
Subject, creature (Figure 17, *Horns Wings…*)	Agitated; comparison between good versus evil (E)	Overall mood/emotion; style; articulation

Note. Student comments were obtained from the transcriptions and student notation on musical score from Sessions One—Three. All of the unrealistic images were paintings or digitally altered photographs. Images that were used by more than one student, or were used for different purposes (i.e., an image featuring birds and ocean were used in two different sessions to explore two different expressive goals) were counted as different images because they were used for different expressive purposes. Figures/images are in the same order as paired student descriptions. The expressive goals were actual words and phrases used by students for Artistic Representation in sessions one through three. See Appendix I, "Catalogue of Figures" for complete listing of figures.

Used relatability to gain insight into the image. A students' ability to relate to a subject, experience, setting or context of an image stood to increase their connection with the expressive process, clarify their expressive goal(s) and directly impact their performance output. This was especially effective when the experiences of an image were used to create an overall mood or emotion in the student, although more at the surface level, rather than at a deeper emotional level. Some students experienced a sense of nostalgia when looking at certain images, thereby inducing a set of associative emotions related to a particular experience and reliving those through the MSMM experience. Student B viewed an image of a snowy forest with sunlight coming through the trees (Figure 32, *Winter…*) as, "…something nostalgic…thinking back to old times…something with the snow. The [rays] coming through the trees make me think of

happiness." The student's performance changed after this recognition to reflect more sensitivity and lift in the rising sixteenth notes, and use of a brighter tone to reflect growth in measures 15 – 17 (Figure 29), as observed by the researcher.

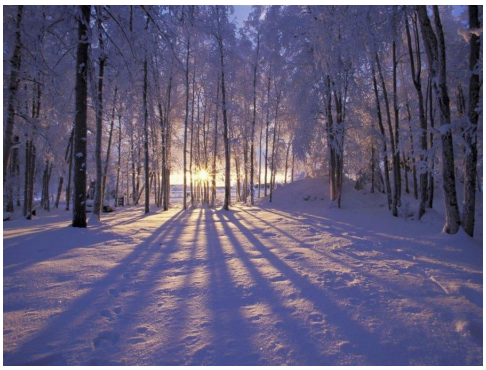

Figure 32. Winter. Chosen by Student C from the Peaceful Category.

Student E viewed a painting of a stormy sea engulfing an island with a lighthouse surrounded by crashing waves with a dark sky (Figure 15, *Angry Sea II*...) through a personal lens, "I kind of break away from the waves…it is a sense of repose…kind of sad and lonely…I am looking at the sky and feeling a sense of despair." Notice the student's language includes "I" and "feel," which translate into his disposition and mood as an active performer in the creative process, versus a passive observer of the image. The most notable difference in the student's performances after this observation was his use of slower, steadier tempo.

Figure 15. Frankief, *Angry Sea II*. Chosen by Student E from the Agitated Category.

In a comparable manner, Student E relayed similar emotions in response to Figure 16 (*Chile…*), an explosive lightening cloud. In the student's words:

> I'm agitated because I see all of this destruction and commotion that is happening and I am way back here [on the mountain watching this happen] and I am safe in the meantime, so I can kind of lament. What I see is the music on the stand, but what I am experiencing is the explosion in the image. I think of this as an emotional reaction...

As a result of this statement, the student performed measures 25 – 34 (Figure 33) at a faster (and unsteady) tempo with more attention to the starts of the notes (slightly more emphasis and attack).

Figure 16. Carlos Gutierrez, *Chile, The Fury of Chaitén Volcano Seems to Set the Sky on Fire*. Chosen by Student E from the Agitated Category.

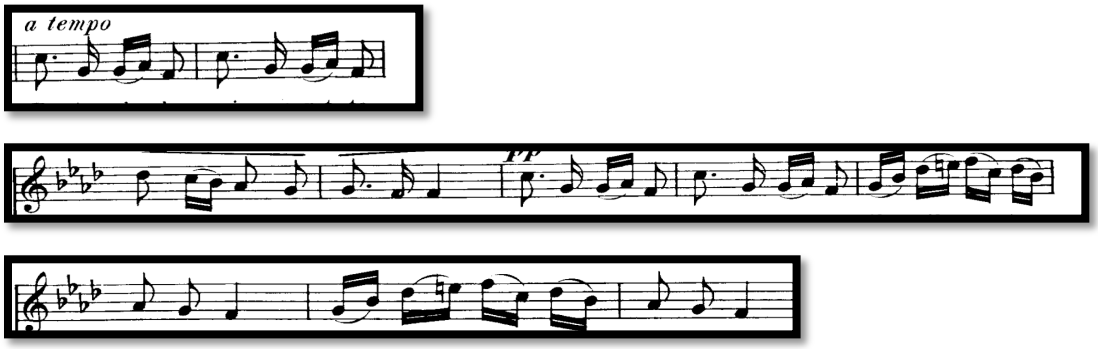

Figure 33. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 25 – 34 from the Arietta (See Appendix H).

In this example, this type of agitated musical performance was not ideal for this phrase, so the researcher asked the student to consider another perspective in this image to focus on the tender aspects of the music. The student responded with, "…I would consider thinking of this as a soliloquy for me…you can see the phrase repeats. For the first statement, I can get a forceful response, like 'why is this happening to me?' and [treat the second statement] like an echo effect, like 'why is this happening to me?'" The student's performances after this description demonstrated more subtleties and a gentler approach to the second statement as observed by the researcher.

Student C vividly described an experience of when he did indoor skydiving upon viewing an image of birds flying over the ocean and described it as "…a giant, vertical wind tunnel with a fan…it slightly moved you up and down…like floating/flying in a giant tunnel." The student described his performances after this description as feeling "…more connected, with longer phrases…and using lots of air. [The phrase] felt more in progress and sustained by my air." The student recalled distinct physical sensations from

a specific experience and was able to transfer them to his performance using the image of the flying birds as a reference.

Student D described being in a garden as "…something that is calm…usually where people go to get away from their problems, it is like a hobby or a diversion from stress. It is meant primarily as a calming feature. Serenity can be found in the environment of your comfort. You can find serenity in things that you feel comfortable around." The student's performances continuously improved in terms of fluidity and connectedness and her disposition and physicality during her performance were more relaxed, as observed by the researcher.

Practiced recall to strengthen visual-musical pairings. Recall is the student's ability to remember the details of an image either without looking at it (in the same session) or without having it in front of them (in a later session). The goal is to train students in the ability to recall the visual cues with which they developed their expressive ideas at later times (in the practice room or on stage in a performance). This ability to visualize is developed through recall and assists students with performance anxiety (e.g., redirecting the attention away from the anxiety of an audience or judges). To cultivate this skill, the researcher worked with the student using an image for the duration of the session and then asked him or her to recall in vivid detail the features of the image and how those related to his or her expressive ideas and musical gestures. The commentary between the researcher and Student C on his expressive goal of achieving more "fluidity" in a particular passage in the Mozart, *Concerto…* exemplifies this process:

> Researcher: Can you close your eyes and see that picture [of the birds in flight over the ocean]?

Student C: There are about fifteen birds; I would say it is closer to the beach than the water. I feel like the top of the water is closer to the front part, which is foamy. I think there are a few rocks toward the left side of the screen (see Figure 12, *Birds Flying…*).

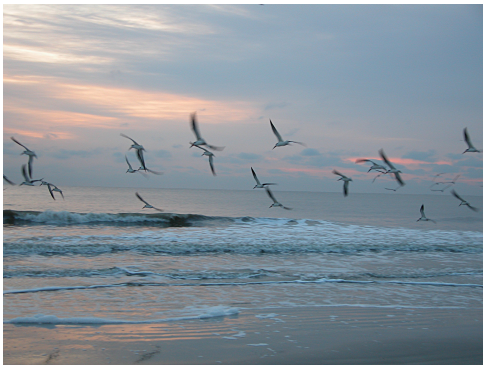

Figure 12. Birds Flying. Chosen by Student A from the Peaceful Category.

Researcher: Now, without looking at it, play the first phrase [of the Mozart], but focus on the vivid details of the image you just described. [Student plays in nearly one breath, more fluid]. Tell me about that performance.

Student C: I've never done the run that fast before, that cleanly before! It just flowed right out!

Researcher: What part of the image stands out in your mind? What were you thinking about?

Student C: I was thinking about one of the seagulls on the left. I can't remember how it is shaped, but I think it is more horizontal than the rest. [Student points to the seagull in the image].

Student D experienced a compelling example of recall: "I was actually seeing the image. It was kind of superimposed on the music." Recall was an important part of the expressive process and could have been exercised more regularly throughout the study (through reflective discussion and reinforcement of expressive ideas during and between the sessions). When it was exercised, students were asked to complete similar tasks

throughout the study to reinforce the importance of reviewing and recalling their visual cues for use in future performances and for facilitating more consistent performances.

These eight themes played an important role in helping familiarize students with Artistic Representation. They also reflected a range of specificity from the detailed alignment of visual features and colors with musical gestures in both realistic and unrealistic images, to the bigger picture concepts such as movement, character development, relatability, creating a narrative and recall. This range of usability reflects the flexibility of Artistic Representation to accommodate the varied learning styles and preferences of the students.

Aural Modeling. Students used Aural Modeling as a tool to enhance their listening skills and heighten their awareness of the various musical components present in the background tracks[15]. Of the three approaches, students took the most time to adjust to the idea of layering their musical selection against a background track. It required that students establish the key, make adjustments for tempo and develop a response mechanism for absorbing the nuances of the style and tempo. Seven themes emerged for *how* students used Aural Modeling in the study:

1. Used response mechanisms.
2. Considered the best time to start playing along with the background track.
3. Established a key, or tonal center.
4. Used familiar background tracks to facilitate the layering process.

[15] The music against which students layered the Arietta and their musical selections will be referred to as 'background track(s)' from this point forward to reflect the variety of musical sounds used throughout the study (ambient sounds, sounds of nature, classical, rock, pop, instrumental, vocal).

5. Matched the musical motives of the background track.
6. Requested background tracks without rhythm to focus on ambiance, or mood.
7. Addressed technical challenges / limitations.
8. Practiced recall to strengthen aural-musical pairings.

Used response mechanisms. Students used several response mechanisms, or layering techniques for Aural Modeling.

Matching style. Students naturally tended toward matching style as a bigger picture approach to gaining insight into the music they were performing by absorbing the stylistic nuances of the music they were hearing in the background track.

Student C wanted to develop a better sense of where to apply accents and emphasis in the opening statement of his musical selection and to give more direction and momentum to his performance, or in the student's words, "[I want] to determine where accents and emphasis on certain notes would be more beneficial." He used Usher's "Yeah! (feat. Lil' Jon & Ludacris)," which features male vocals, piano and percussion to achieve these goals. The student played the first rhythmic phrase a few times against the music while the researcher coached the alignment of the motivic gestures. The student started to dig into (or highlight through tonal weight and rhythmic inflection) the internal rhythms by matching the style of the music, helping the overall motion and use of accents. The student observed that, "It made me realize what the syncopation was supposed to do…it focused on the bigger [picture]…and at the same time the internal notes…I felt more like this is the phrase rather than it [feeling] isolated."

Student E wanted to develop the rhythmic style of the waltz feeling in the opening statement of his musical selection and reduce compression. By engaging in a series of looped repetitions, the student absorbed the stylistic nuances of the waltz style, including more emphasis on beat one and a lighter motion within the measure. This also resulted in a more forward direction and overall momentum. The students' response to layering his musical selection with Jim Dooley's "Waltz" featuring piano, saxophone, and accordion was "…the pulse was steady…this etude now feels like it is coming from a waltz."

Aligning motivic gestures. Students used this technique for instances where there were distinct rhythmic or melodic motives in their musical selection that could be isolated and matched with those in the background track. A pick-up gesture, for example, was matched with the pick-up motives in the background track, thus helping the student to develop stability in the placement of the gesture in the context of his or her musical selection.

Student B wanted to develop a better sense of lyricism within a segmented rhythmic section (due to several short rests) and to give the phrase an overall smoother feeling. The student felt as thought the "melody is in segments." He used Samuel Barber's "Adagio for Strings" for string orchestra to achieve his expressive goal of lyrical continuity. By aligning the starting notes of each passage within the phrase with the entrances of the strings, he was able to create lifted, subtle entrances after each rest, giving the passage an overall smoother and more flowing feeling. The student observed that "It made the segments work better….I was able to forget about the melody and just go with the music."

Looping. Looping consisted of the repetition of a short passage from the student's musical selection against the chosen background track. This allowed students to experiment with the placement of a particular passage against various points in the background music, which resulted in different effects on the performed passage (i.e., heavier if placed against a stronger part in the song, slower if placed at a slower part in the song).

Student A wanted to "get a clearer idea of how to shape [a three, sixteenth-note pick-up gesture in her musical selection]. Using Phillip Glass' "Song V" for solo cello, the student used a repetitive looping approach to align the sixteenth-note pick up gesture in the musical selection with the pick-up gestures in the background music. This resulted in a more defined set of sixteenth-note pick-ups that maintained their musical strength in the student's without the background track playing in the background.

Providing a steady beat. This technique is similar to the use of a metronome; only the student interacts with the steady beat of the background music rather than with the repeating high-pitched beeping of a metronome. This was especially helpful when the student was familiar with the background track and could effortlessly play along to the steady beat. Student C commented, "…[the background music] acted as the metronome…but at the same time it was something to play against…and it added to it."

Students A and B wanted to address rhythmic compression in their musical selections by using a steady beat to counteract their tendency to rush. Student A used Coldplay's "Clocks" featuring male vocals, guitar and piano to address this goal. The continuous sixteenth notes in the piano part allowed the student to play her string of

sixteenth notes seamlessly against the steady and ongoing pulse in the piano. Her subsequent performances were more even, steady and relaxed. Student B used a similar approach with Usher's "Yeah" to not only address compression, but to "drive [the inner notes] a bit more." The student used the heavy backbeat in the percussion to ground his rhythm and create a sense of internal motion. The student observed, "they were a lot more driving…they were a lot more even."

Absence of time. Use of this technique was helpful for providing students the opportunity to simply play their musical selection "out-of-time," without a strict metronomic feeling. This technique helped to reduce associative anxiety (induced by a particularly challenging passage or fear of an upcoming performance), which tended to cause rushing, excessive tension or unsteadiness. As a result, it slowed down the overall pulse or feeling of the performance, reduced physical tension and helped the student relax. Students also used the absence of time to experiment with the pacing of a cadenza.

Playing at half/double tempo. By choosing a background track that was half or double the tempo of the student's musical selection, he or she was able to feel the bigger rhythmic picture (by playing twice as fast), or define the nuances of the rhythm (by playing twice as slow).

In one instance, Student D was rushing a series of sixteenth notes, so the researcher had the student play the passage at half tempo with the music and as a result the student brought out the inner notes and alleviated the overall compression. In her words, "I felt like I was an accompaniment…when you accompany someone you always have to be sensitive to how they are playing…like two people dancing together….push

and pull." As a result of playing the Arietta in half tempo, the student was relieved from focusing on performing at too fast a tempo, and more on the expression of the music (filling out the intervals, holding notes for full value, elongating the last notes of a phrase). She chose "Flight of the Eagle" from *Classical New Age Piano Music* for piano and cello to achieve this goal.

Student A used a difficult string of sixteenth notes from the musical selection she was practicing to layer against the steady sixteenth notes of Coldplay's "Clocks." The tempo of "Clocks" was half that of her musical selection, which resulted in a seamless match against her sixteenth-note runs (note-for-note). The students expressed that "The tempo feels a little slow, but I think it is exactly what I need."

Developing a sense of rubato. In instances where the student's musical selection called for a slowing of the tempo, he or she chose a background track with similar moments of *rubato* and attempted to align a single passage against the background track. This was helpful for establishing the feeling or motion of slowing down, which was then applied in the appropriate context of the student's musical selection.

Eliciting body movement. Often students responded to a familiar background track through body movement (or dancing while playing). This helped the student connect through a deep sense of rhythmic internalization (as developed by their familiarity with the background music), which translated to a more confident and internalized pulse in the performance of their musical selection. Students A and E were most expressive in this regard, both visibly and physically engaged in the music when a familiar background

track was playing (i.e., Usher, “Yeah!”; Kenny G, “Tango”; and, Jim Dooley, “Waltz). This was also true of unfamiliar background tracks with highly engaging rhythms.

For an inclusive list of all of the response mechanisms and corresponding examples, see Appendix L, “Frequency and Student Examples of Response Mechanisms Used in Aural Modeling.”

Considered the best time to start playing along with the background track. Students often listened to the background track at least once before they felt comfortable playing along with the music, especially when the music was unfamiliar to them. In these cases, students would listen for a few moments and then ask the researcher to start the track again from the beginning. At that point, they had a general sense of the musical structure and felt more adept at planning their entrances and placing their musical ideas. Other times, students waited for a pause or dramatic moment in the music to start playing. This underscored bigger-picture thinking in that students were focused on aligning musical gestures from the Arietta (or their musical selection) with those of the background track.

Established a key, or tonal center. Through trial and error, students played a series of notes against key pitches in the background track to try and get a sense of the overall key or tonal center. In some cases (especially in piano works or large symphonic works) it was difficult to latch on to a single key due to ongoing modulations. At other times (when the music was familiar to the student or the harmonic motion was slower) students readily identified the key and responded more quickly. Students often took a minute or two to establish the key and often asked to go back to the beginning and start

again once the key was established. In some cases, the researcher indicated to the student the key (in the cases where it was stated in the title of the song, or musical selection).

Used familiar background tracks to facilitate the layering process. When a student chose a background track that was familiar to him or her (or recognized a song chosen by the researcher), there were several distinct reactions, including: (1) physical responses (such as dancing or moving in the tempo and style of the music); (2) change of disposition (from tension (or stress induced by the musical selection) to joy (or relaxation induced by the background track); and (3) emotional response (emotions induced by memories associated with the background track). These reactions helped students to navigate the musical background and inform their decisions about how to layer the Arietta (or their musical selection) against the background track.

There was a particular emphasis on style and tempo as the most salient features students used as reference points for imitation in their subsequent performances. Student E focused on specific goals within these two categories: (1) placing a series of grace notes more deliberately and accurately within the measure; (2) maintaining the tempo through the technical logistics of the notes; and (3) eliminating the compression of the surrounding rhythms due to rushing the grace notes. The researcher chose Usher's "Yeah!" because of its steady beat and familiarity amongst students in this age group. In this case, Student E immediately responded to the song through dancing and an eagerness to play, as observed by the researcher. After some initial experimenting with the grace note figures and their placement against the background track, the student eventually worked through it and played with a great deal of energy, as observed by the researcher.

The student's disposition changed from stressed and displeased with the figures ("…I just can't play that part…") to a more positive one ("…the fact that the music has such a driving force pushed me into tempo and I wasn't thinking about the notes quite as much as I was just driving the line…so it works"). The student used the looping technique to continuously place the grace notes against the steady backbeat until they settled into the music. The researcher observed a sense of weight on the grace notes as the student continuously repeated the figure against the background track. The student was able to maintain this sense of weight after several performances without the background track (the researcher observed the student doing subtle dances movements just before each performance, indicating he was hearing the music in his head and establishing the tempo and associative musical gestures). Using background tracks (songs) that are familiar to students helped to facilitate the process of Aural Modeling.

Matched the musical motives of the background track. Students shifted between spontaneous and deliberate imitations of the musical motives (rhythmic, melodic, harmonic, and stylistic) that were present in the background track. Spontaneous imitations occurred as an instinctive reaction to what the student heard in the background track. This reaction and its implications for developing an expressive goal were reflected upon immediately after the performance. In situations where students made deliberate decisions about imitating the musical motives of the background track in their performance, they vocalized their intention to place a specific gesture in a specific place in the music, or to use the background track in a certain way to achieve an expressive goal. Students used rhythmic gestures, the shape of the melodic contour, the harmonic

motion and the salient style features of the background track as discussion points for developing their expressive goals. This resulted in several examples of an interactive and highly demanding cognitive task.

Student E was working toward achieving more of a "lilting" feeling in his etude with a time signature of ¾. The researcher suggested putting on a waltz as the background track to achieve this stylistic feature, and after several experimentations with the "Waltz" from Jim Dooley's album, *Pushing Daisies*, the student indicated, "…it flows more like a waltz…now I can feel the placement of the notes easier." In this instance, the student started to place more weight on the downbeat, while lifting beats two and three (as in the inflection of the background track) to help achieve his expressive goal of "lilting." This was a deliberate decision to use the background track to achieve a specific stylistic goal.

Student B was working on the first movement ("Allegretto un poco") from the Nielsen *Clarinet Concerto* on the second page in a lyrical passage that was visually segmented due to rests and breaks in the slurs. The student wished to achieve a more sustained, lyrical approach to the melodic line. The researcher chose Samuel Barber's "Adagio for Strings." The student's response to playing along with the music was, "…it made the segments work better...I was able to forget about the melody and go with it…" In this case, the long-breathed, melodic line of the *Adagio*… helped the student play through the segmented phrases in the Nielsen. This was another deliberate decision to use the background track to achieve a specific melodic goal.

Requested background tracks without rhythm to focus on ambiance, or mood. Students sometimes requested a background track that did not have a specific meter or tempo and lacked any rhythmic boundaries and simply functioned as a musical ambiance or backdrop to achieve a state of mind, overall mood, or to reduce the associative anxiety of trying to keep a steady tempo.

Student A wished to move beyond the technicality and associative anxiety of a series of technically demanding sixteenth-note runs from the "Allegro" movement of the *Concierto pastoral* by Joaquin Rodrigo for flute and orchestra. An appropriate consideration for the background track in this case was that it stay away from any strong sense of rhythmic drive, to give the student a sense of relief from the constrictions of rhythm and time that were imposing a strained performance of these passages. The researcher chose "Meditation on Tranquility – The Hang With Ocean Waves, Music for Deep Sleep" from the album *Tender Lullaby.* During the layering process, the researcher observed the student taking an episodic approach with each of the runs, playing one phrase at a time and taking time at the end of the phrase to slow down and linger on the final notes. The articulation seemed longer and more rounded (in comparison with labored, pecky tonguing that the student used in the first performances of these passages) and certain notes were elongated and played more lyrically. Additionally, the student's internal clock seemed to slow down creating more of a tranquil feeling in the passages. The student felt "…like I had freedom within the notes, [rather than] feeling bound by the rhythm. It is like the waves [gestures with hand long strokes back and forth] were

pushing and pulling…I felt less nervous [without the sense of time] and I wasn't as tense."

Addressed technical challenges / limitations. In some cases, students used Aural Modeling as a means of addressing specific technical limitations or challenges they were currently facing on their instruments. Examples included: (1) constricted airstream; (2) abrupt, cracking first note; and (3) uneven and labored technique.

Student E expressed having a "constricted airstream" at the start of a particular session. To address this limitation, the researcher selected Nature Sounds' "Wind & Waves (Vent et vagues)" as the background track. The music seemed to have a calming effect on the student who felt "….[it was] really relaxing. Just hearing air in the background kind of forced me to move the air within the [instrument], like a calming effect…."

Student C faced a similar challenge related to moving the air in anticipation of the first pitch at the beginning of his musical selection, which often resulted in an abrupt, cracking or delayed starting pitch. The same musical selection was used to help the student achieve consistency in the starting pitch. The researcher observed the student playing out into the openness and expansiveness of the wind. The student commented, "…the [sound of] the wind rushing felt free…like I wasn't tethered." The sound effect of the rushing wind helped both students feel a greater sense in the release of air at specific points in the phrase.

Student A had been working with a background track by Rosi Golan entitled, "Been a Long Day," which she layered against a technically demanding section in the

second movement of her concerto. After asking her how she felt after a week of working with the track, she replied, “It really helps because then I don’t freak out when I go to it…I was really nervous about that section, but now, I just take my time.” The relief from her nerves allowed her the freedom to explore these passages with a more relaxed mindset and expressively rewarding performance.

Practiced recall to strengthen aural-musical pairings. After a student had worked with the background track, he or she was asked to recall the music in his or her head without the music playing, to try and recreate the tempo and perform the musical selection successfully with the particular rhythmic goal in mind. Recall was most successful when the background tracks were songs that were familiar to the students as they could readily recall the tempo, style features, and motivic ideas for use in performance.

Aural Modeling differs from Artistic Representation in that it is more participatory, especially through the use of the response mechanisms, emotionality and navigating the music through key recognition and starting point. These types of actions build upon the descriptive work that was more prominent in Artistic Modeling to create a more in-depth process for learning. The combination of these two methods is discussed in more detail in the following section.

Combined Use Artistic Representation and Aural Modeling. In some cases, students used a combination of images and background music to expound on their expressive goals. In this way, the inception of a single expressive idea taken from an image was further developed through the addition of background music. Two main

themes emerged on how students used a combination of Artistic Representation and Aural Modeling throughout the study:

1. Built on the ideas from Artistic Representation through Aural Modeling.
2. Used a background track to confirm or change initial perception of the image.

Built on the ideas from Artistic Representation through Aural Modeling. In some sessions of the MSMM approach, students established a series of expressive ideas based on an image, and further explored them through the addition of Aural Modeling, thereby working with two variables for expressive input. Student E began work with the image in Figure 17 (*Horns Wings…*), showing a large beast preying on a weak soldier. The impending battle was perceived by the student to represent directed, forward motion as in measures 24 – 30 in the Arietta (Figure 34), in which a *crescendo* is marked through the rising sixteenth notes. At the student's request, the researcher used Car Orff's "O Fortuna" from *Carmina Burana* as the background track for this image. The student's response to the addition of the Aural Modeling experience underscores the extension of initial ideas through music:

> I noticed that in listening to "O Fortuna" from *Carmina Burana* I started putting more space in between the individual eighth notes…I think this is okay because I noticed the crescendo naturally starting to come in between [them]. I immediately knew where to place the *tenuto* and how to move the air, so it made musical sense. I leaned on the sixteenth notes more. I used more air to make a bigger deal of the *crescendos*.

The researcher observed the student taking the rhythms out of context to align them with the grand, vocal gestures of *Carmina Burana*. As a result, the energy and forward direction in the musical line in the student's performance grew to nearly the magnitude of the musical gestures in the background music (especially the opening statements).

Figure 17. Yoshitaka Amano, *Horns Wings*. Chosen by Student E from the Dark Category to portray good versus evil.

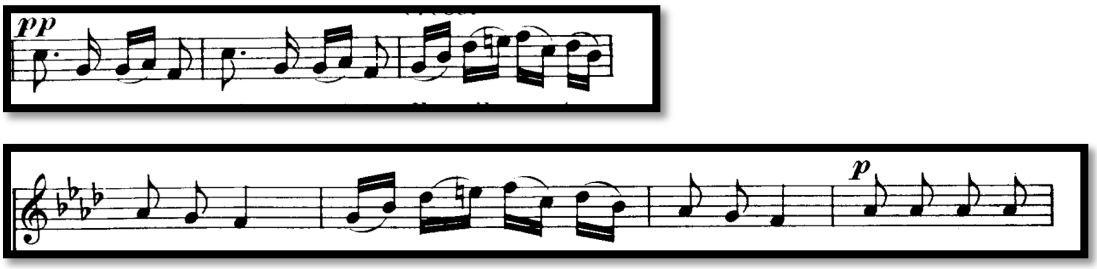

Figure 34. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me*]. Measures 24 – 30 from the Arietta (See Appendix H).

Student A focused on a series of repetitive sixteenth-note runs on page one from the Allegro movement of the *Concierto pastoral* by Joaquin Rodrigo for flute and orchestra. The runs are very angular and physically demanding, yet they need to sound effortless, like they are "shimmering," as stated the student. To help achieve this expressive ideal, the student paired an image of a Wisteria tree (Figure 35, *Wisteria tree…*) with CH2 – Strings Attached "Spanish Guitar." The student wanted the notes to sound like they were "falling effortlessly." The image itself helped the student to play with more ease and less physical tension; however, the addition of the background track added an element of smoothness and fluidity that did not occur with the image alone.

During the Aural Modeling portion with the "Spanish Guitar" background music, the researcher observed the student playing the individual passages in the tempo of the song, waiting to align each one with the strums of the guitar. This gave her performance an overall gestural effect that that was facilitated by slightly more time at the ends of the runs. The end result was a more lyrical performance that was less physically strained and more relaxed overall. The student commented on the performance as having "more fall to it [gestured downward with her hand]." The student's sensitivity to the strumming of the guitar—a distinct musical trait in the background music—helped her place the individual notes of each run within a larger framework, thereby reducing the labored effect of focusing on every single note.

Figure 35. Brian Young, *Wisteria Tree in Ashikaga Flower Park, Japan*. Chosen by Student A from Google Images search phrase, Japanese flower garden.

Used a background track to confirm or change initial perception of the image. In some cases, the addition of a background track changed a student's initial perception of the style or overall mood of the music. Student D provides this comment:

> I feel like my idea of this piece [the Arietta] has changed after I heard that [referring to ThexCloakedxSchermerx, *Game Music*…] that she chose to work with this YouTube video independently prior to the session]. When I first heard it [the Arietta], I thought it was mysterious and serene. I still build with that feeling of serenity, but [now] it is like a Zen pond, with waterfalls.

Student E surmised "the auditory effects just bring me closer to the picture."

> I guess the auditory effects just bring me closer to the picture. I tried not to laugh because at measure 29 I felt like a rock because the wind was actually intensifying, but the music was contradicting that. It says piano [in the Arietta], but moving the air became even more important. I was getting all of this energy thrown at me, so what do I do with this energy? I can't increase the dynamics because that is now what is written, but I can ignite the air between the notes and that was kind of interesting.

In both statements the idea that the background track can add to the experience of using the image is of interest to this point. In this third statement, Student D comments on how the appearance of an image can change with the addition of music:

> I found it interesting [that even] with the picture of still water so much could come from the sound of moving water….It never occurred to me that this image and song would come together…because when I first looked at the image it appeared to me as a walkthrough a dark woods and then when I look at it now [after hearing the background track] there is a lot more color in it, like wow, so many perspectives that come together too.

The combination of Artistic Representation and Aural Modeling brought students closer to their artistic goals in the context of their written music, whether it was the Arietta or a musical selection of their choice. The process of combining visual features from images and aural cues from the background track allowed students an in-depth exploration into the use of multisensory stimuli to inspire new concepts about the music-making process. The third method, Improvisatory Storytelling, takes these initial explorations beyond the boundaries of written notation to the students' personal convictions, emotions, and musical sensibilities.

Improvisatory Storytelling. Students used Improvisatory Storytelling as a tool for accessing their inner emotions and revealing them through tangible musical gestures in a variety of musical settings including images and a background track, as well as musical improvisations with the researcher. Five scenarios were created for students to explore Improvisatory Storytelling:

1. Improvisation on an image only.
2. Improvisation with a single background track only [intended, but not used in this study].
3. Improvisation with an image at first; then, supplemented with a single background track.
4. Improvisation on an image, along with the researcher playing as well.
5. Improvisation on an image, along with the researcher playing as well, and a background track.

Seven themes emerged from these scenarios for how students used Improvisatory Storytelling:

1. Used methods of planning.
2. Engaged in active listening.
3. Aligned specific visual features with performable musical gestures.
4. Used relatability to gain insight into the image.
5. Used background track to confirm or change initial perception of the image (and corresponding improvisation).

6. Used techniques specific to the visual portion of Improvisatory Storytelling (image only).
7. Used techniques specific to the aural portion of Improvisatory Storytelling (background track and/or researcher).

Used methods of planning. Students used four methods of planning to initiate the process of Improvisatory Storytelling. These methods included: (1) using a word to choose an image (figurative and literal); (2) choosing a key based on color(s) of image; (3) choosing a key based on the mood/setting of the image; and (4) listening before improvising with the background track. These methods helped students navigate the unpredictability of an improvisation in a more manageable way.

Used a word to choose an image (figurative and literal). Students were asked to share a word for each session that could be typed into Google Images. Words/phrases ranged from very descriptive and literal visual concepts (abstract art, whale, or boat) to vague or figurative concepts (escape, uncertainty, overtaken, sorrow, freedom, or lost). Often these words seemed to reflect the student's state of mind in a particular session, which through the words and the images chosen to represent it, made their way into the student's improvisatory performances. Student D wished to explore the word "freedom" in her improvisation and chose the following image (Figure 36, *Freedom…*).

Figure 36. Malezi, *Freedom*. Chosen by Student E from Google Images using the search word, freedom to portray freedom.

Student D's response to her improvisation on this image:

> So that is what birds sound like? I didn't think of freedom as that really heavy emotional release, but I thought of it more like dancing [student dances]. Birds are like the cutest little things, especially pigeons. They hop everywhere, like the little sparrows on campus. They are so cute.

When Student D began this session, she used the word "overtaken" to describe how stressed she had felt that day. As the session continued, she sought to explore the opposite of overtaken, and used the word freedom to "lift her spirits." This image and her corresponding improvisation reflected a unique use of the word freedom that appeared as a lighter contrast to an initial darker improvisation (or a lighter mood in contrast to a darker mood).

Chose a key based on color(s) of image. Students first directed their attention toward choosing a key that best fit the image. Students generally associated keys with shades of colors (major keys with bright colors and minor keys with dark colors). Student B used the image in Figure 37 of abstract art as an opportunity to explore a variety of colors.

Figure 37. Mirza Zuplijanin, *Abstract Art*. Chosen by Student B from Google Images using the search phrase, abstract art to explore colors.

The student commented, "There could be lots of [keys]. That is why I could use the colors. The different colors could be different moods and different keys. Or an overall key…the colors are kind of bright, they are not too dark. I am thinking a sharp key." Student C chose an image to represent the word "lost" and associated the key of C minor with the image of a girl standing on a cliff in Figure 38 (*Woman on a Cliff*...) and also referenced the darkness of the image and the "sea" with a minor key (C minor in particular).

Figure 38. Untitled photograph of a woman on a cliff. Chosen by Student C from Google Images using the search word, lost to portray feeling lost.

Student A chose an image of a blue whale (Figure 39, *A Leap for Joy…*), which she labeled as G or D major to represent "happiness," and for the image in Figure 40, *Tango Couple*, she said of her performance, "It is red and I love that color and I was trying to make it sexier and more edgy."

Figure 39. Yeohghstudio*, A Leap for Joy*. Chosen by Student A from her personal blog.

Figure 40. *Tango Couple*. Chosen by Student A from Google Images using the search word, tango to portray exotic.

Chose a key based on the mood/setting of the image. In other cases, students focused on the overall mood, setting, landscape or other overall features of the image independent of the color. Student A chose to portray the image in Figure 41 (*Voyage to*

the Stars…) in the key of E harmonic minor. When asked why she chose this key, the student replied, "They were in a boat and they were rocking and it was creepy."

Figure 41. Odessa Sawyer, *Voyage to the Stars*. Chosen by Student A from her personal blog.

Listened before improvising with the background track. Unlike an image, in which students would spontaneously start improvising from their own creative instincts, adding background music added another layer of mystery and consideration for students. When students did not have specific musical selections as reference points for layering against the background music, they were required to spontaneously create musical ideas from their own library of inner music. This required that students gain a decent understanding of the music and the overall sense of the musical style before starting to improvise within the context of the background music. In general, students listened anywhere between ten seconds to several minutes. Not only were students tending to and absorbing musical nuances of the background music, they were also simultaneously deciding on their own musical composition as an improvisatory layer to the background music. An example dialogue between the researcher and Student B reflects this approach:

Researcher: I saw that you were analyzing it [waiting to come in by trying to understand what is going on in the music].

Student B: I know…I was trying to wait for a good point to come in.

Researcher: Is it better to just start from the beginning now that you have a better sense of it?

Student B: Yeah, Yeah.

Engaged in active listening. Active listening was at the root of all the skills used for getting the most out of an Improvisatory Storytelling session. Students used active listening in three of the five scenarios that included background tracks, or playing with the researcher (three, four, and five) for Improvisatory Storytelling.

Scenario three - Actively listening and responding to aural cues from a single background track and an image. Students used aural cues from the background track to help shape their individual improvisations and guide their stylistic, rhythmic, melodic and harmonic choices. The background tracks were chosen to expound upon the musical ideas established in the image-only improvisation initially completed by the student. Student and researcher worked together, listening to several recordings, to choose one or two against which the student could improvise.

Scenario four – Actively listening and responding to aural cues from performing with the researcher, using an image only. In addition to improvising along with a background track, students engaged in a series of improvisations or musical dialogues with the researcher. The idea here was to provide students with an opportunity to receive musical feedback on the ideas they were presenting in their improvisation and to further

develop those ideas through the musical interaction with the researcher. Students shared several comments on this interaction:

Student C commented on the interactive aspect of the experience, "I was listening to you as well and trying to match [your ideas]. I held a note for a while and then you did something, and then I tried to do it afterwards."

Student B commented on the exploratory nature of the process, "It wasn't as connected, not like through the first run through. The phrases were sort of together at points. I would play held notes and you were playing longer notes, but [eventually] the phrases would work."

Student A commented on the overall experience of active listening:

> I just thought we played off of each other a lot. Like one of us would set something up and it would just go back and forth…like active listening….It is [about] getting used to listening to someone else and reading their cues, while pulling your own music from the image….I liked it when you went off with different themes. I didn't want it to be exactly the same and thought we were complementing one another's melodies.

Student D comments, "I just focused on what you were playing, thinking 'I am different than what she is doing' and just enhanced that." In a later session, Student D called the interactive approach, "echoing," explaining, "I would play something and then you played something that was similar, and then we started playing licks and articulation that were the same." These comments speak to the interactive and exploratory components of improvising in this manner.

Student E comments on the subtleties of the experience:

> When I first started playing, it was something choral that I started working on last night and then I wasn't sure where I was going to go when you came in. Yet when you started playing, I was able to pick up on some nuances that you were giving,

> which was give and take and you went with it and the articulations and the pitch bending, which is quite difficult [on this instrument], yet I was able to find a way to match what you were playing. Yeah! We were just in sync, plus we knew the time signature going into it. And there was more communication from me to you [the second time].

The live musical feed provides students the opportunity to hear different versions of their initial ideas through the performance of another and to enhance their sensitivity for musical nuances in similar settings.

Scenario five – Actively listening and responding to aural cues from performing with the researcher, background track, and an image. To provide students with the opportunity to further exercise their active listening skills, the researcher added a background track to the musical dialogue. This was used in conjunction with an image to which the researcher and student previously improvised. The background track added yet another variable to the listening experience. In one example, the researcher and Student A improvised to the image of the whale (Figure 39, *A Leap for Joy…*) as an initial exploration. Next, the researcher, at the student's request, added "Humpback Whales" by John Grout from the album *Sounds of the Sea* (a track featuring sounds of whale cries and calls) as the background track to further inform the improvisatory session. The student and researcher improvised along with the background track feeding off of the many expressive and musical subtleties available from the three inputs. The student commented, "It is weird how well the sounds of the whales matched our sounds. It really seemed to work." The student and researcher added pitch bends, chromaticism and vibrato to enhance their improvisation and to match that of the whale song. Additionally, the student and researcher matched the ebb and flow of the whale calls themselves,

picking up on the momentum or urgency of the calls throughout the track and matching their sounds accordingly throughout the improvisation. The overall improvisation was more episodic (in accordance with the nature of the sporadic whale calls) and less melodic than the improvisation with the image only. Student C, in a different session, encapsulates the experience as a whole, "I feel like I am able to listen to what you are doing and what the soundtrack is doing and able to better fit in between both, so I feel like I am connecting more." Several cognitive tasks were at play in this process, including goal imagining and motor production (Woody, 2003)[16]

Aligned specific visual features with performable musical gestures. Similarly to Artistic Representation, students used the translation of specific visual features from an image to guide their interpretative decisions for performing musical gestures, especially from a creative standpoint in using their own ideas rather than passages from the musical selection they had been preparing. In Student A's improvisation, she used a series of jumping figures to represent the whale jumping out of the water (Figure 39, *A Leap for Joy…*), "at first I thought this would be a sad picture, but then I thought, well he is jumping, so he is happy, so this is a happy picture." The student associated the joy of the whale, and a general sense of happiness, through the musical gesture of improvised jumping figures, or larger leaping figures in her performance.

Used relatability to gain insight into the image. As with Artistic Representation and Aural Modeling, students used their ability to connect with an image to help inform

[16] Goal imagining refers to the "…use of an explicit plan for expressive performance…" (p. 60), which leads to "…better motor production…and more accurate imitative performances." (p. 61).

their improvisation. Student C viewed the image of a young woman looking over a steep cliff from above a large ocean (Figure 38, *Woman on a Cliff...*) from his perspective of the associative emotions of that moment, "I pretended I was looking over the cliff as well." In addition to actively placing himself within the image through her actions, he also commented that, "…there are those moments where you feel like you are having a mental break down…it is kind of eye opening…" When the researcher asked the student to consider the emotions that surrounded such an experience, he stated, "guilt, pain, worthlessness." In many ways, through his ability to relate to the subject and her (perceived) emotions, he was able to recall/experience those emotions and learn how to use them, and/or translate them into musical gestures.

Used a background track to confirm or change initial perception of the image (and corresponding improvisation). In some cases, the addition of a background track changed a student's initial perception of the style or overall mood of the music.

Student A commented on the experience of adding a background track after an improvisation to an image only, "[The background track] adds another element, like a whole other mood. It is weird how you take an image and you go at it one way and then you add sound and it becomes completely different." In the same session, this student experienced this statement to yet another degree that was observed by the researcher. The image of an abstract moon (Figure 41, *Voyage to the Stars…*) was treated through an initial improvisation by the Student and Researcher without a background track as a musical setting similar to that of a lullaby: long-breathed melodies, a lulling rhythmic pattern (in a 6/8 feeling), and use of E harmonic minor. The student indicated that she

was focusing on the "rocking boats" as inspiration for her rhythmic feeling. The "exotic and Oriental" feeling of the image guided her expressive instincts in this improvisatory session. When the researcher added the music, "Anywhere Out of the World" by Dead Can Dance from their album *Wake*, the student's improvisation changed drastically to mimic the darkness of the background track. In her subsequent improvisation, she experimented with extended techniques, such as flutter tonguing and pitch bends, greater use of chromaticism (and a lack of a distinct key), melodies in lower range on the instrument, and a more episodic melodic presentation. She and the researcher were much more rhythmically active as the middle section of the background track permitted. The Student commented, "that was creepy, I liked it!" This experience demonstrated the influence of many variables and stimuli in the music-making process, revealing to the student how critical active listening, and an awareness of stylistic nuances are to this process.

Student A noted changes from her initial performance as compared with her performance after hearing the background track:

> Researcher: What is the music drawing out in the image that wasn't present before?
>
> Student A: Sadness and darkness and more of the blue and that dark greyish bluish [from the image]; all the darker colors that aren't apparent when you first look at the image [without the background track].
>
> Researcher: What else?
>
> Student A: A lot of jumps, and a little chromaticism, on purpose, wrong notes.

Student B commented on the stylistic changes in his performance after the background track had been added:

Researcher: What happened when the music came on?

Student B: At fist I was just like…uh…[laughs], but then I just went with it. I don't know, it was different [from the image]. It was gypsy-ish, and it sounds like something I know, but couldn't' recognize. It was interesting.

Researcher: How did you feel in that moment, when the music came on?

Student B: "It made it different. It changed the mood and made it more like, um…more like minor, like reminiscing.

Researcher: Do you feel like you were in the moment?

Student B: "Yeah, more than last time….I was able to paint more lyrical, legato sections when the music came on, because before it was just notes."

Used techniques specific to the visual portion of Improvisatory Storytelling (image only). Techniques used for the visual portion of Improvisatory Storytelling include color association for overall mood/emotion and to facilitate relatability to the image. Students related to an image directly through the characters or events in the image.

Considered color for overall mood/emotion. Similar to color selection in Artistic Representation, students often used color as a starting point to establish an overall mood or emotion within the image. With Improvisatory Storytelling, students explored even further and improvised their performances from their own moods, emotions and thoughts at the time of the session in conjunction with the image. So, while the color choices (black, grey, white) and images from Artistic Representation were chosen to represent the mood and emotions of the Arietta, the colors used in Improvisatory Storytelling reflect more the internal states of the students. Notice the frequency of colors in Figure 42 is more varied than those used in Artistic Representation to reflect the variety of internal

states, versus a single mood in the Arietta. Additionally, the color blue was referenced the most number of times due to the use of Figure 19 (*Old Man in Sorrow…*) in the Improvisatory experiment. Students also referenced the color black on several occasions because of its versatility in expressing a range of emotions (mystery, sadness, despair, lost, creepy).

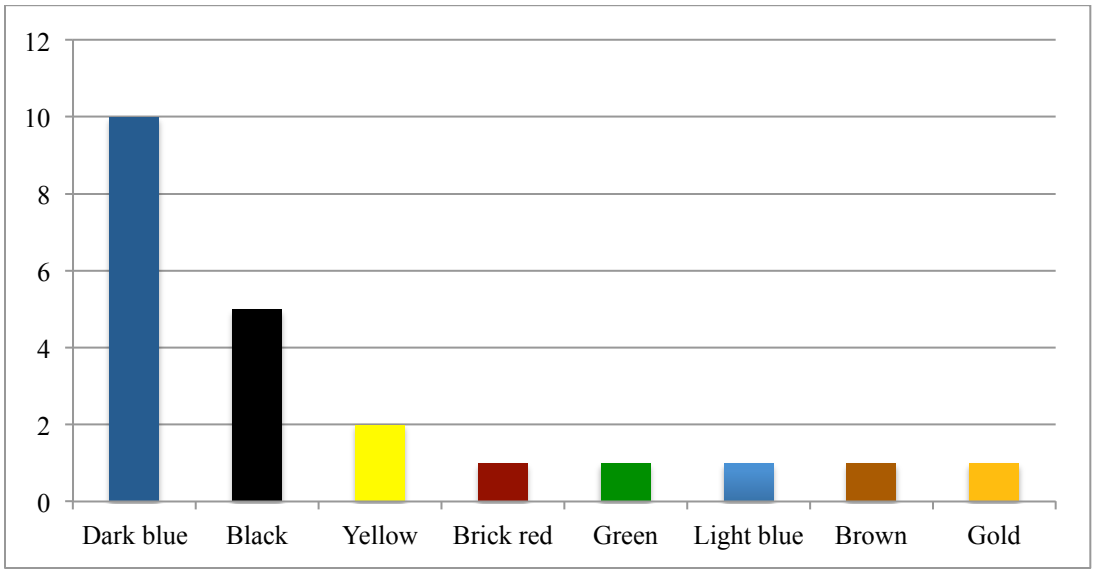

Figure 42. Frequency of colors used in Improvisatory Storytelling in Sessions Five and Six. Range is from one to ten. Colors were counted each time they were referenced by a student within a session.

In addition to the frequency and range of colors reflecting a more varied state of emotions, the expressive goals were also very different in that they represented a range of images chosen by key words the students used to describe their current emotional or mental state at the time of the session. Table 14 illustrates these findings.

Table 14

Colors and Expressive Goals Used in Improvisatory Storytelling

Color	Expressive goal
Dark blue	Sadness (A, B, C, D); sorrow (A, B, C, D); heartache (A); despondence (E)
Black	Despair (E); lost (C); creepy (A); focus (A); overtaken (D)
Yellow	Fiery; intensity (A, E)
Brick red	Exotic; darker sound (A)
Green	Freedom (D)
Light blue	Celebratory (E)
Brown	Lonesome despair (E)
Gold	Majestic (E)

Note. Student comments were obtained from the transcriptions and student notation on musical score from Sessions Five and Six. Colors and expressive goals reflect actual words and phrases used by the students throughout the study. Students used colors to explore their internal mental and emotional states through improvisation. Some colors include several expressive goals to reflect the variety of associations used by the students. Notice that while the vocabulary is different amongst the students, the overall themes are similar. Students who used the phrases are included in parenthesis. See Appendix I, "Catalogue of Figures," Figures 19, 20, 33, 34, 35-37, and 41-44 for examples of images and representative colors.

Portrayed the actions of the character(s)/subject(s) in the image in distinct musical gestures. Some students portrayed the actions of the character(s) in the image through musical gestures, such as *crying* (sigh gestures and more weighted rhythms), *weeping* (large swells in the phrase) or *jumping for joy* (accents or *forte* exclamations in the melodic contour or larger intervals). Student A provides one example:

> I was just trying to think about heartache…you can feel it. It is this sigh going through you and [the weeping man in the image (Figure19, *Sorrowing Old Man…*)] is facing downward and you feel like everything drops and then you have pangs of pain…angst…you know when you're really sad and you have these tiny convulsions, and you are just like, "Ahh!" That is where the wailing was coming from [in my performance].

Placed oneself within the image/experience and reacted accordingly. These emotional reactions were evident in heightened or subdued musical tension in their subsequent performances either through slower/faster tempi, the use of lighter/darker tone colors, or less/more exaggerated articulations. When students considered the perspective of the character in the image they were able to explore the associated emotions within themselves that they may not have felt comfortable exploring without the "outlet" of the character. The character provided an emotional buffer for the experience and provided the student a safe zone for exploration. Student E commented on the image of the *Sorrowing Old Man ('At Eternity's Gate)* (Figure 19) saying, "he is in such a state of despair, I can only imagine…the poor man."

Ignited past memories. In cases when an image ignited a past memory in the student, an emotional reaction was evident and consequently portrayed in the student's performance. Such images acted as visual triggers for recalling personal memories and the associative emotions and/or physical sensations of the memory. Student E was reminded of a difficult upbringing when he viewed an image of a poor man begging. He recalled in great detail the memories of those difficult times due to the poignancy of the surrendering man and his evident sorrow portrayed in the image.

Created a narrative beyond the image. As in other methods, students explored beyond the moment of the image (or the scene itself), to a story that supported the image. This allowed students to create a narrative and thread that narrative through their musical performance. Student B used an image of a father and son standing in a cemetery (Figure 49, *A New Day, Has Come…*) looking at a gravestone for his improvisation. The

conflicting emotions of the child in particular inspired his improvisation and alternation between E minor and E major:

> Somehow I added a G-sharp, even though I started in E minor, and then went to G-natural because I viewed the boy looking at the gravestone and not really understanding. You know how kids are when they really don't understand something? They are happy because they don't understand the problem. Like, 'what is this piece of stone?' And then [I went back to the initial thought]. It starts in minor, the child is happy, and then realizes he is supposed to be sad.

Used techniques specific to the aural portion of Improvisatory Storytelling (background track and/or researcher). Students used a number of methods for interacting with the background track from an improvisatory standpoint, without any boundaries. A natural response was to imitate or mimic the musical ideas in the background track as a starting point from which to further explore one's improvisational ideas.

Matched the melodic ideas, harmonic and rhythmic motion, and stylistic nuances of the background track. A typical starting point for students was to focus on the melodic ideas in the background track, by performing exact repetitions, fragments or variations of them (e.g., matching melodic shape and contour, emulating melodic rhythm) These eventually segued into the student's own melodic or counter-melodic ideas in their improvisation, or inspired new melodies that played more of a dominant role in the improvisation. After establishing the key or tonal center of the background track, students responded by placing their melodic ideas within the context of the harmonic motion and/or direction of the background track (e.g., aligned with cadence points, reinforced or lingered upon critical harmonic pitches). Similarly, students matched the rhythmic motion, inflection and moving/resting points of the music. In cases where a student was

uncertain of how to connect with the music, he or she would simply sustain held notes and try to fill in when the motion of the music stopped, through a call-and-response approach. Students noted and responded to changes in tempo, including *accelerando* and *ritardando* or moments of *rubato* in certain phrases. The most explicit demonstration of active listening presented itself through the student's ability to incorporate stylistic nuances or features of the background track in his or her improvisation. Style features may have been as broad as use of tone (broad and full for *tutti* orchestral passages, delicate and light for a waltz) or as specific as the use of articulation (punctuated staccato to mimic *pizzicato* in strings, more connected, sustained passages to mimic *legato* passages) and phrasing (crafting shorter or longer phrases with greater or lesser peaks in accordance with the music) to convey these style features. Through this process, the improvisation became more intimately linked with the musical nuances of the background track and students actively (albeit instinctively) responded in real-time to the music through their output.

Used critical diatonic pitches (tonic, dominant, leading tone) to add drama to the improvisation. Once students established the key or tonal center of the music, they felt free to use the critical pitches within that key to help enhance their improvisation and better connect with the background track. Student B used A-natural and A-flat against a background track that was in G minor to bring more drama to the improvisation, which in this particular example was meant to portray the ferocity of a blazing forest fire in the image. Student E explored a harmonic minor scale with a special emphasis on the raised

seventh scale degree to highlight the "exotic" feeling of the music (and corresponding image of a woman in a seductive dancing pose).

Explored various performer roles with the background track (passive versus dominant). As students navigated the background track (or musical dialogue with the background track and/or researcher), while simultaneously creating their improvisation, they assumed a variety of performer roles ranging from passive, or more accompanimental to more dominant or soloistic. Early in the improvisation, students generally assumed an accompanying role; either through a series of stable, repetitive musical motives that supported the melodic motion of the track/researcher, or by filling in the music during lulls in the melody, rests or pauses. Students explored their soloistic sensibilities in these moments of rest, and eventually began to assume a more active role in their melodic contribution. At that point, the improvisation became more of a duet, with the student responding to the gestures of the background track/researcher through melodically independent ideas rather than simply playing along or mimicking what he or she was hearing. Throughout this improvisatory exploration, the student more readily assumed the role of the soloist and created more melodically independent (versus melodically dependent) ideas and explored them as the forefront or main musical material of the dialogue.

Improvisatory Storytelling built on the techniques of Artistic Representation and Aural Modeling to further develop students' musical and emotional sensibilities in the artistic process. Improvising proved to be a skill that was generally unfamiliar to the students in this study, and it took them some time to adjust and truly embrace the

experience. The role of active listening and relatability were especially prominent in this method for exploring the depths of the creative process, which required listening, responding and interacting with spontaneous musical cues as well as formulating them in the context of their personal emotional lens.

The Ease and Accessibility of the Approach

The three methods of the MSMM approach (Artistic Representation, Aural Modeling and Improvisatory Storytelling) resulted in varying levels of accessibility. This point of exploration seeks to gain an understanding of how easily students adapted to the MSMM approach's three methods throughout the study. The techniques described in the previous section (*how* students used the approach) are considered in this section as generalized actions with two possible outcomes for accessibility: (1) features of the action that aided in accessibility; and (2) features of the action that inhibited accessibility.

Artistic Representation. Five generalized actions unique to Artistic Representation were considered for accessibility: (1) image selection; (2) translation process; (3) character development; (4) relatability; and (5) recall. The ease with which students experienced these actions reflects the level of accessibility of the MSMM approach unique to this method. The actions are categorized according to the features that aided or inhibited accessibility (some are listed in both categories for different reasons and some are not listed due to lack of examples for that particular action).

Features of image selection that supported accessibility. Four features of image selection aided in the accessibility of using the Artistic Representation method of the MSMM approach:

1. Image selection guided student's initial thought process as images were placed within categories ahead of time by the researcher.
2. Image selection enhanced student participation by using a keyword/phrase (e.g., student typed chosen word into Google Images search engine) to focus/narrow visual options on his or her desired goal.
3. Image selection reinforced student-centered learning by including images that were familiar/meaningful to the student (e.g., chosen from his/her personal blog; frequented/favorite website(s); or, chosen database).
4. Image selection helped student clarify an expressive goal.

Image selection guided student's initial thought processes as images were placed within categories ahead of time by the researcher. Several steps comprised the process of image selection when using the Artistic Representation method:

1. [*Sessions One and Two*] Choose a category from the MSMM slide displaying five categories for overall mood/emotion (Figure 1, *MSMM slide…*) that best represents the mood of the music you would like to portray, or is most readily present in the music you are performing.
    a. Choose an image(s) from within that category that best suits the expressive goal of the music as it pertains to the overall mood/emotion.
2. [*Sessions Three through Seven*] Choose a word/phrase that best portrays your expressive goal in relation to any one of the five components of music (overall mood/emotion, rhythmic inflection, style, articulation or dynamics).

a. Choose an image (either from your own explorations; Google Images; other sources or image databases (i.e. a personal blog, site) that best represents the word/phrase.

Figure 1. MSMM slide. Five categories of overall mood/emotion.

In the first and second sessions, overall mood/emotion served as the focal point for Artistic Representation and student choices were limited by the categories/images provided by the researcher in relation to this component of music. In sessions three through seven, image choices expanded to include larger image databases (i.e., Google images), giving students greater expressive liberties and more of an active role in the selection process (i.e., using words/phrases to choose images, going to specific sites/blogs/databases that were familiar to them).

Image selection enhanced student participation by using a keyword/phrase (i.e. typed word into Google Images search engine) to focus visual options on his or her desired goal. Students were often asked to choose a word or phrase that encapsulated their expressive goal for a particular session (or passage from their musical selection). By

narrowing their expressive focus to a single word, students were instantly engaged in the image selection process in a thoughtful and directed way.

Image selection reinforced student-centered learning by including images that were familiar/meaningful to the student (i.e., chosen from their personal blog, frequented/favorite website(s) or chosen database). In some cases, students chose images that were personal to them, such as something on their blog or a familiar website. This gave students more control of the expressive outcomes by catering their image choices to ones that they knew, had prior experience with, or felt connected to on some level. Familiarity played an important role in accessibility at many levels in the approach (character development, background track).

Image selection helped student clarify an expressive goal. In the first and second sessions, students were first asked to perform measures 1-18 of the Arietta (Appendix H) and to think about the overall mood and/or emotion they felt/experienced while performing the passage. Generally, a descriptive answer followed, was explored through the choice of one of the five categories from the MSMM slide (Figure 1), and finally realized through a single image that was used for the translation process of distinct visual cues into tangible musical gestures. In general, the process of image selection was intuitive in these sessions and students usually concluded with a mood/emotion that was initially present in their descriptive answer. This speaks to the accessibility of Artistic Representation as highly obtainable and generally consistent from the student's initial statement, to the image choice, and finally, in performance. One explanation for this level of accessibility might be the focus with which the student's efforts were directed (only

five categories, each linked to a series of images within that category, and then finally to a specific passage in the music). By categorizing images, students were encouraged to think within specific expressive contexts that facilitated a natural progression from their initial feeling/descriptive statement to the final performance. A few examples described below exemplify this process and highlight features of accessibility that demonstrate a positive mark for accessibility of image selection using the MSMM approach.

Student D (in session one) performed the opening passage of the Arietta (measures 1-18, Appendix H, "Se tu m'ami se sospiri [If thou lov'st me], Giovanni B. Pergolesi (1710-1736)") and when asked about the overall mood, she replied, "I'm kind of thinking of someone along the lakeside. They are watching…from the porch and they are just thinking. Thinking of someone that they lost…" When the student was shown the five categories, she indicated that her impression of the overall mood resided somewhere between peaceful and dark, but ultimately decided on peaceful when shown an example image from both categories. The student chose the following image of a snow-covered forest from the Peaceful Category (Figure 5, *Winter Wonderland…*).

Figure 5. Untitled photograph of a winter wonderland. Chosen by Student D from the Peaceful Category.

The student used the following descriptive words/phrases for this image, which are all relevant to her initial description about the overall mood of the Arietta (lakeside, peaceful, someone who just lost someone, watching from the porch, thinking):

- "…the whiteness hits you…"
- "…coming out of nowhere…"
- "…sense of serenity…"
- "…the reflectiveness in the water…"
- "…it's like vast open air…"
- "…in the woods, out in the open, when the snow is falling, the clouds almost match the ground…"

Student D chose this image from among 15 other images, which she narrowed down to four, all containing trees, snow, expansiveness (either via a lake, open field or the sky) and some reference to peacefulness (whiteness, serenity, snow, stillness, calmness). This type of focused, and intentional thinking resulted in a flowing and connected style, a slower, more relaxed tempo, and an apparent contrast between transparent and dark tone colors in her performance. In this example, the expressive goal was to create a more peaceful and calming performance, one that portrayed the student's initial descriptive statement. The image selection process helped her to focus on this goal through specific visual elements and corresponding musical gestures (whiteness/serenity/calmness/reflection of water – more transparent tone color; and, expansiveness – more peaceful, relaxed performance (possibly due to more expansive breaths); and, loneliness/loss – more lingering within the phrases).

Another example from session one is in reference to Student C, who identified the overall mood/emotion as "…mysterious, like out of a movie…everything in the background is black." The researcher showed the student several images from the Dark Category. The student was very clear about the images that did not work, giving specific examples of why the image did not fit into his initial description ("too bright," "the [object/background] takes away from [the mood]"). By explaining away inappropriate images, Student C was better able to focus in on what he *was* looking to portray. The student chose the following image (Figure 4, *Goodbye Darkness…*) of a girl standing in a dark alley.

Figure 4. Goodbye Darkness. Chosen by Student C from the Dark Category.

The student used the following descriptive words/phrases of this image, all of which are relevant to his initial description about the overall mood of the Arietta (mysterious, out of a movie, background is black):

- "…there is a hesitation…she is a small girl alone in an alley…is something wrong?"

- "...I picture her turning around in one of those creepy, turn around [moments] that you see in horror movies…"
- "…ominous…"

Student C chose this image from among 20 other images, which he narrowed down to three, all containing a dark background, road, or forest (implied references to mysterious). The musical result was that of a darker, fuller tone and more push and pull in the tempo, especially through slowing down in a style unique to a "*morendo*." The expressive goal in this example was to create a more mysterious mood, one that portrayed the student's initial descriptive statement. The image selection process helped him to focus on this goal through specific visual elements (darkness, isolation, mystery) as well as concepts that distracted from or were inappropriate for the initial description, thereby strengthening his argument for those features that were true to his initial description.

In another session, Student C provided an ongoing analysis of several images that were deemed inappropriate for achieving his expressive goal of "fluid and flowing…not so squawking." This analysis reveals his thought process and reasoning for the images that did not work, once again solidifying his final image choice in support of achieving his expressive goal. Table 15 illustrates his commentary.

Table 15

Explanation of Image Selection by Student C

Expressive goal: "I'd like to make my performance [of the Arietta] more fluid and flowing…not so squawking."	
Image	Student explanation for why image was inappropriate
Water flowing over rocks (Figure 50, *Water Flowing Over Rocks…*)	Maybe. The texture of the water is blended together….but, I don't like [the] rocks…they are an interruption to the fluidity.
Mountain slopes (Figure 45, *Glencoe, Scottish Highlands…*)	I would not include this one because of the mountains, symbolically they mean like an impasse, so, no.
Stone path in a forest (Figure 18, *Peaceful…*)	Maybe. I can see myself walking there, but not necessarily fluidly, maybe water would be more appropriate.
Birds flying over the ocean (Figure 12, *Birds Flying…*)	This works…because of the flight…flight in the sense that it is motionless, but you are still moving…gliding.

Note. Student comments were obtained from the transcriptions in Sessions Three. To view images, see Appendix I, "Catalogue of Figures."

Student B had a similar experience when having difficulty choosing between five images that all could have worked, "…they're all just…maybes…cuz in the beginning, it is very…it kind of has to be dark, but there are parts of this excerpts that are…in the middle, there is like some light in it." When probed by the researcher to consider more specifically his expressive goal, he decided that it was most important to convey a sense of tonal and dynamic contrast in his performance, which he found to be the most true of the final image (image of a barren tree against a light background of a wheat field and a cloudy sky, Figure 13, *Dark Tree…*).

Student E used a process for image selection that was closely related to color relationships, such as gold representing agitation and intensity. His initial description of the overall mood/emotion of the Arietta was that it was, "…between agitated and dark…more about the color…" All of the images he considered contained colors of deep gold (as in the sky of an ocean scene; the flames of a blazing fire; or the molten sea of lava). He was especially directed in his efforts due to the role that color played in image selection.

In a similar example, Student B focused on selecting an image through a specific lens, which in this case was through the use of a character (a female character) who seemed to be longing for someone. His initial description focused on an overall mood that was, "…dark…when I play this, I feel [there is a] woman, waiting for someone to come back….you can't see the face, the full face. You can't see who [she is]. This is someone waiting for or longing for someone, but you don't know who. It is like the minor key and it is mysterious" (Figure 3, *Between Darkness & Wonder…*).

Figure 3. Carlos A. Pereira, *Between Darkness & Wonder*. Chosen by Student B from Dark Category.

The student focused on the use of tone color to portray the transition from the pale white of her face to the darkness that surrounds her, which resulted in a crescendo of the opening phrase and transition from a transparent tone color to a darker one. In the student's words, "I think pale represents trying to search for something [that] she thinks something will work and black represents that nothing will work ([hopeful versus hopeless])."

These examples demonstrate a positive reinforcement for image selection as a helpful tool in clarifying an expressive goal. By choosing certain images over others, students were required to justify their initial impressions about the overall mood and emotion through images and various visual features that were true to, or detracted from this impression. Image selection, therefore requires that students make informed decisions about the mood/emotion or expressive goal they wish to create in performance. Because the images were chosen by the students (within specific categories), students were able to easily obtain their expressive goals and therefore confirm the ease of accessibility and high comfort level with the approach. The process of image selection itself aided students in obtaining their expressive goal by requiring that they argued for or against specific visual features that supported or distracted from their expressive goal. This process allowed for ease of use in the MSMM approach.

Features of image selection that inhibited accessibility. One feature of image selection inhibited the accessibility of the Artistic Representation method of the MSMM approach:

1. Image selection distracted student from making a conclusive decision when there was a high quantity of image choices (e.g., too broad an image database).

Image selection distracted student from making a conclusive decision when there was a high quantity of image choices (e.g., too broad an image database). This distraction was most common in sessions three through seven, when students were no longer working with the five categories (Figure 1, *MSMM slide…*) and were exposed to larger databases. While they did use a keyword/phrase to navigate the visual database, in some cases the number of options was overwhelming and caused students to take more time to sort through the images to find the one they believed was true to their expressive goal. See Table 16 for student comments on image selection as a distraction due to high quantity of choices.

Table 16

Student Comments on Image Selection with a High Quantity of Image Choices as a Distraction

Student comment	Researcher reference note
Hmm. It is hard. (Student D)	When asked to choose from 15-20 images for style.
Surprise me. (Student B)	When asked if he had a preference for any of the images on display. Seemed to disengage from the selection process.
So many [images] work. (Student A)	In response to seeing several image choices.
Can we use a new image? (Student A)	While trying to work within an existing image, other images can be distracting.

Note. Student comments were obtained from the transcriptions in Sessions One—Three.

With regard to image selection overall, its role in helping to clarify an expressive goal provided a means of accessing the MSMM approach using Artistic Representation. Image selection became inhibiting to students when the quantity of the images was greater and they had a greater range of options from which to choose an image. This often resulted in distracted thought processes, difficulty in choosing an image to work with, feeling overwhelmed and wanting to move to another area. Therefore, in this section the conclusion is that when directed to more specific images (either ones that are linked to a specific category, those that are familiar to the student or those that were chosen using a specific word) the MSMM approach was more accessible to students in achieving their expressive and musical goals and therefore helped in the success of their performance.

Features of the translation process that aided in accessibility. The translation process is comprised of aligning specific visual features of an image with performable musical gestures. As one might expect, students became more comfortable navigating this translation process verbally over the course of the sessions; however, initially, students found it challenging to translate a visual cue into a musical gesture (e.g., explaining in musical terms how a series of ripples on the water might represent the speed and width of vibrato). In working with the researcher to cultivate this process, students gained access to an expressive vocabulary that facilitated the translation from one medium (verbal) to another (musical, performable). Six features of the translation process aided in the accessibility of using the Artistic Representation method of the MSMM approach:

1. Specificity of terminology and/or visual features in the image facilitated the translation process from one medium to another.
2. Freedom to use both literal and metaphorical terminology assisted in the translation process from one medium to another.
3. Students with greater facility on their instrument were more successful in translating visual features to musical gestures.
4. Vocabulary that was familiar or meaningful to students produced greater consistency in and impact of performance output.
5. Trial-and-error approach provided immediate feedback from the student and researcher prompting greater clarification of performance output.
6. Singing and diagramming directly on the image helped students strengthen the link between the visual features and musical gestures.

Specificity of terminology and/or visual features in the image facilitated the translation process from one medium to another. Throughout the MSMM approach, students seemed most successful in reaching their expressive goals when their description of how they were going to translate a specific visual feature into a tangible, performable musical gestures (ripples into vibrato, sunshine into tone color, horses running into an *accelerando*) was heavily supported by descriptive terminology and an attention to the nuances of the visual features of the image (color, texture, movement, direction, dimension). See Table 17 for student comments on the translation process as a facilitator of visual features into musical gestures.

Table 17

Student Examples of Terminology and/or Visual Features to Facilitate the Translation Process

Student comments	Researcher observations
[I wanted to show] a sense of serenity…you are going through trees…it is winter…you don't know where you are…instead of having a complete dark sound, I wanted it to be a little more transparent. (Student D)	Established a feeling of serenity by using the color of the white snow to represent a transparency of tone color.
She is turning around on the *ritard*…slowly, creep[ily]…felt more ominous. (Student C)	Established an ominous mood by using the creepy expression of the girl in the image and the act of her turning around to achieve a darker sound and use of an exaggerated *ritardando*.
Each rhythm is a different stepping-stone in the image…stepping, growing, going out into the openness. (Student A)	Created a sense of movement and growth within the phrase through the visual cues of the stepping-stones.
Any of the descending motives in m. 19…different slopes [of the mountain] have different lines…I used different slopes for different descending lines…they are calling back and forth. (Student A)	Created a sense of movement by using the varying degrees of the mountain slopes to achieve more contrast in the weight and volume of the descending passages.
I looked at the measure as a whole…as a pick-up measure to the next one…so I am jumping off the land into the molten sea to get to the landmass. (Student E)	Created a sense of movement by using the physical action/gesture of jumping to represent the energy associated with/needed for a pick-up motive.
I focused on the rocks on the far right corner and [the notes] became very staccato…the rocks are very jagged. (Student E)	Defined the use of staccato by the jaggedness, angularity, and space of the rocks.
I feel like the sixteenth notes just spring from the piece…you can see how the waves are breaking out and releasing energy and water is just flying out everywhere…that is what I see of the sixteenth notes. (Student E)	Created a sense of urgency by using the releasing energy of the waves in the water to represent the momentum of the sixteenth-note passages.)
She is looking out the window…at something…longing in a sense…[musically, that would sound] like a sigh….kind of loud and then back away. (Student B)	Established a sense of longing by using the solemn expression of the woman in the image to portray sigh gestures in the music.
In the picture the rocks are in this dark shadow…when I tried to emulate that in my playing, I noticed that my sound became a lot of heavier, instead of the usual light playing I do.	Completed in between sessions as her own exploration of the translation process.

(Table continues)

(Student D)

Note. Student comments were obtained from the transcriptions and student notation on musical score from Sessions One—Three. Words that are underlined refer to terminology, whereas words that are boxed refer to visual features. The visual imagery used in these examples was helpful for developing the verbal/metaphoric vocabulary and ultimately in solidifying the technical/expressive nuances used in the students' interpretation.

Freedom to use both literal and metaphorical terminology assisted in the translation from one medium to another. Often in musical lessons, students are limited to literal terminology linked specifically to the technical or stylistic features of the music they are performing. The MSMM approach gives students the opportunity to use both literal, and metaphorical language and musically dependent and independent vocabulary to describe, portray, translate or achieve their desired expressive and musical goals. For example, normally a teacher would have a student perform an *accelerando* by instructing him or her to "play faster," "speed up from here to here" or "increase tempo until this desired marking." In the MSMM approach, students can better obtain their expressive goals by having the freedom to explore both figurative and literal vocabularies. Student C, for example, wished to achieve an *accelerando* over the course of a few measures. In his words, "Like a written *accelerando*. Like I am trying to catch up to her and she is getting rather ahead, so I don't want to lose her." This simple statement gives the teacher and student a multitude of outlets for exploring the intensity, speed and destination point of the *accelerando* through questions such as, "is she being chased? (intensity), "can you see her clearly, or is there something blocking your view of her (i.e., trees or a sharp bend in the road), requiring that you keep a close pace behind (speed), "where is she running to?", "is she trying to get to someone?" (destination). Together, the student and teacher

can align these various visual cues with specific notes, measures or passages in the music to create an active experience of an *accelerando*, rather than passively performing the word *accelerando*.

Students with greater facility on their instrument were more successful in translating visual features to musical gestures. As a general observation throughout the approach, students with more facility on their instrument had better capacity for translating visual cues to musical gestures. While three out of five students had five or more years of experience playing their instrument, two students had less than 3 years on their instrument. Of the two students with fewer years on their particular instrument, it should be noted that both were involved in music (on other instruments) for a period of time more comparable to the other three students with five or more years experience. Therefore, while their facility on their instruments were not as high as the three other students, their ability to communicate using musical vocabulary was at the same level and was only limited by technical constraints (fingerings, breath control, finger dexterity) of having fewer years of experience on their current instrument to achieve the expressive goal they both understood and described.

Vocabulary that was familiar or meaningful to students produced greater consistency in and impact of performance output. The more comfortable students were with the language they were using, the stronger the connection between the description of visual feature and the musical gesture. For example, Student D felt strongly about the word serenity as a word to describe the overall mood/emotion of the Arietta. Her description speaks to how strong of a word it is within her emotional vocabulary:

> Serenity a lot of times it can be found in the comfort of your environment. You can find serenity in things that you feel comfortable around. [Measures five through eighteen] has a repeating pattern [sings], [a] repetition the ear gets used to and puts it in the background as part of the enjoyment of the piece. There is comfort in repetition.

She continued to reference the word serenity throughout the study (i.e., when describing a winter scene chosen from the Peaceful Category to describe the overall mood/emotion of the Arietta, "…the sense of serenity, and the quietness…the reflectiveness in the water."). All of her image choices (white, snowy forest, Japanese Botanical Garden, green landscapes) had some visual reference to serenity, which she maintained throughout the study.

Trial-and-error approach provided immediate feedback from the student and researcher prompting greater clarification of performance output. An important feature of the MSMM approach is the continuous feedback cycle between teacher and student (or researcher and student in this study) to continuously refine, rework, clarify and implement performance strategies that best portray the visual cues of the image and ultimately the intended expressive goals of the music. Rather than a teacher simply assigning a technical instruction, the student is actively making decisions about the visual cues in the image to best portray the musical gestures he or she wishes to create. A dialogue between researcher and student best exemplifies this feature of accessibility. In this example, Student A wanted to create a better sense of perspective by defining her arrival point in a cadenza (from the "Adagio" movement in Rodrigo's *Concierto pastorale*), and in working with two different images, decided that the second one was

more effective in helping her reach her goal. The following dialogue captures this experience:

Researcher: Tell me about the next statement [referring to the final passage in the cadenza].

Student A: My teacher always does a lilting gesture here [dances]… I'm not very good at this statement, but I will try. [Student plays the passage; good technique, but lacked in direction].

Researcher: What about these final notes [points to music]? Are these slowing down?

Student A: Just the last ones.

Researcher: So we need an image that shows something slowing down, becoming more prominent, or coming into focus by the end?

Student A: Yes!

Researcher: What do we call that? Perspective? Focus? [Types in the word 'focus' in Google Images search engine, student chose the following image of an optical illusion (Figure 43)]

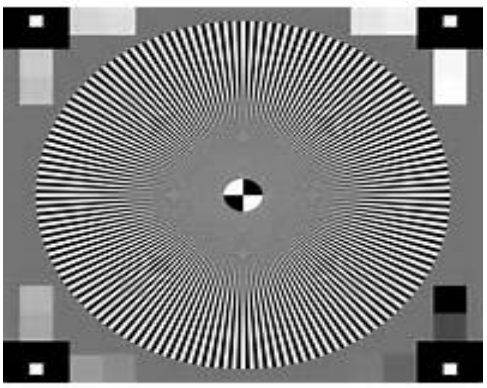

Figure 43. *Star Chart*. Chosen by Student A from Google Images using search word, focus.

Researcher: Why did you pick this image?

Student A: There is so much to look at.

Researcher: Where is the most prominent feature in there?

Student A: The middle. [Student plays the passage, while looking at the image, but it doesn't seem to be working for the student, as she stops and starts a few times]

Researcher: What did you think?

Student A: I don't know….this image isn't working.

Researcher: Let's try another image. [Student goes to computer and chooses the following image of a flower vine from Google images, Figure 44].

Figure 44. *Silk Ivy and Flowers on Redwood Trellis*. Chosen by Student A from Google Images, using the search phrase, floral vine.

Researcher: Why did you choose this image?

Student A: That is what I see in my mind when I play this one. [Student plays the passage while looking at the image; still a bit frantic]

Researcher: What are you inspired by [in the image]?

Student A: The red. The uprising figures [in the passage from the cadenza] are like the vines.

Researcher: So they have to grow into it?! [Student plays the statement again, misses again, but tries a few more times]. As the lines [in the passage toward the final notes] get closer to the rose, do they get longer?

Student A: Yeah.

Researcher: Okay, try again. [Student tries again and starts to lengthen and stretch the last notes]. It was like two different flowers blooming! [Student played again and was more relaxed and had more direction and sense of finality in the final notes as they "blossomed"]. How do you feel?

Student A: Good!

Singing and diagramming directly on the image helped students strengthen the link between the visual features and musical gestures. A very helpful tool for connecting visual features with musical gestures was to have the student sing a particular phrase while diagramming it along the image. For example, if a student wished to use a bridge to represent a crescendo for a particular phrase, he or she would sing the phrase while moving her hand across the bridge, peaking at the highest point, both visually and vocally. The researcher also assisted in this process by singing and diagramming along the image while the student was performing, to help him or her see how their performance lined up directly with the image and its various visual features.

Features of the translation process that inhibited accessibility. Six features of the translation process inhibited the accessibility of the Artistic Representation method of the MSMM approach:

1. Students encountered difficulty verbally expressing the translation process from one medium to another (in initial sessions).
2. The translation process yielded varying levels of consistency in performance output.
3. Students with lesser facility on their instrument were less successful in translating visual features to musical gestures.

4. Image choice/visual features did not always portray the appropriate musical style and had to be reconfigured (also part of the trial-and-error approach).

Students encountered difficulty verbally expressing the translation process from one medium to another (in initial sessions). During the first two sessions, students encountered some initial trepidation in expressing the translation of visual cues into musical gestures, as it was a language and way of speaking that was new to most of them (three out of five, to be exact, as two students had some initial exposure to the MSMM approach). Student B was asked to perform what he described as 'hopeful', and responded with, "I'm trying to think about how to do this…", "Um…this is hard…it is weird…um…maybe white in the beginning and get dark toward the end." After his performance, he was asked to consider the effectiveness of this word as musical gestures, to which he replied, "I couldn't decide about the end run, I think it could be more convincing….to me, I think less pale. Pale is trying to search for something…that something will work [hopeful] and black means that nothing will work [hopeless]." In this instance, he used the contrast of two distinct colors (white and black) as options for tone colors (transparent and dark) to portray a sense of 'hope' (white/transparent) at the beginning of the passage. Until this approach, the tools for navigating this translation process were unavailable to students; therefore, a bit of resistance and anxiety was expected. These initial struggles eventually dissolved in the comforts of the trial-and-error approach and students more readily expressed their thoughts in meaningful and useful descriptions.

The translation process yielded varying levels of consistency in performance output. Throughout the study, either within the same session, or from one session to another, the researcher attempted to cultivate a sense of consistency among the students by repeatedly asking students to discuss the visual cues in a particular image along with their corresponding musical gestures. The researcher brought up images that had been used in that session (or a prior session) and asked the student to recall the following points: (1) what visual cues did you use in this image; (2) what points in the music do these visual cues relate; and, (3) can you describe and perform the associated musical gestures. This type of questioning was intended to maintain levels of consistency throughout the study; however, due to spans of a week (or more) between sessions, and perhaps lack of daily work with the images among students independently, the levels of consistency varied. In these cases, students expressed comments similar to those of Student E,

> I'm still going in and out [of remembering]. When it got to the part [meant to represent] the landmass, the image came to mind too late…I didn't jump off that landmass and just waded there and got burnt…I'm kind of losing some of the spray [of the sixteenth notes], but the golden colors are coming out…which is why I am consistent with measure 18.

Note phrases such as, "I'm still going in and out,"; "the image came to mind too late," and, "losing some of the spray [musical effect]." These types of phrases (disconnecting with the image, or loss in overall effect of a specific musical gesture) were common when there was a breech in the recall of a particular image/musical gesture profile, therefore lessening the levels of consistency in that particular instance. Students that were more active in the process between sessions, wrote notes on their music, used words or stories

that were familiar to them (rather than creating spontaneous narratives about an image) were generally more adept at recall and maintaining higher levels of consistency.

Students with lesser facility on their instrument were less successful in translating visual features to musical gestures. As discussed in the corresponding section (students with greater facility on their instrument were more successful in translating visual features to musical gestures), students with less experience or technical facility on their current instrument (used in the study) encountered some technical limitations that prevented them from fully achieving their desired expressive goal. While their ability to describe in detail the translation from the visual feature to the musical gesture was very high, they sometimes fell short when it came to performing the musical gesture due to these limitations. In some cases, the limitation was linked directly to this shortcoming, "I don't know [what I'm' thinking about in this passage], I kind of lost myself in the technique, so I started thinking more about technique and I lost color." (Student E) or, "I guess it was more along the lines of my technical limitations (when asked what was preventing him from achieving the a more peaceful performance)." (Student B); while other times, it was more linked to the condition of the instrument (not the skill level), "This clarinet isn't working properly…" (Student B), "This reed is really dry, not working well today," and other times, a student's lack of preparation on a musical selection, "I really haven't studied this excerpt…it is more like sight-reading, as I haven't practiced it so I don't know what I want to say expressively." (Student B), or "Aside from me not counting properly, I'm not sure" (when asked to consider what he noticed about his performance), or "I was stuck on the notes [unfamiliar with the scale]" (Student D).

These examples reveal limitations of the instrument, experience, or skill set in a particular instance that may have prevented the student from achieving the expressive goal he or she discussed prior to performing the musical gesture.

Image choice/visual features did not always portray the appropriate musical style and had to be reconfigured (also part of the trial-and-error approach). The following example demonstrates how a student's original use of a visual feature was inappropriate for the musical context, but with the guidance of the researcher, was reworked to better suit the musical style. In measures 19 – 28 of the Arietta (Appendix H), the student wished to portray a "…solemn agitation….with a feeling of loneliness." Student E chose an image of a lightening cloud in a dark sky with bright bolts of lightening: "This picture has a lot of energy, there is a lot going on….I'm agitated because I see all of this destruction and commotion that is happening." This description caused his performance to sound more rushed, energetic, and agitated, yet he chose this image to represent "solemn agitation" for an inherently lyrical passage in the music. In working with the researcher, the student eventually reconsidered his perspective of the image and chose to focus on watching the agitated scene from afar with a sense of calm surrender, "…why is this happening to me?", resulting in a more appropriate (softer, slower, and more connected) performance of the passage.

Features of character development that aided in accessibility. Character development is a technique students used to gain more insight into the behaviors and tendencies of person or subject in an image and to use those insights to gain more tools

for the translation process. There were two features of character development that aided in the accessibility of using the Artistic Representation method of the MSMM approach:

1. Student's familiarity with/prior knowledge of the character(s)/figure(s) in the image (e.g., character in a movie or book) encouraged detailed descriptions of the actions, personality traits, behavioral tendencies, and facial expressions of those subjects for use in character development.
2. Student's creative interpretation of an unknown character fostered a high level of imagination and artistic engagement.

Student's familiarity with/prior knowledge of the character(s)/figure(s) in the image (e.g., character in movie or book) encouraged detailed descriptions of the actions, personality traits, behavioral tendencies, and facial expressions of those subjects for use in character development. A student's natural tendency would be to use these clues as starting points from which to explore possibilities for musical gestures.

Student C made three specific references to characters with whom he was familiar and used to help achieve his expressive goals. The first was that of Mona Lisa to facilitate an expressive goal of seduction for the overall style of the Arietta, "With Mona Lisa's face…[she says] 'yes, I know I am here. I know I am important and you can't deny it in this face'….you are thinking of this backward, seductive [expression]….Mona Lisa in terms of the facial expression, seems to me to be this Arietta." The student's subsequent performance was more deliberate with a constant airspeed and forward motion. The second character, Miranda, played by Meryl Streep from *The Devil Wears Prada* was helpful for achieving a darker sound in the Arietta in measures 39 – 46 (Figure 29). The

student described Miranda as "sarcastic…I felt more intimidated by her…feeling like she was coming at me…I am trying to play like the intimidator. She strikes me as Cruella Deville [from 101 Dalmatians]. He performed with more forward motion, "I can see [her] shifting body weight to get into [her intimidating] position….I was trying to play like the intimidator (Student C). The student's final reference was of Galadriel, the Queen of the Elves in Lord of the Rings. The mood of the Arietta seemed to strike the student as one of deception, and darkness: "The mood strikes me from the scene in Lord of the Rings when the Elf Queen Lady has such an attitude…like I know what I'm doing and you've fallen for it…you've been deceived." He used this air of deception by taking more time at the ends of the phrases, seeming to test the listener's expectations of time and sound. His exploration of these characters helped him achieve stylistic and expressive goals that were also appropriate for the context of the Arietta. His knowledge of the behavior and traits of these characters made it helpful for translation into musical gestures.

Student's creative interpretation of an unknown character fostered a high level of imagination and artistic engagement. In other cases of character development, students explored unknown characters through their imaginative outlets providing greater expressive possibilities. In these cases in particular, students crafted a story or set of traits for the character that were appropriate to the intended expressive idea and musical context. Without any prior knowledge of the character, students were left to their own devices for character development, and therefore could use the characters to help shape, reinforce and further define their intended expressive idea and corresponding musical gestures.

Student B wished to explore a sense of longing in measures five through ten of the Arietta (Figure 25). He used an image (photograph) of an unknown hooded woman, with her eyes covered (Figure 3*, Between Darkness & Wonder…*) to explore this expressive goal. He explained, "The hood adds to it…you can't see the face…you can't see who they are. This I can tell is someone waiting or longing for someone. The student's use of sigh reflected the sense of longing he was trying to achieve, "The dotted notes in the first two measures…where the crescendo starts, because they are the same notes, [they] keep trying to find something…I am leaning on those notes."

Student C explored a sense of mystery through his chosen image of an unknown girl (photograph) in a dark alley (Figure 4, *Goodbye Darkness…*) to explore the same measures. The student explained of the image, "I pictured her walking out and following her….then I am walking up to the girl….there is a hesitation because she is a small girl alone in an alley….is something wrong? She turns around on the *ritard*….feels more ominous than before." The student's use of a darker sound at the *ritard* underscores this pairing.

Student E used the image (painting) of an unknown beastly creature about to overtake a man (Figure 17, *Horns Wings…*) to develop a sense of movement within his phrases in measure 11-46 of the Arietta. You have this beastly looking thing and you have this hero….I see a whole undying army just marching, so the guy didn't come unaccompanied…you can hear them marching. I feel the marching…but I am still moving my air, so it is not clipped…there is still connectivity…this image creates a sense

of movement and war." The student's performances revealed a greater sense of forward motion.

Student A's expressive goal was to bring a sense of reflection to the overall style of the Arietta. She chose an image (painting) of an unknown woman lying on a couch wearing an elegant gown and reading book to develop this idea (Figure 7, *Lovely Lady*...). What drew the student to the image were, "The colors [shades of pink] are serene, tranquil…like a scene from a film…very languid…a relaxed setting. Like if this was a scene in the film, what type of music you would be hearing [I would be playing]….I was the backdrop….I tried to [use] more colors in the beginning. The student performed in a more tender, reserved manner with softer dynamics after exploring this image and creating a story for this character.

These examples demonstrate the level of creativity and imagination amongst the students in the study for exploring their expressive goals through he nuances of stories and characters that are unfamiliar to them. Students seemed to embrace the possibilities for expression through their details and nuances of their descriptions of these unfamiliar characters.

Features of relatability that aided in accessibility. Students related to images through a variety of outlets, including character development, color association, creation of a narrative, and use of past experiences to connect them with the subjects and events in the image. One feature of relatability aided in the accessibility of using the Artistic Representation method of the MSMM approach:

1. The use of past experience, or familiarity with a particular scene, event, or subject was helpful for relating to the image in a more meaningful way.

The use of past experience, or familiarity with a particular scene, event, or subject was helpful for relating to the image in a more meaningful way. Aspects of character development and color association have been explored in previous sections in terms of their role in connecting students with an image, and the creation of a narrative will be explored in more detail in Improvisatory Storytelling. What is perhaps the most compelling tool for accessibility of relatability in Artistic Representation is for students to use a past experience as a means of gaining insight, perspective, and emotional connection to an image. In this way, the image was considered within the context of their past, or what they already knew about the image. Student D discusses her fasciation with waterfalls, "I really like waterfalls. Waterfalls are one of my favorite things to play about…they are really majestic and powerful, but they are really calm. I like to keep emulating that. Every time I try to rehearse or play something I try to keep that refined power." The same student referenced a garden as something that produces a distinct set of emotions and feelings,

> Oh, this is a garden [Japanese Botanical Garden used to portray serenity, Figure 14, *Japanese Garden…*]. So, usually the first thing that comes to my mind with a garden is that it is kind of calm; it is kept proper and it is usually where people go to get away from their problems. It is like a hobby, or a diversion from stress. With the water, it is like a reflection.

Student C connected with the experience of birds in flight to a personal experience with indoor skydiving. His vivid account of the skydiving experience ("you are actually like floating/flying in a giant tunnel", "you can catch all of the air", "you are

relaxed and open) came across in his performances as more connected, use of a stronger airstream, and a feeling of being "in progress." The emotional and physical details of his experience transferred into his experience with the image of the birds in flight, and ultimately in his performance of his musical selection to achieve a more sustained phrase. In cases such as these, the importance of having a distinct connection with the events or places in an image plays a large role in helping students to connect with the image and better portray their intended expressive and musical ideas.

In both cases an associative set of feelings and emotions was trigged by these words/places (waterfalls – majestic, calm; garden – calm, diversion from stress). In the second example, the student's subsequent performances yielded more connected and flowing performances. The use of an echo effect for repeated passages (measures five through ten) was linked to the reflectiveness of the water (the actual object (tree) with a darker tone color; and the reflection (tree's reflection in the water) with a more transparent tone color.

Features of recall that aided in accessibility. Recall was an important feature of the MSMM approach to help students actively recite the visual cues and their corresponding musical gestures of any image used throughout the study. Two features of recall aided in the accessibility of using the Artistic Representation method of the MSMM approach:

1. The use of detailed recall exercises that linked specific visual features with specific musical gestures (visual/sound profiles) helped students recall images at later times.

2. Singing the phrases of the music while diagramming them on the image helped to reinforce the visual/sound pairings.

The use of detailed recall exercises that linked specific visual features with specific musical gestures (visual/sound profiles) helped students recall images at later times. During the image selection and translation process, students' efforts were focused on linking visual features with musical gestures. The use of recall was to reinforce these pairings and to establish a sense of performance consistency throughout the study. The more detailed the pairings, the more consistent the students were in their pairings. Highly specific statements such as those of Student C, "…of the fifteen birds, there was one that was more horizontal than the rest (indicating more forward, gliding motion)"; and Student D,

> …I'm thinking of the bridge and it is in three humps, and the middle is the longest, which represents the turning point in the phrase…I'm thinking about how I can portray that…dynamically speaking, it would just be an overall crescendo, with smaller crescendos for the other [humps] (indicating use of dynamics)

are examples of how recall should be used in this study. The detailed and specific linking of the visual and musical profiles is necessary to recall at later points and develop a sense of consistency in performance from one session to the next and in other performance scenarios.

Singing the phrases of the music while diagramming them on the image reinforced the visual/sound pairings. One simple tool for helping to reinforce the visual/sound pairings for later recall was to have the student walk up to the image on the projector screen and sing the passage while diagramming it within the image. This was most effective after the student had discussed the various pairings separately and

practiced them a few times. This step, the singing while diagramming, served as a review tool to reinforce these ideas, thereby utilizing the multisensory experience to reinforce important visual feature and their corresponding musical gestures (which were often reflected in the student's voice as they sang).

Features of recall that inhibited accessibility. Four features of recall inhibited the accessibility of the Artistic Representation in the MSMM approach:

1. Infrequent use of recall exercises detracted from the longevity of the visual/sound pairings over the course of the study.
2. Lack of musical context between visual features and their corresponding musical gestures produced inconsistency in recall descriptions and performance output.
3. Lack of written cues in music to facilitate these visual feature/musical gesture pairings produced inconsistency in recall descriptions and performance output.
4. Lack of follow up on the part of the student between sessions to reinforce the visual/musical pairings produced inconsistency in recall descriptions and performance output.

Infrequent use of recall exercises lowered the retention rate of the visual/sound pairings over the course of the study. Because of the nature of the study, and the need to cover all of the methods in a variety of contexts, the use of recall exercises to facilitate performance consistency throughout the study was infrequent. This was unfortunate due

to the fact that the time span of the study was spread out over eight weeks and could have benefitted from consistent use of recall exercises.

Lack of musical context between visual features and their corresponding musical gestures produced inconsistency in recall descriptions and performance output. Student E, for example, was asked to do a recall exercise using an image from the same session. The dialogue below reveals how aimless the description is without any musical context or reference to the visual/music pairings. Note that the researcher and student spent an entire session focusing on the visual feature/musical gesture pairings (i.e., crashing waves are the sixteenth notes bursting with energy; waves moving between the rocks is the air moving between the notes).

> Researcher: Can you close your eyes and tell me as much as possible about what you see in the image?
>
> Student E: Um...the lighthouse is white and the waves have like clear bluish tint to them…with the white ocean spray. There is a rock that is being pulverized by a huge giant wave. The grass is green and there is a white fence on it. It looked like low-lying clouds at the top. There are very few breaks in [the sky]. It has a dark gray ting to it, but there is some yellow showing…there is another set of waves by the other island. The wave patterns are being driven off to the left side. They are not hitting the island, they are hitting the rock.
>
> Researcher: Do you think you could recall this image in a performance?
>
> Student E: To be honest with you, because I know myself in a performance, I would probably forget most of it except the waves crashing up against the rocks…that is why the *piano* measure is so consistent, because that is what I remember the most and see the most clearly. So yea, I will remember that there is a lighthouse, but I am going to remember the waves being pushed over the rock.

When the student refers to "what I remember the most" he is referring to the visual pairing that was most actively pursued with the researcher (we did several repetitions of

that very pairing) and discussed at length their relationship. Also, the researcher may have better prompted the student by asking him to include the visual/musical pairings he recalled using earlier that session in addition to describing the image itself.

Lack of written cues in music to facilitate these visual feature/musical gesture pairings produced inconsistency in recall descriptions and performance output. This step could have easily assisted students with remembering visual cures directly in the music. While some students did write down cue words in their parts ("leaning" or "energy") as they related to our work in the sessions, this practice was not done enough and could have prompted greater consistency in recall and performance output.

Lack of follow up on the part of the student between sessions to reinforce the visual/musical pairings produced inconsistency in recall descriptions and performance output. Without constant reinforcement of the visual/music pairings through practice and discussion, the consistency of these for future recall exercises was jeopardized. Students generally did not pursue on a regular basis the reinforcement of these pairings to ensure their commitment to memory. See Figure 46 for the frequency of positive recall (in which students successfully discussed and performed the expressive goal and its corresponding musical gesture(s)) and negative recall (in which students excluded/misrepresented a feature of the expressive goal or corresponding musical gesture(s)) in Artistic Representation. Examples of positive recall would be if a student could recount all of the visual details from an image (the wind and the sea) and match them with their musical gestures (to represent the speed of my air to move the line) and intended expressive idea (to create a more dramatic crescendo.). Examples of negative recall would be if a student

could not recount details, mixed up details, or did not follow the line of thinking described in positive recall. This sometimes occurred when a student was asked to recall this through process about an image from a past session.

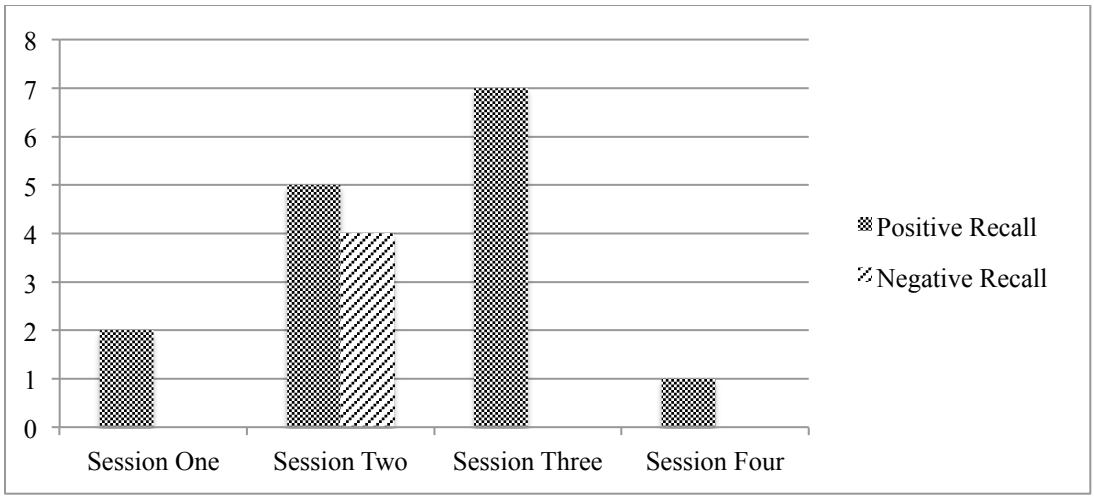

Figure 46. Frequency of positive and negative recall in Sessions One—Four of Artistic Representation. Counts were taken from Sessions One—Four only, in which Artistic Representation was the primary focus prior to Improvisatory Storytelling (Sessions Five and Six). Range is from one to seven. Higher counts for positive recall in Sessions Two and Three were due to a greater frequency of recall exercises than in Sessions One (introductory) and Four (Aural Modeling).

Aural Modeling. Aural Modeling presented an array of initial challenges for students, as it was the most unfamiliar method of the three in the MSMM approach. The accessibility of this method is considered within five areas of interest: (1) comparison of accessibility among response mechanisms; (2) aspects of Aural Modeling that were challenging; (3) distractions; (4) aspects of Aural Modeling that were helpful; and (5) recall.

Comparison of accessibility among response mechanisms. The four most common response mechanisms used throughout the approach were *matching style*,

aligning motivic/musical gestures, *looping*, and *providing a steady beat*. These mechanisms were used by all students as the most accessible techniques for aligning their musical selection with the background track in this method. Figure 48 illustrates the frequency of each response mechanism; thereby inferring it's level of accessibility as higher (used more frequently and by more students) and lower (used less frequently and by fewer students). Those mechanisms that were used most commonly were most accessible to students and therefore good starting points for future use of this method.

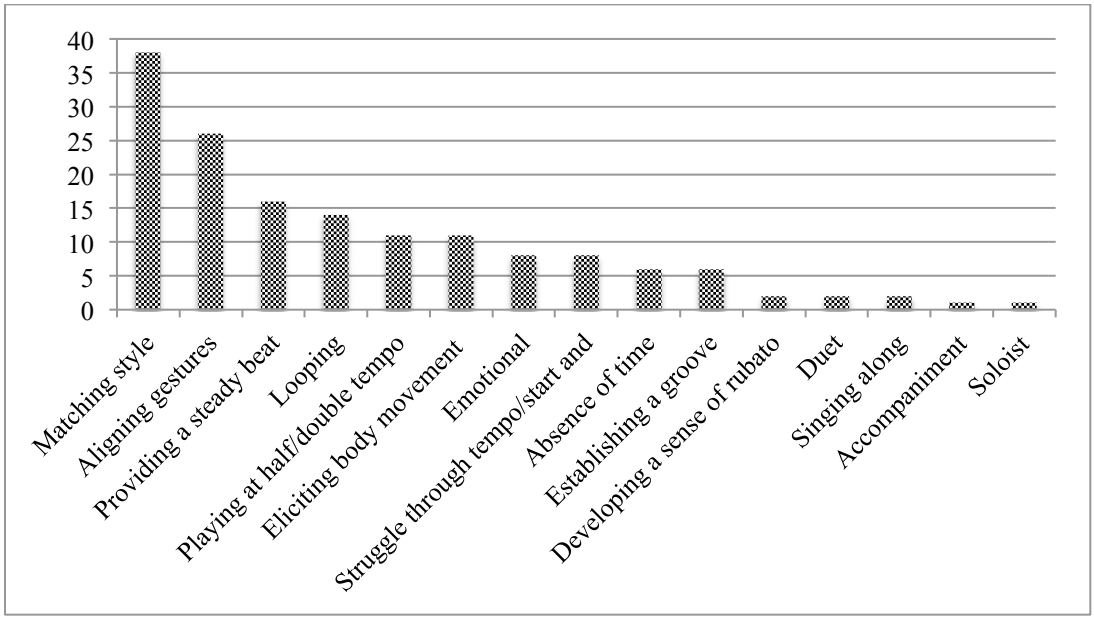

Figure 48. Frequency of response mechanisms used in Aural Modeling. Range is from one to thirty-eight. Mechanisms featuring higher levels of use reflect higher levels of accessibility, and vice versa.

Aspects of Aural Modeling that were challenging. Due to the counterintuitive nature of layering one's musical selection against a background track, students' approach to this method was that of curiosity and trepidation toward the initial layering process. Four aspects of Aural Modeling that students found challenging were:

1. Establishing the key/tonal center.
2. Knowing when to enter.
3. Understanding overall formal structure.
4. Getting a sense of the tempo.

Establishing the key/tonal center. Often, a student's first question upon hearing a background track was about the key or tonal center of the song. This was a natural starting point to begin the layering process; however, in some cases this was not readily available and took some exploring. Some students played a few notes to test the pitches that were consistent with the background track, while others asked if the key was available in the title (i.e., Mozart's *Concerto in D Major*). Frustration came about when students were unable to pinpoint the exact key or tonal center. This was especially problematic in piano or orchestral music when the key was frequently changing, which is why most students looped a shorter phrase for a brief period of the background track and then restarted the recording so they could work within a single key. Pop music was the most predictable and easy to follow. In general, frustrating moments were limited to a few times throughout the study and were slightly more prominent in Improvisatory Storytelling. Generally, students viewed the process as exploratory and were at ease experimenting with different pitch options. To facilitate this process, sometimes the researcher would work with the student to establish the key. Student E has perfect pitch and did not experience any level of anxiety with regard to pitch, key or tonal center.

Knowing when to enter. The most common challenge among students was when to start playing along with the background track. Sometimes there would be an obvious

introduction, which would facilitate a natural starting point, or a repeating and predictable rhythmic pattern, but other times, the music was frequently changing (i.e., meters, tempi) and students sometimes waited one to two minutes before starting to play along. Student B expresses this sentiment, "It was hard to find a place to start, [because] I was waiting for it to like resolve or something, or start over." In that same session, he continued, "I was trying to wait for a good point to come in," to which the researcher suggested starting from the beginning now that he had a better sense of how it went. This proved to be helpful in this situation as well as similar ones.

Understanding overall formal structure. Without having heard the background track before, students did not know the overall formal structure and how they would layer their musical selection against it. The associated challenges were similar to *knowing when to enter*, but were more involved with phrasing, placing, and developing musical ideas. Students asked, "Is [the background track] on a loop?"; "Does it change?"; "Should I just play along?"; "So, it doesn't matter how I go about it?"; or, "I can do it in any tempo, right?" to help get a sense of how to go about the process. It required that students actively listen to the structural components of the background track, such as a possible introduction, resting and cadence points, highs and lows of the melodic contour, and changes in meter, tempo or key to help navigate the layering process. Naturally, this took some adjustment (i.e., "It is hard to …move with it when you don't know where it is going. I was like okay, maybe there is a high point, maybe there isn't, but ok…I'll just go with it." (Student B), but with each successive repetition, students began to embrace the process and commented on the moments when their performance of the musical selection

aligned seamlessly with the background track, “Wow, that was crazy! The pitches actually lined up!” (Student B).

Getting a sense of the tempo. Another challenge for some students was trying to get a sense of the tempo. For some, it was a matter of trial-and-error, starting and stopping until they were able to establish a rhythmic groove and anchor their musical selection against the rhythmic pulse of the background track. For others, it was helpful to first sing along, snap, dance along, or discuss possible meters and time signatures. Regardless, students were able to establish a sense of tempo in a relatively short amount of time.

Distractions. The most common challenges associated with Aural Modeling were presented to students before they started playing along, similar to methods of planning. Distractions, on the other hand, were more problematic during the layering process itself, while the student was playing along with the background track. The most common distractions are listed below:

1. Mismatching meters.
2. Key adjustments.
3. Tempo adjustments.

Mismatching meters. One common distraction was playing a musical selection that was in a different meter from the background track (i.e., student’s musical selection was in 3/4 while the background track was in 4/4). In most cases, the researcher tried to accommodate for this distraction by choosing tracks that were of the same meter, but when they were not, students needed to make adjustments accordingly. While this was a

distraction for students to confront, it also proved beneficial in some cases, causing students to experience a shift in the metric displacement (or weight) of their rhythms against the background track. Where initially they experienced a weaker inner beat, now became a strong beat against the conflicting meter of the background track (i.e. beat two in a 3/4 meter became beat one in a 4/4 meter). This distraction can easily be avoided by careful selection on the part of the researcher (teacher, or student) when choosing an appropriate background track against which to layer the musical selection.

Key adjustments. Conflicting key signatures caused an immediate resistance in students to continue the layering process due to the dissonant (and displeasing) nature of mismatching pitches. Student B discusses this experience:

> At first it is annoying because it is not in the same key, so it just sounds like [bad], but you have to just let it go, because it changes…it can work when they are both in minor because they are both dark, so it was less about tonality and more about sounding emotionally similar.

Accommodating for differences in key required that students focus their efforts on consonant pitches and try to align those with the pitches in their musical selection. This resulted in distortions of rhythm, but encouraged students to sing out, lengthen, emphasize or stretch certain notes that may have otherwise been compressed, rushed, or tonally weaker in comparison to other notes. Again, this distraction can be avoided by careful selection by the researcher (teacher, or student) to ensure that keys (or critical pitches) are closely related.

Tempo adjustments. In the initial stages, adjusting for changes in tempo (or departures from rhythmic stability) caused students some degree of frustration (e.g., they would stop playing; sigh; or ask to start over, such as with Student E, "[The background

track] was a little faster than the tempo [than I usually take], but [at least] it wasn't too slow, so I tried lining it up, it just took some time," or Student C, "When the drums came in, even though they kept the beat going, it felt interrupted and took away from the rest."); however, as they continued with the layering process they began to embrace the exploratory nature of Aural Modeling and simply adjusted accordingly, in real time, and made the changes to their musical selection (i.e., played in half/double time; held certain notes longer until they matched the movement of the background track). Student A experienced this effect when layering a continuous string of technical sixteenth notes against the strums of a guitar, giving them a more of a gestural effect, and taking more time at the start of each string of notes.

Aspects of Aural Modeling that were helpful. While these abovementioned challenges and distractions required that students take some time to navigate the layering process, there were also aspects of the Aural Modeling approach that were helpful to students and facilitated a smoother transition to letting go or assuming a fully reactive state when performing along with the music. Three common aspects of Aural Modeling that students found helpful are listed below:

1. Familiarity of background track.
2. Clearly defined expressive goal.
3. Researcher coaching.

Familiarity of background track. What was most helpful (and one of the main reasons for the development of Aural Modeling) was for students to use background tracks that were familiar to them. Familiar tracks included songs they had heard before,

performed before, grew up listening to, studied and analyzed, or enjoyed listening to on a regular basis. Their familiarity with a song was demonstrated through body movement, positive facial expression, vocal acknowledgment, or discussion of salient musical features. Using familiar background tracks meant students could immediately and easily connect with tempo and style features, as well as establish the key, anticipate any changes in the music, and embrace their knowledge about the artist or culture in which the music originated. Familiarity with a background track afforded students a wealth of information that was available to them throughout the layering process. Furthermore, students responded with joy or comfort when hearing songs they knew, which translated into their physical and mental state when performing the musical selection and ultimately affected their performance in a positive way. Student D underscores the role of familiar music in her learning experience:

> If I know a piece and I am really interested in it I will sing it back to myself so I know it in my mind. And when I am listening I will think that a certain piece reminds me of another and then I will start singing the other piece just because it reminds me.

Another feature of layering against familiar music was that students could take some of the mystery out of playing music by a late composer (or a distinct style set) and use what was appropriately transferrable from the familiar background track to their performance (i.e., layering an Allegro movement of a Mozart *Concerto* with the strong backbeat of Usher's song, "Yeah!"). Table 18 illustrates a few examples of the positive impact of familiar background tracks on student response and performance, thereby reinforcing its role in accessibility of Aural Modeling. It should be noted that when unfamiliar songs were used, they served a different purpose. This required students to

actively listen and absorb all of the musical information needed for transferring to their performance of their corresponding musical selection). It took more time to establish the main components of the unfamiliar track, but also strengthened the student's listening skills in the process.

Student A finds her groove almost immediately by dancing and moving in the tempo of Usher's, "Yeah!," a background track with which she is evidently familiar. She does several repetitions of a difficult passage of sixteenth notes in half time against the steadiness of the background track. Her final attempts at doing the runs in tempo are much more even and steady.

Table 18

Examples of Familiar Background Tracks Used in Aural Modeling

Musical selection	Background track	Student	Reference note and student comment on performance output
Schubert, *Trio for Flute or Violin, Cello and Piano, Op. 63*, *Shepherd's Lament* (Movement III)	Usher, "Yeah!" (male voice with percussive track)	A	Student finds her groove almost immediately by dancing and moving in the tempo of the music. She does several repetitions of a difficult passage of sixteenth notes in half time against the steadiness of the background track. Her final attempts at doing the runs in tempo are much more even and steady.
	Coldplay, "Clocks" (male voice, piano, percussion)	A	Using the same sixteenth-note passage as above, the student layered them against the steady sixteenth notes in the background track, also doing it in half time. The strumming/drumming of the sixteenth notes in the background track allowed for a seamless match against her sixteenth-note runs (note-for-note). "The tempo feels a little slow, but I think it is exactly what I need."
Nielsen, *Clarinet Concerto*	Usher, "Yeah!" (male voice with percussive track)	B	Student wanted to draw greater attention to the inner notes (such as the thirty-second notes), which were compressed in the initial run-through. Playing against the background track reinforced the weight of the thirty-second notes for clarity. "It is like bringing out different rhythms more, like the thirty seconds versus the sixteenths...they were a lot more driving."
	Samuel Barber, "Adagio for Strings" (orchestral)	B	The student wanted to enhance his lyrical playing for a particular passage that felt "segmented." In response to the layering, "it made the segments work better. I was able to forget about the melody just go with it." The student stretched certain notes within the melody as they corresponded to the background track. His knowledge of the overall structure of the background track ("…that is how this piece starts, just chords that seem to come out of nowhere") confirmed the appropriateness of this choice.
Mozart, *Concerto*	Usher, "Yeah!" (male voice with synthesizer)	C	Student responds to the background track by establishing a groove and looping a particularly challenging group of uneven sixteenth notes against it. "It made me realize what the syncopation was supposed to do…it focused on the bigger [picture]."

(Table continues)

	Escala, "Kashmir (feat. Slash)" (electric guitar and synthesizer)	C	Student was very responsive to this background track through his body movement while he was playing. The student latched onto the grounding tempo and focused on an even weight distribution among the same sixteenth-note passage. "It acted as the metronome, something to play against." The student also commented that he could "recall this same tempo without the music."
Arietta	Game Music, "Server Aerial City Fort Ouph" (synthesizer with repeated rhythmic track)	D	Student repeated a few phrases several times in a row to absorb the repetitive nature of the music, which had an overall calming effect on her performance. She commented, "this [background track] has a repeating pattern [sings] and the ear gets used to that repetition…it is just like a harp track that repeats…I listen to it all the time."
Rose, *Etude No. 23*	Usher, "Yeah!" (male voice with percussive track)	E	In an effort to bring greater clarity to a series of grace notes that were compressed, the student felt this background track would supply the needed steady beat upon which to layer the notes. The student instantly started dancing and snapping along. He was very engaged with and connected to the experience using this track, "I wasn't thinking about notes quite as much as I was just driving the line…so it works."

Note. These examples were taken from Session Four, where students worked extensively and solely with Aural Modeling. To view background tracks, see Appendix K, "Catalogue of Background Tracks."

Table 19 demonstrates the use of unfamiliar songs used by students to demonstrate their role in the learning process for comparative purposes.

Table 19

Examples of Unfamiliar Background Tracks Used in Aural Modeling

Musical selection	Background track	Student	Reference note and student observations
Schubert, *Trio for Flute or Violin, Cello and Piano, Op. 63*, *Shepherd's Lament* (Movement II)	Philip Glass, "Song V" (solo cello)	A	Student requested a track with strings to help bring more connection to a "choppy" section in the music. Student coordinated the pick-up gesture in the cello with a similar figure in her musical selection. "It is like pulling from the strings of the cello!" The student's body movement reflected the upward gesture as well.
Rodrigo, *Concierto pastorale,* Movement II (m. 40)	Rosi Golan, *"*Been a Long Day*"* (female voice and piano)	A	Student felt this was her "worst movement" and had anxiety about it. She played the sixteenth-note runs at half tempo with the background track, performing in a more fluid and relaxed way than initial run-throughs that were more frantic and angular. "[The background track] has a calming quality to it…"
Arietta	Best of New Age Piano Music, "Flight of the Eagle" (for piano and cello)	D	Student wanted to steady (and slow) her tempo of the Arietta, so choosing something slower and calmer. This background track proved very appropriate and encouraged the student to "just feel 'ahh', like spa music." The student slowed down her playing and her overall stance was much calmer and subtler.
Rose, *Etude No. 23*	Jim Dooley, "Waltz" (piano, saxophone, clarinet, accordion)	E	Believing this background track "matched the character" of what he was trying to achieve (a lilting waltz feeling), the student chose this selection with great excitement and enthusiasm. "It's very dainty, in the style of the waltz." The student played in a lifted style and with a greater sense of line (as it mimicked the saxophone line in the background track).
Rose, *Etude No. 23*	Franz Schubert, "Pirouette Waltz" (piano)	E	For a lighter quality to his overall performance, the student agreed this background track stood out from others because of its "lilting motion." The student was singing and snapping along, while doing a lilting/bouncing gesture with his knees. "This worked out perfectly! It had a sense of momentum."
Arietta	Yanni, *The Storm* (solo cello)	E	Student wanted to slow down the overall rhythm of the Arietta and absorb bigger gestures. He played off of the dramatic moments of the track ("I waited until the cellist really got into it.") to bring out these bigger gestures and looped them

(Table continues)

	against the grand moments of the soloist's performance.

Note. These examples were taken from Session Four, where students worked extensively and solely with Aural Modeling. Student B worked more extensively with familiar background tracks and is therefore excluded from this table. To view background tracks, see Appendix K, "Catalogue of Background Tracks."

Clearly defined expressive goal. Of great importance in helping students to use Aural Modeling to their fullest potential was clearly defining an expressive goal. As the examples in Tables 18 and 19 demonstrate, all layering experiences were initiated through the use of a clearly articulated expressive goal (i.e., establish a lilting motion; reduce compression; play with more energy or lyricism). Without these expressive goals, the layering process produced little results and led to frustration or feelings of unproductivity. This was an important part of the process for students as it required them identify the problem (the melody is in segments) and state what they needed to hear/layer against in order to address it (something with moving long notes). This thought process is important for students to acquire as it holds them accountable for productivity and keeps their efforts directed toward expressive thinking.

Another feature of defining an expressive goal was the selection process. Like the use of image selection in Artistic Representation, in cases where the researcher worked with the student to chose from among a variety of background tracks, students had to defend their expressive goals by choosing background tracks that supported them. Likewise, they had to negate tracks that were not accepted and did not meet the expressive criteria. When presented with tracks that were not supportive of students expressive goals, comments such as, "I just don't feel the sorrow [in this track]" (Student

C), This supports the notion that much can be learned from indicating what it is you do not want, or does not support the expressive intention.

Researcher coaching. Several times throughout the study, the researcher would coach students during the layering process by singing, snapping, moving, talking, etc. to help students better connect with the background track and/or align specific gestures of their performance with the features of the music. In these cases, the researcher was drawing attention to the expressive goals that were agreed upon between the researcher and student prior to the layering process. These mini coaching moments were helpful for keeping students on track during a particularly lengthy layering session, helping them stay focused on their expressive goals, and to preventing distractions from other elements of the music (or in the room).

Recall. Recall in reference to Aural Modeling refers to a student's ability to perform (without the background track playing) the features (expressive goal and associated musical gestures) that were developed during the layering process either in that session or from a previous session. Recall was an important part of the MSMM approach, and unlike Artistic Representation was much more accessible for students using the Aural Modeling method. This is likely because students were familiar with the background tracks and more engaged in using the stimuli throughout this method. As a result, the ease and consistency with which students were able to recall these experiences was greater. See Figure 51 for counts of positive recall (in which students successfully discussed and performed the expressive goal and its corresponding musical gesture(s))

and negative recall (in which students missed a feature of the expressive goal or corresponding musical gesture(s)).

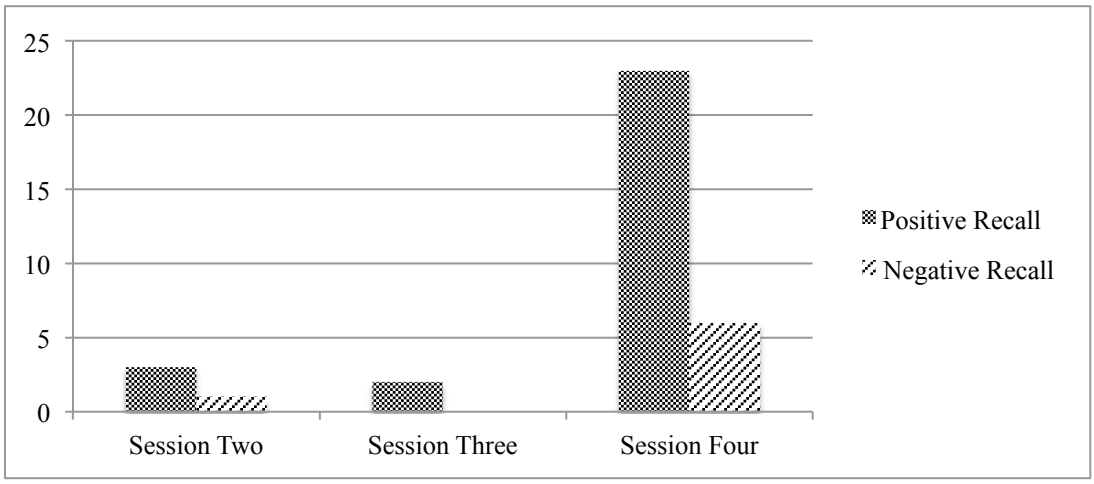

Figure 51. Frequency of positive and negative recall for Aural Modeling in Sessions Two—Four. Range is from one to twenty-three. Counts were taken from Sessions Two—Four only, in which Aural Modeling was the primary focus prior to Improvisatory Storytelling (Sessions Five and Six). Higher counts for positive recall in Session Four were due to the fact that Aural Modeling was the only focus of that session (no Artistic Representation). Compare with Artistic Representation, Figure 46, which features only 15 counts of positive recall, thus indicating that Aural Modeling is more accessible for recall.

Improvisatory Storytelling. Improvisatory Storytelling was the most revealing in terms of student experience, as there were no boundaries for exploration, leaving the process of MSMM wide open for students to consider a multitude of expressive possibilities. The results for accessibility in Improvisatory Storytelling are divided into two categories: (1) actions of Improvisatory Storytelling that were helpful; and (2) actions of Improvisatory Storytelling that were challenging.

Actions of Improvisatory Storytelling that were helpful. Eleven features/actions emerged as helpful for using Improvisatory Storytelling.

1. Leading with an expressive goal helped students with performance success.
2. Pulling inspiration from previously performed musical selections made improvisation easier for students.
3. Use of specific musical ideas and techniques helped students develop their improvisation (image only).
4. Discussing specific visual features and their corresponding musical gestures helped clarify musical ideas (image only).
5. Focusing on the overall emotion portrayed by the subject(s), or event helped students direct their musical efforts toward a bigger picture (image only).
6. Playing off of the musical features in the background track guided the initiation of melodic ideas (i.e., using them as inspiration) (background track only).
7. Assuming an accompanimental role when improvising with a background track helped reduce anxiety (background track only).
8. Linking visual features in the image to musical features in the background track clarified expressive goals (combined image and background track).
9. Prior experience with improvisation reduced anxiety.
10. Use of a specific harmonic language (scales, diatonic figures, etc.) helped students define the "style" of the image.
11. Options for both realistic and unrealistic images targeted specific learning styles and prompted student involvement

Leading with an expressive goal helped students with performance success. This has proven to be the most helpful feature for students to have success in the performances. A simple word, phrase, thought, emotion, color, or feeling was enough for students to have a directed, expressive focus. Without a goal, students were aimless, unproductive and felt as though they were not conveying their expressive ideas, or creating a narrative with their performance. Student B used the word 'connect' as his expressive idea throughout one Improvisatory Storytelling session to better portray the evident sorrow of a man in a particular image. After a few short performances, he realized he wanted to slow down his tempo to better achieve a more connected, lyrical style that was better suited to the state of the sorrowful man in the image. "I was trying to connect everything, in longer phrases," he said of his expressive goals.

An important feature for helping students achieve their expressive goals was to continuously ask them to monitor and assess the conviction and clarity with which they delivered their performances. Additionally, an expressive goal could be realized at several levels in the improvisation, from the use of dynamics, body movement, facial expression, tone color, contour, etc. Student E's expressive goal was to portray an air of seduction that was present in the image of the female dancer. He achieved this by leaning on harmonically exotic notes, focusing in different visual features in his performance (trills to represent her dress twirling, accents to represent her fiery nature, unpredictability of rhythm to represent her behavior) and even in his body movement (lifting of the shoulders and eye brows at highly dramatic movements). Student A used the same image and used similar techniques to achieve what she also described as seductive allure.

Student C also used the word seductive (in a different context and with a different image), "It felt to me, like a seductive procession, like a prince and princess just walking big, and giving that, 'I know I'm better than you face to the people in the aisles.'" The student portrayed this idea through longer, more dramatic phrases than in his initial performance.

Pulling inspiration from previously performed musical selections made improvisation easier for students. To help engage students in their improvisation, they would sometimes use fragments from pieces they were currently working on or studied in the past. This gave them a platform from which to explore and rework these fragments for appropriate use in the current improvisation. Student B was thinking aloud about an improvisation he was about to begin, and thought he might use "some Nielsen-inspired playing to represent this fiery image." The Nielsen Concerto was something he was currently studying, and pulled form the ideas in that musical selection to inform his improvisation, therefore making it a more feasible and musically accessible experience. Student B also demonstrated this technique in another session when discussing how his improvisation was inspired by a musical selection he had studied in the past:

Researcher: How would you describe your phrasing [in that improvisation]?

Student B: Very long and connected.

Researcher: What were you doing in your playing to portray the image?

Student B: [Using] the light.

Researcher: What did the light inspire in your playing?

Student B: The long phrase and maybe the lower register had that kind of black into the light [at the top of the image]. My fingers slipped into the Copland Concerto cadenza, and it actually worked with this image.

Researcher: Why do you think it worked so well?

Student B: Because that part of the concerto is very, the opening is very long and pretty and serene.

Student E pulled from his compositional techniques by using material from the previous night's work, "I had to write a composition last night, a eulogy, in one of my favorite minor keys, which is a tough key, but it works. E-flat minor, and that is the key I want to use now."

Use specific musical ideas and techniques helped students develop their improvisation (image only). Several musical ideas were used regularly among students to develop their improvisatory stories over an extended period of time and to relay specific visual features they observed in the image. Tangible musical gestures included repeated melodic and rhythmic motives, the use of extended techniques (pitch bends; multiphonics, overtones, and harmonics); and specific keys (major or minor) to portray ideas from the image. These musical tools served as starting points when students had no background track from which to exchange ideas. By relying on these musical tools, students were more engaged in the improvisatory process and could speak more freely about how they were using these techniques to tell their story. Students also indulged in two main types of narratives (without any background tracks). The first was an episodic, or fragmented melodic presentation in which the student played a few notes, or explored a single musical idea, then would stop for a moment, and start again with another idea. Another approach was a more sustained, long-breathed melodic sequence that was more

continuously building in pursuit of a single musical idea of an extended period of time. The combination of these approaches helped students adapt to the process of improvisation (especially if they had no prior experience, which was true for three out of the five students). The researcher made these observations throughout Sessions Five and Six.

Discussing specific visual features and their corresponding musical gestures helped clarify musical ideas (image only). Ideas that were initially presented through the various techniques discussed above were further defined when students followed their initial performance with a discussion on the pairing of specific visual features from the image with performable musical gestures. These enhanced discussions helped students better clarify their melodic ideas by aligning them with the features in the image, and as a result they felt more confident in their melodic material in subsequent improvisations. This process (which students were comfortable with at this point in the study due to Artistic Representation in sessions one through four) helped in the accessibility of Improvisatory Storytelling and in shaping and developing their melodic ideas. Some examples are listed below:

> Student A: "The last note represents the last breath of air [coming from the man in the image]. It is kind of…releasing."
>
> Student A: "The chromatic runs and syncopation were her twisting [like her dress] with a lot of energy."
>
> Student A: "That [passage] kind of felt like water for me and how water is constantly moving and this image is blue and flowing."
>
> Student E: "I used pitch bends to represent [his] frown. I'm looking at his scalp and I could feel the tension of his head."

Student E: "She looks like she is on fire. That is where the trills came in. She is giving me intensity in her body movements and there is the fiery background."

Student C: "The pitch bends represent sighs and wailing [of the crying man in the image]."

Student C: "To me it seems like a change of positions, like leaning on the one hand and then the other and then settling back into the chair and looking down again. I was trying to match the different sixteenth note runs with each [change of position]."

Student E: "I'm looking at the gold tips [of the buildings in the image] because they represent the glory of Russia!" [Student performed in folk-style improvisation with simple, energetic melodies].

Focusing on the overall emotion portrayed by the subject(s) or event helped students direct their musical efforts toward a bigger picture (image only). If students were uncertain of how to begin an initial improvisation, they would focus on bigger picture ideas, such as conveying the overall mood or emotion of the main subject in the image. This approach was useful for easing into the improvisation without focusing too intensely on the details of the musical ideas. Some examples are listed below:

Student A: "I was just trying to think about heartache [in response to performing an improvisation on an image of a sorrowful man in mourning]. You know when you're really sad and you have these tiny convulsions? And you are just like…'ahh.'" [student used pitch bends to represents the "convulsions"]

Student A: "[The woman in the image] is seductive. I tried to make each repetition different, like more mysterious."

Student E: "The despondence and stasis, which is why I tried to hold back."

Student E: "The fire was leaping out [in the grace notes]. And also the curvature of her hips and the way her hands are positioned are very seductive. I just brought out the fiery nature."

Playing off of the musical features in the background track guided the initiation of melodic ideas (i.e., using them as inspiration) (background track only). When students were improvising to a background track, they found it helpful to use the musical features of that track to inspire melodic ideas in their performance. This helped students to experiment with and build off ideas they were hearing to further inspire their melodic, rhythmic, and stylistic ideas. Student A improvised to the background track of whale sounds to reinforce her improvisation of an image of a whale. She matched the cries of the whales in her performance through pitch bends, chromaticism, trills and sigh gestures. The culmination of these musical features threaded their way through the student's melodic improvisation.

Assuming an accompanimental role when improvising with a background track helped reduce anxiety (background track only). Another action that provided a "safe" atmosphere for exploration and comfort was for students to assume the role of accompanist, and to simply react and respond to the ideas in the background track. This gave them the time and space to consider how their ideas would come to fruition in the given musical context. In an improvisation to Samuel Barber's "Adagio for Strings," Student E, who was quite familiar with the recording, illustrates this feature of accessibility:

> I am quite familiar with that piece and I knew where [the composer] was moving and what he was trying to do. I didn't want to do the same things, so I was just kind of the echo in the background. The strings were the setting, or the place and I am the person, so I am echoing what is going on with the person.

The process was also helpful to the same student for a background track that was unfamiliar to him:

> I have never heard it before and so I just hunkered down and I could feel where it was going and so I just followed along as I played. I felt like I was reading the music. I have never heard it before, so I just hunkered down. I could feel where it was going and so I just followed.

Linking visual features in the image to musical features in background track clarified expressive goals (combined image and background track). Throughout the Improvisatory Storytelling method, more stimuli were layered together to inspire new concepts for the student performer. After improvising to the image alone, students were provided a background track along with the image. With the combination of these two stimuli, students could more easily access their ideas by creating narratives from both sources and to bridge the gap between the two, students were specific in how they linked visual features to the musical features of the background track. Student E's experience illustrates this action:

> There was a constant rhythmic pattern [in the music]. I noticed that [the man's feet in the image] are far apart and when you have to try you have to move your feet apart a bit so I pictured that steady beat as him just kind of moving his feet around maybe shuffling and rocking back in the chair a bit [expressive goal was to achieve stability of rhythm in his musical selection]

Prior experience with improvisation reduced anxiety. Some students had prior experience with the MSMM approach itself, and others with the art of improvisation, which made their experience more accessible and more comfortable. Student E partook in a class at another school for composition students, which required students to take a poem and come back with something musical that represented the ideas and words in the poem. The student admitted this was quite a challenge at first, but proved very helpful once he was comfortable with the process. This comfort level was also present in this study, as was the case for Student A, who had prior experience in an improvisation class,

"I was just trying to use the techniques that I learned in jazz improvisation techniques class." It should also be noted that both Students A and E also had prior experience with the MSMM approach. Student E comments:

> I've been around people who are great improvisers. From them, I've learned how I can get out of something by saying very little. My improvisation studies with them would be about using one note and saying as much as possible with just that one note and I think that has helped me with the interpretation of the *Adagio* [in this study]. It doesn't require much to bring out full emotion.

Use of a specific harmonic language (scales, diatonic figures, etc.) helped students define the "style" of the image. Another bigger-picture feature that was helpful for students was an attention to harmony as a useful tool in depicting the mood or ambiance of an image. Exotic images with bright colors often resulted in performances that were in harmonic minor scales, or with frequent use of chromaticism. Sad images often resulted in performances that were in minor keys, and vice versa with happier, more joyous images in major keys. This was a natural consideration for students and helpful for giving them a context within which to explore and experiment.

Options for both realistic and unrealistic images targeted specific learning styles and prompted student involvement. Each type of image (realistic and unrealistic) was chosen based on the learning style and personality of each student. For example, the use of realistic images (i.e., father and son standing in a cemetery; woman walking on the beach) proved more effective for students who were more literal, serious, and focused on the music and task-at-hand. Realistic images helped these students connect with the subject, scene, or event taking place. It provided them a real-life experience in which they could place themselves without taking the risk of exploring too much outside their

comfort zone. This was particularly true of Students B and C who were more literal in their thinking and reliant upon real-life or past experiences to fully engage them in the MSMM approach.

Students who preferred unrealistic images (Students A, D and E) demonstrated an exceptional proclivity for imaginative thinking (not only in Improvisatory Storytelling, but generally throughout the study). These students were more focused on the feelings and possibilities of the image, rather than the task-at-hand (telling the stories rather than focusing on how to do it on their instruments). They were interested in creating stories out of visually stimulating images that were usually of far away places, abstract landscapes, or impossible actions (i.e., whale jumping into the sky or boats on the moon). Figure 52 shows the types and frequency of realistic versus unrealistic images used in Improvisatory Storytelling.

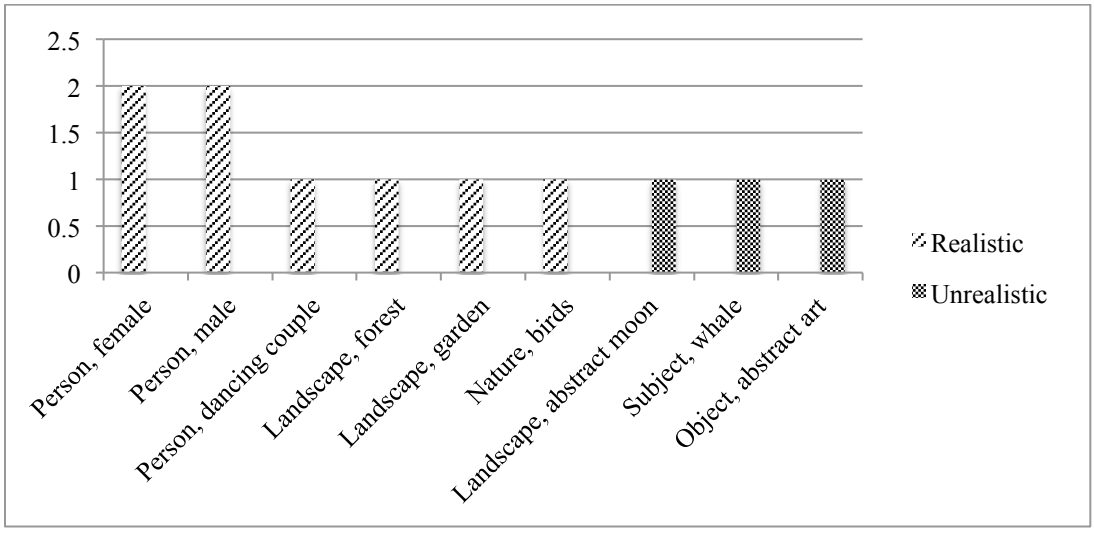

Figure 52. Frequency and types of realistic and unrealistic images used in Improvisatory Storytelling. Range is from one to two. All of the realistic images were either photographs or very detailed paintings that looked realistic. Unrealistic images were paintings, or digitally altered photographs. All of the realistic images were either photographs or very detailed paintings that looked realistic (or were relatable). Unrealistic images were paintings, or digitally altered photographs. The images listed above were those chosen by the students in Sessions Five and Six. The three fictitious images that were chosen by the Researcher in the Three-Phase Introductory Session Five were not listed in this table, as they were not chosen by the student.

Tables 20 and 21 show how realistic and unrealistic images played a role in helping students develop their improvisation through an expressive goal, or chosen expressive word. Realistic images tended toward symbolic ideals or concepts (freedom, overtaken), while unrealistic images explored both emotions and concepts (sadness, creepy).

Table 20

Use of Realistic Images and Expressive Goals Used in Improvisatory Storytelling

Image	Expressive goal
Person, female (Figures 38, *Lost…*; 53, *Woman with Curly Hair…*)	Lost; indecision (C)
Person, male (Figures 54, *Homeless…*; 49, *A New Day, Has Come…*)	Lonesome despair (E); loss (B)
Person, dancing couple (Figure 40, *Tango Couple…*)	Exotic; tango (A)
Landscape, forest (Figure 22, *Wildfire…*)	Frightened (B)
Landscape, garden (Figure 55, *Trees Have Overtaken the Temple…*)	Overtaken (D)
Nature, birds (Figure 36, *Freedom…*)	Freedom (D)

Note. Student comments were obtained from the transcriptions in Sessions Five and Six. All of the realistic images were photographs, or very detailed paintings that looked realistic. Images are in the same order as expressive goals. The expressive goals were actual words and phrases used by students for Improvisatory Storytelling in Sessions Five and Six. See Appendix I, "Catalogue of Figures" for complete listing of figures.

Table 21

Use of Unrealistic Images and Expressive Goals Used in Improvisatory Storytelling

Image	Expressive goal
Landscape, abstract moon (Figure 41, *Voyage to the Stars…*)	Creepy (A)
Subject, whale (Figure 39, *A Leap for Joy…*)	Sadness; joy (A)
Object, abstract art (Figure 37, *Abstract Art…*)	Variety (B)

Note. Student comments were obtained from the transcriptions in Sessions Five and Six. All of the unrealistic images were paintings or digitally altered photographs. Expressive goals were actual words and phrases used by students for Improvisatory Storytelling in Sessions Five and Six. See Appendix I, "Catalogue of Figures" for complete listing of figures.

Actions of Improvisatory Storytelling that were challenging. Because of the exploratory and revealing nature of Improvisatory Storytelling, students did encounter

some initial challenges in using this method. Six features/actions were recorded as challenging:

1. Initial anxiety about improvisation itself.
2. Difficulty establishing key/choosing a key that represented the mood/image, etc.
3. Difficulty establishing key in a background track.
4. Not knowing where to start/how to begin (initial presentation of musical ideas).
5. Technical limitations of instrument/abilities prevented full exploration of expressive ideas.
6. Visual features of the image did not align with the background track, causing a conflict of emotions.

Initial anxiety about improvisation itself. As improvisation is something that is outside of a classically trained musician's comfort zone, the thought of improvising produced some initial anxiety, causing students to confront some initial fears about the process as a whole. In some cases, this initial anxiety about improvisation caused students to disengage, stop trying, express frustration or express discomfort in moving forward. Typical comments amongst students at these early stages included:

Student E: "I'm not much of an improviser."

Student B: "Um…[student laughs]. It is so hard improvising, like on the spot, like making up lines. Just like, melodic lines. I am trying to think melodically, long, legato-ish."

Student B: [Researcher asks student to consider why improvising scares him]. "I don't know, just in general it is uncomfortable. I feel like I just can't."

When encouraged and prompted by the researcher, students eventually became more responsive. Use of the actions from the preceding section helped students gain access to the process.

Difficulty establishing key/ choosing a key that represented the mood/image, etc. When students improvised with the image only, they had more freedom to choose keys that they felt best represented the character, mood, or overall emotion of the image (i.e., major for joyous images; minor for sad images, or darker images; harmonic scale for exotic scenery or characters). This was a positive feature, yet it did require some exploratory work initially, which threw some students off, or required their focus to be more about the key than the expressivity of the improvisation. When Student B was asked how he went about choosing a key, he stated, "Um…I kind of played around with parallel majors and minors. C minor. I was just thinking C minor today. I know that there are colors associated with keys, but I forgot what blue was, so I chose C minor." Student D followed a similar thought process:

Researcher: Does this image work for you?

Student D: Oh yes! The image works fine, I just can't figure out the key.

Researcher: Okay, is it major or minor?

Student D: It would be a minor key.

Researcher: Okay, a sharp or a flat key?

Student D: Definitely A-flat.

Researcher: Okay, why do you say that?

Student D: It is kind of lowered. I was thinking maybe, G minor?

Difficulty establishing key in a background track. "I'm scared to improvise when I don't know the key of the [background] music," commented Student A, "I was into the improvisation, but I just wish I had more perfect pitch in my head." This was a common concern among students. Trying to improvise to a new background track without knowing the key caused students to struggle for some time in order to establish a key or tonal center (some students stopped playing, sighed loudly, grunted or expressed similar frustrations). The distraction of not knowing the key also caused students to lose their expressive focus and direct their efforts and energy on key establishment.

Not knowing where to start/how to begin (initial presentation of musical ideas). The main challenge of an improvisation is knowing how to start. Once the initial musical ideas were established, students seemed to embrace the process and "let go" into the expressive freedom. Building the courage to start the improvisation was a point of anxiety. Student E explained, "once I start I can go with it, but it is just starting and having the right idea that is tough. I can certainly express myself, like in music, yeah, but actually having to do it on the spot without a line written for me [nervous laugh]?" Moving past this initial hurdle required some specific musical tools, which were described in the previous section.

Technical limitations of instrument/abilities prevented full exploration of expressive ideas. In some cases, a student's own abilities impeded their expressive instincts. He or she may have lacked in the tonal flexibility, dynamic range, technical facility or stylistic refinement to perform the nuances of a specific musical or expressive idea. Student E expressed this frustration in one session when asked if he felt his

performance captured the essence of the image, “No. I don’t think so. I think I got caught up more in the transition of the technique and the technique of the piece.” In these cases, the student considered another way to approach the expressive idea through another musical outlet (slower tempo, different articulation).

Visual features of the image did not align with the background track, causing a conflict of emotions. For Improvisatory Storytelling, students were first asked to improvise to an image, and then the researcher would add a background track, thereby asking students to improvise to two different stimuli. In some cases, the two worked very well and students had an experience similar to Student E, “This pairing couldn't’ have been any more perfect [Barber, “Adagio for Strings” and image of a man on the streets begging for money, Figure 54, *Homeless…*]. This is a piece that really moves the soul, as does this image.”

However, in some cases, the pairing of the image with a background track chosen by the researcher did not work well, and for some students caused a conflict. Student C, “couldn't decide whether to think about the music or the image,” and actually found it distracting to use a background track that did he felt, “…just didn’t fit with the image.” The researcher and student worked together to find a background track that did work, and in the process, the student gained a better sense of what he was looking to portray (sorrow versus mystery).

Even though this was often viewed as a distraction, some students found that a background track that did not “fit” with the image, actually inspired new ideas and took them in another expressive direction. Student C comments, “I was like going to do

something in that way [prior to the background track, referring only to the image], an then I totally forgot. The manner of the [background track] was so different, it was interesting to go to another place." Later in that session, Student C had a similar experience, "[when the music came on] it made it different. It changed the mood [of my improvisation when it was just the image]. It made it more minor, like I was reminiscing. It was more lyrical."

Student A echoes this sentiment, "Anytime you attach music to something, it changes the mood. I felt the "blue" in that music a lot. I don't know, it just adds another dimension because at first I was only focusing on the heartache, but when the music came on, I don't know, it just changes it."

These students embraced the contrasts of image and background track and used it to their advanced for exploring new expressive pathways.

The Development of a Deeper Emotional Connection to the Music

One of the main goals for the MSMM approach was to help students develop a more meaningful connection with their music-making process. The numerous examples thus far have illustrated the importance of relating to one's creative environment to better connect with the experience as a whole. When the creative environment is that of the MSMM approach, students are presented with a variety of visual and auditory stimuli to inspire new concepts about the music they are learning. This process is most effective when the experience is made meaningful and personal to the student through their ability to relate to the images (or background tracks) presented to them. These intentions were explored through the three methods of the approach to guide students toward the

development of a deeper emotional connection to their music and the music-making process.

Artistic Representation. Four themes emerged as avenues for exploring a deeper emotional connection to the music within the method of Artistic Representation:

1. Relatability.
2. Placing oneself in the image to deepen the experience/perspective.
3. Being "in the moment" of the music-making process.

Relatability. In many cases, students were able to relate to an image in a personal way by placing oneself within the context, narrative, or setting of the image, experience, scene, or character. This resulted in more intimate exchanges between image and performance and helped students better develop the nuances of the expressive ideas they wished to create. Students established meaningful connections with the subject(s), character(s) and events in the images in a number of ways, including past memories; a reminder of someone they know/knew or something they did; a time in their life when…; or a feeling or emotion that is associated with any of these components. These triggers would function as starting points for narratives, and corresponding musical explorations. Some examples include:

> Student B: "Thinking back to old times…something nostalgic, something with snow."

> Student E: "I'm agitated because I see all of this destruction and commotion that is happening and I am way back here [on the mountain watching this happen] and I am safe in the meantime, so I can kind of lament. What I see is the music on the stand, but what I am experiencing is the explosion in the image. I think of this as an emotional reaction..."

Placing oneself in the image to deepen the experience/perspective. In an effort to better connect with an image and it's corresponding visual features and associated musical gestures, students would often place themselves within the context of the image and respond accordingly the events taking place (whether there were actually present, or made up by the student). The following examples are starting points from which students further explored these narratives through musical gestures:

> Student E: "It is kind of sad and lonely and I feel like I am looking at the sky with a sense of despair." [Student performed with slower, more deliberate musical gestures]
>
> Student C: "I picture myself tapping on her shoulder to get her attention, then she turns around in one of those creepy, turn-around-type moves that you see in horror movies." [Student performed a slower *ritard*; darkening sound on descending run]
>
> Student A: "I feel like I am the music that is playing the background of where she is sitting." [Student performed using more colors; lighter, more feminine]

Being "in-the-moment" of the music-making process. On several occasions throughout the study, the researcher observed each student engage in an "in-the-moment" type of performance. On these occasions, students continued playing despite arriving at a designated stopping point; elaborated extensively on an expressive goal; engaged in an unusually long performance session (longer than two minutes); closed their eyes while playing/thinking about their next idea; looked into space; stared at an image; or simply enjoyed the process by smiling every so often during a break or stopping point. In these moments, the researcher simply removed herself from the performance and observed quietly to give the student space to freely explore. "For a split second I forgot I was in a study!" exclaimed Student E in one of his sessions featuring Artistic Representation.

Aural Modeling. Five themes emerged as avenues for exploring a deeper emotional connection with the music through Aural Modeling.

1. Overcoming technical challenges to better experience the music.
2. Relatability.
3. Familiarity of background music to induce emotional reaction.
4. Emotionality.
5. Getting lost in the music ("letting go", "surrendering to the music").

Overcoming technical challenges to better experience the music. When students transcended their technical inhibitions, they realized on many occasions that it was more of a mental block than a technical limitation. These realizations helped better connect them to the music. Student A had been working with a background track entitled, "Been a Long Day", which she layered against a very technically demanding section in the second movement of her concerto. After asking her how she felt after a week of working with the track, she replied, "It really helps because then I don't freak out when I go to it…I was really nervous about that section, but now, I just take my time." The relief from her nerves allowed her the freedom to explore these passages with a more relaxed mindset and expressively rewarding performance.

Relatability. In the same manner as Artistic Representation, students used background tracks to connect them with meaningful associations to the music they were learning. Student C recalled the time he went indoor skydiving as a way to access the physical sensations of floating, free-falling and gliding that were coming through in his pairing of an image with birds over the ocean and the background track, "Wind & Waves

(Vent et vagues) from the album *The Concert of the Earth (Le concert de la terre)*." In his words, "The [sound] of the wind rushing felt more free, like when I was doing the indoor skydiving and you could feel the wind, I felt more like I was not tethered….I felt a lot more connected in the longer phrases."

Familiarity of background music to induce emotional reaction. As a general observation, when students heard a background track that was familiar to them, an immediate response was usually very evident (through their facial expression, body stance (from rigid to more relaxed), body movement (static to moving/dancing) and demeanor), as they seemed to absorb the emotion of background track in their performance**.** Selections that were used several times throughout the study in a variety of different contexts produced noticeably strong emotional reactions. Usher's "Yeah!" prompted students to start dancing, laugh, lighten up, smile, relax, or sing along, and their corresponding performances revealed higher levels of energy, a steadier pulse, more inflection and accent and other similar features that were appropriately matched to the student's expressive goal. Samuel Barber's "Adagio for Strings," seemed to provoke emotions of sadness, sorrow ("That is like the saddest piece ever…I feel like someone died, honestly" (Student C)), heaviness and even distracted some students from engaging in the process and often resulted in slower, heavier, more deliberate, lingering and longing performances of their musical selections (or improvisation).

Student C underscores the emotional weight of music that is familiar, "Originally, I felt like I could relate to [the image], but then adding the "Adagio…" was just heart wrenching, just can't react to it. It is like where you said, was I shut down before. It was

like another one of those shut down moments." The emotional reactions were extreme amongst the students, either ones of extreme joy and ease, or agitation, sorrow or pain. The important note here is that the background tracks evoked these reactions in the students, and ultimately did come through in their performances.

Emotionality. In many cases, students experienced an emotional response to the music that provided a platform upon which to explore an overall mood or emotion in their performance. In some cases the emotional response was due to the association of the song with a particular memory, but in other cases, the song itself provoked a distinct emotional reaction that caused a physiological change in the student that was reflected in his or her performance.

Student A, for example, was working on a slow movement from her current recital repertoire, which she described to be her "…worst movement." In one particular section, there are nearly 20 measures of harmonically restless descending sixteenth notes, which sounded labored in the student's performances of the passages. The researcher chose "Been a Long Day" by Rosi Golan from the album, *The Drifter and the Gypsy*. The sleepy song is very low- key, and thinly scored for voice and piano. The female voice is very gentle and light. The student started playing along with the background music and in a short period of time treated the sixteenth notes like slower quarter notes in the tempo of the music, almost as background music to the vocalist's track. The section overall seemed lighter, more fluid and fuller within the middle of the runs, as observed by the researcher. The words themselves also implied a feeling of relief after a long day and had a sentiment of repose and rest. The student commented that the music was "…celestial…and it has a

calming quality to it…there is a lot of it that wants to fall back…if that makes sense…you have to feel like you are going back and not all up in the notes…" The student's emotional response was that of calmness and tranquility and was noticeably reflected in her demeanor and overall performance.

Getting lost in the music (i.e. "letting go", "surrendering to the music"). To surrender to the music was a difficult task for students to achieve initially as their focus was directed toward key recognition, planning when to enter the music, matching tempo, and other logistical demands used in Aural Modeling. In general, the experience of "letting go" happened in unexpected moments, when students were several repetitions into the layering process and seemed to indulge in playing without thinking, or just letting go.

Combined Use of Artistic Representation and Aural Modeling. Often, when a background track was added to an image, the emotional experience seemed to intensify and students reached a new level of expression as a result. One product of combining Artistic Representation and Aural Modeling was emotionality.

Emotionality. When combining images with background music, students often reacted with stronger emotional senses than with images alone (although it should be noted that strong emotional reactions were possible with background music alone). Student E experienced this process by layering "The Storm" by Yanni from the album *Yanni Live!* with an image of an explosive lightening cloud (Figure 16, *Chile…*). The intention of this pairing was to induce greater awareness of and attention to the individuality of the notes at a slower tempo, and to establish a darker sound and tonal

weight throughout the phrase (measures 19 – 28 in the Arietta, Figure 56). The presence of the cello seemed an appropriate instrument to help the student create a greater depth of sound in this context. By the third repetition, the student had begun to align the phrases of the Arietta with the dramatic phrases in the cello line. This brought out some unexpected nuances in the student's performance:

> I waited until the cellist really got into it. [The playing] helped separate the events [in the image]. He was playing the [storm] so I could concentrate on surrendering to fate…so I didn't have to play both events at once…he played the storm and I played everything else that is in the path's destruction. For a split second, I forgot that I am in a study and was actually feeling what the cellist was doing, like I was in the image…and I felt the fear.

While the student's sound did darken slightly and the drama of the phrase was intensified, the true outcome of this experience was the student's transition from a technical goal (darker sound) to an emotional one (feeling the fear of surrender). The emotional experience of fear seemed to lend itself to the musical response of a darker sound and a more dramatic performance overall (heightened crescendo, fuller sound, faster tempo).

Figure 16. Carlos Gutierrez, *Chile, The fury of Chaitén volcano seems to set the sky on fire*. Chosen by Student E from the Agitated Category.

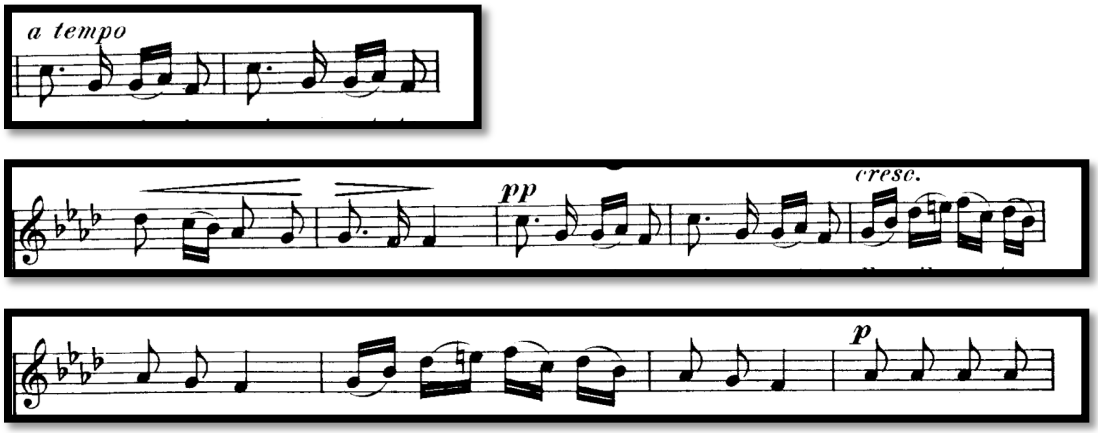

Figure 56. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 19 – 29 in the Arietta (See Appendix H).

Improvisatory Storytelling. Improvisatory Storytelling elicited six actions that facilitated a deeper emotional connection with the music:

1. Losing oneself to the music and improvisation.
2. Experiencing a state of vulnerability
3. Getting swept up by emotions from the image and/or background improvisation with the researcher.
4. Assuming the emotional state of the character(s), or subject(s) in the image; placing oneself in the image to deepen the experience/perspective.
5. Familiarity of the background track to induce emotional reaction.
6. Relatability.

Losing oneself to the music and improvisation. At times during the study, students were able to access newfound places of expression that seemed to overtake their literal experience and replace it with one in which they simply surrendered to the music, the process of the music, and the experience itself. These were very special moments, as

they revealed a potential for this approach to move students beyond the technicality of music, to the sheer emotional context of it. The ability to "lose oneself to the music" is a highly sought after feature of performing, and one that is difficult for students to achieve off stage. The exercises in Improvisatory Storytelling helped students experience this feeling and to observe its physical, emotional and musical effects for possible future use. Notice how these comments are favorable for a performance setting and offsetting the effects of performance anxiety or nerves. The following comments were in response:

> Student C: "I'm just trying to block out everything else in the room and focus on myself and the music."
>
> Student E: "[There was a] strong sense of emotion, of getting lost in the music. It felt different on the keys. I was in the mood overall, a lot more subdued."
>
> Student D: "Yeah! I was just going with it! Now, it's in my head. It is such a refreshing change from my usual practicing. That was really fun."

Experiencing a state of vulnerability. As a general observation, Improvisatory Storytelling caused some students to feel vulnerable or exposed, which seems a natural reaction considering improvisation is truly the representation of one's musical thoughts, beliefs, skill sets and perceptions. Students used words such as, scared, nervous or uncomfortable to describe the process of improvisation and took some time to fully embrace the process and discuss its musical and expressive implications with the researcher. Several of the students' private journal entries made reference to improvisations they explored on their own time, which according to their comments were generally more rewarding, as students were alone when improvising and felt free to truly express their ideas. At the very least, Improvisatory Storytelling may have helped

students pull from their improvisations more melodically significant material as it pertained to the visual and aural stimuli students explored during the MSMM sessions.

Getting swept up by emotions from the image and/or background track/improvisation with the researcher. A natural reaction for students using Improvisatory Storytelling was to unleash a musical performance that was inspired by the emotions evoked from an image or background track. Student A was responsive to the emotions induced by a background track, "There are times when the music can dip into something and you can dip into it as a response. It is a whole interaction of ideas, it's not just your own, it's exchanging…um...it changes, you don't just stick to this one mood and [the background track] helps you bring out other moods."

Student D recounts an experience of improvising with the researcher, "I could do more contrast. There was more light with the dark [in our combined improvisation]. Whenever I am in a rut like this, there is always light at the end of the tunnel, I don't know where, but it is there and even though I feel like crap right now, maybe sometime there will be some hope."

Sometimes this expressive outpouring was inspiring for the improvisatory material, but other times, it caused the student to shut down or disengage. Student C was asked to improvise to Samuel Barber's "Adagio for Strings," to which he replied, "I might cry through it." After his improvisation to the background track, his response revealed a defense mechanism in the student toward the process of getting swept away by the music, "Originally, I felt like I could relate to [the image of the sorrowful man, Figure 19, *Sorrowing Old Man…*], but then adding the "Adagio [for Strings]" was just heart-

wrenching…I just can't react to it. It was another one of those shut down moments….that piece just hits me really hard."

Assuming the emotional state of the character(s), or subject(s) in the image; placing oneself in the image to deepen the experience/perspective. To assume the emotional state of the main subject meant that a student was free to "hide" behind the emotional façade of the subject, and to freely and safely engage in the exploration of that emotional state. One powerful example of this was during the introductory exercise for Improvisatory Storytelling, in which students were asked to choose from three images. Coincidentally, they all chose the first image, which featured an old man bent over in a sorrowful moment (Figure 19, *Sorrowing Old Man…*). This image produced several emotional reactions from the students, which came through in their initial, solo improvisations and proceeding reactive comments:

> Student C: "I'm just going through the last bit of the semester and trying not to overload and mentally breakdown, which I am guessing happened [to the man in the image]….I can picture him crying."
>
> Student E: "I feel like I am in the cabin with him and I guess as far as musically, even though I am not looking at the music, now I can really see the *tenutos* and where I can put more weight on those. I feel heavier, like I just gained 30 pounds. Poor guy." [includes transfer comments from the improvisation to the Arietta]
>
> Student E: "[As a performer], I have to be this guy [in the image], I have to be this character. As musicians we are performers, we are actors and we are interpreters, so I guess that is where I see myself as a performer. I see myself as a character in this piece [Arietta]."
>
> Student E: "I don't personally feel [the way the man looks in the image] right now, but when I listen to Sibelius, that is exactly how I feel, and that is what I want to convey."

Student E: "I think of this [scene from the image, Figure 17, *Horns Wings…*] as a soliloquy. You can see the two measures [from the Arietta] are repeating, the first measure is forceful, like, 'Why is this happening to me?', and the second is like an echo effect, softer, more like, 'Why is this happening to *me*?'."

Student E: "I used more air with the faster, more aggressive passages to help exaggerate the *crescendos*, but at the beginning, I tried to be as lyrical as possible and as beautiful as possible, considering I am about to be eaten by a beast." [Referencing Figure 17, *Horns Wings...*]

Student D: "I'm feeling apathetic, very depressed today. It makes me feel like less of a person. I feel overtaken [like the house in the image]." (Figure 55, *Trees Have Overtaken the Temples…*)

Figure 55. Batesla*, Trees have overtaken the temples, an interesting combination of man-made architecture and nature.* Chosen by Student E using the Google Image word, overtaken.

Familiarity of the background track to induce emotional reaction. As discussed in Aural Modeling, the familiarity of a background track resulted in strong emotional reactions, which were portrayed through a series of physical gestures and in student corresponding student performance. Student D mentioned in one session that she often warms up (plays her scales) to video game music to encourage her body and disposition to relax and naturally absorb the energy of the music to steady her scales and relax her body.

Relatability. As with the other two methods, Improvisatory Storytelling also featured a focus on relatability for students to fully engage in the image and the MSMM experience. This ability to relate to an image prompted greater emotional connection and more expressive material and produced some very intimate revelations about/to the students in response to an image or background track. Student E had a very personal reaction to an image of a beggar on the street (Figure 54, *Homeless…*). His improvisation featured a compelling, long-breathed melody that seemed to linger and wander through repeated figures, almost as though he was pleading in the manner of the man in the photograph.

Figure 54. *Homeless*. Used by Student E for Improvisatory Storytelling.

His comments reveal what he was thinking about and how he felt during the improvisation.

> This picture kind of makes me choke up, because I've been there, growing up. It brought back personal memories because when I was in kindergarten we were very poor and I used to hear my mother praying….and looking at the person in this image who has nothing left, well it just brought back memories. While it is a dark image and while it does look poverty-stricken, or he is suffering the loss of someone, I think the artist also chose to bring out some of the white because maybe there is some hope somewhere.

Student C viewed the image of a young woman looking over a steep cliff from above a large ocean (Figure 38, *Woman on a Cliff*...) from his perspective of the associative emotions of that moment, "I pretended I was looking over the cliff as well." In addition to actively placing himself within the image through her actions, he also commented that, "…there are those moments where you feel like you are having a mental break down…it is kind of eye opening…" When asked by the researcher to consider the emotions that surrounded such an experience, he stated, "guilt, pain, worthlessness." In many ways, through his ability to relate to the subject and her (perceived) emotions, he was able to recall/experience those emotions and learn how to use them, and/or translate them into musical gestures.

With Improvisatory Storytelling there was no musical selection to act as a barrier to the expressive process. Students were directly exposed to the process of making music, in the moment, as it related to their mental and emotional states and musical abilities. Another way for students to access these places was to use an image that evoked a past memory, or one in which they could relate to on an personal level. Student E was exploring images of Russian landscapes as inspiration, and used his experiences in Russia to inform his expressive performance.

> I started emotionally from the grandmother's point of view, from her sense of long [the grandmother was a family member of host family with whom he stayed during a trip to Russia]. But, I am also thinking about how I got to see a lot of Russian dance and a lot of their music is in the minor mod and they borrow from Western traditions, and there is a great sense of pride. To our ears, there is something a little rugged about it, but it is this style of folksy music that makes their music so unique (Student E).

In some cases, the emotional response would translate to specific musical gestures, "I am going to go more Shostakovich [in my next improvisation], more prideful and majestic. I am paying more attention to the gold [color in the image], and paying homage to the majestic areas in Russia."

Student Overall Reaction to the MSMM Approach as a Whole

Data was collected from student interviews and student quotes throughout the course of the study in reference to three main areas of overall reaction:

1. Experience words/phrases and overall impression of the MSMM approach.
2. Preferred method.
3. Points of exploration (three research questions: accessibility; effectiveness; performance quality).

Experience words/phrases and overall impression of the MSMM approach. The MSMM approach yielded several themes for overall impressions that were unique to at least two or more of the students in the study and were related to three general areas: (1) change in perspective; (2) going outside of one's comfort zone; and (3) areas of growth. The overall impression of students' experience with the MSMM approach is considered through student quotes in these three areas.

Change in perspective. Throughout the study, students demonstrated (through their dialogue and interviews) a change in their perspective about their overall approach to thinking about and performing music. Changes were observed in two main areas: (1) students' approach to thinking about music; and (2) students' perspective on how to perform a musical selection.

Change in approach to thinking about music. Comments regarding change in approach focused on students' overall perceptions about music and how those have changed (i.e., not just about the notes, different functions in music, different ways to practice music and embodying music).

Student D: "This research project has changed my way of thinking about music. Instead of just thinking about music and making it sound good, I think what is this color and what am I trying to depict from the image [in my performance]?" [Artistic Representation]

Student D: "It is nice to take just one image and apply it to so many different ideas." [Artistic Representation]

Student D: "I found it funny. I always thought it was abnormal to do this, but it is so fun to do this as a personal joy to do the music in a different way." [Combined Artistic Representation and Aural Modeling]

Student E: "Even though the two seem unrelated [the etude in the style of a waltz and Usher's, *Yeah!*], the function of the music is still the same. That is interesting to me. Because they are both a dance piece, so it is okay and it makes sense as far as the music and the function being the same." [Aural Modeling]

Student D: "…you can teach yourself to understand how to feel the music with your whole body and not just your ears (not just through analysis). Just feel it." [in response to how she practices the MSMM approach on her own]; [Improvisatory Storytelling (aural)]

Student A: "It was interesting to put that into notes." [in response to how it felt improvising to an image that evoked a sense of "intense agony", according to the student]; [Improvisatory Storytelling (visual)]

Student E: "I've realized that I need to get away from all the excerpts and just listen to music. I forgot how to listen to music without trying to critique and analyze." [Improvisatory Storytelling (visual and aural pairing)]

Student B: "[The MSMM approach] has also freed me up to seeing people who can't do it. I can now differentiate between people who don't do it [and those who do]. Really, they just play the notes on the page and I guess they feel like they are playing with emotion, but now I can actually tell if

that actually moves people. It is just cool to actually see that and be able to do that." [General]

Student E: "It is like an actor. I tell the story. I always look at the picture and I tell a story with music that is related to the image." [Artistic Representation]

Change in perspective on how to perform a musical selection. Comments regarding change in perspective focused on specific musical nuances that were affected by the MSMM approach, such as articulation, style, or phrasing.

Student E: "Listening to another waltz by the same composer gave me another perspective on how to approach the etude." [layering musical selection with a background track]; [Aural Modeling]

Student E: "It's interesting because I can hear the difference between the staccatos and accents now. I feel like I have a better understanding of how the composer is doing it. It is not as crisp, it is more space with more life on each note." [on layering a background track in the style of a waltz (by the same composer) against his etude]; [Aural Modeling]

Student C: "For me, it focused on the bigger picture. At the same time, though, the internal notes as well. I felt more like this is the phrase, rather than the isolated notes. [in response to how the background track changed his approach to a series of sixteenth-note runs]; [Aural Modeling]

Student C: "If I were trying to speak or tell a story, I could hear what kind of words I'm using to describe the story; like the word fluid sounds more fluid than the word, start, which is like go and accented. Like actual motions or words help me figure out what kind of articulation I want to use [like the birds gliding]. [in response to how images helped with articulation]; [Artistic Representation]

These comments speak to the MSMM approach as a whole through student observations of how their learning and thinking has changed over the course of the study.

Going outside of one's comfort zone. On several occasions throughout the study, students made references to going outside of their comfort zone, or experiencing something that was beyond their usual routine, or learning style. These comments were

observed in six main areas: (1) going outside of one's comfort zone; (2) losing oneself to the experience; (3) bringing personal emotion into the experience; (4) feeling uncomfortable; (5) sensory overload; and (6) disengaging.

Going outside of one's comfort zone. This theme speaks to students trying something that they were not used to, or was outside of their normal routine or expectations as a musician.

> Student C: "It is different. I am not used to being a solo player, as I have been a section player most of my life, so it was nice." [in response to how it felt to play along with a background track]; [Aural Modeling]

Losing oneself to the experience. Throughout the study, students were constantly encouraged by the researcher to simply let themselves surrender to the music and fully embrace the process. This took some time, but there were a few breakthroughs along with way, provoking the following comments.

> Student A: "Surrender!" [when asked to describe the feeling of layering against the background music]; [Aural Modeling]

Bringing personal emotion into the experience. Part of going outside of one's comfort zone is the process of emotionality, or bringing emotion in the experience through discussion and observation of one's emotions as they relate to the experience. Through this process, students gained a greater awareness of their emotions by including them as part of their learning outcomes. The recognition of emotion in the learning process can enhance a student's engagement in the activity; deepen the experience through a lens of personal meaning and familiarity; and encourage students to look within

themselves for solutions to technical and expressive challenges. The following examples underscore some of these points:

> Student D: "You might look at [an image] differently, depending on how you are feeling or thinking about it in general. It is the same with the performance. If I took [the Arietta] and I was angry I would have a different outlook [and performance] than if I was sad, or happy." [Artistic Representation]

> Student B: "I don't know where that came from today… I could evoke more emotion." [in response to how his improvisation performance went]; [Improvisatory Storytelling (visual and aural)]

> Student B: "Different images…evoked different emotions. One would be calm and I would play the piece calm and then another would be happy and chirpy, so I tried to play it chirpy and then I would think, 'Wow, that sounds different!'" [Artistic Representation]

> Student B: "Emotions that I felt. I would look at the image, respond to that image emotionally and then try to translate that into music. I feel like if music has no set emotion, it gets kind of boring. I feel like music in its purest form should be more than one emotion….that is why I try to have many images that keep bring up many emotions." [Artistic Representation]

Feeling uncomfortable. Students experienced some degree of discomfort at various points during the study as they explored the methods of the MSMM approach. These varying degrees of discomfort are expressed in the following quotes, and were generally linked to Improvisatory Storytelling.

> Student C: "I feel scared [of improvising]." [Improvisatory Storytelling (visual)]

> Student A: "I'm scared to improvise when I don't know the key of the music."[Improvisatory Storytelling (aural)]

> Student B: "It is hard improvising, like on the spot, just like make up lines. Just like, melodic lines. " [Improvisatory Storytelling (visual)]

> Student B: "I can certainly express myself, like in music, but actually having to like do it on the spot without a line written for me…" [Improvisatory Storytelling (visual)]

Student B: "At first I was just like…ugh…[laughs], but then I just went with it. I don't know if it was different. It sounded like something I knew, but couldn't recognize it. It was interesting." [Improvisatory Storytelling (aural)]

Student C: "I'm not sure how to do that sort of thing where you just go with it." [in response to how he felt improvising with a background track and image]; [Improvisatory Storytelling (visual and aural)]

Student C: "If I went long enough and far enough with the approach, probably [I would discover things about myself], but I think for the amount of time I did, I don't think I connected much other than just getting used to everything and scarping off the surface. Scraping away the [the feeling of being uncomfortable]." [Improvisatory Storytelling (general)]

Sensory overload. Sensory overload is a large part of the MSMM approach in that students are constantly presented with a multitude of sensory stimuli to enhance their performance experience.

Student E: "The change is like sensory overload! I love it!" [on speaking to the use of two images in Improvisatory Storytelling over the course of one session]; [Artistic Representation]

Disengaged. Because of multisensory approach, there were moments in which the researcher observed students disengaging from the process due to an overload of information or stimuli. This was generally observed in situations where students did not look up at the image while performing their musical selection (as was part of the process), or stopped performing during an Aural Modeling or Improvisatory Storytelling session.

Student C: Researcher observed that the student was disengaged from the process as was evidenced by his lack of looking up at the image while using Artistic Representation. [Artistic Representation]

Areas of growth. An important result of the MSMM approach was that students recognized areas of growth that impacted the overall musicianship and learning potential. Seven areas of growth were observed:

1. Recognition of growth throughout the study.
2. Learning how to communicate music.
3. Overcoming technical limitations.
4. Overcoming nerves.
5. Having a reference point.
6. Application of skills learned in this study to other areas.
7. Giving direction and focus to practice sessions.

Recognition of growth throughout the study/using the MSMM approach. In the words of the students, recognition of their own growth was an important outcome of this study.

> Student E: "I've seen growth, particularly when I go back and play something. I am thinking, 'I feel this color, and here is why. Here is how the notes conform to that color and here is how this idea morphs around it'….It has helped me engage in the music making instead of just focusing on the technical aspects of lyricism. It is more about the emotional aspect of it, so it kind of grounds me." [Artistic Representation]

> Student E: "So, um, [I feel I've grown]… as composer as well. As a composer I don't mean to…ignore the performer [and the fact] that they have something to say too. So now that we have done those improv sessions, I've gone back to pieces that I've composed and looked at them again through the eyes of the performer and I reverse edit, I pulled some instructions out to give the performer more leeway to perform the pieces. They have something to say too, just like the artists of the pictures we've looked at they are trying to tell you something. The idea that is on a piece of paper that is only half of the story because the performer has something to say too. Trying to get into that space, especially the second

> improvisation [of Figure 54, *Homeless…*] was very heavy. [It] helped me to get to that space as a performer." [General]

Learning how to communicate music. Through the use of the three MSMM approach methods, students learned more effective ways of communicating music.

> Student E: One thing that has stuck out to me is how I am supposed to have the audience get what I am trying to convey if I don't know it myself. We go in there and we get the notes right and most people don't care about that; they care about how the music makes them feel. So, I mean I have to think of something first to pass that off to someone else." [General]

Overcoming technical limitations. The MSMM approach had a positive effect on the mental blocks and technical holdups related to the student's musical selections and pieces they had been studying for some time.

> Student A: "I felt better about it. I think the difficult part came out better, it was clearer." [in response to layering]; [Combined Artistic Representation and Aural Modeling]

Overcoming nerves. A positive benefit of the MSMM approach is that by helping students to direct their thought process to the process of making music, they are directing their attention away from nervous thoughts about performing.

> Student B: "It was like the nerves weren't there…I mean they are there physically, but not mentally, especially when the music was playing in the background." [when asked to describe his level of nerves when using Aural Modeling]; [Aural Modeling]

> Student A: "Ugh, this is so frustrating. This part is so intimidating….[prior to an MSMM experiment in Artistic Representation]. That feels much better…more relaxed…less stressed." [after the MSMM experiment in Artistic Representation].

Having a reference point. The MSMM approach and its various methods helped students develop new reference points for learning and understanding their musical selections. This resulted in more solid and convincing performances.

Student C: "Everything just felt more solid, I think because now that I have a specific thing to think about." [on how he felt about his overall performance after an Aural Modeling session]; [Aural Modeling]

Student A: "It is getting used to listening to someone else and reading their cues. It is nice to be able to pull your own music from the image as well." [in response to how it felt improvising with the researcher to an image]; [Improvisatory Storytelling (visual and aural/researcher)]

Student B: "The first time I played this Arietta, I had nothing to go off of, it wasn't alive, and the music was just one emotion. Now that I've played it over and over again and I have things to attribute different sections of the music to, I have now breathed life into it." [General]

Application of skills learned in this study to other areas. Application is a critical testament to the depth of learning a student encounters. In this study, there were several accounts of deep learning through the use of application of skills learned in the study to other areas of study.

Student E: "I do the same thing when I am composing." [On why it is easy to layer the background track with his musical selection and pull ideas from one another]; [Combined Artistic Representation and Aural Modeling]

Student E: "Some of the things I have worked on in this study have enhanced my composition because of doing this like this [improvising]."; [Improvisatory Storytelling (visual and aural)]

Giving direction and focus to practice sessions. One means of encouraging students to continue using the methods of the MSMM approach beyond the study, is to help them make it a part of their daily routine and practice sessions. The comments here provide some insights into how students might use these methods in their future practice sessions.

Student C: "[This approach] falls into the mental practice category, so you have to know what your piece sounds like. And find what is appropriate for the music."; Aural Modeling

Student C: “Mentally prepping myself and thinking ahead about the mood.”

Student B: “I would work further on what we did in the sessions, like [focusing] on some of the features in the image, and try to make sure they happen every time [for consistency].”

Student D: “I would first think about the overall take on the music, then I look at the finer details [of the image]. Are the trees blooming? How are they shaped? So, I want my sound to be subtle and subdued, not bright.

Preferred method. Of the three MSMM methods, Artistic Representation seemed the most preferred method mainly due to the fact that it was the most intuitive approach for students (Aural Modeling and Improvisatory Storytelling were newer experiences for most students); however, students were very inspired by and engaged with Aural Modeling. Perhaps in alignment with reading music, seeing an image and holding that image in the mind’s eye is initially more preferable. Each student seemed to have a preference for one over the other, or for images over background tracks and vice versa.

Student A: “For me it is all about the music.” [in reference to preferring Aural Modeling to Artistic Representation]

Student B: “I mean I can grasp an image over time, but the music I can respond to like that.”

Student C: “I am more inspired by the visual….the visual is more compelling for me.”

Student D: “I’m a very visual learning style and I’m kinesthetic. I can imagine something.”

Student E: “I can better use the aural.”

Accessibility; effectiveness; and quality of performance. Students were asked specific questions about these areas of the study that were relevant to the study's three research questions.

Accessibility. Students were asked to consider how accessible the study was for use, and to give an explanation as to why or why not.

> Student B: "At first it was awkward because it was just a different way of actually thinking about how to play emotionally. Usually, you just kind of do what your teacher says (like crescendo here), but there is no feeling behind it….it is accessible once you get used to it, and see how all these things connect into playing more emotionally."

> Student D: "It was actually really natural. I didn't realize that I already use some of this in what I play anyway. The newest part of this [experience] was the layering against the background track. Listening to a song that is completely different from [what I am playing], that was a completely different experience and I liked it, I really liked it."

> Student E: "Because of the nature of the work I do with images and such (on computers and things like that), it is very engaging. Music and technology are things that I love, so for me it was very natural.

Effectiveness. Students were asked to consider the effectiveness of the study in terms of translating a visual cue or nuance from a background track to a musical gesture in the Arietta or a musical selection of their choice.

> Student B: "For some [the translation is] right away, yes, but for others to fully understand it, that may take time."

> Student C: "I am more conscious now about [what I am doing expressively]. Because of putting a story to it or associating an image to get the story, I'm able to think, 'Okay, there is actually, I can do something with this'."

> Student B: "It is fun, you know: Two things are totally different, but they are still music; there is still a melody so they still work together. Andy they came through and it actually worked."

> Student D: "I feel like I have a better time [communicating the music now] and I have a means of doing that by using an image. I feel like I have not just

mastered a little bit more my instrument, but also mastered more of my own emotions and how I can play through music."

Student E: "For me, it wasn't necessarily immediate. I noticed the secondary effects before I noticed the primary effects. For me, the memorization of the image/music pairings were more noticeable and then the results of better playing, (i.e., better breath support and line came later.)"

Quality of performance. Finally, students were asked to comment on their performance quality and whether or not it had improved over the course of the study.

Student B: "Yes, I would say that my quality of performance has [improved]. I can definitely draw emotion from something right away. I still listen to recordings before I play a piece, but now I actually can draw emotion from something and make it project and actually put the emotions that actually moves people and not just, 'it is getting louder and louder', but like using timbre and style. Yeah it works."

Student D: "My performance has grown and changed and helped me grow and change as a musician. I've noticed changes in my music outside too, like my jury pieces have improved. I imagined a snake charmer and incense and backroom with dancers and the overall feeling I wanted it to be mysterious. It has changed a lot how I look at music."

Student E: "It definitely has gotten better, because it made me comfortable. Sometimes you can get so worked up on the technical aspects of a piece that you forget what you are actually playing. You have to remember the who, what, where, when and why when you want to connect with an audience. So, if ever I mess up on this piece, I can think to myself to recall an image, like go back to the lava and because of that I have a better relationship to the piece."

Students spoke to a wealth of growth and growth potential throughout the study, which ranged from technical to expressive. Students demonstrated a use of expressive vocabulary to help them transcend the technical limitations and visual boundaries of relying solely on the notes on the page. The countless examples of images and background tracks have inspired new ways of thinking about and learning music.

CHAPTER VI—RESEARCH QUESTION THREE RESULTS

Performance Quality

Research question three seeks to explore the quality of performance demonstrated by students using the MSMM approach. Of particular interest was the level of improvement related to musical expression in student performances of the Arietta and was it observable by a panel of judges (outside party) and the applied instrumental instructors for each student. Surveys administered to a panel of judges (at the end of the study) and the students' applied instrumental instructors (before and after the study), in addition to the information gathered from student interviews (following each set of recordings) provided the data for this research question.

Comparative Analysis of Quantitative Data

Baseline recording of musical selections chosen by students (Music A, Recording 1). A baseline recording was completed to obtain a measurement of students' initial levels of musical expression. Results of Recording 1 are listed in Table 22. Students performed a musical selection of their choice (Music A) that they had studied for a substantial period of time (ranging from several weeks to months) with the assistance of their applied instrumental instructors.

Table 22

Results of Baseline Recording of Musical Selections Chosen by Students (Music A, Recording 1)

Measurement of expression	Student A	Student B	Student C	Student D	Student E
Overall mood/emotion: The student communicated a contrast of moods and/or emotions.	6	8	4.5	4	4
Overall mood/emotion: The student performed with emotional conviction and believability.	6.5	8	4.5	5	2
Tempo and rhythmic inflection: The student varied the tempo for expressive purposes (*rubato*, *accelerando*).	4	6	1.5	5	2
Tempo and rhythmic inflection: The student used rhythmic inflection to shape the music through accents, meter and emphasis of patterns.	4	8	4.5	4	2
Phrasing: The student used pauses and/or lifts in the phrases as expressive tools.	7	7.5	2	5.5	4.5
Phrasing: The student demonstrated flow and fluidity within lyrical lines.	4.5	7.5	1	4.5	3.5
Style: The student reflected the nuances of the historical genre.	4	2.5	1	1.5	2
Dynamics: The student used dynamics expressively (tonal shading, noticeable climaxes, *subito*, *crescendo*/*decrescendo*).	6	2.5	1.5	4	4.5
Articulation: The student used articulation to reflect the phrasing and structure (*tenuto*, *staccato*, lifts, emphasis, legato, accents).	4	8	1.5	4	2
Articulation: The student used articulation to introduce variety and shape to the phrases.	4	7.5	1	4	3
Overall: The student performed with compelling musical expression and sensitivity.	5.5	7	1	4	2
Overall: The student exhibited a distinctive quality that made the performance memorable.	2.5	7.5	1	4	1.5

Note. These scores were averaged between to the two judge's rankings on the levels of discernable musical expression related to each of the categories in the table. The scale ranged from 1-10 with 1 indicating

"Strongly Disagree" and 10 indicating "Strongly Agree." Judges were presented with anonymous recordings and individual surveys for each recording. Averaged scores for each student: Student A (4.8), Student B (6.7), Student C (2.1), Student D (4.13) and Student E (2.8). The cumulative average score for Recording 1 of all students is 4.106.

The results in this table range from a low score of 1 to a high score of 8 with an average score of 4.106, and provide a basis for the levels of observable musical expression. These scores can be compared with the results of the student performances (recordings) of the Arietta prior to and at the end of the study.

Pre-MSMM recording of the Arietta (Music B, Recording 2). Prior to starting the MSMM portion of the study, all participants individually studied the Arietta (Music B) for 30 minutes before recording their performance (Recording 2). This performance was used as a pre-test for measurement of expression prior to receiving the MSMM. The results of the pre-MSMM recording of the Arietta are listed in Table 23.

Table 23

Results of Pre-MSMM Recording of the Arietta (Music B, Recording 2)

Measurement of expression	Student A	Student B	Student C	Student D	Student E
Overall mood/emotion: The student communicated a contrast of moods and/or emotions.	4	4.5	5	4.5	6.5
Overall mood/emotion: The student performed with emotional conviction and believability.	5	2.5	2.5	4	6
Tempo and rhythmic inflection: The student varied the tempo for expressive purposes (*rubato*, *accelerando*).	4	1.5	3	4	7.5
Tempo and rhythmic inflection: The student used rhythmic inflection to shape the music through accents, meter and emphasis of patterns.	5	1.5	2.5	3	6
Phrasing: The student used pauses and/or lifts in the phrases as expressive tools.	5.5	1.5	4	3	7.5
Phrasing: The student demonstrated flow and fluidity within lyrical lines.	5	3	3.5	2.5	3
Style: The student reflected the nuances of the historical genre (eighteenth-century Italian aria) in his/her performance (use of *rubato*, sigh gestures, giving weight to/lengthening critical pitches).	3.5	1.5	3.5	1.5	6.5
Dynamics: The student used dynamics expressively (tonal shading, noticeable climaxes, *subito*, *crescendo*/*decrescendo*).	2.5	1.5	3.5	1.5	4.5
Articulation: The student used articulation to reflect the phrasing and structure (*tenuto*, *staccato*, lifts, emphasis, legato, accents).	6	1.5	3	3	5
Articulation: The student used articulation to introduce variety and shape to the phrases.	4.5	1.5	4	3	3
Overall: The student performed with compelling musical expression and sensitivity.	3	1	1.5	1.5	4.5
Overall: The student exhibited a distinctive quality that made the performance memorable.	3	1	1.5	1.5	3

Note. These scores were averaged between to the two judge's rankings on the levels of discernable musical expression related to each of the categories in the table. The scale ranged from 1-10 with 1 indicating

"Strongly Disagree" and 10 indicating "Strongly Agree." Judges were presented with anonymous recordings and individual surveys for each recording. Averaged scores each student: Student A (4.3), Student B (1.9), Student C (3.13), Student D (2.8) and Student E (6.7). The cumulative average score for Recording 1 of all students is 3.766.

The results in these categories range from a low score of 1 to a high score of 7.5 with an average score of 3.766. The observable traits of musical expression in these recordings reflect a baseline measurement of inherent musical expression because the musical selection was unfamiliar to the students, who relied solely on their musical instincts to create expressive moments.

Post-MSMM recording of the Arietta (Music B, Recording 3). At the conclusion of the study, students recorded a final performance of the Arietta (Music B, Recording 3). These results indicate the levels of musical expression recognized by the panel of judges amongst all five participants. These results reveal the level of improvement related to each category of musical expression that was studied in the MSMM approach. The results of the post-MSMM recording of the Arietta are listed in Table 24.

Table 24

Results of Post-MSMM Recording of the Arietta (Music B, Recording 3)

Measurement of expression	Student A	Student B	Student C	Student D	Student E
Overall mood/emotion: The student communicated a contrast of moods and/or emotions.	8.5	9	6	6	7
Overall mood/emotion: The student performed with emotional conviction and believability.	8.5	9.5	6	6	7
Tempo and rhythmic inflection: The student varied the tempo for expressive purposes (*rubato*, *accelerando*).	9	10	6	6	7
Tempo and rhythmic inflection: The student used rhythmic inflection to shape the music through accents, meter and emphasis of patterns.	8.5	9	6	6	7
Phrasing: The student used pauses and/or lifts in the phrases as expressive tools.	9	9	4.5	5.5	8.5
Phrasing: The student demonstrated flow and fluidity within lyrical lines.	8.5	9	5.5	5	6
Style: The student reflected the nuances of the historical genre (eighteenth-century Italian aria) in his/her performance (use of *rubato*, sigh gestures, giving weight to/lengthening critical pitches).	8.5	9	5	6	7
Dynamics: The student used dynamics expressively (tonal shading, noticeable climaxes, *subito*, *crescendo*/*decrescendo*).	7.5	7.5	4	5	6
Articulation: The student used articulation to reflect the phrasing and structure (*tenuto*, *staccato*, lifts, emphasis, legato, accents).	8.5	9	4.5	6	6
Articulation: The student used articulation to introduce variety and shape to the phrases.	8.5	8.5	4.5	5	7.5
Overall: The student performed with compelling musical expression and sensitivity.	8.5	9.5	3.5	2.5	6.5
Overall: The student exhibited a distinctive quality that made the performance memorable.	8	9	3	2.5	4.5

Note. These scores were averaged between to the two judge's rankings on the levels of discernable musical expression related to each of the categories in the table. The scale ranged from 1-10 with 1 indicating

"Strongly Disagree" and 10 indicating "Strongly Agree." Judges were presented with anonymous recordings and individual surveys for each recording. Averaged scores for each student: Student A (8.5), Student B (9), Student C (4.9), Student D (5.13) and Student E (6.7). The cumulative average score for Recording 1 of all students is 6.846.

The results in these categories range from a low score of 3 to a high score of 10 with an average score of 6.846. These scores demonstrate an overall improvement in the levels of musical expression from the pre-MSMM scores. The progression of averaged scores from baseline recordings (4.106) to pre-MSMM (3.766) to post-MSMM (6.846) underscores the cumulative results of the student group as a whole and solidifies their collective improvements after using the MSMM approach.

Illustrative analysis of data. A further exploration of this data is considered through a comparative analysis of pre- and post-MSMM results of Recordings 1 and 2. Figures 57 through 59 are illustrative tables that were generated to show areas of improvement and growth amongst students from baseline to post-MSMM recordings.

Comparative results of baseline, pre- and post-MSMM recordings. Figure 57 illustrates the comparative results of the baseline, pre- and post-MSMM recordings of all participants.

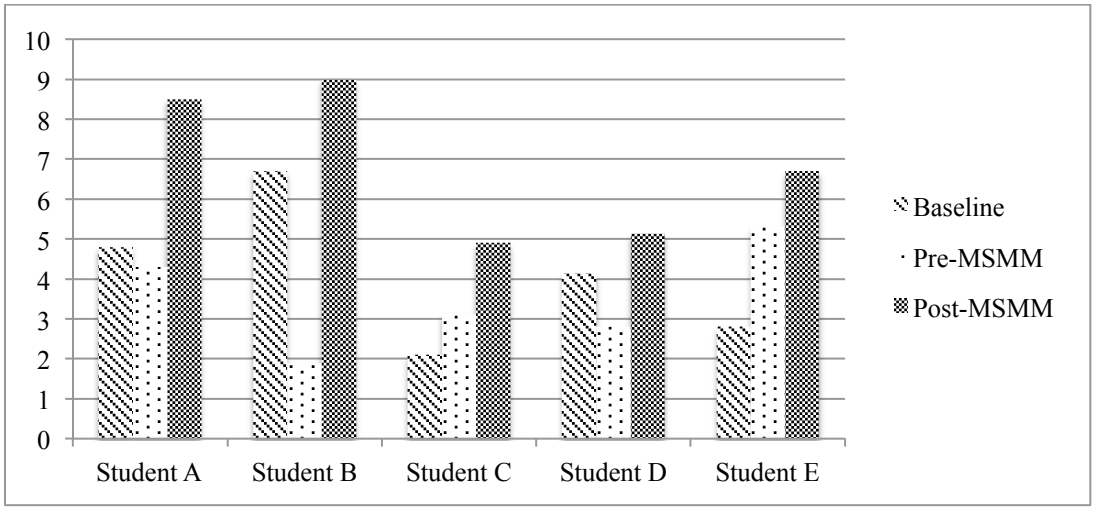

Figure 57. Comparative results of the baseline, pre- and post-MSMM Recordings 1, 2, and 3 of the Arietta of all participants. Results indicate averaged scores for each recording.

Noticeable improvement in areas of musical expression was evident across all participants. Looking at pre- and post-MSMM recordings only, the results demonstrate consistency of improvement amongst students. (Student A (4.3 to 8.5); Student B (1.9 to 9); Student C (3.13 to 4.9); Student D (2.8 to 5.13); and Student E (5.3 to 6.7).

Comparative results of the five components of music from baseline to post-MSMM recordings. Figure 58 lists the averaged scores amongst students within the five components of music.

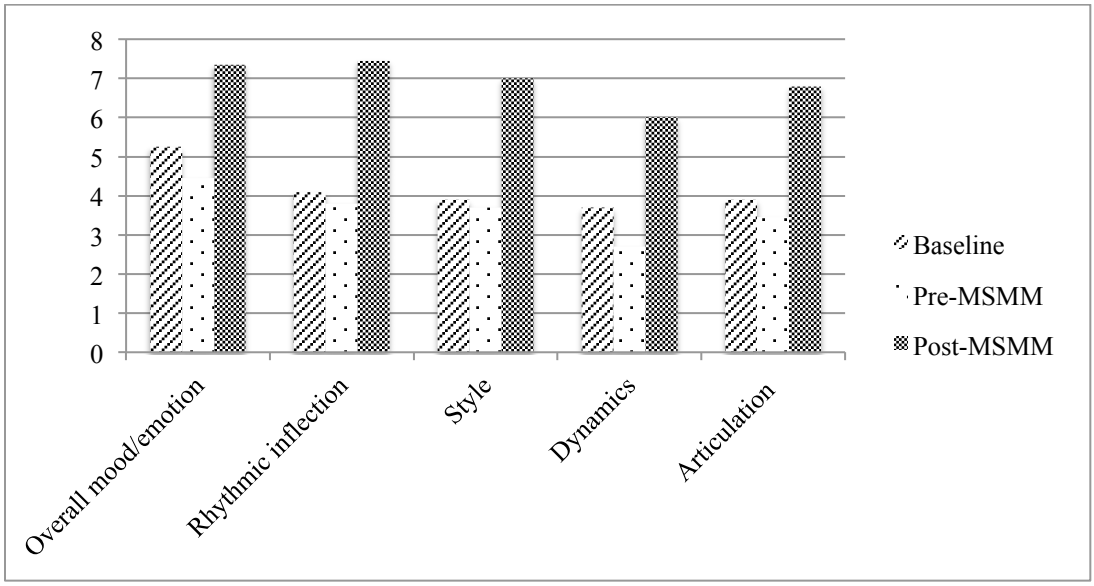

Figure 58. Comparative results of baseline, pre-MSMM and post-MSMM recordings within the five components of music. Range is from 2.7 to 7.45. An additional category of "Overall" which was listed on the judges form was not included in this table as it focused on the overall performance of each student and was not unique to these five categories. In the survey, the categories observing phrasing were scored along with style. Baseline scores (overall mood/emotion: 5.25; rhythmic inflection: 4.1; style: 3.9; dynamics: 3.7; and articulation: 3.9). Pre-MSMM scores (overall mood/emotion: 4.45; rhythmic inflection: 3.8; style: 3.7; dynamics: 2.7; and articulation: 3.45). Post-MSMM scores (overall mood/emotion: 7.35; rhythmic inflection: 7.45; style: 7; dynamics: 6; and articulation: 6.8).

Overall mood/emotion scored highest in both baseline (5.25) and pre-MSMM (4.45) recordings, and second highest to rhythmic inflection (7.45) in the post-MSMM (7.35) recordings. In general, the scores were very similar from baseline to pre-MSMM approach recordings and improved in post-MSMM approach recordings indicating that work in each of these separate areas is beneficial for students. The collective results of these illustrative indicate that the MSMM approach proved effective in the context of this study as one possible method for learning musical expression.

Explanation of data. Consideration of the data against the variables that were present in this study will provide further insight into the results and explanations for levels of improvement for individual students and collectively.

Experience on instrument. Students A and B received the highest scores for musical expression in baseline recordings, which is consistent with their years of experience on the instrument (five to seven) and a more adept technical facility. Students C, D and E scored the lowest in baseline recordings, which is also consistent with fewer years experience on their instrument (one to five) and less adept in technical facility.

Interestingly, students C and E received higher pre-MSMM scores than baseline scores. One explanation is that their individual musical selections were more advanced and technically demanding than the Arietta, causing some technical distractions in their performances. Although they were both familiar with their musical selections, there were several observable technical glitches in their performances that may have interfered with their ability to convey expressive ideas at noticeable levels. The Arietta—in comparision with their learned repertoire—was much more accessible, both rhythmically and technically, which may have allotted more attention to discernable expressive moments in their performances.

Inherent/preexisting levels of musicianship. Students A and B demonstrated the highest rate of improvement from pre- to post-MSMM recordings. Student A received the second highest scores for the baseline recording confirming inherent tendencies for expressive musicianship. Furthermore, Student A received comparably high scores on her pre-MSMM recording, which indicates a natural proclivity toward expressive instincts that are distinct even without extensive training on a given musical selection. These natural instincts were present in both baseline and pre-MSMM recordings and may have played a role in this Student's level of improvement in post-MSMM recordings.

Student B also received the highest scores on his baseline recording, indicating an inherent level of technical ability and *trained* musical expression. He may have a less accessible approach to musical expression in an unfamiliar musical selection because his pre-MSMM scores were lowest in the group. His pre-MSMM interview also revealed a process of thinking that was more inclined toward a technically-enriched vocabulary, and was more extensive in his descriptions of his musical selection rather than the Arietta ("hairpin things are very important," "…the eighth notes are leading into something else," "heightening the tension because it is…going from something slurred to something tongued," "leaps", "make something out of the *crescendo*", Table 25). These comments were listed in categories related to *expressive markings in the music* and *exaggeration of musical gestures to portray an idea*.

Student E earned pre-MSMM scores that were nearly as strong as his post-MSMM scores. Without the limitations of technique in the Arietta, he was able to freely demonstrate notable expressive moments. Like Student B, he was more versed in technical vocabulary during his initial interview about the Arietta, which may explain a natural tendency toward expressive playing (in a less technically demanding musical context), but a deficiency in recalling the expressive vocabulary to describe those tendencies. Most of his comments in the initial interview were technical and listed in the category for *exaggeration of musical gestures to portray an idea* ("the use of an echo in repeated passages"; "the second time I played it, I needed to be more emphatic, so I increased the dynamic a little bit"; "bigger contrast in the dynamics by making a bigger *crescendo* and then immediately go into a *piano*").

Student D also demonstrated higher levels of musical expression in baseline recordings and lower in pre-MSMM recordings, indicating her approach to musical expression was applicable in familiar musical selections (with extensive study or training), but less reliable or accessible in unfamiliar settings.

Prior exposure to MSMM approach. In some students, prior exposure to the MSMM approach seemed evident throughout the study. Student A, for example, had worked with the researcher using the MSMM approach in several individual sessions one year prior to the study so she was well informed of the methods and acclimated to the expressive environment. This may account for her comparable levels of baseline and pre-MSMM recordings and notable improvement in the post-MSMM recordings. Her natural expressive instincts were apparent in both recordings and even further developed in the post-MSMM recording.

Student E had some exposure to MSMM prior to the study (through participation in a one-time group setting workshop), so he was somewhat versed in the process. His level of improvement was 1.4, the lowest of the group, yet still better than his pre-MSMM score. One explanation might be that his high pre-MSMM score demonstrated strengths in expressive playing, but weakness in the vocabulary for describing those expressive moments. The MSMM approach may have strengthened this weakness to better match his already instinctive expressive habits.

Students B, C and D had no prior exposure to the MSMM approach. Student B was especially responsive to the approach as evidenced by his level of improvement of 7.1. Again, this may be attributed to his natural technical abilities on the instrument

allowing him the freedom to explore new expressive ideas without the limitations of technique holding him back. Students C and D showed marked improvement as well, even without any previous exposure to the study, but not at the same rate as Students A, who had previous exposure to the approach. This could indicate that students with more exposure to the approach are better acclimated to its potential and continue to benefit from repeated exposure over time.

Area of study. Student E's background is in composition, so perhaps one explanation for his higher levels of pre- and post-MSMM scores may be his mindset toward preforming, which is more influenced by how the music is portrayed through notation and his creativity in developing phrases and musical lines as part of his study. It may also explain why his initial interviews were more technique-focused on how the music is portrayed through cues in the score.

Students A and B are performance majors and are perhaps more in tune to the intricacies of both technical and expressive playing, but have been developed more intimately in one area over the other (Student A (expressive); Student B (technical) as part of their training. The time and practice put in by these students is the highest in the group because of the nature of their degree, which also speaks to more developed training overall.

Student C is studying music education on several instruments, with bassoon as his newest instrument, which may result in less experience in technique on the instrument itself, but a well-rounded knowledge of music and expression. His scores were evenly distributed from baseline to post-MSMM recordings and steadily progressed from one

recording to the next. His results reveal a methodical approach, which may reflect his mindset towards music education.

Student D is minoring in music and is pursuing study in engineering as well, so her mindset might be one of someone who thrives in trained situations. Her baseline and post-MSMM recordings were the most comparable among the five subjects, which may indicate her strengths are most apparent in settings where she is adequately trained and prepared, but may lack in the intuitive application of expression. It is important to note that this student was the most extensive in her expressive vocabulary and ability to discuss and describe musical expression at the start of the study. She maintained deliberate expressive ideas, but they were sometimes lost in translation (or went off on in many directions) and so the MSMM study may have helped her better direct these thoughts into tangible musical gestures.

Comparative Analysis of Qualitative Data

A further exploration of this data is considered in the context of teacher surveys and student interviews. Several comparative analyses were completed: (1) student comments pre- and post- MSMM approach; (2) applied instrumental instructor's comments on student levels of musical expression pre- and post-MSMM approach (teacher's surveys); and (2) student comments pre- and post- MSMM approach (student interviews).

Student comments pre- and post- MSMM approach. A final indicator of student growth in performance quality is the expansion of an expressive vocabulary to better inform more compelling and visceral musical output. Three types of data provided

insight into this particular area of intended growth: (1) notes from the initial and final interviews; (2) recorded observations in student journals throughout the study; and (3) student notation on sheet music.

Pre-MSMM expressive vocabulary amongst students. Prior to the MSMM study, students tended toward a technical vocabulary that included references to the mechanics of playing, expressive markings in the music, and an exaggeration of musical gestures to portray an idea. Table 25 summarizes these results.

Table 25

Examples of Technical Vocabulary Used by Students Prior to the MSMM Approach

Areas of technical vocabulary	Student comments on individual musical selections	Student comments on Arietta
Mechanics of playing	Breath support (E); slowing down to make sure the fingers are flowing (B); moving the air (E); make sure the air is moving so the top note doesn't pop out (B)	
Expressive markings in the music	Hairpin things are very important (B); the quarter notes are establishing something and the eighth notes are leading into something else (B); heightening the tension because it is literally going from something slurred to something tongued (B); If you look at music, it is just a bunch of lines and a bunch of curves…like a roller coaster (D); stepwise motive in the music really starts to build up (D); yearning for the tonic, or holding back until you reach it (A); when you reach a *forte* following a section that is subdued, it definitely stands out (A); something about the triplet, I like best…because it is just different from everything else (C)	Pull back at the *ritardando* (E); there are a lot of clues in dynamics…so I tried to follow them (A)
Exaggeration of musical gestures to portray an idea	Leaps (B); I don't want to use the word swell, but I try and make something out of the *crescendo* (E); when it comes to articulation, I think of giving weight to a particular note (E); I like to extend intervals, really define them (D); I make changes in tone color and tempo [to reflect movement toward the tonic] (A); taking time…stretching [key notes] (A); I like it when you have big leaps…because they are	The use of an echo in repeated passages (E); the second time I played it, I needed to be more emphatic, so I increased the dynamic a little bit (E); bigger contrast in the dynamics by making a bigger *crescendo* and then immediately go into a *piano* (E); lines in a minor key

(Table continues)

	intimidating and dramatic (A); following the contour of the line…more intensity at the bottom (C); the rising interval makes me feel…'Yeah!' (C); I will slow down if the line is moving up and stretch just a bit before falling into the next bit (D); the more repeated the pattern is…[the] faster and more intense I play (D); leading with the notes…going into the end of the phrases (B); going somewhere new…literally, music theory wise, it is going somewhere (B)	evoke more of a heavier sense (E); I wanted the *forte* figures to sing (A); there is a tension…like straining or a pulling sensation (A); It is kind if a lilting feeling…I just wanted it to be a stark contrast from before (A); I brought out repeated patterns and tempo changes (C); I played the dotted-sixteenth-eighth-note rhythm with a diminuendo to make it sound like a sigh (C); I always make the jumping intervals stand out…because there is more space between the note[s] (C); I played loud the first time and soft the second time for repeated passages (B); definitely the faster notes/rhythms, like sixteenths lead into eighths. I will crescendo with those and then settle with the eighths…like resting, then you go back (B); I focus more on the first statement [in repeated passages] then come away on the second (D); I build up tension on the [ascending] stepwise figures (D)

Note. Student comments were obtained from the final interview transcripts. A technical vocabulary is used here to denote any physical or tangible musical gesture that is used to portray an expressive idea. These comments were obtained from interviews conducted immediately following student performances of their musical selections (Recording 1) and the Arietta (Recording 2), which were completed prior to interacting with the MSMM approach. Comments are linked to students by the letter in parenthesis following each statement. Total number of technical comments per student: Student B (10), Student A (9), Student E (9), Student D (7) and Student C (6). Total number of cumulative technical comments is 41 (25 for individual musical selection and 16 for Arietta).

Some students expressed a general focus on technicality over expression.

> Student E: "I worry a lot about the technical aspects of [music]…making sure the air and fingers are moving correctly."
>
> Student D: "…my teacher wanted me to get used to how things worked [on the instrument] and in certain time periods…so this one was more or less technique-oriented."
>
> Student D: "When I first practiced the piece, my first thought was 'crap' there are a lot of notes on the page."
>
> Student C: "[when] I'm learning the repertoire [I work] to get the notes…then whatever the expression is for that day will have to do."

> Student C: "…I used to ignore dynamic markings…I used to be like 'Ok, I just need to get through these notes and make it sound good.' I never really focused on dynamics until later."

Additional comments related to weaknesses in a specific area of technicality, such as rhythm.

> Student E: "I tend to be very methodical when it comes to rhythm…because that is my weakness."

> Student D: "I tend to struggle with the rhythm."

> Student C: "…that is my downfall…rhythmic troubles."

In other cases, students commented on nerves as a predisposing factor for eliciting technique-focused performing.

> Student E: "I was a little nervous at first…because I didn't want to mess this up…so I was thinking more technically."

These areas of focus seem to demand a great deal of cognitive energy from the student and require that attention is first (or entirely) directed toward the technical aspects of making music, sometimes without further exploration of the expressive goals.

While technique-focused vocabulary was prominent in the initial data (39 counts), students also demonstrated inclinations toward an expressive vocabulary (15 counts) in areas related to emotion, style, narrative, and use of imagery to guide expressive ideas. Table 26 summarizes these results.

Table 26

Examples of Expressive Vocabulary Used by Students Prior to the MSMM Approach

Areas of expressive vocabulary	Student comments on individual musical selections	Student comments on Arietta
Phrasing	N/A	N/A
Emotion	A sense of suffering…minor keys are very emotional in a sense (B); this piece is really about the sensitivity of the heart (D); the emotions are just like a push and pull (D); the emotion is a yearning…a gentle ache (A)	I wanted it to maintain the sweetness, while allowing it to explore different emotions (A); break down each section to see where the natural emotional places would be, based on leading tones, or something, kind of where it would grab you (B); I bring out the minor sections more than anything else. It just has emotion in it…due to the notes…whatever it is…anything minor (B); there is an unrest, like waiting for something (B); I thought about the overall mood, which seems really sad…small jumps in the beginning, nothing too dramatic (D)
Style		I wanted it to be soft, then something more powerful, then kind of retreating again (A)
Narrative	If I put a story to it, like a king ordering the knights into battle, there has to be a contrast between the middle section and the two outer sections (E)	I played around with it a little, with different characters on the repeating parts (A); with each repetition, I tried to give the [line] a separate voice…all interacting with each other (A); when something is repeating, you never want to have the some one repeated the same way…if you want to tell a story, you've got to tell it differently every time (D)
Imagery	I find myself thinking or seeing colors or images (D)	

Note. Student comments were obtained from the final interview transcripts. An expressive vocabulary is used here to denote bigger-picture conceptual ideas related to portraying an expressive idea. These comments were obtained from interviews conducted immediately following student performances of their musical selections (Recording 1) and the Arietta (Recording 2), which were completed prior to interacting with the MSMM approach. Comments are linked to students by the letter in parenthesis following each statement. Total number of expressive comments per student: Student A (5), Student D (5), Student B (4), Student E (1) and Student C (0). Total number of cumulative expressive comments is 15 (6 for individual musical selection and 9 for Arietta).

In other cases, students spoke about areas related to expression (emotion, energy, phrasing) but were unable to speak specifically about how to translate these larger expressive concepts into tangible musical gestures.

Student A: "[the register] is very high and when it is played perfectly in tune…and emotionally well, I love it."

Student A: "Actually making something out of the notes."

Student A: "I keep going until the phrase sounds good."

Student A: "Just literally as much as emotion as possible."

Student E: "…every once in a while when it comes to expression I'll do things related to color because that is how I see music…especially things with a strong tonal center."

Student E: "I try to think of what the composer had in mind…that is important to me as far as interpretation [is concerned]."

Student D: "I really wanted to know how I could look at a piece of music after listening to it and infuse my own emotion into it…I have a lot of natural instinct, so I can look at a piece and sort of put emotion into it and it will somehow be appropriate."

Student D: "…the piece is kind of relaxing…so I tried to express that…I tried to get my head into what felt like calm."

Student D: "I like to prepare a piece so well so that I can just forget about it and my muscles remember it so that I can really just let myself go…"

Student A: "[for expression] I rely mostly on instinct."

Student C: "I try to put something that I've done with my life…some sort of moment that happens to me. I try and apply it [in the music]."

Student C: "[expression] just kind of happens…it may change depending on the day I've had."

Post-MSMM expressive vocabulary amongst students. The countless examples of the expressive vocabulary used by students throughout the study have been thoroughly documented in the context of this paper (and in interviews on *Student Overall Reaction to the MSMM Approach as a Whole*) indicating tremendous growth in this area; however, a brief summary of each student's individual progress over the course of the study is noted as areas of improvement in expressive vocabulary from pre- to post-MSMM approach.

Student A had worked with the researcher using the MSMM approach prior to this study through a series of individualized teaching sessions and was familiar with the process and expectations of the approach. Her initial baseline results were averaged at 4.8 out of 10, 4.3 for the pre-MSMM recording and progressed to 8.5 for the post-MSMM approach. The Student's pre-MSMM expressive vocabulary was generally technical and focused on *expressive markings in the music* and *exaggeration of musical gestures to portray an idea* (See Table 25) with some exploration of *narrative* and *emotion* (See Table 26). In initial interviews, the Student explained that she "[relied] on instinct" or "making something of the notes" to convey expression and expressed concern with nerves and performance anxiety. Throughout the MSMM approach, the Student used Aural Modeling as a preferred method to explore emotions of "intense agony," "creepiness", and "yearning and longing" in deeper expressive contexts using a more profound expressive language. Improvisatory Storytelling was helpful for exploring these emotional outlets and detailing her thought process. The Student's main areas of growth were in overcoming technical limitations induced by nerves through Aural Modeling, in

particular, by having a reference point beyond the notes to focus thoughts and channel nervous energy.

Student B had no previous experience with the MSMM approach prior to the study. His initial baseline results were averaged at 6.7 out of 10, 1.9 for the pre-MSMM recording and progressed to 9 for the post-MSMM approach. The Student's pre-MSMM expressive vocabulary was generally technical and focused on *expressive markings in the music* and *exaggeration of musical gestures to portray an idea* (See Table 25). Initial interviews revealed that the Student seemed to recognize bigger picture emotions or moods (See Table 26), but was somewhat limited in expressive vocabulary beyond musical terms and markings. Expression was more accessible in familiar repertoire and less instinctive in unfamiliar repertoire. Also, the Student indicated difficulty in moving beyond imitated expression to expressive independence. Throughout the MSMM approach, the Student used images from Artistic Representation to "respond emotionally…and translate into music….[using] many images to bring up many emotions." The Student also used Aural Modeling to explore distinct style features in the background track to use as inspiration in other areas. This process required that the Student think independently about how he wished to perform those gestures and further develop them through Improvisatory Storytelling. Student B's main areas of growth were connecting bigger picture thinking of overall mood/emotion with more detailed expressive ideas and translating them into performable gestures. He also indicated growth in expressive vocabulary by indicating growth in *performance quality* in particular, "…now I actually can draw emotion from something and make it project…".

Student C also had no previous experience with the MSMM approach prior to the study. His initial baseline results were averaged at 2.1 out of 10, 3.13 for the pre-MSMM recording and progressed to 4.9 for the post-MSMM approach. The Student's pre-MSMM expressive vocabulary was only technical and focused mainly on *exaggeration of musical gestures to portray an idea* (Table 25). The student seemed more focused on the technical aspects (limitations) of playing the instrument rather than the expressive content of the music ("…when I'm learning repertoire [I work] to get the notes….whatever the expression is for that day will have to do"). Throughout the study, the Student used Artistic Representation to "…[consider] actual motions or words…to figure out what kind of articulation I want to use" and to move beyond the technicality of the instrument to the expression of the performance output. He also used Aural Modeling to provide "…something more specific to think about" that was related to the possibilities of the music rather than the limitations of the instrument. The main areas of growth for Student C were "inspired by the visual" possibilities of the image as they related to musical output and helped him to be more "conscious [of what I am doing expressively]…[by] putting a story to [the music] or by associating an image…with a story…[now] I'm able to think, 'Okay, there is actually something I can do with this," and to move beyond the instrument to the music itself.

Student D had no previous experience with the MSMM approach prior to the study. Her initial baseline results were averaged at 4.13 out of 10, 2.8 for the pre-MSMM recording and progressed to 5.13 for the post-MSMM approach. The Student's pre-MSMM expressive vocabulary was only slightly more technical than expressive

(compare Tables 25 and 26). Technical vocabulary was generally limited to *exaggeration of musical gestures to portray an idea* and expressive vocabulary referenced *emotion*, *narrative* and *imagery*. The Student indicated some tendencies toward expressive thinking early in the process, but was less adept at expressing theses ideas as musical output on the instrument ("…my teacher wanted me to get used to how things worked [on the instrument]…") and "I tend to struggle with rhythm." Additionally, the student had an active imagination that was at times not channeled properly into the musical output ("…I have a lot of natural instinct, so I can look at a piece and sort of put emotion into it and it will somehow be appropriate.") or was misdirected within the context of the music. The Student used Artistic Representation to further her understanding of the details of the image and the corresponding musical context, "I would first think about the overall take on the music, then look at the finger details of [the image…and apply them accordingly]." This method helped her better direct her expressive vocabulary into more appropriate musical contexts. She also used Aural Modeling to target aspects of rhythm including steadiness of tempo, accuracy of rhythmic figures and evenness of overall rhythmic motion, with a specific use of playing certain selections in half time to better internalize the bigger beat and feeling of the overall meter. Her main areas of growth were in better directing musical and expressive thoughts into more appropriate contexts with more consistent output and improvement of rhythmic consistency and steadiness of tempo.

Student E had some previous experience with the MSMM approach prior to the study from a class, in which the researcher featured an MSMM demonstration. His initial

baseline results were averaged at 2.8 out of 10, 5.3 for the pre-MSMM recording and progressed to 6.7 for the post-MSMM approach. The Student's pre-MSMM vocabulary was mainly technical and focused on *exaggeration of musical gestures to portray an idea* ("…when it come to articulation, I think of giving weight to a particular note," "I try to make something out of the *crescendo*," the use of an echo in repeated passages"; See Table 25). Although the student only made one mention of *narrative* in expressive vocabulary (See Table 26), it was evident this was his expressive tool throughout the study in the many examples of narratives he derived from the images. This student was also particularly motivated by color and his use of synesthesia to inform his initial impressions of image and how they translated to tone color, dynamics and character of the music. The student also expressed rhythmic limitations when learning music; "I tend to be very methodical when it comes to rhythm…because that is my weakness." The student used Artistic Representation to explore the role of narrative and the use of color to further enhance his performance of musical gestures and their expressive nuances. He used Aural Modeling to address his weakness of rhythm (by using familiar songs to stabilize tempo and play difficult technical passages more evenly) and to further explore style, "Listening to another waltz by the same composer gave me another perspective on how to approach the etude," "I can hear the difference between the *staccatos* and accents now…and have a better understanding of how the composer is doing it." Improvisatory Storytelling was also very effective for eliciting musical expression with this Student, as he was able to further embrace his training as a composer and to further explore those instincts. His main areas of growth were in the use of narrative and color to develop

musical gestures, familiarity of background tracks to control tempo fluctuation and improve rhythm and further develop his compositional training through improvised performances.

Tables 27 and 28 provide examples of technical and expressive vocabulary used by students after the MSMM approach and provide an overview for comparison with Tables 25 and 26.

Table 27

Examples of Technical Vocabulary Used by Students After the MSMM Approach

Areas of technical vocabulary	Student comments on individual musical selections	Student comments on Arietta
Mechanics of playing	N/A	I was consciously thinking about my starting note (C); as I became more comfortable with the music then I could better translate the musical ideas (E)
Expressive markings in the music	N/A	The *fermata* helped me with my arrival point (B)
Exaggeration of musical gestures to portray an idea	N/A	The descending line has a greater sense of direction for me (C); I brought out the difference between shorter rhythms and longer rhythms (B); I used the chromatic notes to build dissonance and tension (D)

Note. Student comments were obtained from the final interview transcripts. A technical vocabulary is used here to denote any physical or tangible musical gesture that is used to portray an expressive idea. These comments were obtained from interviews conducted immediately following student performances of the Arietta (Recording 3), which were completed after interacting with the MSMM approach. Comments are linked to students by the letter in parenthesis following each statement. Total number of technical comments per student: Student B (2), Student C (2), Student D (1), Student E (1), and Student A (0). Total number of cumulative technical comments is 6. Compare with Table 25.

Table 28

Examples of Expressive Vocabulary Used by Students After the MSMM Approach

Areas of expressive vocabulary	Student comments on individual musical selections	Student comments on Arietta
Phrasing	N/A	I focused on the descents as sigh gestures (C); I am trying to catch [the mysterious girl] as she walks off down the road [like an *accelerando*] (C); the phrase grew and then shied away like the female character would (B); the light in this piece would represent a crescendo (B); the sigh motives really carry the motion (B); the curls of the tree acted like movement from one phrase to the next (D); I recalled the idea of footsteps coming closer and getting louder to create movement with the repeated eighth notes (D); the sun is in the distance and I am going toward it (E)
Emotion	N/A	This [section] was the happier side of the piece, like the sun coming through the trees…I used that more (B); the beginning is remembering the happiness and then it goes sad and the [tone] colors change (B); I would respond emotionally to the image in my head and then try to translate that into the music (D); I feel the character's sense of yearning and longing (A); there is an intense agony (A); I felt the weight of the ensuing destruction (E)
Style	N/A	…the characteristic eeriness of it (C); I can sense the darkness of the mood of the piece (C); the repeated eighth notes were the footsteps [of the mysterious girl] as she was walking down the road, like a natural acceleration (C); the style was very seductive (C); actual motions and words helped me figure out the articulation (C); The colors [in my mind] were very vivid and helped me to portray the mood (B); I made the sixteenths more driving toward the light, graceful in a sense (B); the light in this piece would represent a crescendo, like a different style…more color and happier and more connected (B); it can be light in a sense, but not staccato, more feather like (B); the *piano* dynamics are more graceful and the *crescendos* are happy (B); my overall take on this piece is to have the dark mysterious sound with an emptiness to it like the wintery image (D); I thought of the middle section as a motherly and tender moment [like in the Botticelli painting] (D); the creepiness is very tangible (A); I wanted to portray her tenderness and delicacy (A)

(Table continues)

Narrative	N/A	It is like an actor. I tell the story. I always look at the picture and I had to tell a story with music that is related to the image (E); I am in the midst of this battle with opposing forces (E); I thought of the first two measures as the woman realizing what is happening and then trying to remember what happened…so more hesitation (B); I imagined the woman crying [to create the sigh gestures] (B)
Imagery	N/A	I was thinking of walking up to the girl [as I approached the *fermata*] and seeing right through her, then blacking out and it starts all over again (C); I thought a lot about light versus dark (B); I thought of the image with the overgrown tree…it was overtaken…the roots and tree were dark brown and grey (D); I felt the calm of the spa music in my playing (D); I imagined the dialogue between the two mountain slopes (A); I can imagine the lava and I am hopping from one mass to the next (E)

Note. Student comments were obtained from the final interview transcripts. An expressive vocabulary is used here to denote bigger-picture conceptual ideas related to portraying an expressive idea. These comments were obtained from the final interviews conducted immediately following student performances of the Arietta (Recording 3), which were completed after interacting with the MSMM approach. Comments are linked to students by the letter in parenthesis following each statement. Total number of expressive comments per student: Student B (13), Student C (8), Student D (7), Student A (5), Student E (5). Total number of cumulative expressive comments is 38. Compare with Table 26.

Student comments are more frequent in the expressive categories and are generally linked to the images and background tracks students recalled throughout the study to convey expressive ideas. The numerical analysis of Tables 25-28 provides more evidence in favor of collective growth in expressive vocabulary from pre- to post-MSMM interactions. Figure 59 shows the illustrative comparison of these results.

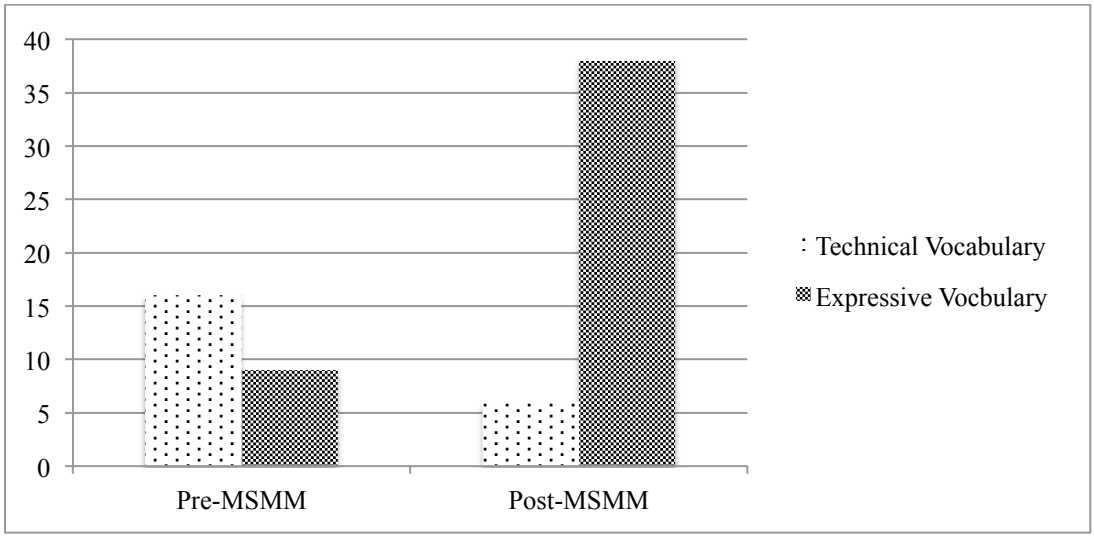

Figure 59. Comparative results of pre-MSMM and post-MSMM technical and expressive vocabulary amongst students. Range is from six to 38. Data was collected from Tables 25-28 and pertained only to the comments about the Arietta. Summary of counts for pre-MSMM technical vocabulary was 16 and for post-MSMM 9. Summary of counts for pre-MSMM expressive vocabulary was 6 and for post-MSMM 38.

Applied instrumental instructor's comments on student levels of musical expression pre- and post-MSMM approach. An important consideration for the effectiveness of this approach is the students' applied instrumental instructor's comments on the noted progress of their individual students over the course of the 14-week study. All of the available teacher comments are listed in Table 29 and remark on areas of improvement or otherwise for each student.

Table 29

Applied Instrumental Instructor's Comments on Student Levels of Musical Expression

Pre- and Post-MSMM Approach

	Describe your student's overall level of musical expression	Rate your student's overall level of musical expression in relation to the five components of music	Discuss and provide examples of your student's expressive language
Student A	Pre: "Her physical demeanor is very tense and fidgety. I think there are large issues to overcome with her daily lifestyle. She does love music!" Post: N/A	Pre: Overall mood/emotion: "Weak." Rhythmic inflection: "There at times." Style: "If she practiced more." Dynamics: "Has to be prodded then they go away." Articulation: "No." Post: N/A	Pre: "This student doesn't practice much, and the tenseness really gets in the way. Natural fingers and technique, though. Not sure how she does it, but she gets through performances." Post: N/A
Student B	Pre: "[Student B] is a 4-5 on a scale of 1-10 (1 being no expression and 10 being professional level of expression), depending on whether or not he likes the piece. As he masters control over his instrument he is learning more about how to achieve expressive independence." Post: "Very good college level, but not yet professional."	Pre: Overall mood/emotion: 5 Rhythmic inflection: 4 Style: 5 Dynamics: 5 Articulation: 4 (*Scale of 1-5 with 5 being the highest*) Post: Overall mood/emotion: 3 Rhythmic inflection: 3 Style: 4 Dynamics: 3 Articulation: 2 (*Scale of 1-5 with 5 being the highest*)	Pre: "[Student B] is on the road to being more independently expressive (expressiveness without coaxing). He has a lot 'inside' him, but needs to gain more mastery of his instrument to really learn how to express himself." Post: "He can imitate well, but he doesn't yet have an internal understanding of how to show what the composer is trying to express. He plays the [instrument] quite beautifully, but he can be too concerned with playing the [instrument] well and therefore has a hard time conveying the music."
Student C	Pre: N/A Post: [Student C] has matured greatly. He exhibits a high level of expression, at times out stripping his technical ability, but always grounded in sound principals."	Pre: N/A Post: Overall mood/emotion: 4 Rhythmic inflection: 4 Style: 5 Dynamics: 4 Articulation: 3 (*Scale of 1-5 with 5 being the highest*)	Pre: N/A Post: "[Student C] has successfully transitioned from Baroque to expansive chromaticism to classical purity throughout this upcoming recital program."

(Table continues)

Student D	Pre: N/A Post: N/A	Pre: N/A Post: N/A	Pre: N/A Post: N/A
Student E	Pre: "[Student E]'s overall level is moderate. He does not communicate verbally with ease, but his musical expression as at an even lower level. Once I teach him how to play a phrase musically, he is able to imitate it back, but he typically does not enter a lesson with musical expression as a part of the initial learning. When he better understands a piece, his ability to express verbally and musically increases dramatically Post: "[Student E] is extremely expressive when he plays. The listener truly 'feels' his playing and it is quite emotional, especially when he is performing an expressive piece."	Pre: Overall mood/emotion: "After studying a piece for a couple of weeks, he is able to create distinct moods." Rhythmic inflection: He does this moderately well, but does need to study rhythms for accuracy first, then extend into expression." Style: "He is quite good at this." Dynamics: "He typically does note follow dynamics until they are pointed out to him." Articulation: "He has to spend a lot of time focusing in order to correctly articulate passages. Simply getting accurate articulations takes effort. Expression from there is rare." Post: Overall mood/emotion: 5 Rhythmic inflection: 4 Style: 4 Dynamics: 5 Articulation: 4 (*Scale of 1-5 with 5 being the highest*)	Pre: "When [Student E] has studied a piece for a while…his expressiveness begins to really come along. He is much more expressive when he performs at a standing position and he typically moves with the phrase and doesn't simply move with the beat itself." Post: "[Student E] would typically paint a verbal picture of what the music expresses to him personally (like fog rising from a lake as the sun comes up) and then would work towards translating his verbal/thoughtful picture into something that emotes the same picture to the listener when he performs it. He was very successful at doing this!"

Note. Some answers were not available and indicated as such with NA. Teacher surveys were administered prior to the start of the study and at the conclusion of the study. Comments were missing due to confidentially concerns among some of the applied instrumental instructors, particularly in studios with only one student represented in the study.

The most notable comparative examples include Students B and D. Student B's teacher spoke to his facility on the instrument as a strength and something that should facilitate greater expressive freedom. Furthermore, it was noted that the Student does well with imitation, but needs to develop his ability to communicate musical ideas independently. This independence did emerge in the Student's final interviews as demonstrated by his ability to discuss in more detail (than prior to the study) his awareness and understanding of the expressive moments in the music.

Student E's teacher spoke to his progress in moving from simply imitating musical expression to noticeably "feeling" it. His teacher also mentioned the importance this Student needing to fully understand the music before expressing it in a compelling way. His teacher's description of his musical language after the MSMM study was in accordance with the MSMM approach ("[Student E] can paint a verbal picture of what the music means to him personally…and then work toward translating his verbal/thoughtful picture into something that emotes the same picture to the listener"). Additionally, Student E's teacher commented on his physical accompaniment to expressive playing, which was also noted in several of the Aural Modeling examples throughout the study and is therefore consistent with his style of learning.

Student A's teacher spoke in general to her level of nerves and tenseness that seemed to distract her from the expressive process and music in general. In many of the examples listed throughout the study, Student A was given opportunities to explore outlets through images and music to keep her more focused on the expressive process itself and less concerned with nerves or tension. These exercises may have proven effective in helping her to overcome her teacher's concerns with nerves and performance anxiety.

Student C's teacher commented on his high level of expression and stylistic transition from Baroque to Classical music in preparation for upcoming performances. These comments reference an improvement in his expressive language and musical output especially with regard to style, which was also documented in a further developed expressive language in his interviews post-MSMM approach.

In general, several pre-MSMM study points were raised by the teachers that were successfully addressed throughout the study, including nerves and tension, moving beyond imitation to mastering independently guided expressive ideas, translating verbal pictures or images to performable musical gestures, developing expression through understanding of style and incorporating natural learning styles and tendencies into the expressive process. In addition to noting improvement in some students' expressive understanding, these teacher surveys also provided insights into the areas of improvement that were important for the continued expressive growth of their students.

Pre-MSMM Expressive Tendencies of Students as Described by Applied Instrumental Instructors

Data collected from a pre-MSMM survey administered to students' applied instrumental instructors revealed several habits or tendencies amongst students in their approach to musical expression. Instructors considered the following two questions: (1) at what stage of learning does the student begin to incorporate expressive ideas and how integrated is musical expression in the student's performance and practice habits; and (2) list and describe a few examples of the techniques used to incorporate musical expression (including examples of your approaches for teaching musical expression to your students).

Stage of learning

The first question reveled a set of habits that are common among students of this age group and provide further insight into their thought processes for musical expression at this stage of learning. The comments listed below are in the words of the applied

instrumental instructors of their individual student. One teacher described her student in the following way, "This student does not practice much and is physically very tense. I sense with practice and no physical issues she would actually be a great player. She has a level of innate musicality but is scared to demonstrate it. So, musically is always late to the game." This area of concern relates to particular mental blocks when it comes to practicing (tension, nerves, lack of engagement) that might deter a student from fully exploring the possibilities of musical expression.

Another teacher reported her approach to the student's incorporation of expressive ideas:

> …it is not until the very end—multiple weeks of lessons—that the student's expressive nature comes out. It requires a great deal of time practicing the "logistics" of the music (rhythm, notes, dynamics) for accuracy and comfort before he makes the music his own. He does not intuitively play musically from the very start of learning a piece.

These two approaches reveal a spectrum of learning that is common among this age group. Some students integrate expressive thinking in the early stages of learning, while others consider it secondary to the technical requirements necessary for fully learning the music. This provides another opportunity for teachers to consider ways of incorporating expression into the early stages of learning music (rhythm, dynamics, phrasing and note accuracy, style features). One teacher provides an example of this in her comments, "expressiveness is incorporated into every aspect of his assigned repertoire: scales, etudes and pieces." This approach is one such of example of incorporating expression early in the learning process by varying its outlets for teaching and learning beyond just the repertoire.

Techniques for teaching and learning musical expression

The teacher comments in the surveys also provided some insights into the techniques that were used for teaching and learning musical expression at the collegiate level. Some teachers described specific tools for creating expression: (1) use of palate for expression; (2) vibrato; (3) air stream/speed; (4) breathing styles; (5) finding the 'line' in technical passages; (6) finding large and mini goals in the slower melodic lines; (7) using articulation to achieve nuance and character; and (8) write markings on the sheet music and "discuss the energy" of the notes and where they lead to musically.

Others listed imitation as a prominent tool for teaching expression. One teacher commented, "I spend a lot of time playing for my students and having them try to imitate. Once it becomes 'their own' then they are able to make personal musical decisions that mean something to them." Another teacher recommended listening to recordings as a form of imitation to enhance musical expression.

Some teachers used the approach of working from the student's initial interpretation of the expressive tendencies in the music. One teacher approached this by "…asking students to prepare a new piece (a page or two at a time) on their own to see what they come up with musically, prior to us working on it in lessons. Then, we discuss and work on multiple options and find out what is most suitable for each situation." Similarly, "the main technique I have used…is to have [the student] start with her own ideas and then greatly exaggerate them, sometimes to the point where she goes beyond her comfort zone. We will also trying playing a phrase several different ways to help her gain flexibility and spontaneity in performance situations." The teachers in both of these

circumstances actively seek out input from the student and help him or her to further develop expressive ideas in the music.

These insights provide further explanation for how students approach musical expression early in the learning process and the techniques that teachers use for guiding their students further into the process.

CHAPTER VII—DISCUSSION

Summary

The aim of this study was to gain insight into student learning through the application of a new approach for learning musical expression. Currently, musical expression is often neglected, overlooked, or replaced by technique-focused instruction in private music instruction due to several common challenges: (1) the emotional character of musical expression is derived from a very personal domain of the individual musician making it difficult for him or her to verbalize expression (Hultberg, 2007); (2) the ability to play expressively is often regarded as a skill that reflects only musical talent and cannot be learned; (3) much knowledge concerning expression is tacit and therefore difficult to convey in words (Juslin, 2003); performing arts (specifically musical expression) lack the concrete form of "mental structures and schemata" (Brigham, 1979, p.12) that make knowledge tangible and accessible. The sensory and experiential processes of active learning are necessary for students to engage in sensory perceptual thinking. In music, this type of thinking is referred to as metaperception (Haroutounian, 2002) and describes the interpretative process of musicians as they navigate artistic possibilities and creative solutions in the context of music. An approach is needed to activate metaperceptive thinking in musicians and address the challenges that inhibit expressive teaching and learning in private music instruction.

The Multisensory Music Making (MSMM) approach uses both visual and auditory stimuli to elicit a descriptive and emotional vocabulary for musical expression and to heighten one's awareness in relation to the expressive process. Three methods are intended to help students play more expressively, and include Artistic Representation, Aural Modeling and Improvisatory Storytelling. To help navigate the expressive landscape, these three methods are used in conjunction with five components of music, including (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and (5) articulation. A personalized translation process ensues to assist students in moving from an intangible, descriptive medium (image, sound) to a tangible, musical gesture (performance). Armed with expressive possibilities and a highly informed translation process throughout this study, students experienced new levels of musical sensibilities that not only improved their interpretative skills and performance quality, but also authenticated their individuality and creativity as a musician.

This study sought to explore three research questions:

1. How does the MSMM approach develop a *vocabulary* for the process of learning musical expression, and whole role does metaperception play in this process?
2. What is the student's *experience* like using the MSMM approach to develop a deeper emotional connection with the music?
3. What is the *quality of performance* demonstrated by students using the MSMM approach?

Several areas of data collected aided in the gathering of information related to these questions and included:

1. Researcher observations.
2. Student interviews.
3. Surveys from teachers in observation of their student's progress in terms of expressive playing.
4. Student documents (such as notes in music and journal entries).
5. Audiovisual materials (as gathered from videotaped and audio sessions).
6. Observations/evaluations gathered from third-part judges in assessment of performance quality of recorded performances of the participants.

Data yielded a wealth of information concerning the mental/perceptive process of musical learning. It also provided insights into the approach's effectiveness and ease and accessibility of the approach overall. The data is discussed as a series of the most relevant learning outcomes unique to each of the research questions and is further examined in terms of its implications for future research.

Metaperception

The interpretative process is a very individualized one that varies greatly from one person to the next and from one musical selection to the next. An exploration within this process should occur in such a way that is unique to the musical language[17], experiences, and sensibilities of each student. The role of the teacher in this process is to facilitate

[17] Musical language is an outgrowth of each student's expressive vocabulary as it becomes highly personalized and consistent with the student's learning style and musical preferences.

student learning through a lens that centers on the emotional and descriptive language of the student to best access complex expressive concepts. The findings in this study reveal dozens of examples for how customized these language profiles are for each student, and also demonstrate that most were appropriate for the intended expressive goals within a given musical context. Thus, the main learning outcomes for this research question that facilitate the development of an expressive vocabulary in accordance with the main principles of metaperception are:

1. Individualize the expressive language for each student.
2. Link expressive goals with clearly articulated and performable musical gestures.
3. Filter and process sensory perceptions into meaningful information.

Individualize the Expressive Language for Each Student

The most important learning outcome has to do with tailoring the use of an expressive language to each student by carefully selecting images and background tracks that are chosen with the student's preferences in mind while preserving the overall expressive/musical context and intention. Results of the study show that these preferences are influenced by several factors, including past experiences and memories, image specifications (realistic versus unrealistic), background track specifications (familiar versus unfamiliar), preconceived associations (with colors, words, characters, style features), inclinations toward certain colors or keys, and varying types of language modalities (figurative, musically technical, physically descriptive, illustrative and metaphoric). Attention to student preference and the various factors that influence the

student's learning process provide a platform for teachers and students to work together in an exploratory, student-centered environment that encourages deep learning [18]and provides a more meaningful and engaging learning experience for the student.

Link Expressive Goals with Clearly Articulated and Performable Musical Gestures

Numerous studies have shown the importance of clearly stating an expressive goal prior to performing a designated phrase, passage or selection in the music (Woody, 1999; Woody, 2003; & Anemone, G.W., Zijl, V., & Sloboda, J., 2010). Committing to an expressive goal requires that a student understands his or her musical intentions and can accurately describe the goal, relate it to the musical setting and demonstrate the corresponding performable musical gesture(s) on his or her instrument. This is the translation process by which a student breaks down a broad expressive concept into manageable units that are illuminated through images and background tracks, and eventually performed on the instrument in practice and performance. Without expressive goals, students often tended toward random performance output that lacked the nuances of the intended musical context and/or consistency in subsequent performances. Also, by exploring expressive goals in the context of the five components of music, students had a process for understanding the music from a number of different perspectives and with great attention to detail.

[18] Deep learning refers to the transformation of knowledge as opposed to the reproduction of knowledge as in surface learning. Characteristics include: (1) focus is on "what is signified"; (2) relating previous knowledge to new knowledge; (3) relates knowledge from different courses; (4) relates theoretical ideas to everyday experience; (5) relates and distinguishes evidence and argument; (6) organizes and structures content into coherent whole; and (7) emphasis is internal, from within the student (Atherton, 2013).

Filter and Process Sensory Perceptions into Meaningful Information

The filtering and processing of sensory perceptions[19] varied greatly among the students and required a balance between guiding the student toward the appropriate expressive goal as well as navigating the visual and auditory stimuli in such a way that made sense to the student and was not overwhelming, confusing, or detracting from the expressive goal. The most effective approach to filtering sensory input was to present a sampling of options to the student for his or her choosing. With an expressive goal in mind, the student was able to filter out images or background tracks that were not in alignment with the goal, and to focus more closely on those that contained elements of the expressive concept they wished to achieve. Options were presented in a series of categories that were narrowed down at each level (e.g., overall mood/emotion of dark was narrowed down to images of dark forests that were then narrowed down to images of single trees at nighttime to achieve an expressive goal of solitude). This selection process helped students navigate the sensory information in such a way that made it more manageable and accessible for achieving the desired expressive goal.

Processing sensory perceptions took place as a secondary action after filtering through a series of options. The visual processing of images required that students isolate various components or features from the image (color, texture, character, energy or movement) to inform larger expressive ideas. Students discussed these features within the context of the expressive idea by comparing and demonstrating (singing or performing) various options for the performable musical gestures that best portrayed the idea. This is

[19] Sensory perception is the organization, identification, and interpretation of sensory information in order to represent and understand the environment.

a very intricate process and sometimes students were overwhelmed with options and features to the point of distraction. The best efforts to counteract these distractions were to keep students focused on one expressive goal and one to three features from the image to explore/develop that goal. It was also helpful for students to work with only one or two images in a single session to keep their attention and memory sharp for as long as possible without distraction. The aural processing of background tracks required some initial processing time for students to take in the wealth of auditory stimuli that absorbed their attention. The most effective approach for facilitating the processing of sensory information in this method was to have students focus on either the bigger picture sound profile of the music (overall style, mood, tempo) without getting caught up in the details; simply follow along with the music. Student and researcher followed with a discussion of the salient points in the music that best achieved the expressive goal in performance. Another way to facilitate this process was to have students play a short excerpt from their musical selection and loop it against a salient feature in the music (accents, style feature, tempo changes) to ensure they focused on one gesture that was true to the expressive goal. When students broke down the visual and auditory stimuli into small chunks of meaningful information that was applied directly to their expressive goal, they were able to overcome any distractions relating to the processing of sensory perceptions and could navigate the stimuli in ways that produced consistent and compelling performance output.

The learning outcomes associated with metaperception play a large role in highlighting the nuances and intricacies of student-centered learning as well as

considerations for teacher facilitation of the MSMM approach for learning musical expression.

Experience

Recall the current methods for teaching musical expression based on the current literature in music education: (1) figurative language (imposed by the teacher); (2) aural modeling (imitation of teacher); (3) behaviorist-dominated teaching methods (master/apprentice approach); and (4) and a limited focus on technical mastery. These methods all place the teacher at the center of the learning and essentially limit students to the perceptions, preferences, and language of the teacher, and generally do so in a technique-focused manner. While it is of utmost importance that students develop "expressive templates" that are derived from a technical language and through teacher directives and listening/imitation, students still need the tools to develop their individual expressive instincts beyond the guidance of their teachers. This is why an approach such as MSMM is an important transitional tool for helping students embrace a more independent mindset and take ownership over their expressive sensibilities.

Furthermore, the climate for learning is changing and evidence is building a strong case for experiential learning (Kolb and Kolb, 2009; Hodge, 2010; & Zull, 2002), which requires that students interact with the material they are learning. Multisensory learning is one such method for engaging students with material from a variety of sensory perspectives. Additionally, hands-on learning cycles developed by Zull (sense, integrate, act) and Kolb (concrete experience, reflective observation, abstract conceptualization, active experimentation) place the student at the center of the learning process. The

combination of these processes in the context of learning musical expression gives students an intellectual ownership over their expressive output and strengthens their interpretative abilities.

In this study, the student experience was captured through hours of observation, interviews, and journal entries. This ongoing process revealed a myriad of options for how to use each method and points of accessibility that are helpful for teachers and other students who wish to use this approach. Additionally, students established contact points for establishing a deeper emotional connection to music making, which ultimately improved the overall growth potential for students using the approach. These revelations were all identified by the students throughout the study and recorded by the researcher as some of the most compelling research output from the study. Furthermore, they reflect artistic ways of knowing that are in accordance with the principles and methods for experiential learning and make a strong case for the effectiveness of this approach for learning musical expression.

How to Use MSMM Methods

The vast amount of student performance output and discussion points provided detailed insights into the use of the MSMM approach from several different perspectives and yielded a variety of options (learning outcomes) for use of each method.

Artistic Representation. The student experience with Artistic Representation initially centered on the use of specific visual features in the image, such as degrees of movement or energy, landscapes, textures and colors to inform the expressive process. These were often the best starting points for exploration, which were later developed

through the student's ability to relate to the characters, narrative, or setting of the image. In cases where images were realistic (photographs, or paintings portraying real-life scenes or people), students seemed more adept at relating to the experience and expanding their expressive possibilities; however, images that were unrealistic (digitally altered, or paintings) provided some imaginative outlets for students who were comfortable exploring outside of their comfort zone.

Aural Modeling. For Aural Modeling, the response mechanisms were the most helpful insight into use of this method. Student interactions with the background tracks were carefully observed and categorized into specific response mechanisms that served as facilitators for the Aural Modeling process. The most common response mechanisms (matching style, aligning motivic gestures, looping and providing a steady beat) are usable by any teacher or student trying the method for the first time, as they are the most intuitive and immediately accessible for achieving results. Aural Modeling taps into our most natural instinct as musicians—active listening—by absorbing what we are hearing and then using those sound cues to inform our performance. This interactive process is at the core of the music-making process and is a necessary skill for all musicians. Aural Modeling can help students establish a musical context or overall mood, understand a particular style or genre of music (especially when paired with a background track that is familiar to the student), and develop rhythmic stability (as an alternative/addition to the metronome).

Improvisatory Storytelling. This method requires a great deal of trust between student and teacher and is best explored in a setting that is familiar to the student, and

uses image/sound profiles unique to the student's preferences. The approach is best navigated by using methods of planning and a focus on active listening. Methods of planning help the student connect with the image and/or background track by exposing salient features and translating them directly to a performance gesture (e.g., colors with tone; motives with phrases; characters or subjects with rhythms). Methods of planning require that students listen for specific musical features, such as key, tempo, or style to make the best decisions on how to improvise in an appropriate and complementary way. These methods alleviate some of the anxiety of an initial improvisation and keep the focus on the image or background track instead of on the student (thereby reducing self-consciousness about improvising).

Additionally, the layering of particularly emotional or inspiring music (or images) can inspire spontaneous performances and animated discussions about what the student experienced in those moments. It is important to document these experiences so that teachers and students can call upon them later for use in other contexts (to inspire/elicit an emotional connection with another piece, alleviate pre-performance nerves, or assist with practicing).

General Observations. The order with which these methods are presented to students is an important consideration, as it seems to ease them into the process by starting with more intuitive actions in Artistic Representation and moving toward more conscious decisions in Improvisatory Storytelling (even though improvisation is the most intuitive form of music, it still requires "new users" to think deliberately at first to gain an awareness of their musical actions and responses before they can "let go (improvise)" to

the music). Moving through these methods in this order also reflects the process of expression in that it begins as tangible action (Artistic Representation and use of an unchanging image) to something that is less tangible (Aural Modeling and use of observed sound cues) to something that is intangible (Improvisatory Storytelling and the unpredictability of musical output). The expressive process begins as something tangible (a deliberate musical marking on the page, such as a *crescendo*) to something that is less tangible (the creation of this musical marking (*crescendo*) on the instrument by using different air speed, tone color, or variations of these both, resulting in observed sound cues that can be varied or changed over time) to something that is intangible (feeling the expressive gestures or implied musical ideas within a greater musical context or simply "feeling the music" in an improvisation).

In some cases the initial presentation of a new method was met with some anxiety or resistance. This required a great deal of patience on the part of the researcher (or teacher) and a delicate line of questioning that helped students move into the method more easily and naturally. Often referencing students back to what they already do (in practice and performance) and bringing that awareness into the approach helped to ease them in and experience the approach more completely. The basic notion of trying something new (especially with something as intimate as expression) can be an uncomfortable task for some students, but with constant encouragement and use of images and background tracks that are familiar to the student, he or she is likely to overcome any lingering fears of feeling vulnerable, nervous or uncomfortable.

Careful observation of the various student approaches to these methods will shed light on the totality of the experience for those who are new to MSMM. Also, consideration of these points is beneficial for teachers or students wishing to experiment with the MSMM approach and are looking for ways to use the approach in their practice or teaching.

Points of Accessibility

The ease and accessibility with which students experienced each method is also helpful for gaining a better understanding of how to integrate the approach with newer students. What emerged from the data were several features of accessibility that were directly linked to the prominent actions of each method and listed as specific directives to guide students in their interactions with the process. These features were categorized as either accessible or inaccessible and are perhaps the most useful tools for teachers who wish to work with their students using the approach, as they serve as guides for the best approaches overall.

Artistic Representation. The most prominent actions for Artistic Representation were image selection, translation process, character development, relatability and recall. Collectively, these actions outline the complete experience that is Artistic Representation, but also leave room for the addition of new actions to further raise the levels of accessibility for teachers and students.

All of the actions that prompted accessibility were student-centered and self-directed[20], requiring that the student make conscious decisions for each action in the process. This encouraged students to fully immerse themselves in the interpretative process and take ownership over their learning. In general, the actions that facilitated accessibility of learning were those in which the process was individualized for students, giving them the creative freedom to select images that were best suited to their preferences (and the musical context), using a variety of metaphorical, figurative and descriptive language that was best suited to the student's learning style, and choosing characters that were familiar or relatable. These options meant that students could work from their existing database of information to form new ideas and opinions in an expressive context.

Aural Modeling. The actions for Aural Modeling were categorized as either challenging or helpful. Actions that were considered challenging include methods of planning and distractions that occur when layering a student's performance of a musical selection with a different song in the background track. This requires diligent preparation on the part of the teacher (or the student) to coordinate this layering process and to avoid as many distractions as possible by eliminating key/tempo discrepancies, allowing sufficient listening time for the student to get a sense of the music (especially if it is unfamiliar to him or her), and focusing the student's attention on specific aural cues or expressive goals (e.g., rhythm, tempo, accents, tempo changes). Aspects of Aural Modeling that were helpful also pertained to the importance of familiarity (song choice,

[20] Self-directed learning occurs when the individual takes the initiative and the responsibility for the action. Individuals select, manage and assess their own learning activities. Self-directed learning involves initiating personal goals and developing the qualities to pursue them successfully (Gibbons, 2014).

knowledge of tempos/style/rhythms/harmony) when working through the layering process.

Improvisatory Storytelling. The actions for Improvisatory Storytelling were also categorized according to whether they were helpful or challenging. One action in particular that was helpful was directing the students' attention away from their own performance (and the associated vulnerability of improvising) to a specific reference point that would help guide the improvisation (e.g., inspiration from previously performed musical selections, use of specific musical ideas or motives, focusing on the overall mood or emotion (of the image or background track), playing along as an accompaniment to the background track, linking visual features from the image with those of the background track and then their portrayal in the improvisation). Similarly, if students felt they were portraying (through the improvised performance) the mood, emotions or feelings of a character/subject from an image then there was less of a focus on the students' emotions and feelings and they felt freer to improvise without feeling "judged." Additionally, discussion on/ demonstration of the use of critical diatonic pitches, melodic motives, scales and other musical "tools" also helped students stay focused on a central feature of their improvisation and reduce anxious feelings of improvising with seemingly little information.

Actions of Improvisatory Storytelling that were challenging were unique to either the visual or aural portion of the method. Visually, the main challenge was choosing an appropriate key to portray the image. Some students needed extra "experimental" time to choose a key before engaging in the full improvisation. Simply giving the student the

creative space to explore/discuss various key options eliminated this as a point of concern and made it just another step in the process. Aural challenges dealt with navigating unfamiliar musical territory. Having to supply an improvisatory backdrop to a background track proved a challenging task in that students had to develop a sense of the background track before engaging in an appropriate or complementary improvisation. Acknowledgement of the key (of the background track) and/or tonal center was the first step in the process. This was a point of anxiety for several students in the study, and should be kept in mind when teachers choose background tracks for these sessions; either inform students ahead of time of the key or tonal center, or help them navigate the music by playing along until they establish the key by ear.

Combined use of the visual and aural components produced either a challenge or an opportunity. In some cases, the visual features of the image did not align with the background track, causing a conflict of emotions. This occurred when a student improvised to an image (using a designated emotion) and then heard a background track that represented a different emotion. As a result, it made improvising to both stimuli confusing and difficult for the student and required a reworking of the image/sound profile. In other cases, it changed the student's perspective of the image and he or she felt comfortable exploring other improvisatory possibilities. Again, a delicate balance of encouraging students to go outside of their comfort zone, but maintaining some sense of familiarity and ownership over the expressive process is necessary for implementing this method in particular.

General Observations. The accessibility for each method was ultimately determined by the accessibility of the translation process from one medium to another and varied greatly among the three methods. Naturally, Artistic Representation was the most intuitive approach as it allowed students to apply the tangible (visual feature in an image) with the tangible (performable musical gesture). The translation process for this method was very direct and resulted in generally very applicable expressive ideas in performance.

Aural Modeling was least direct method for students and was initially very distracting. The idea of layering two different musical tracks (their musical selection with that of a background track) was confusing and took some adjustment; however, students demonstrated dramatic expressive results and increased proficiency in the method (as compared with Artistic Representation) in subsequent performances. The translation process is less direct for Aural Modeling, yet it is more intuitive than Artistic Representation as it draws upon skills that are more inherent to musicians (active listening, imitation), albeit in a context that is more complex. Students were required to absorb aural cues from the background track, while simultaneously applying them to their musical selection. The cognitive energy for this task was very demanding and therefore required heightened awareness and focus from the student.

Improvisatory Storytelling was the least accessible of the three methods. Even though students worked with the same amount of visual and auditory stimuli, they no longer had a musical reference with which to work. Instead, they were working from an intangible expressive form that is derived from spontaneous instincts based in one's

musical knowledge at any given moment. The subjective nature of improvisation lends itself to a translation process that is more susceptible to variation, critique, and cognitive alertness. It is best to start with the most accessible method, Artistic Representation to help students develop direct links between the visual and performable, and then move into Aural Modeling, which taps into musician's most important skill applied in a new context, and finally to the most personalized art of musicianship—improvisation—and the ability to cultivate individualized musical ideas and apply their associated emotional identifiers to other applicable moments and gestures in music.

The Development of a Deeper Emotional Connection to the Music

The most telling revelations in this study emerged from the data supporting the development of a deeper emotional connection to the music-making process. Students demonstrated the most compelling transformations in this area of the study. Collectively, among the three methods, the same three themes continuously emerged throughout the study: (1) relatability; (2) emotionality; and (3) vulnerability.

The most important tool for helping students gain emotional insights into the music they are learning, as well as the music they are performing is to engage them in experiences that are relatable to their life and musical preferences. A student's ability to learn is very intimately linked with his or her ability to relate to the material and/or categorize new information with concepts that are already established in his or her thought process. The wealth of examples in this study demonstrates the process by which students used visual and auditory stimuli that were in some way familiar, memorable, or personal to them. Relatability encourages a student to "enter" into the visual/aural

landscape to absorb, imitate, impersonate or experience the associated emotions of the image/background track (and often times ones that are similar to those they have felt) and allows those emotions to filter through their performance. Relatability diminishes learning barriers (by working with an existing knowledge base), engages the emotional interest of the student (by referencing emotions that are familiar to the student), and facilitates the learning process (by lessening the cognitive demand of handling an entirely new concept in a complex context).

Emotionality is the measure of one's emotional reactivity to a stimulus, which is often observable by other people. Emotionality is also a product of relatability in that the emotional responses (in this study) were often observed when students identified/connected with the associated emotions of a particular image/background track because they could relate to the events, subjects, or setting of the image or inspired emotional reaction of the background track. Emotionality resulted when students were able to place themselves within the image (i.e., the mindset of the character/subject of a given image), or ignite an emotional reaction from a particular background track. In these moments, students seemed to be "lost" in the music and essentially surrendered to the memories and feelings of those memories as they flowed their performances. The improvisatory performances reflected these emotional responses in the most compelling and memorable ways (especially for the students).

The final theme after relatability and emotionality is vulnerability. Emotional vulnerability is essential for connection (in relationships or from one medium to another). In this study, vulnerability connects the student to the music-making process and helps

him or her to overcome any preconceived notions of what is right or wrong, interesting or boring, correct or incorrect (especially in improvisation), and to apply those feelings of liberation to the art of performing and musical expression. Vulnerability elicits a susceptibility to judgment (from the listener), exposure (of one's emotional capacity) and release of control (over the art of musical expression). Vulnerability is about taking risks and growing in unexpected and delightful ways throughout the music-making process. Reminding students of the joy of taking risks, pushing their limits, finding their voice, and discovering their authenticity is an important stage of learning and one that is encountered when there is a trust established between teacher and student and in the learning environment as a whole.

These three elements of relatability, emotionality and vulnerability work together to elicit the development a deeper emotional connection with the music-making process and are not only an important feature of the MSMM approach, but for any learning experience in which students are venturing into the unexpected, and highly rewarding platform of artistic and creative musical expression.

Growth Potential for Students

The main tribute to the effectiveness of this study is the students' recognition and acknowledgment of the learning that took place through their reflective post-study interviews. The use of reflection as part of the learning process is also an important component to self-directed learning (Gibbons, 2014), of which this study was intent on achieving. Students' reflections on their learning and growth potential after having completing the study resulted in the identification of three main areas of growth: (1)

change in perspective; (2) areas of growth unique to each student's personal goals; and (3) going outside of one's comfort zone.

An overall observation by students was their change in perspective for learning and practicing musical expression from one that was more technique-dominated and controlled to one that is more engaging, surprising and revealing. Students expressed learning more about themselves through the process and intend to use those revelations as starting points for a deeper exploration into musical expression and learning music in general. The ability to consider alternate perspectives in learning is an important tool for students to strive to enhance their learning, and to continue growing beyond their craft as interesting, capable, and informed human beings.

Students also spoke about areas of growth in relation to their individual musical goals. Some were as straightforward as overcoming technical limitations, having expressive reference points to enhance practicing and performing, and giving direction to practicing in general. Others were more in-depth, such as learning how to communicate music and application of skills learned in this study to other areas and may serve as revelations from the study for exploration over the long run.

When a student is pushed beyond her comfort zone, it can be an uncomfortable and frightening process; however, when the learning environment is established as safe and trustworthy and students are encouraged to stay positive, patient and open to the process, deep learning can occur. Students often described going out of their comfort zone as bringing emotion into the experience, "letting go," feeling uncomfortable, "sensory overload," or losing oneself to the experience. These feelings are often avoided

or overlooked in private music instruction because of the consequences of these emotions; however, in this study they were paramount to helping students achieve deeper levels of learning in relation to an emotionally heightened musical context. It is important to understand/observe that the conviction with which musical expression is performed and received should also be learned and taught in a similarly charged environment. In other words, the learning should match the product (or outcome). Similarly, if a parent teaches his daughter how to drive by driving around in their family neighborhood, yet the daughter's commute to school everyday requires taking the highway; she will not be emotionally or physically equipped to handle the situation when it occurs. The same experience is true for teaching musical expression. It should be a very emotionally charged, thought provoking and a highly personalized process that produces compelling, musically authentic results (performances).

Performance Quality

Results indicating improvement in performance quality were validated through a cross verification from three different sources: (1) judges' assessments of Recordings 1, 2 and 3; (2) applied instrumental instructors' responses on surveys of student improvement before and after the study; and (3) students' comments on individual progress during pre- and post- study interviews. The triangulation of this critical data supports noted improvement amongst the students throughout the study and the value of the MSMM approach for teaching and learning musical expression.

Judge's Assessment of Performance Quality

Comparative results from pre- to post-MSMM Recordings indicate marked improvement amongst students indicating the evidence of expression in a performance situation was observable by an outside party. The randomized recordings provided judges with an objective opportunity to consider expressive gestures in each performance scenario, using a grading system that was linked to the five components of music. Of these five components, overall mood/emotion was most observed by judges in the baseline (5.25) and pre-MSMM (4.45) recordings and the second most observed component in the post-MSMM (7.35) recordings after tempo and rhythmic inflection (7.45). This may speak to the students' collective strength in recognizing and performing the bigger picture or overall mood of the music. This category also measured the student's ability to convincingly communicate changes in character and perform with emotional conviction and believability. The statistical validation of improvement in the area of performance quality is an important recognition for the effectiveness of the MSMM approach.

Applied Instrumental Instructor's Responses on Student Improvement in Performance Quality

The second set of data was provided by applied instrumental instructor's responses to surveys on student progress throughout the study. The main areas of noted improvement in performance quality were recognition of style features over a range of style periods, use of verbal language translated to performable gestures and emotional engagement in the music. While some of the instructors' comments were missing or

irrelevant to the features of the study, they did speak to these areas of development, which were also important elements of the MSMM approach.

Students' Comments on Individual Progress During Pre- and Post-MSMM Study Interviews

The third set of data was unique to student impressions of their individual progress throughout the study. Generalized areas of improvement in performance quality included the ability to draw emotion from a set of stimuli and use it to inform or heighten the believability of a performance, use of images and narratives to inspire new moods and emotions and using this method to better connect with the audience.

CHAPTER VIII—LIMITATIONS

Limitations

The positive results in favor of the effectiveness of a multisensory approach for teaching and learning musical expression speak to the importance of incorporating this approach in private instruction and exploring further in future studies. By considering the current study's limitations, future studies will be better informed on how to proceed more effectively and efficiently. They include sample size, limitation of instrumental area, length of study and availability of data.

Small Sample Size

Limitations of the study are most pronounced in the sample size, which is rather small for the exploration of the effectiveness of this new approach (only five participating subjects). While this sample size was helpful for gaining deep and meaningful insights into a smaller pool of subjects and their perceptions of and experiences in using the MSMM approach, the study would benefit from a larger sample and the inclusion of more pre- and post- test components that would speak to the statistical evidence for the effectiveness of the approach. Additionally, this study limited its scope to undergraduate music majors, whereas the effectiveness of a MSMM approach for other age groups (high school, graduate, doctoral) to discern its impact at those various stages of learning and development would prove valuable.

Limitation of Instrumental Area

This study sought to explore the effectiveness of a MSMM approach with participating subjects limited to wind instruments. This may limit the use of the approach to these types of instruments only, without exploring the benefits and possibilities of other areas. Future research on this topic might explore other instrument (strings, percussion) or vocal areas. Vocalists, in particular, are more adept at thinking about expression in ways that are similar to the MSMM approach (use of characters, dialogue, facial expression, storyline and narrative) and could provide some insights into how to further develop this process for learning musical expression.

Length of Study

This study took place over the course of a 14-week period, with sessions once a week or once every two weeks (depending on student availability). Because of the time lapse between sessions, some students found it difficult to pick up where they left off, or were inconsistent with their expressive goals and descriptions of image/sound pairings. Due to the rigorous demands of music majors and the amount of repertoire, rehearsals and preparation involved with private lessons and performances, a MSMM approach that is conducted at a point in the semester when students have more availability (perhaps at the beginning of the semester) and over a shorter period of time (daily sessions over a one- or two-week period in a "total immersion" experience) may prove more effective for maintaining the consistency and exploration of expressive ideas developed through the MSMM approach.

Daily interaction with the approach over several weeks is sufficient to give students the tools for viewing musical expression in new ways. These tools will eventually develop into skills and over time will become instinctive for students. While the changes in performance are often immediate when using the approach, the lasting effects of the MSMM approach are secured only with repeated exposure over time supplemented by regular opportunities for discussion and reflection with an instructor.

Lack of Available Data/Inconsistent Data

Another limitation was the lack of available data from surveys administered throughout the study. Teachers were asked to complete surveys prior to and at the end of the study; however, in some cases these results were difficult to obtain and resulted in gaps in some of the data (Table 27). Additionally, some of the data from pre- to post-MSMM study was inconsistent within the surveys and was lacking some of the insights necessary for understanding the student's progress related musical to expression in the context of their applied music instruction. This may have been due to the 14-week time lapse and insufficient communication with teachers throughout the study. To facilitate this communication during the study, it may be beneficial for students to have their teachers complete a short survey at the end of each lesson and to discuss with them the work they are doing with the MSMM approach. The researcher may also provide the teachers with weekly updates on their students to help guide their feedback in the direction and focus of the study.

Students were also asked to keep weekly journals documenting their progress throughout the study. These journals proved helpful for keeping *some* students engaged

during their individual practice sessions (between sessions); however, they could have been more developed if the researcher had encouraged a brief discussion about their entries at the start of each new session. This would ensure students are taking the time to write in the journals and provide a foundation for further exploration of the ideas presented in the journals in proceeding sessions.

Improvements to these limitations in future studies will benefit the researcher and participating subjects, as well as provide the teaching community with greater insights into a more extensive exploration of this topic.

CHAPTER IX—IMPLICATIONS FOR FUTURE RESEARCH

Future exploration of this topic in the following areas of research (possible studies) will benefit the longevity and practicality of the MSMM approach in a variety of educational and pedagogical contexts.

Gender Influence

One consideration for future research is the impact of the MSMM approach on male versus female students, and the role that sensitivity and gender influence (proclivities) play in the process for teaching and learning musical expression. Some questions might include:

1. How does an expressive vocabulary differ between male and female subjects?
2. What role does gender influence play in a subject's openness to learning/discussing musical expression?
3. Is there a greater sensitivity toward expressive and emotional thinking in one gender over the other? How does this effect teaching and learning?

Color Preference

This study explored a brief consideration of color preference amongst the subjects, but could benefit from standing as its own independent study on how specific colors elicit emotional responses from students. Some questions might include:

1. How are color preferences/associations formed?

2. What emotions are evoked by specific colors (e.g., does red always indicate passion or intensity)?
3. How apparent is color influence in musical output?
4. What role does color preference play in communicating an expressive vocabulary?

MSMM and Vocal Students

Vocal students have a greater tendency toward expressive thinking due to the nature of their work and repertoire because their thought process is developed through characters, plots, settings, narrative, dialogue, imagery and sound concepts. An exploration into the learning process of how vocalists process musical expression through these components and the addition of the MSMM approach in this process would provide further insights into the possibilities of the MSMM approach. Some questions might include:

1. What is the expressive process of vocalists and how is it similar to/different from the MSMM approach?
2. How do musicians use imagery to facilitate learning musical expression?
3. How might vocalists benefit from the MSMM approach?

Stage of Musical Development Best Suited for the MSMM Approach

Learning musical expression can be challenging for all stages of musical development, yet the MSMM approach may facilitate this process of learning in different ways at various stages of learning. The role of the MSMM approach at various stages of learning is of interest in a potential study of this kind. Some questions might include:

1. In what ways is the MSMM approach suitable for elementary school students? High school students? College students? Graduate students? Professional students?
2. Is there a stage of musical development that is best suited for the MSMM approach?
3. Do certain age groups benefit more than others?

Using the MSMM Approach in Small/Large Ensemble Settings

While the MSMM approach has mainly been used in private instruction or in a small master class setting, it may be worth exploring its value in small or large ensemble settings and rehearsals. The benefits of unifying musical and expressive thinking through distinct image and sound profiles may provide some interesting insights into the collective impact of this approach. Some questions for consideration:

1. What are some methods for implementing the MSMM approach into small/large ensemble settings?
2. How effective is the MSMM approach in large/small ensemble settings?
3. How can the MSMM approach enhance rehearsal and expressive goals?

Novel Ways of Incorporating the MSMM Approach in Teaching Studios

As with any new approach for teaching and learning, it is helpful to explore its possibilities through the lens of other teachers, researchers, students and conductors. A study exploring the various methodologies and applications of the MSMM approach would prove beneficial for the teaching community at large and continue to enhance the value and worth of the including this approach for teaching and learning musical

expression. Individual studies discussing various pedagogical uses for the MSMM approach could provide a wealth of possibility for furthering the potential for learning in this context. Some questions might include:

1. What are some practical uses for the MSMM approach?
2. In what context were these practical uses applied?
3. How effective were they for eliciting a more expressive vocabulary? Performance?

CHAPTER X—SUGGESTED USE FOR PRACTICE

Several observations arose in retrospect of completing this study that are valuable for implementing the methods and approach. The following points should be taken into account when using this approach with new students: (1) keeping students on track; (2) maintaining consistency (between sessions); (3) practicing recall; (4) keeping appropriate context in mind; and (5) taking into account competency on instrument.

Keeping Students on Track

With particularly expressive, imaginative or talkative students it was possible to go in several directions at one time or digress on a variety of tangents. Often, when a student was recounting a memorable experience (that was initially appropriate for the emotional context of a particular example) he or she would go in another direction, experience an emotional overload and get distracted. This resulted in some emotional confusion and required that the researcher gently guide the student back to the intended expressive goal. A simple recognition of this line of thinking is helpful for keeping students on track and guiding them back to their initial goals for the given musical context. It is also helpful to have students write down their expressive goals and continually refer to them throughout the session to ensure their emotional digressions in one way or another leads back to their intended expressive goal(s).

Maintaining Consistency Between Sessions

One of the greatest challenges in this study was maintaining consistency between sessions and ensuring that students continued their thought process in a direction that heading toward their intended expressive goal. The time lapse between sessions (sometimes one to two weeks) and lack of practice caused students to forget where they left off and have to start their process from the beginning. This can be easily adjusted by conducting the study on a more regular basis, either in weekly lessons, or in a study that is carried out in daily sessions over the course of a few weeks. The use of journals throughout the study (including supplemental images and songs chosen by students between sessions and documentation of expressive goals as they relate to each image/song) can also be effective if they are used as discussion points at the start of each session to help students refresh their memory and maintain their directed path of thinking. The researcher also created personalized websites for the students, which included session goals, expressive goals related to a particular musical selection (measure, passage) and the songs and images that were used in each session. These were helpful for tracking the student's thought process at each session.

Practicing Recall

Practicing recall is similar to maintaining consistency between sessions, but is more focused on strengthening and maintaining the distinct connections between images/background tracks and the specific measure or passages from the musical selection within and between sessions. In some cases, students would forget which images or background tracks they paired with a measure or phrase in a previous session

and would need to review the pairing at the start of the session. These relationships can be managed through several recall exercises.

Holding Review Discussions at the Start and End of Sessions

Taking a few moments to have the student discuss these relationships at the start or end of a session helped them to solidify the relationships the created in that session or from the last session. Asking specific questions about the use of color, character, narrative, response mechanism or improvisation goals can be good discussion points for these conversations and help keep students accountable for their expressive decisions and help commit them to memory.

Diagramming

Asking students to diagram their thought process using an/directly on the image is also helping for strengthening the visual and descriptive ties between two different types of stimuli. This exercise is more visual and kinesthetic and helps students access their learning beyond just descriptive language. Also, the image acts as a visual trigger eliciting more descriptive responses from the student through the presentation of a vast amount detail that is helpful for recall at a later time. A similar "diagramming" can be used for Aural Modeling in that students can review their goals as the background track is playing (much in the same way as diagramming on an image) to help use the aural stimuli as a trigger recalling expressive goals in greater detail.

Journaling

Asking students to record their reflections from a particular session on their own time is helpful for documenting expressive goals, important expressive moments and for

holding students accountable in maintaining consistency between sound/image pairings. Some students printed out the images or wrote in the song titles directly in their journals in conjunction with the expressive goals to help jog their memory on a daily basis and to continue practice sessions using the visual cues from their journals.

Writing Cue Words on Sheet Music

The simple task of writing down cue words in the sheet music that link specific sound/image pairs in specific measures or phrases is a very effective tool for helping students recall these expressive gestures in the performance moment. For example, one student used the word "creepy" to identify with an image that she developed using an improvisation and a specific set of expressive tendencies (wider vibrato, attention to chromaticism, darker sound) and utilized those whenever she saw this word in her music. Another student wrote "hesitation" at the ends of phrases as it referred to a young girl in a dark alley who was frightened and hesitant to proceed down the road. This cue helped the student engage in a more deliberate and dramatic *ritardando* at the ends of appropriate phrases.

Keeping Appropriate Context in Mind

To ensure that the context of the musical selection and the appropriateness of the style are upheld, teachers and/or the researcher should guide the student closely in the development of his or her expressive and musical goals so that they are in accordance with these criteria. In some cases, students chose images or background tracks that were inappropriate for the musical context, expressive goal or musical selection. In these cases, the researcher would ask a series of questions to help the student realize his or her

misinterpretation and make a more informed decision for the context. Questions included: (1) what features of the image/background track are most suitable for this context; (2) how does this goal support the musical context; (3) what is your reasoning for choosing this image/background track; or (4) consider comparing this image (or background track) with this one and discuss why it may be a better choice. In instances where students felt particularly connected with an image/background track that was inappropriate for the musical selection, the researcher worked with the student to reconsider his or her view of that image and to reframe it in a more appropriate manner.

Taking Into Account Competency on Instrument

In some cases, students had elaborate expressive ideas they wished to explore, but lacked the technical facility to pursue those ideas thoroughly. For example, a student may wish to use a background track that features a tempo that is beyond his technical control in a certain passage and is therefore unable to perform along with the track at that given speed. The researcher simply had the student play along with the song in half time and used other background tracks to slightly increase the tempo until the student was able to perform at tempo with the initial song's tempo. This is at the discretion of the teacher and should be revised for the needs of each student.

Other Implications

The implications for the MSMM approach for teaching and learning musical expression in the field of music education are reflected in the many different facets of the approach itself. MSMM can be used to establish a musical context, or overall mood. To help a student understand the true meaning of *Grave,* using the MSMM, a teacher might

show a student and image of a beggar on the street. Perhaps the teacher could suggest that a student consider the emotions of the beggar and perhaps the story of how he came to be in such dire circumstances. The student might speak to the sadness in this man's life and the ways in which that sadness is portrayed in the image, such as in his facial expression, the isolation of the street upon which he kneels, or the darkish-gray color that seems to loom over and around him. The student and teacher might continue their discussion by considering ways in which these overall themes of sadness might be depicted in the particular *Grave* passage the student is playing. For example, at what speed might she use vibrato to portray this evident sadness? How might her articulation change to reflect this image? Musically, this might lead the student to think of the two-note motives as the wrinkles on the withered face of the man and the sorrow they reveal from years of a difficult life. The image will help the student breathe life into the overall mood of *Grave* in a way that could never have been achieved by merely saying, "Play more sadly."

The MSMM approach could have implications for introducing a student to a particular style of music. Consider a student just beginning work on a Mozart concerto. Aside from listening to various recordings of Mozart concerti to help her absorb the style from a general perspective, she can try the MSMM to help her to internalize the style in direct relationship to specific passages in the piece she is learning. The teacher might play a recording of a Mozart string quartet while having the student simultaneously play along with the recording. The student may need to make adjustments for rhythm, but will soon start to comfortably mimic the stylistic subtleties of the music she is hearing while simultaneously making those changes in the music she is playing. She may start to

spontaneously change her articulation, or play shorter, more concise phrases. She will automatically respond to the musical experience right before her and without any directions from the teacher will start to imitate and produce the appropriate stylistic subtleties of this particular genre using her musical instincts as her guide. Teachers should take great care in choosing music that has similar harmonic and rhythmic structures so as not to distract the student from focusing on the task at hand.

Another way in which the MSMM approach can be used is to help students develop rhythmic stability. Perhaps a student continually rushes a sixteenth-note passage in a marimba etude. The teacher has had the student count out the rhythms, work with a metronome, write in the rhythms, and tap out the rhythm, yet nothing seems to work. Instead, the teacher has a student pick his favorite pop song. Let us say he chooses an acoustic guitar song, which is in a steady 4/4 pulse (the same pulse and rhythmic inflection as the passage he continuously rushes). The teacher will play the recording of the guitar song and the student will play the particular passage from the etude along with the recording. He will repeat the passage several times until he continuously matches it against the rhythm of the recording. He will begin to internalize the rhythm by stabilizing himself against the pulse of the guitar song (which he has chosen because he enjoys listening to). By giving the student the chance to work with a song he truly enjoys and has absorbed over time through repetitive listening, he will develop a rhythmic association between the preferred guitar song and the piece he is learning.

Other implications for the MSMM approach include: helping students with *memorization* by linking specific images and songs to specific passages in the music;

authenticity of expression by having students choose music they feel best represents what they are trying to achieve in the piece they are learning and then making interpretive decisions about what works and does not work in relation to a specific expressive goal; *authenticity of performance* in that students develop an expressive repertoire through layering of songs and images that inform their conceptualization about the music in ways that no one else has done; *uniting musicians in ensemble playing* by having them improvise or perform isolated passages to specific images or songs and then discussing the subtleties of each stimulus as it plays out in the music; *diminishing the historical gap* for students who have trouble relating to Baroque or Classical music, for example, by layering those pieces with music that is more familiar to the student and can evoke an emotional connection that is more personal and compelling; and, *making warm-ups or technique studies more interesting* by layering them against familiar songs to which students easily relate; encouraging students play their scales along with Coldplay's *Viva la Vida*.

These are just a few examples of the ways in which the MSMM approach can be used to elicit expressive responses from students in relation to various musical components or contexts. To incorporate MSMM into the curriculum one might start with master classes, workshops and seminars related to expression through this approach. Additionally, the use of a MSMM lab/studio for students to have access to a computer, speakers, song lists, and images is of value at a musical institution. These sound and image libraries are developed by students and available for all to use.

Conclusion

An approach as unique as Multisensory Music Making affords students the opportunity to cultivate skill sets that speak to their authenticity as learners and as performers. The components of experiential learning, intellectual ownership, and multisensory learning are exploited in this approach to ensure students are engaging deeply with the material and assuming the critical role of student-centered learning. This is an important step toward redefining how expression is learned, taught and ultimately perceived in music education. While the inexplicit nature of musical expression may not change, our approach—as teachers and learners—can change in such a way that brings us closer to the process of expression. Through this approach, we can cultivate the tools for interacting with a deeply emotional set of musical variables and contexts to achieve heightened levels of musical expression. Keeping the learner at the center of this process will embrace his or her voice of authenticity and promote creativity, curiosity, exploration and spontaneity in studying and performing music. The student's imagination will grow exponentially through the MSMM approach, and his or her creative process will transcend the stages of technical mastery to a realm of expressive ingenuity that demands a fully engaged student and inspires an authentic performance output.

APPENDIX A

Script A: Student Group Meeting

This script is for use at the student group meeting to discuss details of the study and to provide students the opportunity to ask further questions.

RESEARCHER: Thank you for your attendance at this meeting. At today's meeting, I will go over the following:

1. Purpose of the study
2. An explanation of the Multisensory Music Making (MSMM) approach in detail;
3. A video, entitled "Digital Story: Multisensory Music Making: Unleash the Power of Music Within You!" to give you an overall sense of the MSMM approach
4. A step-by-step discussion of the study, answering any questions along the way;
5. Discussion of any risks or benefits to you as a result of participating in this study;
6. Discussion of confidentiality; and,
7. Time allotted at the end for group and/or individual questions

The meeting should take no longer than 30 minutes

RESEARCHER:

1. The purpose of this study is to investigate the perceptions of students and teachers using the Multisensory Music Making (MSMM) approach for learning musical expression. *[The researcher will invite questions along the way]*
2. Referred to as Multisensory Music Making (MSMM), musicians interact with a combination of visual and auditory stimuli to inspire new concepts about the music they are learning. Through this approach, musicians learn to connect with music on a deeper level and to expand their range of emotional and expressive playing. Additionally, students will glean insights into the necessary translation process for realizing abstract musical ideas into recognizable musical features.
    a. The MSMM approach will employ three methods for playing expressively, which include Artistic Representation, Aural Modeling and Improvisatory Storytelling. These methods are intended to help students play more expressively in relation to five components of music, which include: (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and, (5) articulation. *[The researcher will invite questions along the way]*
3. A video, entitled "Digital Story: Multisensory Music Making: Unleash the Power of Music Within You!" will demonstrate the overall idea of the appraoch. This digital story incoporated three George Mason University

students and recorded their interactions with the appraoch. [Show video] *[The researcher will invite questions along the way]*

4. Your involvement with the approach will include the observation of visual images and simultaneous layering of audio excerpts. I will work individually with each of you through a series of exploratory sessions that involve recording your: (1) performances; (2) discussions with mylself, the researcher; and, (3) reflective interviews with myself, the researcher.
    a. In addition, you will be asked to keep a practice journal to record your experiences with the approach during your individual practice time.
    b. I will also distribute a survey to your private teachers requesting information on their perceptions of your progress in relation to musical expression over the course of this study.
    c. Finally, the researcher will have two outside judges participate in the final assessment of recorded performances of the students.
    d. The researcher will then read through the step-by-step procedures of the method section as laid out in the Human Subjects Review Board under Protocal, question number six, "Describe the research design and methods." *[The researcher will invite questions along the way]*
5. There are no risks to those who participate in this study. All confidential data (including audio-visual materials, journals, notes in music, and teacher surveys) will be maintained in locked cabinets located in the Music Education office in the School of Music. All journals will be returned at the end of the

study, and the audio-visual materials will be discarded after a three-year period to allow for future use in possible follow-up studies. All of your information

a. Students participating in this study may benefit from the techniques used to employ expression in musical selections. Additionally, students may notice an improvement in their performance abilities. *[The researcher will invite questions along the way]*

6. All confidential data will be maintained in locked cabinets, accessible to only the researcher and project staff (as described above). The only direct link to you will be the recorded sessions, which are used only to ensure that the approach has been carried out appropriately. All information pertaining to students will be coded for confidentiality purposes. *[The researcher will invite questions along the way]*
7. Are there any overall questions?
8. Thank you for your time. I will now pass out the "Informed Consent Forms". Please read them carefully and if you are interested in participating in the study, please returned the signed consent form to my box in the School of Music no later than one week from today.

APPENDIX B

Teacher Survey Prior to Student's Interaction with the MSMM Treatment

This survey is intended for the private teacher to provide a baseline observation of his/her student's overall level of musical expression prior to receiving the MSMM treatment.

PRIVATE TEACHER SURVEY: PRIOR TO STUDENT'S USE OF THE MSMM APPROACH Please provide answers to the questions below to the best of your knowledge. Answers ay be provided directly below in the space provided, or on a separate sheet of paper.
1. Describe your student's overall level of musical expression (consider the student's ease in communicating expression (both verbally and musically); use of the physical demeanor in an expressive context; and, ability to achieve expressive independence as possible discussion points).
2. Rate your student's overall level of musical expression in relation to the following categories: a. Ability to establish an overall mood or emotion; b. Use of rhythmic inflection to create expression c. Ability to demonstrate appropriate stylistic nuances in the musical context; d. Use of dynamics to create expression; and, e. Use of articulation to create expression
3. Discuss and provide examples of your student's expressive language.
4. At what stage of learning does the student begin to incorporate expressive ideas? How integrated is musical expression in the student's performance and practice habits?
5. List and describe a few examples of the techniques used to incorporate musical expression (please include examples of your approaches for teaching musical expression to this particular student, and those that the student uses on his/her own).

APPENDIX C

Summary of Interview Questions

These interview questions are designed to gain insight into the student's experiences with musical expression after each recorded performance throughout the study.

Interview Questions No. 1:

Interview to be completed in response to Music A (fall jury performance) / Recording 1

1. How long have you worked on this piece, and in what context (lessons, performances, independently, etc.)?
2. Describe your approach to practicing this piece.
3. How did you "practice" expression in this piece?
4. Identify the expressive moments in the music.
5. Discuss and provide examples for how you achieved musical expression in the piece?
6. How would you describe your means of expression in relation to the following five components of music: (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and, (5) articulation.
7. How would you rate your overall performance?

Interview Questions No. 2:

Interview to be completed in response to Music B (sight-read selection from 24 Italian Arias…PRIOR to MSMM approach) / Recording 2

1. Identify the expressive moments in the music.
2. Discuss and provide examples for how you achieved musical expression in the piece?
3. How would you rate your overall performance?

Interview Questions No. 3:

Interview to be completed in response to Music B (selection from 24 Italian Arias…AFTER MSMM approach) / Recording 3

1. How long have you worked on this piece, and in what context (lessons, performances, independently, etc.)?
2. Describe your approach to practicing this piece.
3. How did you "practice" expression in this piece?
4. Identify the expressive moments in the music.
5. Discuss and provide examples for how you achieved musical expression in the piece?
6. How would you describe your means of expression in relation to the following five components of music: (1) overall mood and emotion; (2) rhythmic inflection; (3) style; (4) dynamics; and, (5) articulation.
7. How would you rate your overall performance?

APPENDIX D

Script B: MSMM Guidelines and Questions

Because of the exploratory nature of this study, this script will provide a set of initial directions for the student in relation to the three methods (artistic representation, aural modeling, and narrative storytelling) and will allow the approach to unfold at the pace and direction of the student. This script will go into effect at the first session of the MSMM approach.

Session 1:

Overall goal: Introduce student to the first two methods of the MSMM approach (artistic representation and aural modeling) through the selection from the 24 Arias… in relation to the first musical component (overall mood and emotion).

Researcher questions/directions:

1. Let's begin with your overall understanding of the music. Please describe your overall expressive sense of the music (referring to selection from 24 Ariettas).
2. How have you practiced expression on this piece so far?
3. Let's start with a run-through of the piece.
4. Discuss and provide examples of how you demonstrated expression in your performance?
5. How would you describe the overall mood or emotion of the selection?

6. How are you currently portraying the overall mood or emotion of the selection?
7. *Method 1: Artistic representation*. I am going to show you a series of images that I would like you to consider as appropriate for matching the overall mood/emotion that you just described. When you see an image that best portrays the overall mood/emotion you are expressing, please let me know.
8. Discuss how this image portrays the overall mood/emotion. Consider the colors, characters, textures, directions, lines, etc. to help enhance your answer. When possible, try to match specific components of the image with specific phrases, notes, or ideas on the music.
9. Please try to demonstrate one of these relationships in a series of mini performances of specific image/music relationship. Discuss how you achieved these relationships.

The researcher and student will work together to translate some of the visual cues into musical gestures (for example, through tone color, vibrato, rubato, etc.)

An ongoing dialogue might ensue at this point as the researcher and student observe and experiment with various image/music relationships.

10. Consider an aspect of the pieces overall mood/emotion that you feel is missing from your performance that you'd like to try and incorporate.
11. I am going to show you a series of images that I would like you to consider as appropriate for matching the overall mood/emotion that you just described as

missing from your current performance. When you see an image that best portrays the overall mood/emotion you wish to express, please let me know.

12. Discuss how this image portrays the overall mood/emotion. Consider the colors, characters, textures, directions, lines, etc. to help enhance your answer. When possible, try to match specific components of the image with specific phrases, notes, or ideas on the music.
13. Please try to demonstrate one of these relationships in a series of mini performances of specific image/music relationship. Discuss how you achieved these relationships.

The researcher and student will work together to translate some of the visual cues into musical gestures (for example, through tone color, vibrato, rubato, etc.)

An ongoing dialogue might ensure at this point, as the researcher and student observe and experiment with various image/music relationships.

14. Now, perform the selection again, all the way through with these new expressive concepts related to the overall mood/emotion of the music.
15. Discuss your thoughts on the performance. How well did you achieve the expressive ideas?

At this point, the student may indicate a successful performance of the described expressive ideas, in which case, the researcher may move on to the next method. If not, the researcher may repeat the process until the student feels he/she has achieved a tangible level of expression in the performance.

16. *Method 2: Aural modeling*. I am going to play a series of recordings that I would like you to consider as appropriate for matching the overall mood/emotion that you described earlier. When you hear a song that best portrays the overall mood/emotion you are expressing, please let me know.
17. Discuss how the recording portrays the overall mood/emotion. Consider the rhythms, tone color, flow of the music, energy level, articulation, instrumentation, etc. to help enhance your answer. When possible, try to match specific components of the recording with specific phrases, notes, or ideas in the music.
18. I am going to play the recording, and when you feel ready, I'd like for you to play along from your musical selection. See if you can absorb/imitate some of the musical nuances that you described above into your performance. You can change the rhythm of your piece to match that of the recording, or you can just play a few measures over and over again. It is up to you. Feel free to experiment. The goal is simply to absorb the feeling of the recording into your performance.
19. Discuss how you achieved these relationships.

The researcher and student will work together to translate some of the aural cues into musical gestures (for example, through tone color, vibrato, rubato, etc.)

An ongoing dialogue might ensure at this point, as the researcher and student observe and experiment with various recording/music relationships.

20. What do you feel is still missing from your expressive performance in relation to the overall mood/emotion?
21. Let's repeat the process of layering the recording with your music to develop this expressive element that you feel is currently missing from the performance.
22. Now, perform the selection again, all the way through with these new expressive concepts related to the overall mood/emotion of the music.
23. Discuss your thoughts on the performance. How well did you achieve the expressive ideas?

At this point, the student may indicate a successful performance of the described expressive ideas, in which case, the researcher may move on to the next method. If not, the researcher may repeat the process until the student feels he/she has achieved a tangible level of expression in the performance.

24. Good work today. For your homework, I'd like you to continue to work with the images and recordings we have chosen today and to continue to explore other options related to the concepts we have discussed for overall mood/emotion of this piece. Please keep all images and recordings documented in your practice journal for future reference. Spend some time each day playing along with the recording, or reviewing the images for additional relationships. Please document your experiences in your practice journal. Do you have any questions?

End Session 1

Sessions 2 – 5:

Overall goal: Using the first two methods of the MSMM approach (artistic representation and aural modeling) through the selection from the 24 Arias… for the remaining four musical components.

Researcher will repeat the above statements/questions from Session 1 in relation to the remaining four musical components:

1. *Rhythmic inflection*
2. *Style*
3. *Dynamics*
4. *Articulation*

The same interactive process will continue, using both images and recordings to inform expressive concepts related to these components.

End sessions 2 - 5

Session 6:

Overall goal: Introduce student to the final method of the MSMM approach (Improvisatory Storytelling) independent from the selection from 24 Arias… to warm up the student to the art of improvising and the language of storytelling.

1. *Method 3: Improvisatory Storytelling*. In this session, we are going to further explore the expressive concepts discussed this far in relation to the five components of music (overall mood/emotion; rhythmic inflection; style; dynamics; and, articulation) and put them into a narrative context that builds the idea of storytelling into the music.

2. First, I will have you improvise to a series of images and recordings.

The researcher and student will choose an image just for the sake of "inspiration" (there is no need for the image to relate to the musical selection that student is preparing).

3. Let's chose an image that you feel is inspiring, interesting, or intriguing.
4. Tell me what you find interesting about this image? What story does it seem to tell?
5. Now that you have chosen the image, I'd like for you to start improvising to the image in a way that feels most comfortable.
6. Discuss what guided your improvisation. What about the image did you portray in your performance?
7. Now, let's focus on the story of the image a bit more. Discuss potential characters, a plot, and a narrative to the picture.
8. Perform an improvisation once again and see if you can "tell the story" in your performance.
9. Discuss how you "told the story." How did you use the five components of music to assist in telling the story?
10. I'd like for you to improvise while focusing one only one musical component at a time. Let's start with overall mood/emotion.
11. Discuss how you used overall mood/emotion to tell the story.

Researcher asks the student to repeat this process using each of the five musical components one at a time.

12. Now, let's add music to the image to see how the story changes. I am going to play a recording, and I'd like for you to tell me what story the recording tells.
13. Now, I'd like for you to play along with the recording while watching the image to see if you can "tell the story" using the music as your guidepost.
14. Now, let's focus only on the overall mood/emotion of the recording as aligned with the image to tell the story in your improvisatory performance.
15. Discuss how you used overall mood/emotion to tell the story.

Researcher asks the student to repeat this process using each of the five musical components one at a time.

End session 6

Sessions 7 and 8:

Overall goal: To utilize the final method of the MSMM approach (narrative storytelling) within the context of the selection from 24 Arias…

1. *Method 3: Narrative storytelling*. In these final two sessions, we are going to build a narrative of your musical selection through the use of images and recordings.
2. Let's chose an image that you feel best tells the visual story of your musical selection. I have a selection of images from which to choose.
3. What story does this image tell? How does it relate to your musical selection?
4. I'd like for you to improvise to the image within the context of your musical selection. Feel free to play through the entire piece and try to align aspects of the music with the image, or chose a single idea, phrase or section to repeat in

relation to the image. Let the image guide your story/performance of the music. Feel free to experiment.

5. Discuss how you told the story of this image in your performance.
6. What are the characters in the image? How are those portrayed in your musical selection?
7. How might you portray those characters in musical gestures?
8. Let's see if we can develop musical ideas for each character.

Researcher and student continue in a dialogue through experimentation of various musical gestures that portray the various "characters" in the image.

9. Now, perform the musical selection away from the image to see if you can retain these characters.

The researcher repeats this process using other narrative clues, such as: plot; high points or climaxes; structural ideas (beginning, middle, end); surprise endings; use of perspectives (first-person versus third-person) and other components that the image has to offer the story.

10. Now that you've performed the selection with these various narrative elements, please play through the selection in its entirety to see how the flow of the story carries through.
11. Discuss how you achieved the narrative in your performance.

The researcher will repeat this process using a recording in the same way.

12. Now that you've performed the selection with both the image and the recording as narrative clues, please perform the selection all the way through once again.
13. Discuss how you achieved the narrative in your performance. How does this relate to expression?

The student and researcher will review all of the stages of the MSMM process and discuss the salient expressive ideas that have resulted.

End sessions 7 - 8

APPENDIX E

Journal Guidelines and Prompts

These prompts and guidelines serve as a reference for students on how to use the journal during the 14-week treatment period.

Journal Guidelines and Prompts

You will be asked to keep a journal during the 14-week training period to record your experiences with the MSMM approach in your individual practice sessions and lessons.

A few things to keep in mind…

- Try to record an entry immediately following every practice session and lesson
- Entries should make reference to how you've used the MSMM approach in your practice session
- Provide specific examples of how you used the approach
- Be sure to include print-outs of the images and titles of the songs you use
- Be as informal as you like in your writing, but make sure writing is legible

Consider the following prompts when writing in your journal…

- Discuss the context of the practice session or lesson (were you preparing for a performance; working solely on the selection from *24 Arias…;* preparing for a lesson, etc.)

- Discuss your approach for practicing in general.
- How do you practice expression (either on the selection from *24 Arias*… or on another piece)?
- How do you identify the expressive moments in your music?
- Provide examples of how you achieve musical expression (either in the MSMM piece or on another piece)
- How do you practice expression in relation to the five components of music: (1) overall mood and emotion, (2) rhythmic inflection; (3) style; (4) dynamics; and, (5) articulation?
- Do you notice an improvement, or a more directed focus toward practicing musical expression in your practice sessions and/or lessons?
- Any other comments related to musical expression in general and the techniques you've discovered throughout this process

The journal will be collected at the end of the 14-week period for review, but will be returned to you following the study.

APPENDIX F

Performance Assessment Tool

This assessment tool is intended for the panel of three judges to use for evaluation of the recorded performances.

Measurement of expression
Overall mood/emotion: The student communicated a contrast of moods and/or emotions.
Overall mood/emotion: The student performed with emotional conviction and believability.
Tempo and rhythmic inflection: The student varied the tempo for expressive purposes (*rubato*, *accelerando*).
Tempo and rhythmic inflection: The student used rhythmic inflection to shape the music through accents, meter and emphasis of patterns.
Phrasing: The student used pauses and/or lifts in the phrases as expressive tools.
Phrasing: The student demonstrated flow and fluidity within lyrical lines.
Style: The student reflected the nuances of the historical genre (eighteenth-century Italian aria) in his/her performance (use of *rubato*, sigh gestures, giving weight to/lengthening critical pitches).
Dynamics: The student used dynamics expressively (tonal shading, noticeable climaxes, *subito*, *crescendo*/*decrescendo*).
Articulation: The student used articulation to reflect the phrasing and structure (*tenuto*, *staccato*, lifts, emphasis, legato, accents).
Articulation: The student used articulation to introduce variety and shape to the phrases.
Overall: The student performed with compelling musical expression and sensitivity.
Overall: The student exhibited a distinctive quality that made the performance memorable.

APPENDIX G

Teacher Survey After the Student's Interaction with the MSMM Treatment

This survey is intended for the private teacher to provide an observation of his/her student's perceived progress after the 14-week instructional period in which the student received the MSMM treatment.

PRIVATE TEACHER SURVEY: AFTER THE STUDENT'S TREATMENT OF THE MSMM APPROACH *Please provide answers to the questions below to the best of your knowledge. Answers may be provided directly below in the space provided, or on a separate sheet of paper.*
1. Describe your student's overall level of musical expression (consider the student's ease in communicating expression (both verbally and musically); use of the physical demeanor in an expressive context; and, ability to achieve expressive independence as possible discussion points).
2. Rate your student's overall level of musical expression in relation to the following categories: a. Ability to establish an overall mood or emotion; b. Use of rhythmic inflection to create expression; c. Ability to demonstrate appropriate stylistic nuances in the musical context; d. Use of dynamics to create expression; and, e. Use of articulation to create expression
3. Discuss and provide examples of your student's expressive language.
4. At what stage of learning does the student begin to incorporate expressive ideas? How integrated is musical expression in the student's performance and practice habits?
5. List and describe a few examples of the techniques used to incorporate musical expression (please include examples of your approaches for teaching musical expression to this particular student, and those that the student uses on his/her own).

6. Discuss any potential expressive growth in your student over the duration of this instructional period. Were there any specific expressive ideas that seemed linked to the MSMM approach, in particular?

APPENDIX H

Se tu m'ami se sospiri [If thou lov'st me], Giovanni B. Pergolesi (1710-1736)

99

Se tu m'ami, se sospiri
(If thou lov'st me.)

Arietta.

English Version by
Dr TH. BAKER.

GIOVANNI B. PERGOLESI.
(1710 - 1736)

Andantino. (♩ = 58.)

Voice.

Piano.

p

Se tu —
If thou

mf

p

cresc. *rit.*

m'a - mi, se tu so - spi - ri Sol per me, gen-til pa - stor, —
lov'st me, and sigh - est ev - er But for me, O gen-tle — swain,

cresc. *rit.*

p *a tempo*

Ho do-lor de' tuoi mar-ti - ri, Ho di-let-to del tuo a-mor, Ma — se — pen - si
Sweet I find thy lov-ing fa-vor, Pi-ti-ful I feel thy pain. Should'st thou think tho',

f *rit.*

p *a tempo*

rit.

a tempo

che_ so - let - to Io_ ti_ deb - ba ri - a-mar, Pa-sto-rel - lo, sei sog-get-to
that demure-ly I _ on thee a - lone_ may smile, Simple shepherd, thou art sure-ly

a tempo

pp *cresc.*

Fa - cil-mente a t'in-gannar; Pa-sto-rel-lo, sei sog-get-to Fa - cil - men-te a
Prone thy sens-es to beguile; Simple shepherd, thou art surely Prone thy senses_

p *cresc.*

p

t'in-gan-nar, Fa - cil - men - te a_ t'in-gan-nar. Bel - la ro - sa
to be-guile, prone thy_ sens - es_ to be-guile. As a fair red

p

poco cresc.

por - po - ri - na Og - gi Sil-via sce - glie - rà, Con la scu - sa
rose, a _ lov- er Fain might Sil-via choose to - day, Hap-ly if_ he

a tempo

che_ so - let - to Io_ ti_ deb - ba ri - a - mar, Pa-sto-rel - lo, sei sog-get-to
that demure-ly I _ on thee a - lone_ may smile, Simple shepherd, thou art sure-ly

a tempo

pp *cresc.*

Fa - cil-mente a t'in-gannar; Pa-sto-rel-lo, sei sog-get-to Fa - cil - men-te a
Prone thy sens-es to beguile; Simple shepherd, thou art surely Prone thy senses_

p *cresc.*

p

t'in-gan-nar, Fa - cil - men - te a_ t'in-gan-nar. Bel - la ro - sa
to be-guile, prone thy_ sens - es_ to be-guile. As a fair red

p

poco cresc.

por - po - ri - na Og - gi Sil-via sce - glie - rà, Con la scu - sa
rose, a _ lov - er Fain might Sil-via choose to - day, Hap-ly if_ he

sempre cresc.

del - la spi - na Do-man poi la sprez - ze - rà, Doman poi la sprez - ze - rà.
thorns dis-cov-er 'Tis to-morrow thrown a-way, 'Tis to-mor-row thrown a-way.

sempre cresc.

cresc. un poco

Ma de-gli uomi-ni il con-si-glio Io per me non se-gui - rò. Non perchè mi
All men say of maid - en-fol - ly Finds no fa-vor in mine eyes, Nor because I

cresc. un poco

rit.

pia-ce il gi - glio Gli al-tri fio - ri sprez - ze - rò.
love the lil - y Shall I oth-er flow'rs de-spise.

a tempo

rit.

p

p

cresc.

Se tu m'a - mi, se tu so - spi-ri Sol per
If thou lov'st me, and sigh - est ev - er But for

p

cresc.

rit. *p a tempo*

me, gen-til pa - stor, Ho do-lor de' tuoi mar-ti-ri, Ho di-let-to
me, O gen-tle swain, Sweet I find thy lov-ing fa-vor, Pi-ti-ful I

rit. *p a tempo*

f *rit.*

del tuo a-mor, Ma se pen-si che so-let-to Io ti deb-ba ri - a-mar,
feel thy pain. Should'st thou think tho', that de-mure-ly I on thee a-lone may smile,

f rit.

a tempo *pp*

Pa-sto-rel - lo, sei sog-get-to Fa - cil-mente a t'in-gannar, Pa-sto-rel - lo,
Simple shepherd, thou art sure-ly Prone thy sens-es to beguile; Simple shepherd

a tempo *p*

cresc. *rit. assai*

sei sog-get-to Fa - cil - mente a t'in-gannar, Fa - cil - mente a t'in-gannar.
thou art sure-ly Prone thy sens-es to beguile, prone thy sens-es to beguile.

rit. assai

cresc.

APPENDIX I

Catalogue of Figures

Figure 1. *MSMM slide*. Five categories of overall mood/emotion.

Figure 2. Untitled image of moonbeams on the water. Chosen by Student A from the Dark Category.

Figure 3. Carlos A. Pereira, *Between Darkness & Wonder*. Chosen by Student B from the Dark Category.

Figure 4. *Goodbye Darkness*. Chosen by Student C from the Dark Category.

Figure 5. Untitled photograph of a winter wonderland. Chosen by Student D from the Peaceful Category.

Figure 6. *Lava Flow*. Chosen by Student E from the Agitated Category.

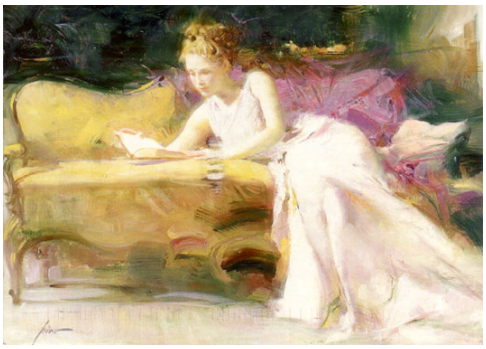

Figure 7. Pino Dangelico, *Lovely Lady*. Chosen by Student A from Google Images search phrase, Pino Dangelico, pink girl on bed.

Figure 8. Edward Munch, *Morning*. Chosen by Student B from Google Images search phrase, painting of woman longing.

Figure 9. Leonardo da Vinci, *Mona Lisa*. Chosen by Student C from Google Images search phrase, Mona Lisa.

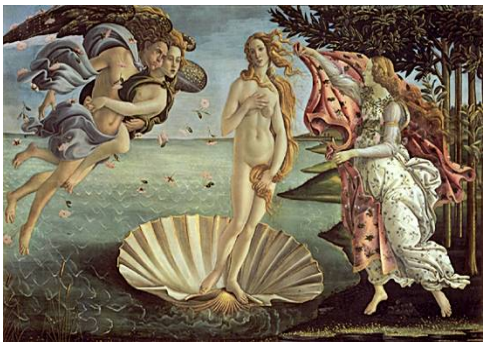

Figure 10. Sandro Botticelli, *The Birth of Venus.* Chosen by Student D from Google Images, the Birth of Venus.

Figure 11. Priyanka Rastogi, *Whimsical Art*. Chosen by Student A from Playful Category.

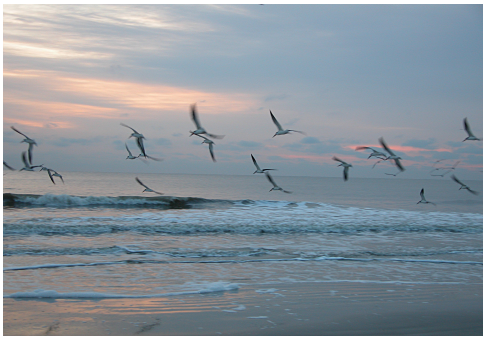

Figure 12. *Birds Flying*. Chosen by Students A and C from Peaceful Category.

Figure 13. Zach Stern, *Dark Tree*. Chosen by Student B from the Dark Category.

Figure 14. RoyalRoadsUniversity, *Japanese Garden at Royal Roads University*. Chosen by Student E from Google Images, using the search phrase, Japanese flower garden.

Figure 15. Frankief, *Angry Sea II*. Chosen by Student E from the Agitated Category.

Figure 16. Carlos Gutierrez, *Chile, The fury of Chaitén volcano seems to set the sky on fire*. Chosen by Student E from the Agitated Category.

Figure 17. Yoshitaka Amano, *Horns Wings*. Chosen by Student E from the Dark Category to portray good versus evil.

Figure 18. *Peaceful*. Chosen by Student A from Peaceful Category. Dismissed by Student C as it was not appropriate for his expressive goal.

Figure 19. Vincent van Gogh, *Sorrowing Old Man ('At Eternity's Gate')*. Improvisatory Storytelling experiment.

Figure 20. Mark Spain, *Sevilla*. Improvisatory Storytelling experiment.

Figure 21. Untitled photograph of a roaming man. Improvisatory Storytelling experiment.

Figure 22. Wildfire. Chosen by Student C from Researcher collection (no specific category).

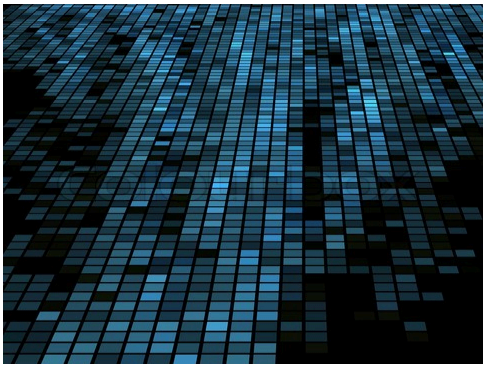

Figure 23. Vector, *Dark Blue 3D Mosaic Technology Background*. Chosen by Student B from Google Images using the search word, mosaic.

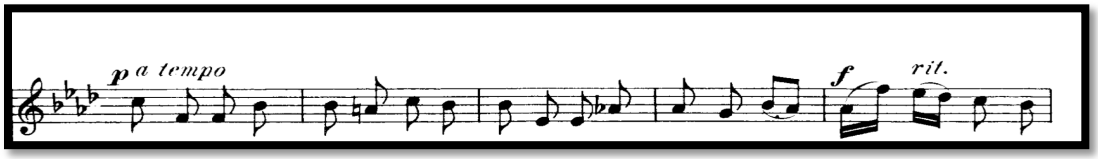

Figure 24. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 11 – 15 from Arietta (See Appendix H).

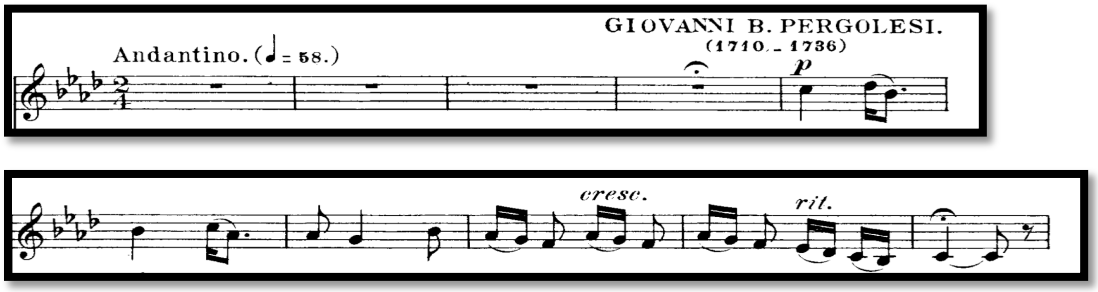

Figure 25. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures five through ten from the Arietta (See Appendix H).

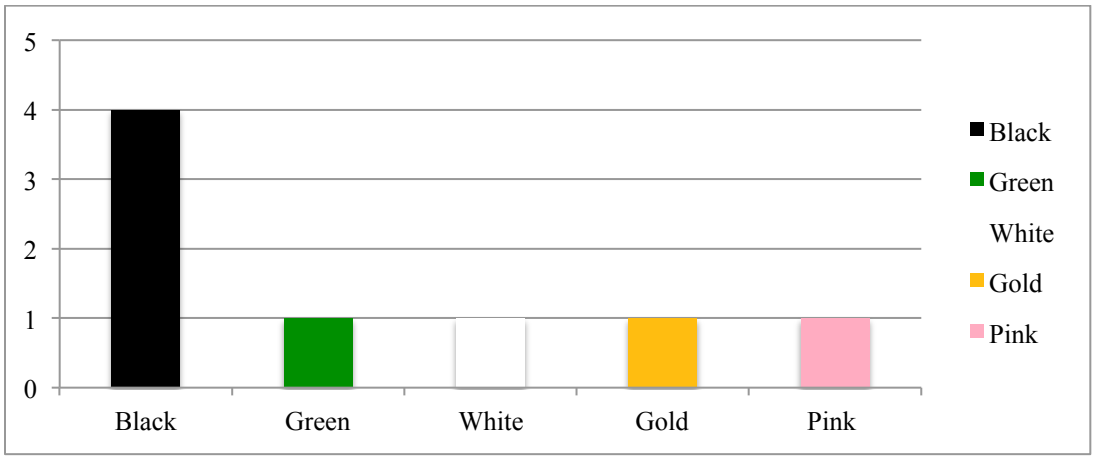

Figure 26. Frequency of colors used with Artistic Representation in Sessions One—Three. Range is from one to four. These color selections were mainly in reference to the Arietta for overall mood/emotion, style and articulation.

Figure 27. Meryl Streep as Miranda Priestly in the 20th Century Fox's The Devil Wears Prada. Chosen by Student C.

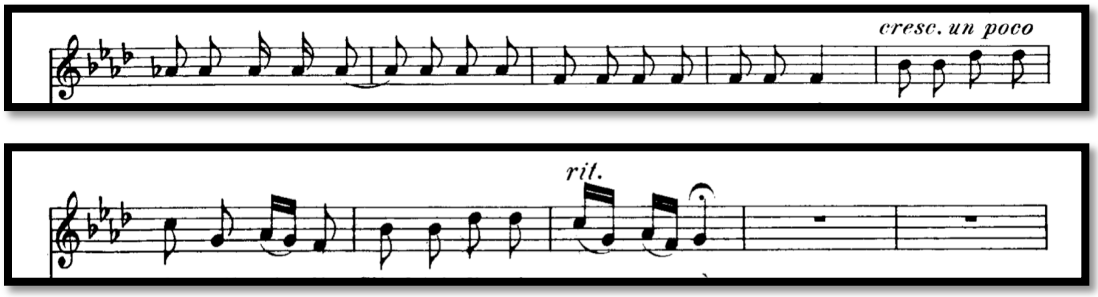

Figure 28. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 39 – 46 from the Arietta (See Appendix H).

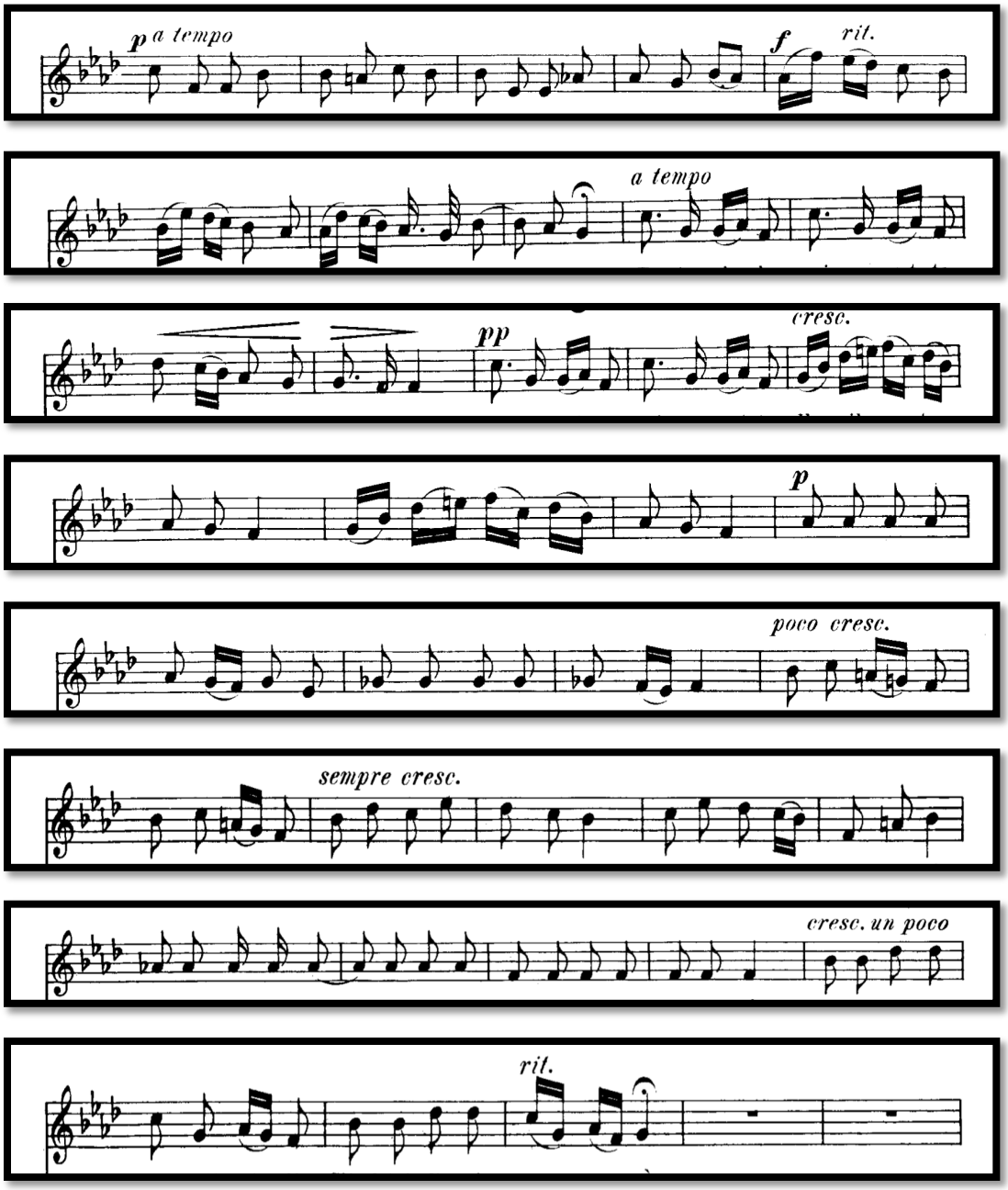

Figure 29. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 11 – 46 in the Arietta (See Appendix H).

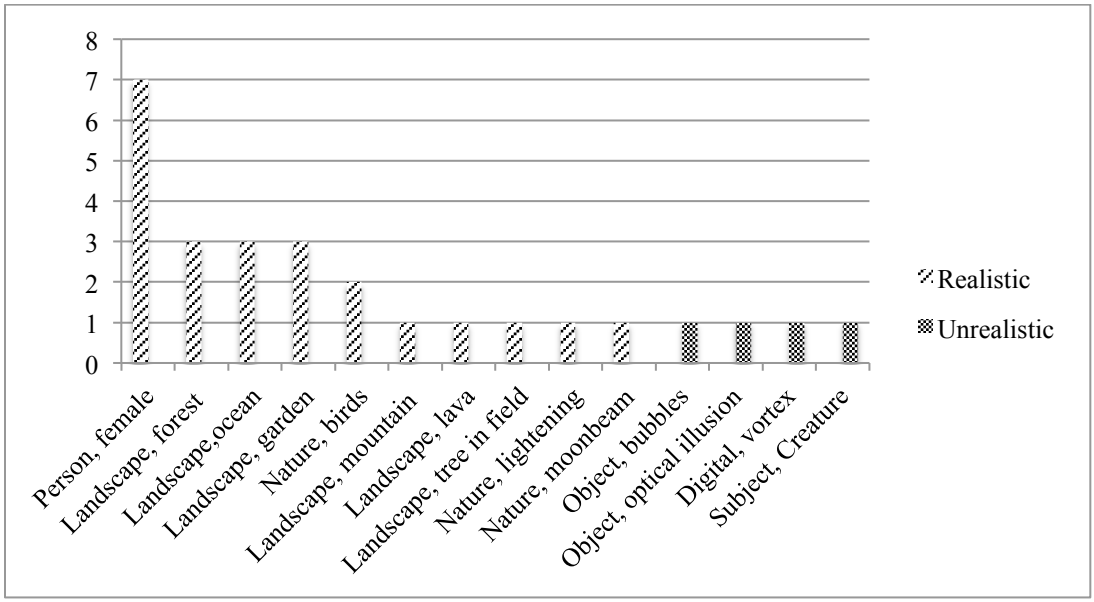

Figure 30. Frequency and types of realistic and unrealistic images used in Artistic Representation. Range is from one to seven. All of the realistic images were either photographs or very detailed paintings that looked realistic. Unrealistic images were paintings or digitally altered photographs. Images that were used by more than one student or were used for different purposes (i.e., an image featuring birds and ocean were used in two different sessions to explore two different expressive goals) were counted as different images because they were used for different expressive purposes.

Figure 31. Untitled painting of a Renaissance woman in a burgundy dress. Chosen by Student C to represent Italian Renaissance simplicity and grace.

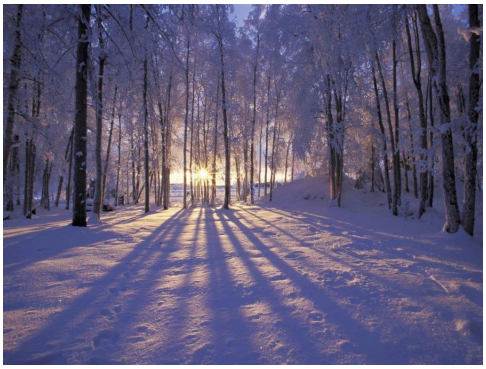

Figure 32. Winter. Chosen by Student C from the Peaceful Category.

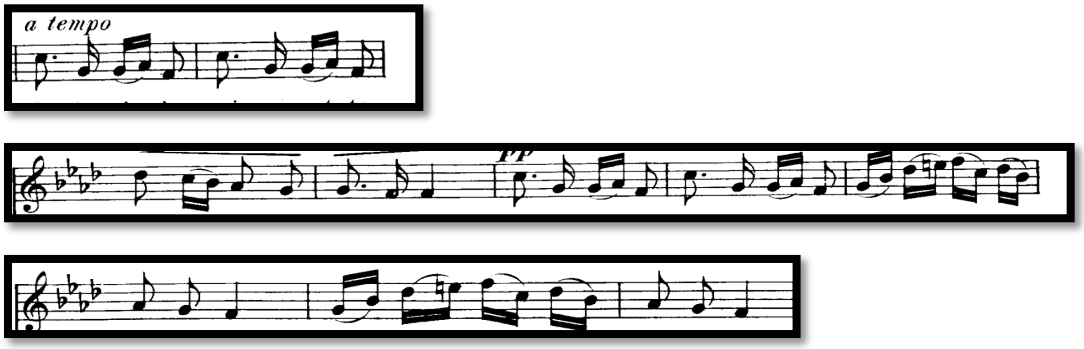

Figure 33. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 25 – 34 from the Arietta (See Appendix H).

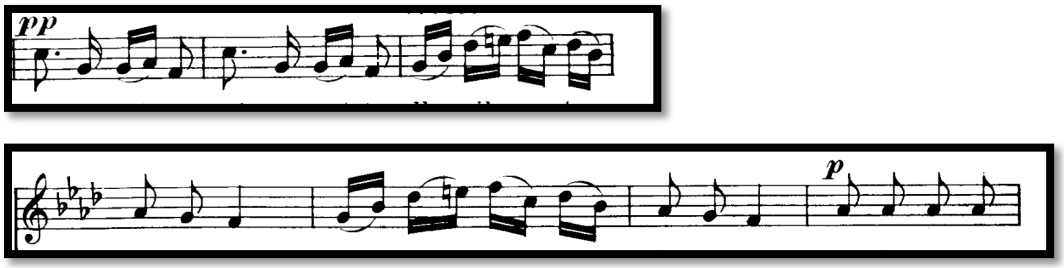

Figure 34. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 24 – 30 from the Arietta (See Appendix H).

Figure 35. Brian Young, *Wisteria Tree in Ashikaga Flower Park, Japan*. Chosen by Student A from Google Images search phrase, Japanese flower garden.

Figure 36. Malezi, *Freedom*. Chosen by Student E from Google Images, using the search word, freedom to portray freedom.

*Figure 37***.** Mirza Zuplijanin, *Abstract Art*. Chosen by Student B from Google Images using the search phrase, abstract art to explore colors.

Figure 38. Untitled photograph of a woman standing on a cliff. Chosen by Student C from Google Images using the search word, lost to portray feeling lost.

Figure 39. Yeohghstudio, *A Leap for Joy.* Chosen by Student A from her personal blog.

Figure 40. *Tango Couple*. Chosen by Student A from Google Images using the search word, tango to portray exotic.

Figure 41. Odessa Sawyer, *Voyage to the Stars*. Chosen by Student A from her personal blog.

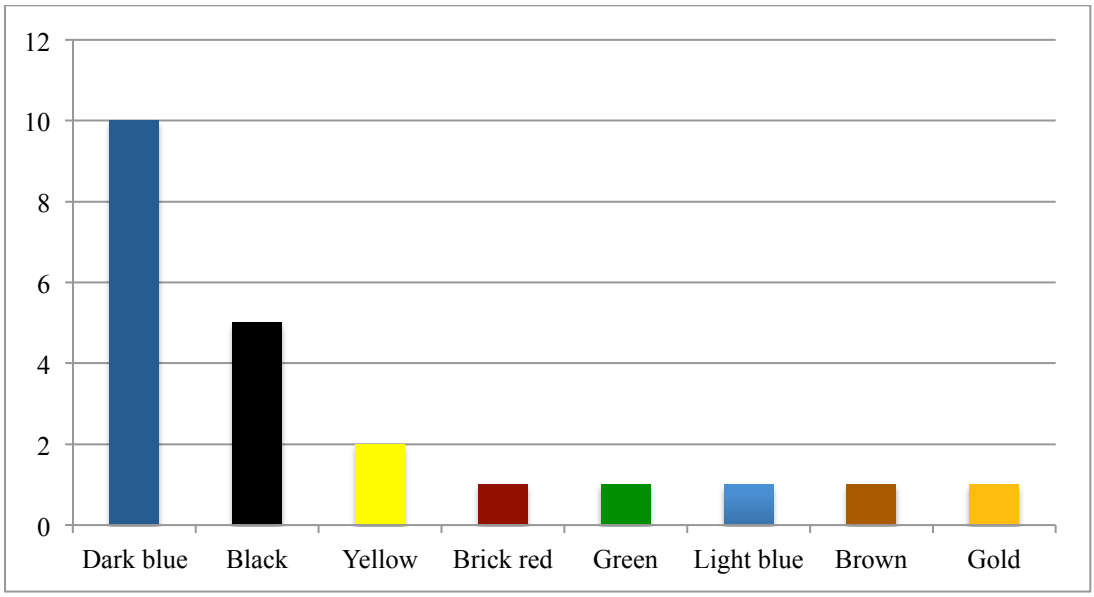

Figure 42. Frequency of colors used in Improvisatory Storytelling in Sessions Five and Six. Range is from one to ten. Colors were counted each time they were referenced by a student within a session.

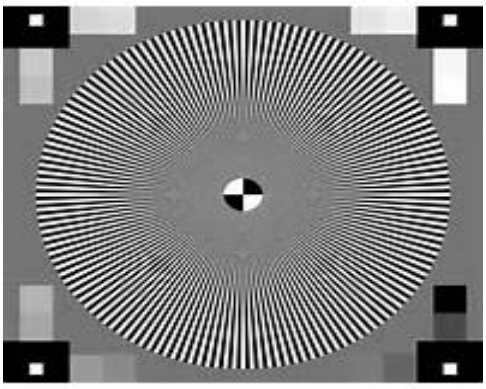

Figure 43. *Star Chart*. Chosen by Student A from Google Images using search word, focus.

Figure 44. *Silk Ivy and Flowers on Redwood Trellis*. Chosen by Student A from Google Images, using the search phrase, floral vine.

Figure 45. Dawid Jaskiewicz, *Glencoe, Scottish Highlands*. Chosen by Student A from the Peaceful Category and dismissed by Student C as it was not appropriate for his expressive goal.

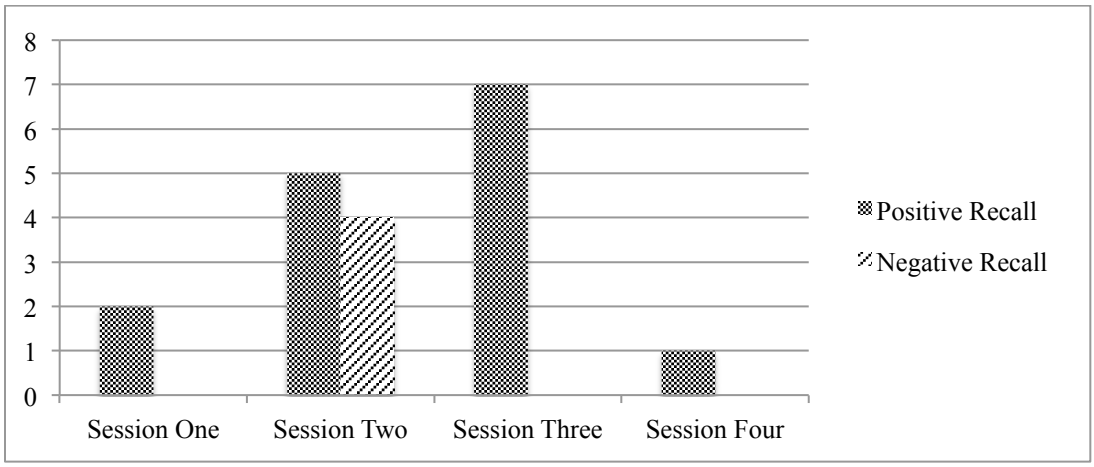

Figure 46. Frequency of positive and negative recall in Sessions One—Four of Artistic Representation. Counts were taken from Sessions One—Four only, in which Artistic Representation was the primary focus prior to Improvisatory Storytelling (Sessions Five and Six). Range is from one to seven. Higher counts for positive recall in Sessions Two and Three were due to a greater frequency of recall exercises than in Sessions One (introductory) and Four (Aural Modeling).

Figure 47. *Accelerator of Change.* Chosen by Student A to represent *accelerando*.

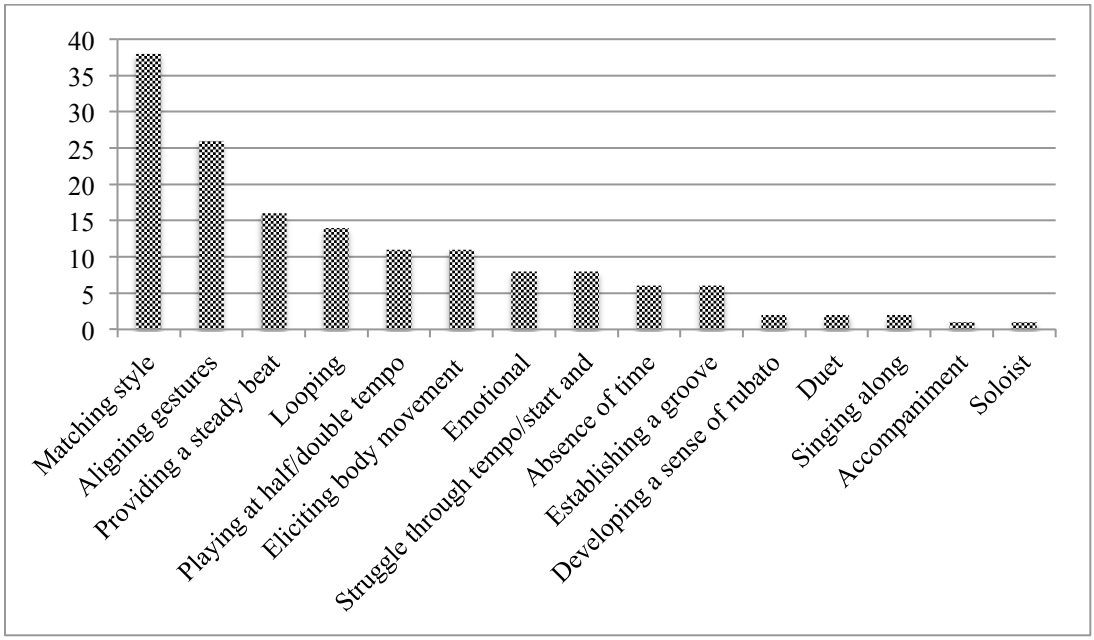

Figure 48. Frequency of response mechanisms used in Aural Modeling. Range is from one to thirty-eight. Mechanisms featuring higher levels of use reflect higher levels of accessibility, and vice versa.

Figure 49. *A New Day, Has Come*. Chosen by Student C from the Dark Category.

Figure 50. Stephen Gassman, *Water Flowing Over Rocks in Piney Creek*. Dismissed by Student C as it was not appropriate for his expressive goal.

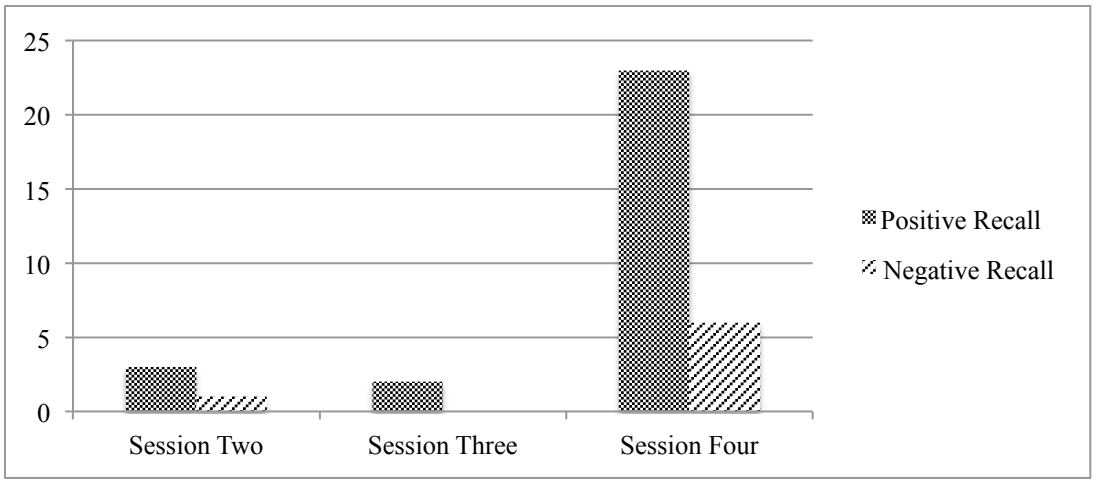

Figure 51. Frequency of positive and negative recall for Aural Modeling in Sessions Two—Four. Range is from one to twenty-three. Counts were taken from Sessions Two—Four only, in which Aural Modeling was the primary focus prior to Improvisatory Storytelling (Sessions Five and Six). Higher counts for positive recall in Session Four were due to the fact that Aural Modeling was the only focus of that session (no Artistic Representation). Compare with Artistic Representation, Figure 46, which features only 15 counts of positive recall, thus indicating that Aural Modeling is more accessible for recall.

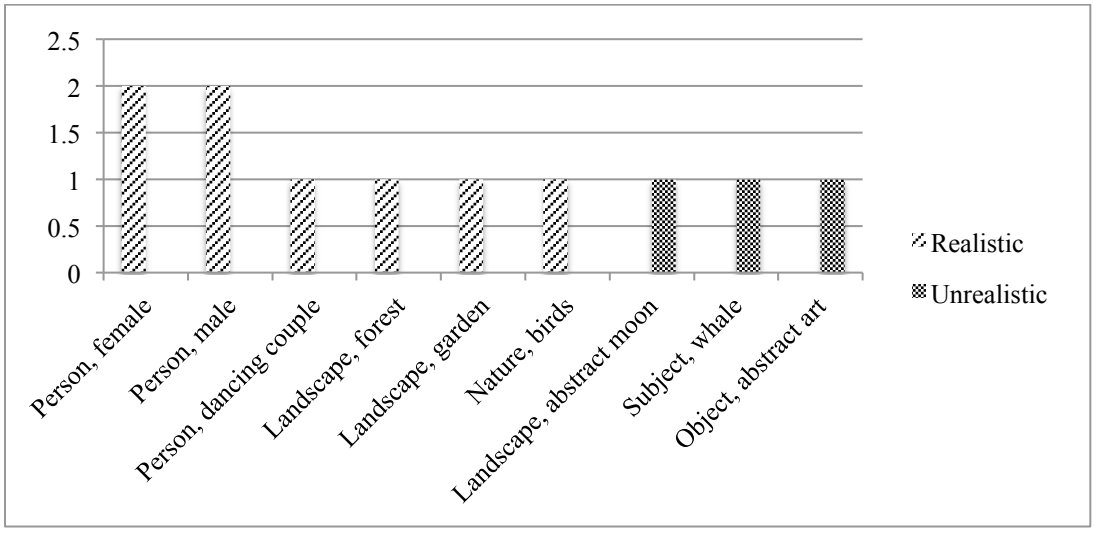

Figure 52. Frequency and types of realistic and unrealistic images used in Improvisatory Storytelling. Range is from one to two. All of the realistic images were either photographs or very detailed paintings that looked realistic. Unrealistic images were paintings, or digitally altered photographs. All of the realistic images were either photographs or very detailed paintings that looked realistic (or were relatable). Unrealistic images were paintings, or digitally altered photographs. The images listed above were those chosen by the students in sessions five and six. The three fictitious images that were chosen by the Researcher in the Three-Phase Introductory Session five were not listed in this table, as they were not chosen by the student.

Figure 53. Grove Pashley, *Woman with Curly Hair Holding an Apple and Orange*. Chosen by Student C from Google Images, using the search word, indecision.

Figure 54. *Homeless*. Used by Student E for Improvisatory Storytelling.

Figure 55. Batesla, *Trees have overtaken the temples, an interesting combination of man-made architecture and nature.* Chosen by Student E using the Google Image word, overtaken.

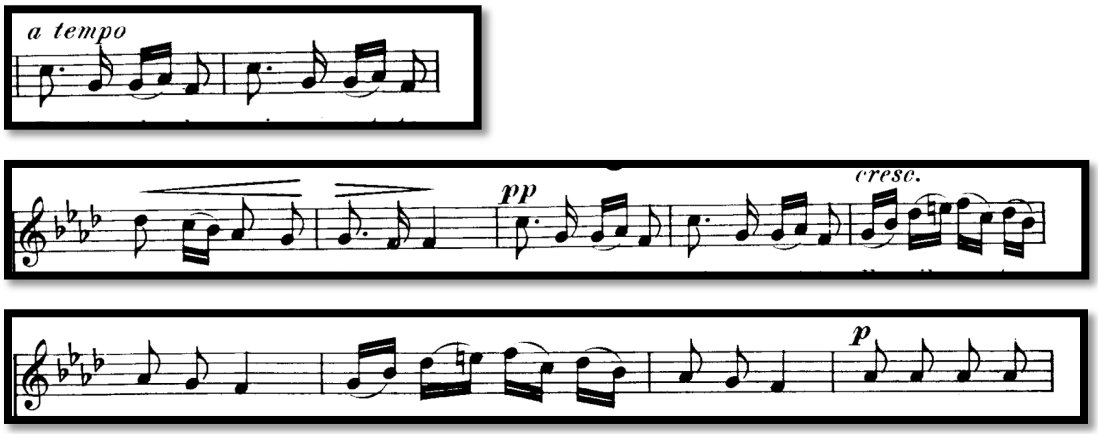

Figure 56. Giovanni Pergolesi, *Se tu m'ami, se sospiri [If thou lov'st me]*. Measures 19 – 29 in the Arietta (See Appendix H).

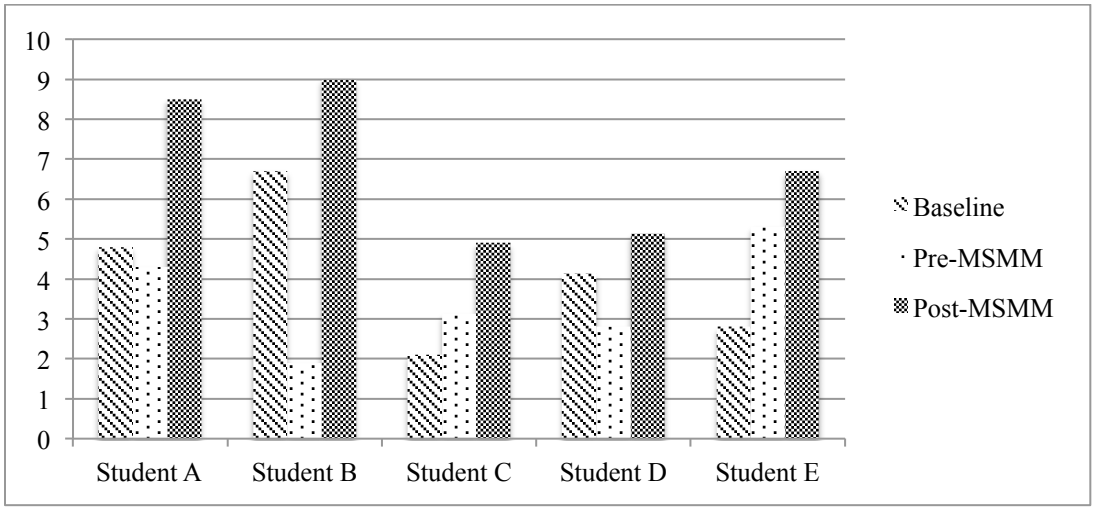

Figure 57. Comparative results of the baseline, pre- and post-MSMM Recordings 1, 2, and 3 of the Arietta of all participants. Results indicate averaged scores for each recording.

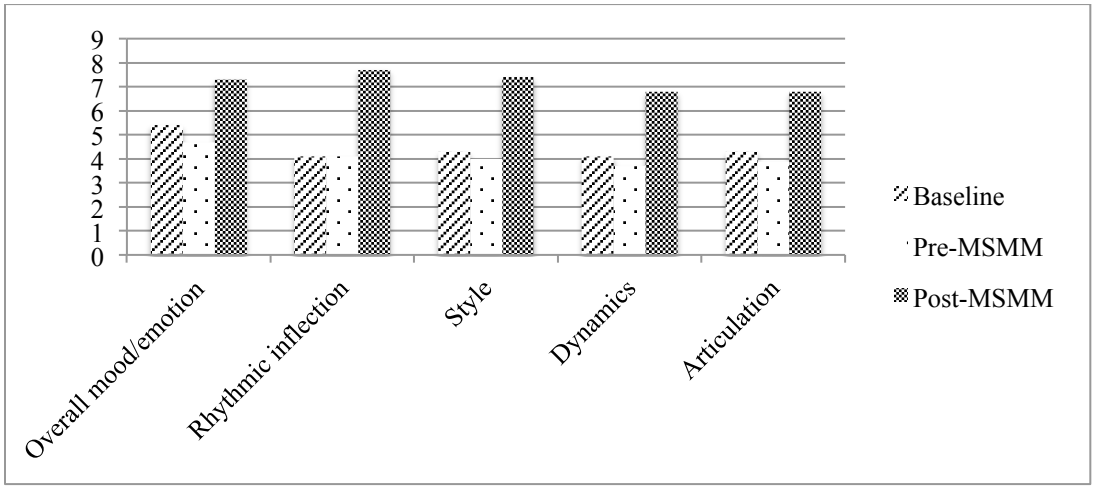

Figure 58. Comparative results of baseline, pre-MSMM and post-MSMM recordings within the five components of music. Range is from 2.7 to 7.45. An additional category of "Overall" which was listed on the judges form was not included in this table as it focused on the overall performance of each student and was not unique to these five categories. In the survey, the categories observing phrasing were scored along with style. Baseline scores (overall mood/emotion: 5.25; rhythmic inflection: 4.1; style: 3.9; dynamics: 3.7; and articulation: 3.9). Pre-MSMM scores (overall mood/emotion: 4.45; rhythmic inflection: 3.8; style: 3.7; dynamics: 2.7; and articulation: 3.45). Post-MSMM scores (overall mood/emotion: 7.35; rhythmic inflection: 7.45; style: 7; dynamics: 6; and articulation: 6.8).

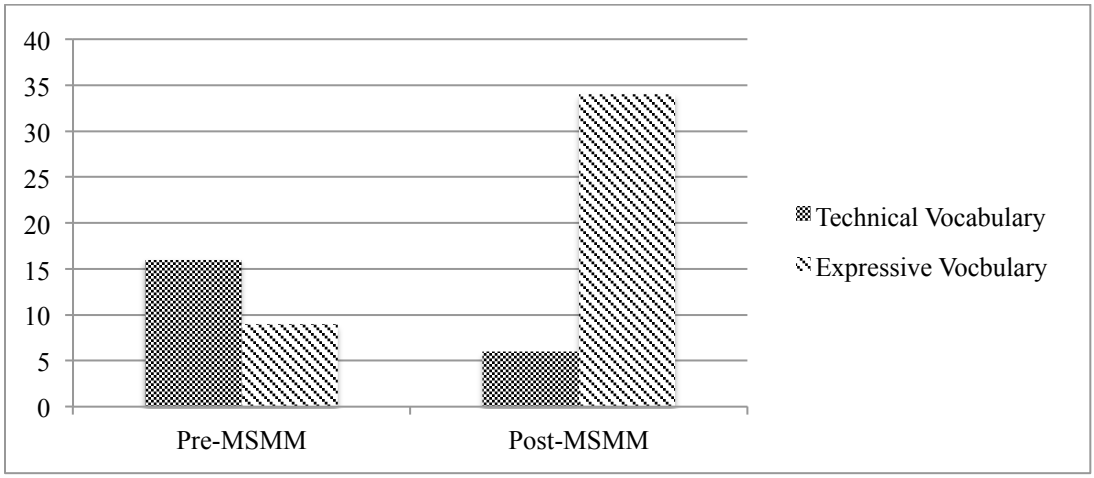

Figure 59. Comparative results of pre-MSMM and post-MSMM technical and expressive vocabulary amongst students. Range is from six to 38. Data was collected from Tables 25-28 and pertained only to the comments about the Arietta. Summary of counts for pre-MSMM technical vocabulary was 16 and for post-MSMM 9. Summary of counts for pre-MSMM expressive vocabulary was 6 and for post-MSMM 38.

APPENDIX J

Translation of *Se tu m'ami, se sospiri [If thou lov'st me]*

Se tu m'ami, se sospiri
Sol per me, gentil pastor,
Ho dolor de' tuoi martiri,
Ho diletto del tuo amor,
Ma se pensi che soletto
Io ti debba riamar,
Pastorello, sei soggetto
Facilmente a t'ingannar.
Bella rosa porporina
Oggi Silvia sceglierà,
Con la scusa della spina
Doman poi la sprezzerà.
Ma degli uomini il consiglio
Io per me non seguirò.
Non perché mi piace il giglio
Gli altri fiori sprezzerò.

If you love me, if you sigh
Only for me, dear shepherd,
I am sorrowful for your sufferings;
yet I delight in your love.
But if you think that
I must in return love only you,
Little shepherd, you are subject
To deceiving yourself easily.
The beautiful purple rose
Will Silvia choose today;
With the excuse of its thorns,
Tomorrow, then, will she despise it.
But the advice of the men
I will not follow -
Just because the lily pleases me,
I do not have to despise the other flowers.

APPENDIX K

Catalogue of Background Tracks

Background track information	Method	Component	Students
Best of New Age Piano Music, "Waterfall" (solo piano)	Improvisatory Storytelling	Style	B
Carl Orff, "O Fortuna" from *Carmina Burana* (chorus and orchestra)	Aural Modeling	Style, Dynamics	E
CH2, "Spanish Guitar" (solo guitar)	Aural Modeling	Style	A
Classical New Age Piano Music, "Flight of the Eagle" (solo piano)	Aural Modeling	Style, Rhythmic inflection	D
Coldplay, "Clocks" (male vocals, guitar, piano)	Aural Modeling	Rhythmic inflection	A, B (steady beat)
Coldplay, "Viva la Vida" (male vocals, piano, synthesized strings)	Aural Modeling	Rhythmic inflection	A
Dead Can Dance, "Anywhere Out of the World" (synthesizer and male voice)	Improvisatory Storytelling	Style	A
Douglas Spotted Eagle, "Closer Still" (piano, Native American flute)	Aural Modeling	Style, Rhythmic inflection	D (steady beat)
Ennio Morricone, "Come Sail Away" (solo voice, piano and orchestra)	Aural Modeling	Style	All
Escala, "Kashmir (feat. Slash)" (electric guitar and synthesizer)	Improvisatory Storytelling	Style	C
Franz Schubert, "Pirouette (Waltz) (solo piano)	Aural Modeling	Style, Rhythmic inflection	E (matching style)
Jim Dooley, "Waltz" (piano, saxophone, accordion)	Aural Modeling	Style	E
John Grout, "Humpback Whales" (whale calls)	Improvisatory Storytelling	Style	A
Kenny G, "Tango" (saxophone and rhythm section)	Improvisatory Storytelling	Style	A
Kronos Quartet, "Close Your Eyes" (string quartet)	Aural Modeling	Style	B
Music for Deep Sleep, "Meditation On Tranquility -The Hang With Ocean Waves (steel drums and ocean waves)	Aural Modeling	Style	D, A
Nature Sounds, "Wind & Waves (Vent et vagues)" (sounds of wind and ocean waves)	Aural Modeling	Style	C, E

Phillip Glass, “Song V” (solo cello)	Aural Modeling	Style	A (looping)
Rosi Golan, “Been a Long Day” (female vocals and piano)	Aural Modeling	Style	A
Samuel Barber, “Adagio for Strings” (orchestra)	Improvisatory Storytelling, Aural Modeling	Style	B (aligning motivic gestures), C
Tomaso Albinoni, “Adagio in G Minor” (organ and strings)	Improvisatory Storytelling	Style	B
Usher’s, “Yeah (feat. Lil’ Jon & Ludacris) (male vocals, synthesizer, heavy backbeat)	Aural Modeling	Style, Rhythmic inflection	B, C, E (looping)
Yanni, “The Storm” (solo cello)	Aural Modeling	Style	E

APPENDIX L

Frequency and Student Examples of Response Mechanisms Used in Aural Modeling

Matching style (38)
[The piece I'm playing] is all about the accent and bringing out the accent, which I couldn't do [before layering with the track]. (Student A) [The track] has a calming quality to it…there is a lot of it that wants to fall back…you have to feel like you are going back [in the piece I'm playing] and not all up in the notes. (Student A) I noticed that when listening to *Carmina [Burana],* I started putting more space [between the eighth notes]…and I noticed that the crescendos were naturally starting to come in to it...and in between the eighth notes. (Student E) It felt a lot more connected…longer phrases. (Student C) There was a lot more fall to it [gestures downward] and that's what the piece calls for. (Student A) [The track helps you with] dynamics, where to lean. What notes to lean on, like *tenutos*, how long a note really [can be]; like it is a quarter note, so lean into it, don't just cut it off. There was a lot more *ritard*." (Student B) [Captured] the bigger picture of sound. (Student A) It was interesting to hear how someone else did the sigh [motive]. It wasn't too far off from the idea. (Student B) I felt more of the longing…before she [the singer] falls from the higher note. (Student C) It is just kind of like giving weight to the bottom note. (Student B) [I picked up on the] swells [the singer] was doing…they were of a round nature. (Student A)
Aligning motivic/musical gestures (26)
[The backbeat] made me realize what the syncopation was supposed to do. (Student C) [Helped] to bring out different rhythms more, like bringing out the thirty seconds versus the sixteenths]. (Student B) [The thirty-second notes] were a lot more driving…they were more even. (Student B) It is like the waves [gestures back and forth with hand] are pushing and pulling [so I held some notes longer than others]. (Student A)
Providing a steady beat (16)
The pulse was steady…and matched that of a waltz. (Student E) The tempo actually…the music had such a driving force that it pushed me into tempo and I wasn't thinking about the notes quite as much as I was just driving the line. (Student E) [The background track] acted as the metronome…at the same time it was something to play against. (Student C)
Looping (14)
Observed by researcher
Playing at half/double tempo (11)
It was a little faster than the tempo [I usually take], but I was trying to line it up. (Student B) When it is really slow, people get impatient…instead of singing with it. So, this one helps ground you in it and let's you sit in it and just sing. (Student D)

Eliciting body movement (11)
The sound had a lot of ocean crashes and I noticed that I was moving my instrument in a kind of circle. Because of that I was able to pull back and [create] this wave kind of feeling, like I was cradling the music. (Student D) *Observed by researcher*
Emotional (8)
I waited until the cellist really got into it...[the cello represented the storm in the image] and separated the event so I could concentrate on playing and really surrender to fate…the cello played the storm and I played everything else in it's path of destruction. (Student E) I was able to for a split second forget that I am in a study…I was actually feeling what the cellist was doing, where the image was and where I was…I actually felt fear more than agitation. (Student E) The wind rushing felt more in terms of like free and like when I was doing the indoor skydiving and you could feel the wind, I felt more like I was not tethered. (Student C) It was more active, presence wise…like character wise because it was very emotional the way she sang it. Very full. Some things are just so pretty. (Student A)
Struggle through tempo/ start and stop (8)
I'm not sure [where to start]. (Student B) I was trying to wait for a good point to come on. (Student B)
Absence of time (6)
It was relaxing. Just hearing air [wind] in the background kind of forced me to move the air within the [instrument]. It was kind of a calming effect, as I wasn't as nervous. (Student E) It felt like I had more freedom within the notes, not bound by rhythm. (Student A) [The absence of time] makes me less nervous because it is not as tense. (Student A)
Establishing a groove (6)
Just because the beat is really strong. (Student A)
Developing a sense of rubato (2)
That actually worked out perfectly! It slows down at 15…like a cadence to the end of that thought…it helps me gain more in-depth interpretation of it…because my professor said I can show off a little more…instead of just playing through it. (Student E) That was part of the problem, because I don't know where the fermatas are, but it kind of makes me think where I can take rubato…I remembered to take time. (Student E)
Duet (2)
I used this idea of having two voices of people dancing together…like push and pull. (Student D) It is immediate when you are playing in it and reacting to it and going back and forth and just being immersed. (Student A)
Singing along (2)
Observed by researcher
Accompaniment (1)
I feel like the accompaniment…when you accompany someone you always have to be sensitive to how they are playing. (Student D)
Soloist (1)
I'm not used to being the solo player…it was nice. (Student C)

Note. Frequency was determined by the number of times each response mechanism was used by each student in each session. In many sessions, the same response mechanisms were used more than once. Counts for response mechanisms were take from sessions two through four only, as sessions five through seven were focused on Improvisatory Storytelling. The number in the () following the response mechanism refers to the frequency of that mechanism used.

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