An Analysis of Existing Elementary Classroom Music Composition Pedagogy

And the Potential For Its Use In the Music Composition Studio

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Abstract

The purpose of this study was to examine existing pedagogy methods employed in elementary school music composition classrooms in order to determine which, if any of the methods, have significant potential for use in the music composition studio. This paper asked the research questions: (1) What are the essential stages of music composition pedagogy appropriate for the elementary-aged student? (2) What pedagogical techniques are most effective for use in the elementary-age music composition studio setting? The stages involved in the music composition process were researched and analyzed. Current elementary school methods for teaching music composition were researched and compared, including the Orff approach as well as five other well-cited methods. Three methods, resulting from a combination of elements from these six techniques, were tested in a practical studio setting with three primary age students, each with limited musical training. All of the lessons were videotaped. This case study analyzes the results of each of the three methods, comparing for similarities, differences, and correlations. Recommendations are offered regarding the most effective teaching tools for music composition in an elementary-aged studio setting. Further study is indicated, and recommendations are offered for future music composition pedagogy.

An Analysis of Existing Elementary Classroom Music Composition Pedagogy And the Potential For Its Use In the Music Composition Studio

The American educational system has recognized the importance of the inclusion of music education in the public school system since 1838, when schools in Boston introduced the instruction of reading and writing note values to children in an effort to improve singing in churches (Brophy, 1996). Since the beginning of the 20th Century, the educational focus in music has centered on instrumental or vocal performance, especially in secondary systems. In elementary grades, many systems require the entire school population to participate in a course of study that includes singing, movement activities and listening (Webster, 2009). The implementation of National Standards in 1994 has prompted a number of systems to include a more global variety of musical experiences, including improvisation and composition at all grade levels, but there is a lack of pedagogical standardization in these areas. A study in 2006 found that music teachers in Indiana had no consistent definition of music composition or agreement of the necessary elements of a compositionally based pedagogy (Strand, 2006). The teacher's undergraduate course of study may be an additional hindrance, possibly lacking basic courses in compositionally related subjects including improvisation, thus leaving teachers on their own to determine appropriate methods of instruction (Whitcomb, 2013). This void in the teacher's training can cause a complete avoidance of implementing a creative pedagogy. Webster states that significant work remains to be done in preparing music teachers to succeed in teaching composition (Webster, 2009). Green notes that sometimes teachers do not nurture their students to tap their creative potential. For many, "creativity just doesn't exist" (Green, 2005). The area of musical creativity and composition is complex in design as well as practice and can be described as non-standardized and unpredictable (Hargreaves, 2008). The educational system needs to

recognize and nurture the untapped potential of creative development that can be realized through the processes of music composition and improvisation, even though the cognitive processes involved cannot be easily determined (Miles, 2008). The creation of spontaneous musical ideas causes the brain to handle information differently, using more of the cortex, thus increasing the ability to learn. This powerful manipulation of the cognitive processes of application, analysis and synthesis is also known as discovery learning (Riveire, 2006). Webster calls it constructivism, which has roots with Dewey and Piaget, and places the emphasis on creativeness and motivates learning through activity. He notes that children learn most efficiently when actively involved in the process of creation, rather than passively receiving information for memorization. Further, the student creates his or her own understanding with the guidance of the teacher (Webster, 2009). Kaschub and Smith's study offers similar findings, stating that composing ignites atypical patterns of thinking, which are used to identify and solve problems, question procedures and instigate innovation (Kaschub and Smith, 2009). Music composition also cultivates emotional growth, giving students room to explore their own emotional and intellectual capacities within a musical context (Kaschub and Smith, 2009). In a group composition setting, inclusion can be a significant benefit of composition study, often occurring as the result of experimental or playful interactions (Kerchner and Abril, 2009). The incorporation of music composition into school curriculum can also increase performance in other subjects. Green notes that if students do well with their creativity, their other school subjects "suddenly become much better" (Green, 2005).

The National Standards established in 2014 include guidelines and goals for creativity in music. The standards state that by 4th grade, a student should be able to: improvise melodies, rhythms, and harmonic ideas, and explain their context or inspiration; generate music ideas within a harmonic setting, as well as within meters; show and describe musical ideas for an

improvisation, arrangement or composition, explaining their context or inspiration; use iconic or standard notation, or recording technology to preserve creative ideas; reflect on and refine their personal music, showing improvement over time; present the final musical creation to others, explaining their context or inspiration (National Core Arts Standards, 2014).

Oxford Music Online defines music composition as "the activity or process of creating music, and the product of such activity" (Blum, 2014). This broad characterization suggests that an examination of the stages of music composition may be useful in order to understand and clarify the process. The research finds that several stages are involved in the process of music composition, beginning with the student's discovery of a creative impetus or inspiration. There are studies that recommend the use of visual imagery for stimuli (Frazee, 1987; Kaschub and Smith, 2009), while other studies discuss the use of familiar speech patterns as stimuli, such as using a student's name or hometown (Brophy, 2001). Robinson suggests that the springboard topic should be relevant to the student's life, such as a favorite movie or book, and the student should be encouraged to discuss their feelings regarding the topic with emotional descriptors such as fear, happiness, or bravery (Robinson, 2011).

The next stage is audiation, the ability to hear with discernment such musical attributes as pitch, tempo, dynamics, rhythm and timbre, and effectively reproduce what is heard inside his or her head (Garner, 2009). The use of movement and speech are the prevailing methods of exploring and teaching the audiation process. Psychologist Howard Gardner theorizes that activities that require the body to respond, such as speech or movement, have a stimulating effect on the musical sphere of the brain (Gardner, 2009). Piaget's cognitive stages of childhood states that children in the pre-operation stage, ages of 2-7, begin to develop audiation skills, and continue to expand and evolve during the concrete operations stage, ages 7-11 (Gardner, 2009).

Garner's technique begins with movement, instructing the students to "move their bodies in response to what they hear." She guides the movements in order to define the pulse, musical character, and rhythms, as well as the pitches and dynamics. She recommends leading questions, such as "how would your body change if I play this?" Garner also suggests playing games in rhythm, such as passing a ball, playing jump rope, or jacks, to make the process more enjoyable for students (Garner, 2009). The mirrored imitation of teacher's gestures, clapping, snapping, or thigh slapping, is recommended by some studies as an effective tool for improving audiation proficiency (Frazz, 1987; Gardner, 2009). Mirrored imitation, also known as simultaneous imitation, is effective as an aid for students of all ages and abilities in the development of good aural skills, as well as observational skills, faster reaction times, and a larger movement vocabulary (Frazz, 1987). Choksy has a differing view, suggesting that the voice is the best means of expanding audiation skills. She states, "To be internalized, music learning must begin with the child's own natural instrument, the voice" (Choksy, 1981). As students progress, Garner introduces a combination of both techniques, directing the student to chant a familiar piece like "Twinkle, Twinkle", and then to internalize it by transferring the rhythm to some part of their body while auralizing the words in their heads (Garner, 2009). After students have mastered this technique, Garner addresses pitch using folk songs that contain only notes from the pentatonic scale, reinforcing the intervals using hand gestures as well as notation.

The next stage of composition is improvisation and exploration. Grove's Dictionary of Music defines improvisation as the "art of thinking and performing music simultaneously" (Sadie, 2001). Brophy expands this definition, adding that during improvisation there is no intent to revise the music. This distinction marks a fundamental difference between improvisation and composition (Brophy, 2001). One study implies that during improvisation, an area of the brain is

accessed that is associated with meditation, daydreaming and multitasking, which is different than the area used when playing memorized or pre-written passages, a region associated with sequence, planning, and problem solving (Beakstead, 2013). Determining the best age to introduce the process of improvisation to students is a matter of some controversy in the research. There are educators who feel that improvisation should only be taught when students achieve a certain level of musical ability, simply because they feel it's a complicated process, while others feel that improvisation is a very natural human activity and should be taught at a very early age (Kratus, 1991). Azzara agrees, noting that it should be included in music classes of all ages, because of its significant contribution to the student's overall musical understanding and performance abilities (Azzara, 1999). Brophy also concurs, asserting that the storage of musical ideas begins at an early age, and grow over time, resulting in a "cognitive storehouse" of musical referents, used as ingredients for improvisation (Brophy, 2001). Regardless of age, studies agree on the importance of removing any pressures or fears that the student may feel prior to beginning the process. Performance-oriented instructors may find this a difficult concept to embrace and could unintentionally reveal a hope for high expectations, thus invoking fear in the student and immobilizing the creative process. The student must understand that they will be improvising for their own gratification, with no judgment from the instructor (Choksy, 2001). Brophy and Kratus note that students between 5-8 have no reservations regarding others judging their creativity, while students between 9-12 feel a need to conform to the reactions of their peers and teachers. Students who are older are very sensitive to the judgment of others, resulting in creative efforts designed to earn approval from an audience. Further, primary children are willing to create simply for the joy of creating, while older children will only improvise in a structured environment (Brophy, 2001; Kratus, 1991). Brophy's view is that there are three contexts for improvisation: a

response to words or musical cues; free improvisation limited by a given musical form; and free improvisation with no given musical restrictions. Most of the studies agree that providing some degree of structure and guidelines for the improvisational process are helpful (Azzara, 1999; Poulter, 2008; Whitcomb, 2013). Azzara notes that creative improvisation occurs when restrictions are placed on harmonic structure, meter, and tonality. Poulter adds that by providing a framework for the student, he or she is given added freedom to experiment within the "remaining creative opportunities" (Poulter, 2008). Whitcomb suggests that the improvisational restrictions include such items as number of measures, number of beats, specific pitches, or rhythmic patterns. The research agrees that the process of free exploration is a primary ingredient for successful improvisation. It is only through this process that the student can thoroughly familiarize themselves with the tools available to them for composition. Through exploration the student may discover the creative impetus that inspires a complete work (Kratus, 1989). Kaschub and Smith suggest that limiting the process to a single idea limits the compositional process, and that brainstorming many ideas is important (Kaschub and Smith, 2009). Robinson agrees, noting that successful creative results are attained when all of the musical ideas are exhausted (Robinson, 2011).

The next compositional stage is melodic and structural refinement. As students experience this stage, it may strongly resemble exploration, but this process is distinct by virtue of the fact that students are now editing in search of the desired sounds (Kaschub and Smith, 2009). Evidence of this stage occurs when the student begins to make musical decisions regarding dynamics, timbre, tempo, and the refinement of the overall form (Robinson, 2011). It's also during this stage that the student may discard some musical fragments from those generated during improvisation, as he or she solves the musical puzzle at hand (Kaschub and Smith, 2009).

Guilbault notes that it can be helpful at this stage for the instructor to offer a simple harmonic background for the student's melodic lines. Her studies reveal that children who received this harmonic guide responded to the harmony, maintaining tonality and a sense of key noticeably better than those students who didn't receive such instruction (Guilbault, 2004; Guilbault, 2009).

The next stage in composition is preservation, which can be accomplished in three ways: memorization, physical notation, and audio recording. The decision regarding the preferred method of preservation must be determined in advance, in order to be assured that the composition will be properly preserved. Since memorization clearly has significant limitations, the research suggests using either symbolic notation or audio recording as preferred methods (Kaschub and Smith, 2009; Robinson, 2011; Orman-Rodriguez, 2001). For younger students, or those with little or no notation skills, audio recording has significant advantages. Robinson notes that recording a students work not only preserves the work, but also offers the student the means to listen, analyze, and reflect on their work, as well as validating their musical endeavor (Robinson, 2011). Ohman-Rodriguez agrees, stating that students need to hear their composition soon after the recording (Ohman-Rodriguez, 2001). Regarding the use of symbolic notation, Kaschub and Smith suggest that notational skills should be taught separately, allowing the student to completely focus on the sound in composition. When the student achieves a level of notational competence, it then becomes a valuable tool for preservation of their work (Kaschub and Smith, 2009). Goldstaub has a slightly differing view, suggesting that students should begin the process of symbolic notation by sketching gestures, thereby cultivating the concept of general musical phrases. Azzara and Brophy conclude that competent notational skills lead to original works of increasing complexity and sophistication (Azzara, 1999; Brophy, 1996).

The final stage in the composition process is performance and reflection. While not all

compositions are performed, yet the research indicates it can be the most rewarding part of the composition process (Kaschub and Smith, 2009). A strong message is conveyed to the student that their work is valid and honored when the piece is played during a public performance or simply by the teacher during a lesson (Upitis 1991). Kaschub and Smith note that this musical interaction with others significantly contributes to the process of learning to compose music, and "can be a celebration" (Kaschub and Smith, 2009). This is the point where students can begin to reflect on their work and make personal assessments regarding the composition. The student's impression of the work may change when it's replayed, as he or she decides what worked and what didn't work as expected (Kaschub and Smith, 2009). This postponement of judgment by the student affords them the time they need in order to develop good audiation skills and completely explore their creative path (Goldstaub, 1996). Robinson notes that this type of analysis is significant in developing effective critical thinking skills (Robinson, 2011).

The research indicates that teachers play a significant role in the achievement of success or failure during music composition instruction. It is vital that the interplay between teacher and student stresses a safe, judgment-free environment, as well as a shared understanding regarding the goals, methods, and compositional approach (Wiggins, 2003). It is also important that instructional theories and research be studied by the instructor in the area of composition teaching and learning, given the strong influence of the teacher (Kaschub and Smith, 2009). Teachers should have experience as improvisers and composers in order to competently relate to the student the many creative stages that comprise the process (Robinson, 2011). In a study by Kerchner and Abril, a student survey reported that during their composition class, the teacher's role ranged from "being helpful to being intrusive" (Kerchner and Abril, 2009). In the same manner as improvisation, the entire compositional process may be more successful if the student

is given some level of prescribed parameters. The teacher must build in as many "controls" as are necessary, but no more. The teacher should never make melodic suggestions, beyond suggesting a starting or ending note (Brophy, 1996). Volz agrees, stating that too many parameters can squelch the creativity of the student, and undermine the entire process (Volz, 2005). The determination of the amount of restricting tools is a delicate balance, which must leave the student a healthy degree of autonomy (Kaschub and Smith, 2009). Lapidaki notes that the student's intuition must be respected, thus encouraging their individuality, and fostering personal creative freedom (Lapidaki, 2007). Robinson stresses that a balance between student and teacher is necessary, where both are equal members of the learning experience, rather than the teacher playing the role of the sole giver of information. This shared learning approach cab build self-value and self-worth for the student, hopefully giving them confidence to share their musical creations more easily (Robinson, 2011).

The research discovered differing methods of music composition instruction in the elementary school classroom. Kaschub and Smith found the following similarities between methods: all compositional processes have a starting point, a midpoint containing great activity, and an ending, marking the existence of a piece (Kaschub and Smith, 2009). Given the varying approaches, this research focuses on six current and cited methods of music composition instructional methods.

The Orff approach sparks creativity through the student's instinctive responses to music. Orff feels that speaking, singing, music and movement are all naturally connected, and accordingly, his approach teaches rhythm by connecting speech patterns to their natural rhythms. This naturally leads to body percussion and movement. Orff's approach to melody is similar, using the natural pitches of words to inspire and select melodic pitches, which can then be

transferred to instruments. The Orff approach emphasizes the learning of playing first, and notation second. Pre-K students are introduced to symbols, primary students are taught quarter note rhythms and rests as well as a limited number of pitches, and by Grade 4, the students are fluent in the diatonic scale. Audiation is a large part of Orff's preparation for musical creativity, including simultaneous imitation, remembered imitation, and overlapping imitation. His method for improvisation also involves inspiring the students with visual imagery, preparing them with question and answer exercises, and setting up basic rules or boundaries for the student, allowing them to create melodies and rhythms within a framework. These rules might include the number of beats or measures for the melody, or limiting the available pitches to those in the pentatonic scale (Frazee, 1987).

The Kaschub and Smith approach begins by stimulating the students' imaginations, encouraging them to visualize a mental image of a faraway or exciting place. Then the students are asked to write several phrases that describe the location in detail. They are directed to choose two phrases from their description that they like the best. Then, using the first phrase as inspiration, they are guided to create a rhythm, which they can remember and repeat, and play it on an Orff xylophone. Next they are directed to use the second phrase as inspiration to create a melody, which they can remember and repeat, and play it on the Orff xylophone. Once they can play both phrases separately, they are asked to compose a piece that uses the 2 phrases, using repetition, and variations (Kaschub and Smith, 2009).

Kratus's approach to music composition instruction has five steps. First, audiation is introduced, as the teacher encourages direct imitation of familiar spoken or sung phrases. The exercise is then expanded, having students imitate unknown rhythms and melodic patterns. When the students are adept at these exercises, they are introduced to a question and answer technique.

Kratus's second step, unique in the cited methods, involves having the students create variations to a well-known melody, such as Hot Cross Buns, as the teacher plays accompaniment on the piano. The student is then asked to create a rhythm and melody using the speech patterns of their name, or the teacher's name; next an unexpected variation of the same. Finally, the student is directed to create a new, "never before heard" melody, with no prompting or guidelines from the teacher (Kratus, 1989).

The Robinson approach begins with a creative springboard topic, something relevant to the student's experience, such as a book or movie, from which they are asked to describe the main character using words that describe feelings, such as fear, bravery, pride, etc. When the student has offered at least three responses, the teacher prompts the student with phrases like, "Can you make a short musical phrase on the xylophone that captures one of the feelings that you described?" (Robinson, 2011). This process is repeated for a total of three times, yielding three musical phrases. The teacher then helps the student organize the phrases into a composition, encouraging the student to be creative with dynamics, timbre, and form. Once the student can perform the piece in its entirety, the teacher records the work, and has the student listen to the recording. The student is then asked to reflect on the work, prompted by questions such as, "Given more time, would you change anything?" (Robinson, 2011)

Brophy's approach bypasses inspiration, beginning with rhythm audiation. The teacher writes a 4-bar rhythm on the board, and practices it with the students through speaking and clapping. The students copy the rhythm to their individual boards. Then on Orff instruments, the students improvise melodies that fit the given rhythm. They are given some pitch parameters, instructing them to land on a dominant note as the last pitch of bar 2, and to end on a tonic note as the last pitch of bar 4. When the students are satisfied with their melody, they write the letter

names of the notes below the stick rhythm patterns on their boards. The teacher passes out a notation guide, showing standard musical notation of the pitches they've been using. They are instructed to transfer their letter name notes to standard music paper, using the notation sheet as a guide (Brophy, 2001).

Mrs. Miracle's approach has similarities to those of Brophy, with more emphasis on creative impetus. For one exercise, she directs the students to close their eyes and picture a windy day. What do they see, smell, hear, or taste? The teacher makes a list of the students' answers, and chooses 4 phrases that have interesting speech pattern rhythms. She writes these phrases on the board, in 4 boxes, and challenges students to play each of the rhythms as body percussion. Students are asked to raise their hands to play their rhythms for the class. The teacher then chooses 4 of their rhythms that will work well together as a phrase, and notates the rhythm in 4 boxes on a worksheet, and passes out a copy to each student. They are then directed to experiment on the barred instruments using the rhythm. The teacher encourages them to listen to what they've played to see if they'd like to change it in any way. After the students are pleased with their melody, they are instructed to write the note letter names below the stick rhythms on the worksheet. Then, in similar fashion to Brophy's approach, the students are given a notation guide to help them transfer the note letter names and stick rhythms to musical notation on a musical staff (Miracle, 2012).

Some of the research suggests that students who participate in a class or group music composition lesson may experience interpersonal challenges or a questioning of their creativity. Some students may find themselves forced to sell their musical ideas to the group in order to have their ideas adopted. Arguments, debates, or voting may ensue during the process of refining the composition (Kaschub and Smith, 2009). Group classes, by nature, compel the teacher to teach

one concept at a time to all students. This can be a problem. In audiation, for example, not every student will respond in the same manner. Some students audiate at a high level while others need more practice to succeed (Garner, 2009). Kaschub and Smith state that the teacher needs to develop instructional strategies that allow them to spend individual time with students during the entire compositional process. They maintain that having a student composer work alone is not preferred, because the freedom is too overwhelming for a young composer. Instead they endorse a mentor's input, helping to balance the student's working style, providing valuable feedback on their work (Kaschub and Smith, 2009).

The review of literature revealed a lack of research in instructional methods specifically designed for use in the elementary music composition studio. Therefore research was indicated to determine the essential elements of music composition pedagogy appropriate for the elementary-aged student, as well as possible ways to implement them into a studio setting.

The purpose of this case study is to adapt and test the six music composition classroom methods discussed in this study, using primary-grade students as subjects, in order to determine which techniques are most effective in teaching the essential components of music composition pedagogy in an elementary music composition studio setting, and to analyze the results. Several elements from the six methods were adapted and combined, resulting in 3 music composition studio lesson plans.

This study explored two research questions: (1) What are the essential stages of music composition pedagogy appropriate for the elementary-aged student? (2) What pedagogical techniques are most effective for use in the elementary-age music composition studio setting?

Method

Participants

Participants included 3 elementary school students (N = 3), all of which were students at Our Lady of Mercy School, a Catholic parochial school in East Greenwich, Rhode Island. Student A, a male, and Student B, a female, were both 9 years of age. Student C, a female, was 11 years of age. As this was a pilot study, the students were all selected from one local elementary school as samples of convenience. Each of the students had experienced similar levels of musical training, centered mostly on imitational singing, basic staff notation, and music history. The two 9-year-old students also had 2 months of beginner band experience, and the 11 year old had received one year of piano training.

Materials

Each participant's parents were given two copies of the Consent Form For Research shown in Appendix A. Student A was given the Notation Guide and worksheet "Music Composition Experiment #1", both shown in Appendix A. Student B was given the Notation Guide and worksheet "Music Composition Experiment #2", both shown in Appendix A. Student C was given the worksheet "Music Composition Experiment #3", shown in Appendix A. During the experiments an Orff alto xylophone, portable electronic piano, music stand, video camera, microphone, and audio recording system were used. The instructor used three pre-scripted lesson plans, one for each experiment, shown in the Procedures Section and in Appendix A.

Procedure

One of the researchers invited four students to visit the recording studio in Warwick, Rhode Island, where the pilot study was conducted and recorded. The students were asked to participate in the study on a Saturday morning. They, as well as their parents, were told that their participation was voluntary and they were not obligated in any way to participate. The participants' parents each completed 2 copies of the Consent Form For Research, one of which was collected by the researchers and the other retained by the participant.

Student A was instructed using the following lesson plan, which combines methods from Kaschub & Smith and Brophy.

EXPERIMENT 1

Creative Impetus	"Can you think of a favorite character in a story, book, or movie that has a lot of emotion?" "Great. Can you tell me what some of those emotions might be?" **Teacher writes them on scratch paper.**
Audiation	"I'm going to clap a 2-measure rhythm. When I'm done, I'd like you to clap the same rhythm. We'll do it several times, okay?" **Teacher claps 2-bar rhythm and student imitates. It is repeated several times.** "Good. Now I'm going to remind you of some of the emotions you chose a little while ago. _____, _____, _____. I'd like you to use those emotions as inspiration, and clap your own 2-measure rhythm. I'll imitate what you do." "We'll repeat it until you tell me that you like it. Okay? Good… go ahead." **When student stops, the teacher notates the rhythm onto *Music Composition Experiment #1* (student watches).** "Good. Now let's do it once more, and try for a different rhythm. Go ahead."

	When student stops, the teacher notates the rhythm on *Music Composition Experiment #1* (student watches). "Great. Now, on one note on the instrument, I'd like you to play the 1st rhythm. You can read it from the paper." **Student plays on the instrument** "Good. And now let's play the 2nd rhythm." **Student plays on the instrument**
Improvisation & Exploration	"Now I'd like you to make up a melody for the first rhythm, using any of the bars on the instrument. You can experiment as long as you like. *There's only one rule:* the last note of your melody must be a 'G'. Okay? Go ahead… let me know when you have something you like." **Student improvises melodies aiming for the dominant pitch** "That's great! Now let's do the same thing for the 2nd rhythm - try to make a different melody for that rhythm. *Again, there's only one rule:* the last note of this melody must be a 'C'. Okay? Go ahead… let me know when you have something you like." **Student improvises melodies aiming for the tonic pitch**
Refine Structure	"Good. Now I'd like you to play both melodies back-to-back. You can repeat them in any order that you'd like. Just experiment until you're happy." **Student sequences melodies refining the form**
Preservation	"Wonderful! We're almost done. I'd like you to just write down the letter names of your melodies on the page, matching the letter names with the rhythm notes." **Student writes letter names under stick notes** "Great! Last thing: I'd like you to use this music staff as a guide, and draw the notes of your melodies onto the staff below." **Student is given *Notation Guide* with labeled notes and letter names and notates the melody**
Reflection	"Was this an enjoyable activity?" "Do you think that someday you may be able to write a whole song?"

Student B was instructed using the following lesson plan, which combines methods from Kratus and Miracle.

EXPERIMENT 2

Creative Impetus	"I'd like you to close your eyes and imagine a faraway place." "What do you see?" "What do you hear?" "What do you smell?" "Who do you see?" **Teacher writes down the responses.**
Audiation	**Teacher chooses 4 words or phrases that will each work rhythmically in one measure. He writes them in boxes 1-4 on *Music Composition Experiment #2.*** **Teacher explains the concept of body percussion.** "Now, I'd like you to read the words or phrases out loud while playing a matching rhythms using body percussion." (Teacher can demonstrate) **Student reads the written phrases and creates rhythmic pattern for the phrase using body percussion while saying pattern.** **Repeat until student is satisfied. Teacher writes rhythm on *Music Composition Experiment #2.***
Improvisation & Exploration	"Great! Now let's play that rhythm on one of the bars on the instrument. Don't forget to speak the words or phrases as you play." **Student plays the rhythm on one pitch of the barred keyboard.** "Wonderful! Now let's turn that rhythm into a melody. Go ahead and play that same rhythm and use as many of the notes as you'd like. *There's only one rule:* the 1st note must be 'C', and the last note must be 'C'. Experiment as long as you'd like. Let me know when you have something you're happy with." **Student experiments with transforming their rhythm into a melody, using the barred keyboard and following the rules.**

Refine Structure	"Great! Now let's combine the rhythm version with the melody version. Start with the rhythm version on one bar only, and then play it with the melody version." **Student plays the rhythmic version followed by the melodic version.**
Preservation	"Good job! Now we're just going to write this all down so that we don't forget it. I'd like you to write the note names of the melody version under the rhythms on the page." **On *Music Composition Experiment #2* the student writes the note names under the rhythms** "Great! Just one last thing: I'd like you to use this music staff as a guide, and draw the notes of your melodies onto the staff below." **Student is given *Notation Guide* with labeled notes and letter names and notates the melody**
Reflection	**Teacher plays the piece** "What do you like about the piece?" "What instrument would this sound best played on?"

Student C was instructed using the following lesson plan, which combines methods from Orff and Robinson.

EXPERIMENT 3

Creative Impetus	"I'd like you to close your eyes and imagine an exciting place." "What place do you see?" **Teacher writes students answer on *Music Composition Experiment #3.***

Audiation (Simultaneous imitation)	"Have you heard this rhythm?" "Baa-baa black sheep, have you any wool? Yes, sir, yes, sir, three bags full. One for my master, one for my dame. One for the little boy who lives down the lane." "Let's say it together." **Teacher and student repeat it until memorized.** **Describe to student the process of body percussion.** "We're going to do it again, but this time, when we get to the 3rd line, I'd like you to start playing body percussion with no words, and continue that to the end." **Teacher and student do the exercise.** "Great! This time, I'll say the rhyme, and you do body percussion for the whole song, again with no words."
Audiation (Remembered imitation)	"Good job. Now I'd like you to imitate me. I'll play a rhythm, and when I'm done, you play the same rhythm." **Teacher plays 2-bar rhythm using body percussion; student imitates.**
Improvisation & Exploration	"Okay, now we're going to use the instruments. I'll play a rhythm on only one note, and I'm going to try and make it sound like a question. Then I'd like you to play a rhythm on only one note, that might sound like an answer." **On keyboard, teacher plays a rhythm as a question; student plays a rhythmic answer on the barred keyboard.** "Great! This time, we can use as many notes as we like. I'll play a melody that sounds like a question. Then I'd like you to play a melody sounds like an answer." **Teacher then plays a melody as a question; student plays a melodic answer.** "Wonderful. Now, when we started, you said that your exciting place was _____. Can you make up two short phrases about that place?"

	Student tells the teacher his answer, and teacher writes it down on *Music Composition Experiment #3.* "Now, take as much time as you like, and make up a melody for each of the 2 phrases. Try to capture the emotion that you might feel if you were in _____. If you'd like you could use the question and answer format, but you don't have to." **Student experiments with melody & rhythm for the phrases.**
Refine Structure	"This time, I'm going to play along with you. We'll keep repeating it, until you're happy with it." **Teacher plays ostinato, as student plays the 2 phrases**
Preservation	"Great job! We're almost done. We're going to play it one more time and record it, so that we don't forget it!" **Teacher records the performance of the piece**
Reflection	**Student listens to recording** "What would you change, if anything?"

Data Analysis

Results

I. Creative impetus

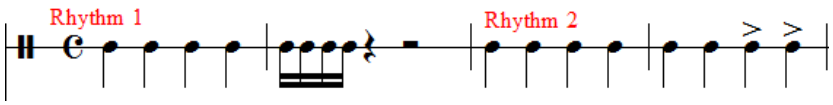
In response to the prompt, Student A named a character, "Hawkeye" from *The Avengers*. This is a character that the student describes as "sneaky" and a "behind the scenes" type of personality.

Student B, when prompted, described "a farm and a ranch… kind of in a desert, with cows." Imagined sounds in included "guns, for some reason, and yelling," The imagined smell was that of "pastries." These images were used by the facilitators to generate four brief textual phrases to be used as a lyric basis for composition: 1) "In the desert," 2) "Yelling," 3) "Cows," and 4) "Smell of pastries."

Student C responded to the prompt describing a "huge pool" with "big waterslides" which are "see-through" and "long and twisty." In addition she describes diving boards at different heights, including "fat ones" that "make noise when you jump off of them." She also mentions a volleyball court, which has sand in it.

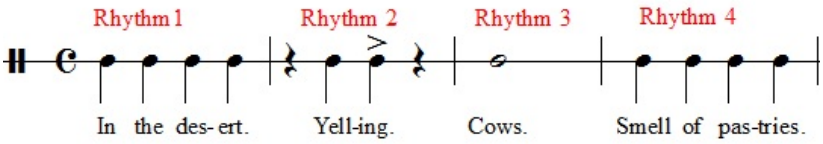
II. Audiation

Student A successfully produced two rhythms, both inspired by the character "Hawkeye." The facilitators interpreted both of these rhythms as follows. The accents here were chosen to represent an increase in volume heard in the student's performance.



The student even explained some of his compositional choices in first rhythm: "because he's sneaky, and then he does something," apparently referring to the slow, steady quarter-note pattern interrupted by a sudden burst of quick sixteenth notes.

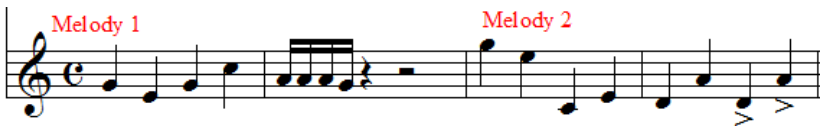
Student B was able to create four rhythms using the phrases generated in step 1. These were notated as follows by the facilitators. The student also appeared to make use of dynamics in the rhythm for "Yelling."



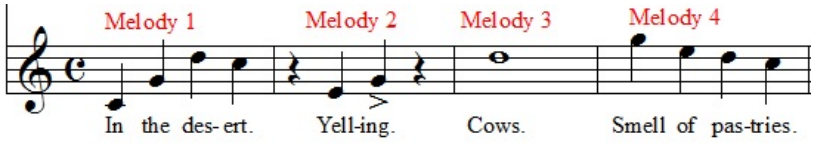
Student C successfully improvised a rhythm to "Baa-baa black sheep" using body percussion in the *simultaneous imitation* exercise, and showed very accurate rhythmic recall in the *remembered imitation* exercise.

III. Improvisation and exploration

Student A successfully used his rhythms to improvise and generate two different 2-bar melodies using pitches from the Orff instrument. These melodies were played through several times, with slight pitch differences each performance. The facilitators notated the final performances of the resulting melodies, as shown below.



Student B successfully created four melodic fragments for all rhythms according to the instructions, though some of the pitches used in performance were slightly different each time. She also sang along while playing, though sometimes singing different pitches (and even opposite melodic motion) from those she was playing. The facilitators, as shown below, notated the final performance of each melodic.



Student C was able to improvise several "answer" responses to musical "questions" given by the facilitators on the Orff instrument. These responses appeared to show flexibility, confidence, and an unrestrained engagement with the activity. When prompted to compose two brief sentences describing the "exciting place" in a question-answer format, she generated the following two sentences: "There's a big fat man that went down the water slide. / It was gross, because the water slides were see-through." A brief melody was gradually improvised using these two lines of text as a rhythmic basis. Once again, the melody was played with slightly different pitches in each performance.

IV. Refine structure

The final melodies were initially notated using actual staff notation for rhythm but with letter names written underneath to represent pitch. An upward arrow beneath the letter name was chosen to represent the upper octave. This is the version given to students A and B to attempt playing back their own composition from a notated version.

Student A was able to play back both the notated melodies identically and confidently.

Student B was able to play back all four melodies identically with the one exception that "Yelling" was played an octave higher than the notated transcript of her original performance.

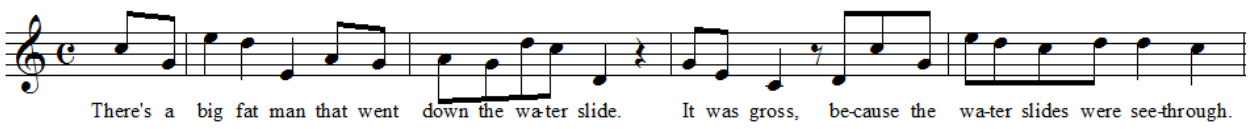
Student C successfully played a refined version of her improvisation alongside piano accompaniment in a short, recorded performance.

V. Preservation

Student A successfully notated all the pitches of both melodies. His notation, however, failed to reflect changes in rhythm (quarter note to sixteenth) or dynamics (no accents were written).

Student B successfully notated all pitches for all melodies. The rhythms, however, were not correctly reflected in her notation. Whole notes were used for all syllables, though the rests were correctly written as quarter rests. The accent in "Yelling" was also missing in her attempt at staff notation.

Student C's duet performance was recorded by audio, though it was not transcribed or notated by the student or the facilitators during the experiment. The resulting melody, however, can be effectively approximated by the transcription used below, which was made from the resulting recording after the session was over. Note that the words are printed as lyrics below to reflect that the student had sung along with the melody while she was first composing it, even though she chose not to sing along during the final duet performance.



VI. Reflection

Student A said that he "sometimes" heard music in his head that he wished he could somehow preserve. When allowed to freely improvise at the Orff instrument by himself, his performance showed a noticeably steadier rhythm and wide range of used pitch than his guided improvisation during step 3 of the experiment. He played confidently and with steady concentration. However, when accompanied by the piano, his concentration seemed to waver and he grew increasingly uncomfortable and dissatisfied with his performance.

Student B appeared to passively acknowledge hearing music in her head and wishing to transcribe it. In hearing her melody played back on the piano, she expressed satisfaction and an interest in hearing it played on a saxophone sometime.

Student C seemed pleased on hearing the recording of the duet, saying, "I am good." However, when asked if she ever "heard tunes" in her head or wished she could notate them, she responded with "I don't really pay attention to what I'm thinking" and laughed.

Discussion

The "Creative Impetus" phase of the experiment seems to have revealed a capacity for vivid and unrestrained imagination among all three students. All of the students were able to generate material upon which to generate both rhythmic and lyric aspects of their composition, and all students successfully completed brief melodic pieces from these elements using the guidelines set forth in the experiments. In the case of Student A, this process even took on a somewhat programmatic approach, using variations in rhythmic speed and intensity to convey the movement of a "sneaky" person about to do something surprising.

Two of the students, A and B, appeared to use not only pitch and rhythmic variation, but also dynamics (this was especially clear in Student A's work). This expressive choice on the part of the students proved surprising, since the compositional exercise was designed to direct them to focus on rhythm, and the concept of dynamics was not introduced or explained to any of the students before beginning the experiment. In the cases of students A and B, the ability to audiate and convey dynamics appears to be innate.

Rhythm seems to be slightly easier to audiate than pitch for all three students. Rhythms performed on body percussion and the Orff instrument were somewhat tentative and unsteady, but still discernable when accounting for uneven tempo in the students' performances. Precise changes in pitch, however, seem more difficult for students to hear. This is suggested by slight changes in pitch during repetitions of the same performance, if one excludes the possibility of students intentionally revising the melody during subsequent performances without alerting the facilitators. In the case of Student B, she would occasionally sing in the opposite melodic direction from what she was playing. Overall, melodic motion appears to be gestural rather than intervallic among the three students assessed.

While pitch seems more difficult to audiate than rhythm for the three subjects, rhythm ironically appears more difficult to notate. Both of the students who attempted to notate their pieces using the key (A and B) did so successfully with respect to pitch. Rhythm and dynamics, however, were either notated vaguely or not at all. These elements were used more deliberately and consistently in their improvisations than pitch, but the notation of these items by the facilitators in stage 3 did not seem to catch the students' attention as a tool to be combined with pitch in stage 5 of the experiment. It is also possible that the students were confused by the differences in notation between the facilitator's notes (quarter notes, sixteenth notes, quarter rests,

etc.) and the staff notation key, which uses only whole notes to indicate pitch.

Implications

At the most basic level the results of this study suggest that musically inclined students in the 9 to 11 year-old age range can, with guided prompts, produce and partially notate original compositions on an improvisational basis. While the imaginative capacity of a child may generate an almost inexhaustible creative impetus for musical composition, however, the preservation and conveyance of that imagination requires a child to master certain basic techniques of audiation and notation. The child would, for example, have to hear not only differences between high and low, fast and slow, or soft and loud, but also the differences between D4 and C4, eighth notes and quarter notes, or forte and piano. Once hearing these differences is possible, then the notational vocabulary must be learned in order to preserve the audiation.

The findings of this study have several implications for future research. One is the relationship between a child's desire to create music and the ability for that child to preserve and communicate it given the proper notation. Could this study be repeated using a simpler form of notation that can convey elements of pitch, rhythm, and dynamics while still being relatively intuitive for a child to learn and internalize? Many children learn the alphabet and begin writing words several years before the age group represented in this study, yet even with spelling errors their writings can often be understood unambiguously by adults and other children. The challenge with music notation is that even a very basic system requires one to be capable of even subtler communication than are the 26 letters of the English alphabet. It is suggested that these issues be further explored in future studies regarding the capacity of children to learn standard or alternate forms of music notation.

Possible future research might also approach the creation/audiation/preservation relationship from the opposite angle. How can musically trained adults with facility in music notation use the imaginative process of a child when seeking a creative impetus for composing music? What can children teach adults about the power of open-ended brainstorming and imagination when it comes to audiating new music?

Future researchers studying preschool-age music composition may also wish to experiment with instruments of different expressive capabilities. Would instruments of different timbres, registers, or chromatic capacities allow children to hear melodies and harmonies in their improvisations that capture their attention even more than those possible on the Orff xylophone?

This research has only begun to scratch the surface of these issues and it is encouraged that some of these other topics be studied, not only to understand the role of music education in child development, but also to explore the possibilities of new notation systems and compositional techniques for musicians of all ages.

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Appendix A

The University of Rhode Island
Department of Music, Kingston, RI
Research Title: "Measuring the Effectiveness of Various Pedagogical Techniques In the Music Composition Studio"

CONSENT FORM FOR RESEARCH

Your child has been invited to take part in a research project described below. The researcher will explain the project to you in detail. You should feel free to ask questions. If you have more questions later, John Rametta and John Prevedini, the people mainly responsible for this study, (401) 219-0409, will discuss them with you. Participants must be under 12 years old to be in this research study.

This research study will gather information related the instruction of music composition in the elementary-aged music studio. It will analyze the results and note any implications for further study or suggested lesson plans.

Participation in this study is voluntary. Even if you give your permission for your child to participate, your child is free to refuse to participate. If your child agrees to participate, he or she is free to end participation at any time. Simply inform John Rametta or John Prevedini of your child's decision. You and your child are not waiving any legal claims, rights, or remedies because of your child's participation in this research study.

The research instrument is a video-recorded music composition lesson. It will involve several learning processes, and should take approximately 30-45 minutes to complete. It will be held at StarTrak Studios, Inc., at 36 Vermont Avenue, Unit 1, Warwick, RI, (401) 732-1880.

There are no risks or discomforts involved in this study beyond what one would normally experience in everyday life.

The potential benefits of this study include an understanding of the enrichment to the general knowledge base that a fuller knowledge in the area of music composition may provide.

Your child's part in this study is confidential. None of the information will identify your child by name. During the video recording, your child's face will not be captured from a full-frontal view; however, their voice will be heard. The video recording will not be made available for general public viewing; it will only be played in a small classroom setting. All records will be stored with the lead researcher.

If you are not satisfied with the way this study is performed, you may discuss your complaints with John Rametta or John Prevedini at (401) 219-0409 if you choose. In addition, if you have questions about your rights as a research participant, you may contact

the office of the Vice-President for Research, 70 Lower College Road, Suite 2, University of Rhode Island, Kingston, Rhode Island, telephone: (401) 874-4328.

You have read the Consent Form. Your questions have been answered. Please indicate whether or not you wish to allow your child to participate in this project by checking one of the statements below, signing your name to both copies, keeping one for your records.

____ I grant permission for my child to participate in John Rametta and John Prevedini's study on teaching music composition in the studio.

____ I do not grant permission for my child to participate in John Rametta and John Prevedini's study on teaching music composition in the studio.

_____ _____
Signature of Parent/Guardian Printed Parent/Guardian Name

_____ _____
Printed Name of Child Date

_____ _____
Signature of Researcher Printed Name Researcher

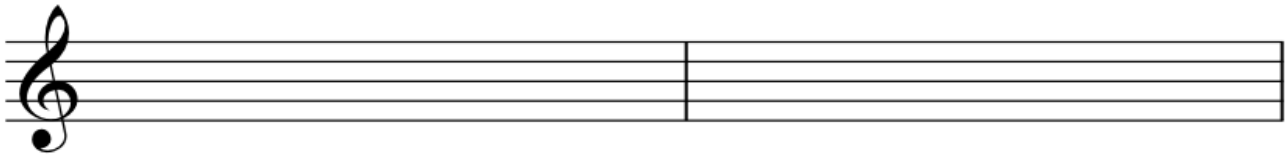
_____
Date

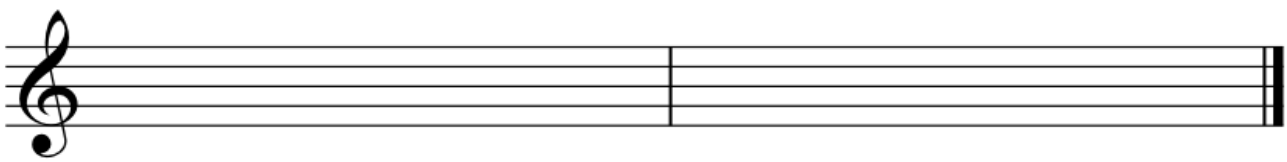
Please sign both consent forms, keeping one for your records

Appendix B

Music Composition Experiment #1

1.	**2.**
3.	**4.**

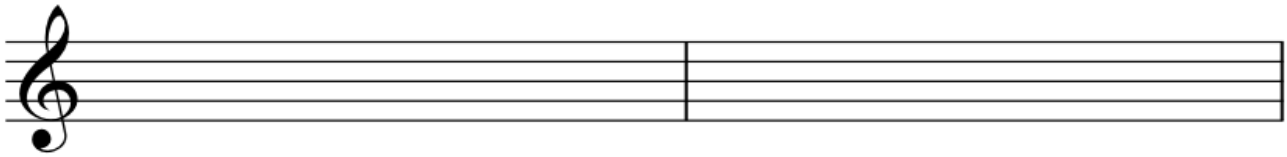


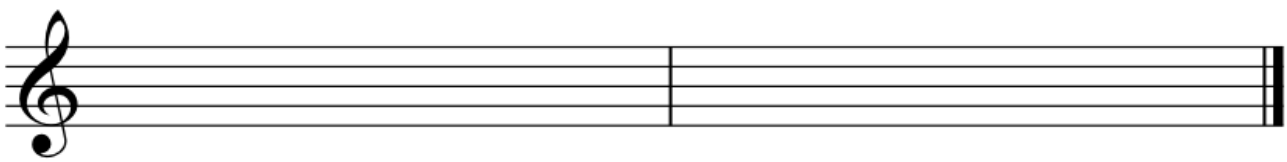


Appendix C

Music Composition Experiment #2

1.	**2.**
3.	**4.**





Appendix D

Music Composition Experiment #3

Exciting Place
1.
2.

Appendix E

Notation Guide