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Music Improvisation and Composition in the General Music Curriculum

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Abstract

This article describes an approach to general music where assignments in music improvisation and composition are embedded into the curriculum, that is, creative assignments are given as an outgrowth of curriculum content and directly related to instruction and activities in conceptual learning and skill development in the classroom. Such an approach to general music education can make possible the teaching and learning of standards-based, sequentially-designed curriculum and the nurturing of students' creative thinking in music, an almost simultaneous process. Included are practical suggestions for meeting National Standards Three (Improvisation) and Four (Composition) by embedding composition assignments into the general music curriculum per age categories of elementary, middle, and high school learners supported by descriptions of examples from the field.

Keywords

composition, improvisation, general music, sequential curriculum, creative thinking, creative application

> The process of skill learning and the act of musical creation are closely connected, even in some sense identical.
>
> —Loane (1984, p. 205)

Creative Application: A Teaching and Learning Instructional Strategy for General Music

During the course of my life as a general music teacher in the schools, I have found that by giving students opportunities to apply what they are learning in creative ways reinforces and clarifies their understandings of course content and strengthens the development of skills experienced through instruction and activities in the classroom. Incorporating improvising and composing activities as a natural outgrowth of course content and instruction is an excellent way teachers can provide students with opportunities to reinforce and expand their understanding and skills in the objectives at hand while simultaneously nurturing their development of creative thinking in music.

Inclusion of improvising and composing in an interconnected curriculum can enable teachers in providing a comprehensive standards-based music education for their students even under limited amounts of time that are often given for music classes in the school schedule. Reimer (2003) recommended a comprehensive music curriculum to develop all of the multiple intelligences of music students and urged teachers to begin fostering applied creative thinking in students in the early stages of learning: even in beginning singing and instrument playing experiences (Reimer, 1989, p. 191). Opportunities for creative work—in this case, assignments in music composition and improvisation, directly related to conceptual learning in the classroom—embedded into the curriculum can make this possible and effect students' learning (Guderian, 2003, 2008).

Including improvising and composing activities as a natural outgrowth of an interrelated and interactive curriculum aligns with many theories of learning. As early as the 19th century, Swiss educator Johann Pestalozzi (Mark & Gary, 1999) recognized that education should involve the learning, applying, and practicing of concepts in support of each other, not as components of learning to be addressed separately. There should be a bringing together of things that were related to each other.

John Dewey's (1900/1990) vision included a teaching and learning environment in which the individual was allowed to explore and pursue his or her interests and capabilities. He believed that the child has four interests: (a) that of conversation or communication, (b) that of inquiry,

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(c) that of construction or making things, and (d) that of artistic expression that should follow as a natural expression and outgrowth of their experiences (Dewey, 1900/1990). Composition assignments given as an outgrowth of the curriculum in a learning community classroom environment aligns with Dewey's understanding of children in educational settings. Dewey (1916/1967) also emphasized the importance of efficiency and organization in education. "Organization is nothing but getting things into connection with one another so that they work easily, flexibly and fully" (Dewey, 1916/1967, p. 64). This is possible in a general music class when the curriculum content is connected to the creative work and the creative work is an outgrowth of and support to the curriculum content.

Sequentially organized curriculum—building on children's former knowledge and understandings and guiding them in their understanding from uncomplicated concepts to the complex—is another key to effective, organized teaching and learning. Boardman (2001) and Bruner (1960/2006) have advised educators on the importance of keeping this in mind when planning instruction: emphasis in building on students' former knowledge to advance it. Vygotsky (1934/1986) believed that schemas of understanding are formed in the mind and influenced by sociocultural settings. The schemas of understanding that are created under informal learning settings such as in the home combine with understandings learned in formal learning settings like the school resulting in new schemas of understanding. Social interactions with teachers, adults and peers play a significant role in the child's learning. Research in brain function as applied to teaching and learning supports the importance of learning information in context and drawing from and building on students' current levels of understanding when trying to engage children in learning (Bransford, Brown, & Cocking, 2000).

According to Torrance (1963), "The creative challenge to education of the future is not only to provide environments where children can learn, but can learn how to think" (p. 4). Torrance realized the importance of developing creative potential and thinking rather than simply the diligent acquisition of knowledge. It was learning how to use knowledge in applied, creative ways that would ultimately have an effect on the quality of human life. "Children can be taught to use creative thinking abilities in acquiring even traditional learnings" (Torrance, 1963, p. 7). As applied to music education, Reimer (2003) supported this idea in suggesting the cultivation of the interdependence of technique and creativity right from the start with students.

> From the very first moments of sound-expressing in performance, and sound-imaging in composition, and imagining-expressing in improvisation, the need for technique as the servant of creativity becomes obvious: you can't do what you want to do—make music—unless you have the wherewithal to do so. The goal, the point, the purpose, is to make music—that is, to create sounds that satisfy as only music can. That is what needs to drive our instruction: the search for creative musical meaning. Technique becomes the partner in that endeavor, not an obstacle to be gotten over so one can then be creative, but the wherewithal that allows creativity to happen. (Reimer, 2003, p. 130)

Similar to Torrance's ideas, Sternberg (1998) believed that school achievement was better accomplished by teaching for *successful intelligence*. Sternberg found that teaching students for successful intelligence, that is, according to his triarchic theory of teaching and learning, involved analytical, creative and applied practical aspects of thinking that raised students' levels of achievement. Composing involves analytical, creative, and practical kinds of thinking as well as an interactive synthesis of these. It is possible for students to develop domain knowledge in music and creative thinking in music for the most part simultaneously when students are given opportunities to apply what they are learning in creative ways (Guderian, 2008).

For those who are used to designing curriculum and daily planning according to "Bloom's Taxonomy of Learning Domains" (1999), improvising and composing engage students in the cognitive processes of remembering; understanding; exploration; experimentation; application of learned knowledge, analyzing, evaluating, synthesizing, and creating. Students develop in the affective domain of learning in many ways while composing: through the making of choices required regarding personal expression through sound manipulation; at times through social interactions and group choices, and through social interactions with composers, their compositions that are given as examples in the composing process and the meanings inherent in their music. Psychomotor learning is incorporated into the improvising and composing process as students play, practice, and often perform their compositions during the "working out process" of assignments. In effect, improvising and composing involve interplay of all of the defined areas of Bloom's taxonomy. To create music, students go back and forth between remembering and understanding information in order to apply it, and are continuously analyzing and evaluating their choices as they work out their ideas. Cognitive processes are revisited as needed and students explore ways to express meaning through sound. Students learn from the process and move forward in knowledge, skills, and dispositions (attitudes) in their learning. Resulting products

from the assignments students complete can provide teachers with information on where students are in their learning thus facilitating teachers' ability to differentiate instruction according to students' individual needs.

In line with these and additional theories of education not given here, I have found that giving my students of all age levels opportunities to improvise and compose has expanded their development of skills and understanding in music, added a layer of meaning and depth to their studies and reinforced and helped them and me in achieving the desired outcomes of instruction as stated in the curriculum. The results from specific classroom assessments support the benefits of including these activities in general music.

Support From Research

Several researcher-teachers have found that providing students with opportunities to apply their understandings and skills in music through composition has an effect on students' learning and development in music. Upitis (1992) found that allowing children to construct their own knowledge through the process of sound exploration, manipulation of musical elements, and creations of figural notations as important to meaningful learning in music; essential to development in musical understanding and necessary when working with young children.

Miller (2004) found that giving her students in elementary general music classes composition assignments allowed her to observe what each of her students understood from class learnings in curriculum content. In a very natural way, composing engaged each child in personal accountability for showing what he or she had learned from class instruction and activities. Miller had a maximum of 40 minutes per week with her students. She found that composition assignments allowed her students to work at their own level of understanding more than any other music learning activity that was part of class studies. Through consistent composing experiences from year to year based on students' former learning experiences in music, the children were able to grow in their musical development and understanding. Miller emphasized the importance of teaching for conceptual understanding regarding the elements of music to enable creative thinkers with tools for their work. Both sequential organization of curriculum materials and developmental stages of learners were important considerations in the instructional design for her study.

Azzara (1993) investigated the effect of improvisation on the music achievement of fifth-grade wind and percussion students. In total, 66 students who received instruction with emphasis on improvisation were able to outperform students who did not receive the instruction in improvisation.

In a study with fifth-grade children who had no previous instruction in reading music and recorder playing, Guderian (2008) taught the same sequentially organized curriculum to two sections of students. The amount of time spent on instruction and in follow up to the instruction was equal for the two groups and the curriculum was the same. To develop playing ability, instruction began with rote learning in the areas of recorder playing that supported the development of psychomotor skills for playing; such as, learning new fingerings, blowing techniques, and so on, in relation to cognitive understandings of pitch, pattern, and particular tones. These were learned via an interactive, echo-pattern-playing activity modeled by the teacher and later in paired student groupings. As students developed proficiency in the activity, the echo game evolved into a game of question (teacher generated) and improvised answer (student generated). After this physical and mental priming for learning, designated musical concepts, notation, and technical skills for playing the soprano recorder were introduced and reinforced immediately through learning and playing pieces of music that contained the new notes, fingerings, note values, terms and concepts learned in the lesson. Delivery of instruction and the materials were identical for the two groups. However, as follow up to instruction, one group—the experimental group—was given applied creative assignments in improvisation and composition. An assignment consisted of an open-ended framework of criteria for composing a piece that required application of the concepts, notation, and skills learned during the whole group instruction. The children were given the option of working alone or in pairs on the assignment, and they could move about the room to share their compositions with other students (play their piece for a friend or have a friend play the piece). Guderian (2008) circulated throughout the experimental group of children showing interest in the students' work and providing help when asked or needed.

The other group of children—the control group—was given an assignment to practice the new pieces three to four times and to review and reinforce the new terms and concepts they had learned that day. The control group also sight-read additional pre-created pieces at the same level of difficulty as the pieces that were presented during the whole group instruction to both groups. These were teacher-directed activities blended with child-centered instructional strategies and inquiry for active student involvement.

Although the reinforcing of curriculum content was different, Guderian (2008) found that both groups developed substantial skills in playing and sight-reading music and made significant gains in understanding music theory. Formal assessment results indicated that reduced practice time for the experimental group that creatively applied

course content through improvising and composing, instead of reinforcing the new material through practicing, did not negatively affect the students' playing and sight-reading ability and written music understanding. Mean scores on poststudy assessments of students' playing and sight-reading skills and written music understanding revealed no significant difference between the two groups.

Guderian's (2008) and Miller's (2004) studies support the idea that even in school settings where time is limited for general music, the development of musical skills, understanding and creative thinking in music can be part of an interwoven teaching and learning process and potentially a way to address all areas of a comprehensive, standards-based curriculum.

In working with older students, Loane (1984) wrote that each composition was a learning experience for his students. The process of composing resulted not only in a product (composition) but also in a new level of understanding and knowledge. Just as the problem solving process of creative story writing helped one realize, clarify, organize, and discover thoughts and ideas, so did the problem solving process of composing—experimentation, exploration, manipulation, and organization of sounds—help his students to advance in their musicianship and to realize, clarify, organize, and discover thoughts, ideas, and feelings of human conscious life (Loane, 1984, p. 213).

To develop authentic musicianship skills and musical understanding in fourth-to eighth-grade children, Regelski (2004) advised teachers to engage students in creative exercises he called practicums for learning. Guderian (2003, 2008, 2009c) also emphasized the importance of consistently providing middle school students with creative work through numerous and varied assignment frameworks that support sequentially designed course content and curriculum. Hoffer (2001) and Regelski (2004) recommended applied creative coursework that reinforces learning goals and supports students' ability and motivation for long-term, real-life music making.

During a series of observations of a rock group's rehearsals, Davis (2005) witnessed the evolution of older students' musical understanding through their collaborative music making that included composing of songs. She examined the musical processes of the three-member rock band, their roles within the group, and reflected on how they constructed musical meaning. She found that the members of the group grew musically from their ongoing collaborative engagement in the band and that learning from each other played an important role in their ability to compose music. Davis wrote that the members of the rock band were often simultaneously engaged in the roles of composer, arranger, performer, teacher, creator, and learner. Rehearsals consisted of "rich peer teaching and collaboration" (Davis, 2005, p. 10).

Composition Frameworks for Learning: Many Ways to a Creative End

There are many ways to incorporate opportunities for creative application of course content into class activities (Guderian, 2003, 2008, 2009a, 2009c). Assignments that include criteria can give students a point of departure and serve as a framework (also called parameter) for the working out of ideas. Over time, a variety of assigned frameworks, some structured and some more open-ended than others, help students develop a comprehensive understanding for the endless possibilities inherent in creative music making. For example, a teacher might begin an assignment with a priming activity, delivered in whole group instruction, that includes a listening experience, a "hands on" music making experience or both. Dependent on the concepts under study, the desired outcomes for the teaching and learning, and the age and development of the children, some creative assignments might be best realized in standard notation and others in graphic or student-invented notation. A balance in the kinds of creative activities and assignments—those that are wholistic in nature and others that might serve as creative exercises for building skills and understanding for composing in the Western notational system—is necessary for helping students to develop comprehensive understanding and skill in expressing and creating with sound. Creative exercises can help in building tools for composing, that is, musical knowledge and compositional skills that prepare students for composing longer pieces that might involve the working out of several musical ideas. Wholistic frameworks for learning and composing, such as starting with a listening experience to give students a "whole picture" model of composing can help students to make sense of the many "holistic" processes involved in composing. Priming for the composing assignment might begin with listening to examples where composers have explored themes or a programmatic idea from outside of music. In preparation of an assignment, both before and after listening to a musical example that has been selected to prime students' thinking, strategies of inquiry are effective for generating ideas. For example, using a prepared, guided set of questions to engage students' thinking regarding the listening experience, the thematic ideas and the concepts can be very effective. Some questions given before the listening experience help to focus students' listening and thinking process on particular aspects in the music targeted for learning. Other questions would follow the listening experience(s). Usually, repeated "listenings" to examples make it possible for students to answer questions and to think about the implications for anticipated creative work in groups.

Both "whole picture" listening models that help students to understand the end in mind such as, composing a piece that expresses two different emotions or two different occurrences in nature in ABA form; and "holistic" building of composing skills through assignments that address particular "parts" of the process—learning to notate rhythms via an assignment to compose an original sight reading exercise that contains 8th and 16th note patterns—support the development of understanding for composing. Another kind of wholistic composing is to allow students to create their own notation for their work and/or by giving students assignments that do not require traditional notation. These have an important impact on student learning. Use of nontraditional means of notation and student-generated original notation often make possible the realization of complex ideas and whole compositions that the child is able to compose but not able to notate in traditional Western notation. Therefore, frameworks for learning and developing creative thinking in music and musicianship skills for composing can take and be realized in many forms: from creative exercises that reinforce playing and music reading skills to wholistic creative ventures that give students opportunities to explore musical concepts and ideas and personal expression of thoughts and feelings through music.

Examples From the Field: Early to Middle and Upper Elementary

At the kindergarten or first grade level, in a creative application activity that supports the development of understanding and eventual recognition and application of dynamics in music, a teacher could begin the work on dynamics by teaching children a new song such as a lullaby and then ask the children to show how they think the piece should be sung in order to help a baby fall asleep. When the children performed the song softly, the teacher could start to add aural word associations such as "soft" and visuals; perhaps a picture of a baby sleeping or a baby bunny to represent singing or playing music softly. Children could be given an applied creative assignment at this point to create soft music on a barred instrument that could help a baby to fall asleep. "Could we make music on this instrument that would help a baby to fall asleep? Would you like to find the music for the baby on this instrument?" Further inquiry regarding different associations (a thunder storm, a giant walking, etc.) and explorations on additional instruments would lead children to understanding loud in music and other dynamic levels. "Can you make some music that would sound like a parade that is far, far away coming closer and closer to us? How do you think it would sound?" Depending on the age of the children, the small cursive p as a musical symbol for playing or singing softly would eventually be incorporated into the learning activities (Guderian, 2008, 2009a, 2010).

For older children in fourth or fifth grade who would likely already have learned many of the dynamic markings, an assignment in dynamics might engage children in the interplay of problem solving tasks that require convergent thinking (based on what they have already learned) and divergent thinking (examining many possibilities for decision making) by first having the students listen for dynamic levels in musical examples followed by having the students add dynamics to a piece they had previously written or learned. Additional group activities could include the learning or composing of new works: Orff ensemble pieces preceded by a priming activity that included listening examples; suggestions of mood words, poetry, or subject matter that would stimulate ideas for sound exploration such as a flowing river or a cops and robbers chase scene. In small groups, students could explore formal structures through composition. "Compose a piece that has a beginning, a middle and end where the beginning and end are the same and the middle is contrasting to the beginning and end." Suggestions of this nature provide students with a point of departure for generating their own ideas through improvisation and an open-ended framework for the decision-making and organizing process of composing. As part of the assignment, they would be asked to determine dynamics for the new piece(s). "Write in the dynamics where you think they should go and then practice the music the way you have marked it." Reflection questions could be, "Did you like your music better with or without the dynamics? What happens to the music when we add dynamics? How does the music make you feel with dynamics added: without the dynamics?" (Guderian, 2008, 2009a, 2010)

In the above scenarios, the teacher is helping students to both discover and add to conceptual knowledge and understandings and to develop creative thinking. The processes as described above reinforce both by having the children apply what they have learned in creative ways. Small cursive f means to play or sing loudly is a fact: a cultural tool necessary for effective music reading, performing, creating, and sharing in Western music practices. Loud, very loud, very soft, are also factual, conceptual understandings learned from cultural others. The application of the cultural tools requiring the students to decide on the expressive markings that would be effective in their music or to create a piece that would help a baby fall asleep requires divergent thinking (Guderian, 2008, 2009a).

Creative application in support of the development of reading, writing, and performing music in Western notation can take numerous forms. In order to provide a framework for sequentially organized teaching and learning,

curriculum documents usually specify particular requirements per age. If the desired goal is to have first-grade children read, play, and understand rhythms containing quarter and eighth note values, teachers could offer students listening and performing experiences that contain quarter and eighth note simple rhythm patterns. For example, "Engine", "Engine Number Nine", "Doggie", "Doggie Where's Your Bone", and the first half of Haydn's theme (Theme and Variations, Andante, Movement Two of the 94th symphony) all have the same rhythm pattern. Learning to sing, sign, clap, and move to these pieces helps the children to develop an understanding of the beat and the relationship of the longer and shorter note values. Engaging the children in simple choreography for the Haydn and the songs is a psychomotor way they can experience the durational values in the rhythm patterns and by using stick notation, still another way: a visual representation of the rhythm. A form of analysis can be added by mounting visual posters of the rhythm of the pieces or by placing two or more rhythms on the board for comparison. This helps the children learn to recognize the patterns and to develop rhythm-reading skills. "Which picture is a picture of 'This Old Man'? Which picture is a picture of 'Doggie, Doggie Where's Your Bone'?" Sing the songs and clap the rhythms with the children while looking at and pointing to the rhythms. Using craft sticks, the children can notate the rhythm patterns of the songs; they can take dictation for clapped rhythms or the rhythms of songs they have experienced previously, and finally, they can create their own rhythm pieces by arranging the sticks in new patterns that they can perform in small and whole class groupings. Over several days of instruction, various frameworks for creative work would reinforce the previous listening, performing, and notating experiences. (a) Use the craft sticks to make a piece that has two parts. Make the first part with the same rhythm as "Engine", "Engine Number Nine". Make the second part of your piece with a new rhythm of tis and tahs. Choose percussion instruments to play your piece. Use different instruments for each part. (b) Use the sticks to make two different ti and tah patterns for a piece. Use one pattern for the beginning and end of your piece. Use the other pattern for the middle of your piece. How many parts will your piece have? Choose different instruments for each pattern. Teachers can also make use of the process as an assessment measure.

For middle to upper elementary grades, creative application in support of the development of reading, writing, and performing music in Western music notation might begin with listening, singing and/or playing of recorder pieces that contain the desired note values and rhythm patterns for learning. Drawing from listening examples that contain rhythmic or melodic (or both) motives that are familiar to students such as Beethoven's Symphony #5 Movement 1, followed by a guided listening-discussion activity that helps students to hear some of the ways Beethoven develops his four-note motive, is a good way to help students in building conceptual understanding regarding the way composers explore and expand their ideas. Having the students sight-read, clap, and follow a rhythmic idea throughout a piece such as "Bolero" or a more modern example like "Adiemus" by Karl Jenkins, further clarifies and strengthens these understandings and provides additional context for students' applied creative work. These experiences prime students' thinking for creating their own pieces with rhythmic or musical ideas. Teachers can align these experiences with applied assignments based on designated curriculum goals. Small group activity: Create a 2–4 bar rhythmic pattern for percussion instruments that contains 8th and 16th notes and the dotted 8th and 16th note pattern. After you have created the pattern, practice it in your group to make sure you can perform the pattern. Repeat the pattern 3 times or more. Change it 2 times by changing the instrumentation. Change it a third time by notating and performing it in retrograde.

Middle School and High School

At the middle school and high school level, students appreciate the opportunity to participate in the responsibility and ownership of their education. This is accomplished in part by giving students choices in tools and materials, that is, how they will go about fulfilling particular assignments, and choices such as whether or not they will work in pairs, groups or individually to carry out their assigned work. Students can be given a variety of assignments in both traditional and non-traditional ways to compose and notate music–with or without technology.

Students at this age appreciate the connection of their studies and skill building to real-life music making (Hoffer, 2001; Regelski, 2004). Applied creative assignments that are an outgrowth of listening experiences and are related to other aspects of the course content, and to subject areas in the school curriculum outside of music class, make sense to students and reinforce the concepts under study (Guderian, 2003, 2009b).

Studies of formal structures across styles such as rondo form or theme and variation form can be noninhibiting ways of engaging students in skill-building creative exercises, and improvisation and composing for gaining musical understanding. For example, examination and comparison of several pieces of music in different styles—classical, rock, pop, ethnic, and world music styles to determine if, where, and in what ways composers have varied their ideas, helps students build their understanding of variation

in music and provides them with ideas that can become points of departure for their own work. Using inquiry techniques before and after listening experiences, and at times during repeated listening experiences, to direct students' attention to the form or concept under study helps prepare them for applying their newly acquired understandings. Further listing of and short exercises in the various compositional strategies that composers use—augmentation, diminution, retrograde, inversion, change of instrumentation or meter, and so on makes students aware of how they might go about the working out of their own musical ideas in a particular form like theme and variation form. Such lists, when derived from musical works, become resources for students and a mental reference or framework for developing their own ideas (Guderian, 2003, 2009a).

During the mix of listening experiences to build understanding for composing in a particular form, short, creative exercises can prepare students for composing longer works. For example, during the studies of theme and variation form students could be given existing well-known themes to vary. Apply two of the variation strategies you have learned from your listening experiences to vary this theme. Another effective way to develop students understanding of theme and variation for their own work is to have them learn how to play the theme of a particular work on a melody instrument like recorder or bells before listening to the piece.

With one foot in the world of childhood and the other in adulthood, middle school students especially appreciate the opportunity to participate in the responsibility of their education. Short creative assignments that reinforce concepts under study can be carried out as paired, group or individual creative experiences. For example, if part of the curriculum for sixth graders is to be able to execute triplet and dotted-eighth and sixteenth note patterns, after whole group teaching and practice in listening to music, learning and performing (in the classroom) music pieces and sight-reading examples that contain these rhythms, have students write their own rhythm exercises that contain these rhythms. As part of the assignment, ask students to prepare their rhythm piece in order to teach it to the class: That is, they must practice it and be able to perform it well enough to teach it to the class. Give them instruction and practice in how to engage a group of people in reading rhythms such as establishing a steady beat, giving the count off, and so on. Down the road, assignments in composing multilayered rhythm compositions with sounds and percussion instruments would be a logical follow-up and an excellent group composing activity. Over time, teachers can acquire resources for composing activities. Desirable resources include a variety of barred instruments, percussion instruments, recorders, guitars, autoharps, dulcimers, homemade instruments, and ethnic and world instruments available to students for the working out of composition assignments.

Open-ended assignment frameworks for creative work that are linked to historical studies can provide students with a way to relate on a personal level to our historical past while at the same time providing a point of departure for applied, creative work and a way to increase the development of skills and understanding for composing. For example, in studies of modes and music from the Middle Ages, give students an opportunity to write their own chants. (See the supplementary material found online at http://gmt.sagepub.com/supplemental for the example of the framework created to engage students in chant writing as an outgrowth of their class studies: excellent for use with upper middle school age students, high school and/or undergraduate students in music appreciation classes.)

A Brief Word Regarding Technology-Assisted Composing With Older Students

There are many computer programs for all age groups—some that provide opportunities for students to notate their compositions in traditional ways and others, such as looping programs, that allow students to create and notate music in nontraditional ways. Teachers can use these programs to provide students with opportunities to reinforce formal concepts learned in class in creative ways. For example, students can create pieces in rondo and theme and variation form on both acoustic instruments and by way of looping programs. Technology programs that are particularly good for middle school and older are Garage Band and Acid Pro 7 (looping programs), Sibelius, Finale, and other Western notation programs.

Overall, give middle school, high school, and undergraduate general music students opportunities to realize their music studies in creative ways. Older students love the opportunity to make and create music under a balanced variety of teacher-directed and student-centered experiences in the process of teaching and learning music.

In Closing

Under the umbrella of creative application there are many ways to engage children and youths in improvising and composing activities that support curriculum goals in the learning of skills, concepts, and that nurture creative thinking. There is some speculation within the music education profession on whether or not children/

youths are truly composing music if they are not hearing the sounds in their heads before they embark on experimentations with and explorations in sound and notation. From my own experience as a child and adult composer, and my experiences with nurturing composing abilities in students of all ages, I believe that there are many formal and informal musical experiences, and numerous teaching and learning strategies that facilitate the development of skills and understanding necessary for composing music." Not all children will hear music in their heads in the beginning stages of working creatively with sound, but most, if not all, will experience and learn in and about music from the process (Guderian, 2009c). For most children, what is important lies not in the possibility that they will someday be a composer, but in the applied creative music-making process, and the joys in problem solving, self-expression, and learning in music that this kind of creative work in the classroom can provide. Through a balanced variety of experiences in creative application, teachers in schools might be able to offer all students opportunities to develop musical skills, understanding, and creative thinking in all areas of a comprehensive general music curriculum.

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Bio

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