

Updating a Music Classroom to Inspire the 21st Century Student

Margaret E. Lerch
3 Swan Court
Gilbertsville, PA 19525

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Micah Jones, Director of the School of Music

The University of the Arts
College of Performing Arts
School of Music

Master of Music in Music Education

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Margaret E. Lerch

Approved as to style and comment by:

Elizabeth Sokolowski, Division Head Music Education

Micah Jones, Director of the School of Music

James Savoie, Associate Provost who oversees Graduate Studies

ABSTRACT

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Margaret E. Lerch, MMuEd University of the Arts
Research Project Supervisor: Elizabeth Sokolowski

The purpose of this paper is to examine the current state of music technology in the Upper Perkiomen Middle School in Pennsburg, Pennsylvania and to illustrate ways to update this music classroom and music curriculum with technology. This study will combine two main modes of inquiry: historical (surveying teachers about past practice) and empirical (collection of data).

Table of Contents

Chapter 1: Setting the Stage

Chapter 2: Response to the Buzz

Chapter 3: The State of Music Technology

Chapter 4: The Reflection

APPENDIX A: Upper Perkiomen School District 8th Grade General Music Curriculum Maps

APPENDIX B: Upper Perkiomen School District 8th Grade Communication Technology Map

APPENDIX C: Upper Perkiomen Middle School Computer Information Table

APPENDIX D: SoundTree Proposal

Works Cited

Margaret E. Lerch

Professor Elizabeth Sokolowski

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As often happens in our lifetime learning journey, a phrase or an idea will suddenly jump out and become a catalyst for change. One such message came through loud and clear during a succession of summer graduate classes in music education. I felt as though there was a challenge in a textbook and it pointed directly to me, an instrumental and choral music teacher, concerning the “other 80 percent” (Sokolowski 130). Until that moment, I was comfortable in my role as a music educator. For years, my focus has been to grow the band, orchestra and chorus programs in our school in order to engage more students in the music classroom. I worked diligently to bolster their academic achievement through music. Energetic and targeted recruitment and retention have increased student involvement in our performing ensembles. Twenty-eight percent of our middle school population currently participates in one or more of our music groups. That’s great, but what had I done to reach the “other 80 percent of kids who interact with music everyday” (130)? A music technology classroom will potentially reach one hundred percent of the student population. Children in the twenty-first century will require skills in music technology to reach their academic and career aspirations. My goal in this paper is to show that our music classroom and music curriculum in the Upper Perkiomen Middle School must be updated with technology.

To illustrate my plan, I have organized this paper into four chapters. The first chapter is called *Setting the Stage* and will include information about the Upper Perkiomen School District and the Upper Perkiomen Middle School. This introduction will include the statement of purpose and the expected findings prior to my research. In the second chapter, *Response to the Buzz*, I will provide examples through which music technology lessons will help us to reach our new twenty-first century learning goals. The third section, *the State of Music Technology*, will describe what I discovered when investigating the availability of hardware and curriculum maps in the Upper Perkiomen Middle School. Based on those findings, I will make an updated proposal for change. Finally, in the fourth chapter, *The Reflection*, I will recount how we can best use the items discovered in my research to improve the music education classroom in the Upper Perkiomen Middle School and better prepare our students for life and a career in the twenty-first century.

SETTING THE STAGE

The Upper Perkiomen School District is a small, blue-collar district located in the northern end of Montgomery County in Pennsylvania. We have four schools: Hereford Elementary School, Marlborough Elementary School, the Upper Perkiomen Middle School and the Upper Perkiomen High School. According to the school district website, there are currently three thousand three hundred and eighty students enrolled in our schools. Fifty-four million dollars is the budget for the 2014-15 school year.

This project will focus on the Upper Perkiomen Middle School. The middle school is located in East Greenville, Pennsylvania and accommodates children in grades six through eight. There are seven hundred and fifty-two students who are enrolled in the Upper Perkiomen Middle School.

The physical building housing the Upper Perkiomen Middle School is an aging structure. It was used from 1947 to 1968 as the East Greenville High School. In 1968, the building became the Upper Perkiomen Middle School. The latest additions and renovations to the property were completed in 2011.

The current music department at the middle school consists of two general music teachers who are employed part time (.49 each) and three performing ensemble music teachers each of whom spend two days at the middle school per six-day cycle. The ensemble teachers share the remainder of their schedule days at the other schools in the district. Music staffing at the middle school was reduced in 2011 to its current configuration. The middle school music department, prior to 2011, was manned by three full time music education professionals at all times.

The requirements regarding student attendance to music class changed in 2011 as well. All students in all grades were required to attend two general music classes per six-day cycle in

the years leading up to 2011. Each general music class was forty-five minutes in length. Currently, all students in all grades at the Upper Perkiomen Middle School are limited to attend just one music class per six-day cycle all year long. The total number of general music classes per school year equals thirty. Each music class is held for forty-five minutes. It is noted here that all students in the Upper Perkiomen Middle School currently attend both art and physical education classes twice per six-day cycle. Students have sixty learning opportunities per year in these special activities. Each art or physical education class is forty-five minutes in length.

Time spent on traditional music learning with an instrument or in a performing ensemble is minimal. Band and orchestra students may attend a thirty-minute pullout lesson during the school day one time in every six-day cycle. These are group lessons and may be a homogeneous or a heterogeneous grouping. Placement by skill level is ideal but is not always achieved. With the exception of the Upper Perkiomen Middle School Blue Band (primarily sixth grade), all middle school ensemble rehearsals meet after school for about seventy minutes one time for each six-day cycle. Attendance is sporadic at best. Other clubs, activities and sports claim this same block of time for their meetings. A pair of activity buses is needed to take students home after music ensemble rehearsals.

During our winter holiday concert in December 2014, two hundred and twelve middle school musicians performed in a variety of instrumental and vocal ensembles. Twenty-eight percent of our children have taken an active role in learning and performing music. As music directors, we are proud and thrilled that our performance ensembles are robust and continue to grow. But what about the larger portion of the student body – the other seventy-two percent? Would they benefit from an engaging, creativity-based music classroom, too?

In my research within the Upper Perkiomen Middle School, I expect that I will find zero lessons using music technology in our communication technology classes, our general music classes and our performing music rehearsals. I suspect that both our music curriculum and our communication technology curriculum are outdated and ineffective. In addition, I assume that most of the hardware and digital devices at the middle school are aged well beyond their life expectancies. To the positive, I believe there will be enough physical space for placement of the music technology lab as a result of the 2011 renovations and the reduction in general music classes. We possess one empty classroom (currently used for choral riser storage) within our music suite of classrooms.

Music learning is a critical building block for the development of creative, social and academic thought processes. Twenty-first century students are listening to music and navigating technology for countless hours outside of the school day. It makes sense that we could inspire all students to learn about music by combining it with technology. Twenty-first century developments in music technology grant us the opportunity to reach more students with a music curriculum that is interesting, relevant and impactful.

RESPONSE TO THE BUZZ

Since the first decade of the twenty-first century, teachers in all subjects have been bombarded with instruction descriptors such as: “creativity,” “problem solving,” “reflection,” “high expectations” and “engaging.” Educators and the community are encouraging these lesson ideals in the classroom to better prepare our children for the competitive twenty-first century world climate in business and industry. The adaptation of this mind-set has many origins, but it seems that two models are leading us in this direction. The first is the recreation of Bloom’s Taxonomy. “During the 1990’s (published in the year 2001), a group of cognitive psychologists, lead by Lorin Anderson (a former student of Bloom), updated the taxonomy to reflect 21st century work” (Overbaugh and Schultz). The revised tiers placed “creativity” at the top of the chart followed closely by “evaluating” and “analyzing.” Powerful verbs were used to describe each level. The second educational model that is leading us to make revisions in education is that written by Charlotte Danielson. “To the greatest extent possible, the framework for teaching is grounded in a body of research that seeks to identify principles of effective practice and classroom organization. Such principles maximize student learning and promote student engagement” (Danielson 20).

At first glance, the music performing ensemble rehearsals have all of the necessary elements to meet the expectations of these updated and rigorous education models.

But consider this: The majority of the creativity that happens in a traditional ensemble class (a band, chorus, or orchestra) comes from the director, not the students. The director typically makes musical decisions, listens critically, evaluates, and modifies performance based on her judgments. In fact, we could say that the music production in those classes is largely *re-creative*, indicating a reproduction of the music that a composer

has already written, rather than creative, indicating the birthing of something novel (Dorfman 10).

If we consider the third domain of the Danielson framework, “Instruction,” and in particular “Component 3C: Engaging Students in Learning,” we will note that teachers of our middle school music ensembles would most likely perform at a “Basic” or “Proficient” level. The “Distinguished” level of performance is unattainable within our current music classroom setting.

There are two elements in “Component 3C: Engaging Students in Learning” that require closer inspection: (1) “Activities and assignments” and (2) “Instructional materials and resources.” According to Danielson, in order to reach a distinguished performance level in the “Activities and assignments” category “All students are cognitively engaged in the activities and assignments in their exploration content. Students initiate or adapt activities and projects to enhance their understanding” (85). Can a seventh grade band student with limited instrumental skills initiate or modify a music activity to enhance their understanding? If we turn our attention to the “Instructional materials and resources” element in Danielson’s framework, we will see a similar problem: “Instructional materials and resources are suitable to the instructional purposes and engage students mentally. Students initiate the choice, adaptation, or creation of materials to enhance their learning” (85). Again, the students are expected to initiate choices in instruction with limited proficiency on their instrument. As Dorfman describes, the director and the composer typically make the creative decisions for music production in a school ensemble.

“Just as language arts teachers routinely supplement teaching reading with creative writing (stories, essays, poems, etc.), so should music teachers supplement learning about music with both kinds of music making: performing and creating” (Watson 9). We can build an engaging environment to achieve a balance of performing and creating of music, therefore

increasing music comprehension and skills, with the establishment of a music technology classroom.

“The world today is one in which technology is increasingly interwoven into the fabric of our lives” (Bauer 4). We depend on digital devices to communicate, to guide us to our destinations, to obtain instant answers and to entertain us. “Young people especially have been subject to its influence. Today’s youth have been characterized as digital natives, having grown up in a technologically rich world” (5). “Digital natives thrive in a technology-rich environment” (5). Yet it seems, all too often, our digital natives are sitting in school classrooms without access to technology.

“It has never been easier or more fun for your students to compose, improvise, arrange, and produce music-related projects” (Watson 3):

In the last several decades, with the advent of personal computing, electronic musical instruments, the MIDI (musical instrument digital interface) software and hardware protocol, the evolution of the Internet, and an explosion of niche software authoring, among other things, teachers and their students in music classes and ensembles have more tools at their disposal than ever for expressing musical creativity (3).

Current applications and software are accessible to everyone! Anyone with access to a digital device may explore the realms of music-related applications, Internet sites and software programs. Using today’s tools of music technology, it is possible for both traditionally trained music learners and those who have little or no music training to be successful in the development of musical projects. It is important to note here that technology used in music education is applied to enhance student comprehension and literacy of the subject. It is not intended for mastery of specific software or applications.

Imagine the impact on both the student and their classmates with a digital presentation of a typical music class project. “*My Favorite Things Podcast*” (183) is one such example. For this project, one might include research of a favorite composer(s), genre, musician, instrument or other music topic (183). Without technology, this project uses paper and pencil to describe the student’s favorite things. The child stands in front of the class and presents detailed material. Even though the low-tech presentation may list excellent musical similarities and comparisons, no music is heard and the examples fall flat on the listener. When technology is added to this basic project, it comes to life for both the student creator and their audience. In Scott Watson’s high-tech version, students record a short script and choose specific music examples to illustrate their narration. The student will have the opportunity to listen to and edit appropriate music clips to coincide with relevant points they wish to emphasize in their script. With a carefully executed Podcast, the creator and the listener will be immersed in the presentation adding to their retention of concepts and their motivation for success. This lesson addresses the following Pennsylvania Department of Education Academic Standards for the Arts and Humanities:

Standard 9.1.8.A. (optional), Know and use the elements (music: duration, intensity, pitch, timbre) and principles (music: composition, form, genre, harmony, rhythm, texture) of each art form to create works in the arts and humanities.

Standard 9.1.8.B. (optional), Recognize, know, use and demonstrate a variety of appropriate arts elements and principles (music: sing, play an instrument, read and notate music, compose and arrange, improvise) to produce, review and revise original works in the arts.

Standard 9.1.8.E., Communicate a unifying theme or point of view through the production of works in the arts.

Standard 9.1.8.J., Incorporate specific uses of traditional (instruments) and contemporary technologies (e.g., MIDI keyboards, Internet design, computers, interactive technologies, audio/sound equipment, board mixer, video equipment) within the design for producing, performing and exhibiting works in the arts or the works of others.

Standard 9.1.8.K., Incorporate specific uses of traditional and contemporary technologies in furthering knowledge and understanding in the humanities.

Standard 9.2.8.L., Identify, explain and analyze common themes, forms and techniques from works in the arts (e.g., Copland and Graham's *Appalachian Spring* and Millet's *The Gleaners*).

Standard 9.3.8.A., Know and use the critical process of examination of works in the arts and humanities (compare and contrast, analyze, interpret, form and test hypotheses, evaluate and form judgments).

Standard 9.3.8.B., Analyze and interpret specific characteristics of works in the arts within each art form (e.g., pentatonic scales in Korean and Indonesian music).

Standard 9.3.8.C., Identify and classify styles, forms, types and genre within art forms (e.g., a ballad and a patriotic song).

Standard 9.4.8.B., Compare and contrast informed individual opinions about the meaning of works in the arts to others.

“We have a host of new technological tools that can be used to meet the standards in ways that not only enhance our current offerings, but also create new roads toward the ultimate goal of creating well-rounded, passionate musicians” (Criswell 29). In doing so, we will ultimately produce academically successful students through balanced and relevant instruction.

THE STATE OF MUSIC TECHNOLOGY

The study of the state of technology in the Upper Perkiomen Middle School has yielded both expected and unexpected results. It is clearly a time of transition as we move away from common education practices of the twentieth century completed with a pencil and paper to the engaging education ideals of the twenty-first century using our digital devices.

This chapter is divided into two sections: hardware and curriculum. The first section, hardware, will reveal the current inventory of technology devices in the Upper Perkiomen Middle School. Key features will include age and quantity of hardware. In the second section, curriculum, I will identify areas of concern in both the 8th grade general music curriculum and the 8th grade communication technology curriculum and will present recommendations for revision.

Hardware Statistics

Within the Upper Perkiomen Middle School, there are currently five computer rooms. Two of these are dedicated exclusively to technology instruction. The remaining three classrooms are labeled for general use and may be signed out by any instructor as needed. The computer labs contain desktop computers and all are PCs. The workstations are basic. Most student work areas are comprised of a desk, a chair, a desktop computer, a QWERTY keyboard, a mouse, a monitor and a headphone set. Wi-Fi is accessible throughout the building.

The amount of serviceable desktop computers located within the technology labs and scattered around the building is marginally satisfactory. There are three hundred and eighteen desktop computers. The most significant finding is in regard to their age. All of the IBM NetVista PCs were manufactured between 2002 and 2005. This means fifty-six percent of the

desktop computers at the middle school have aged more than a decade. Just to put this in technological perspective, in 2005 we still had flip phones (the iPhone and the Android Smart phones had not yet been marketed), YouTube was in its infancy, MySpace held the number one spot in social media sights and the Xbox 360 gaming console was just released by Microsoft. Hewlett Packard manufactured the remaining one hundred and forty-six desktop computers for our middle school in 2007.

The Upper Perkiomen Middle School fares slightly better when examining the mobile computing devices offered throughout the school. In 2009, one hundred and fifty IBM Thinkpad R500 laptops were purchased. The IBM Thinkpads are housed in mobile carts. The mobile carts can be signed out by any teacher and transported to any classroom throughout the building. This is a fantastic way to address the increasing technological needs of over seven hundred and fifty students. However, there are two major drawbacks. All units and their carts must be plugged in frequently. Lack of maintenance and care often bring laptop lessons to an end prior to completion of the project. The second drawback refers specifically to our middle school music teachers. In order to use a cart of laptops to teach a specific topic, our music teachers would most likely need to have a mobile cart in their possession all day for a complete six-day cycle in order to reach the entire student body with each music technology lesson. One lesson barely scratches the surface. A sequential unit involving technology might require the all-day everyday use of a mobile cart for weeks therefore rendering it unavailable for academic classroom instruction for a prolonged period.

To supplement the mobile computers in our middle school building, the school district (with the help of parent fundraising efforts) recently purchased two items of interest. The first item is the iPad. Eleven iPads were added to our special education classrooms to provide

instruction and reward alternatives for special needs children. In 2014, one hundred and ninety HP Chromebooks were delivered to the middle school to be used primarily by students in our literature classrooms.

Our seven hundred and fifty-two Upper Perkiomen Middle School students have access to six hundred and seventy-three computers (including the one hundred and ninety HP Chromebooks). For all intents and purposes, as of August 2014, most of our devices have been configured to behave like the HP Chromebooks. We are now working within the family of Google applications. Children write with Google documents and save their projects to the Internet. With the availability of web-based applications, the district removed most titles from the computer stations. This shift has helped us to lengthen the life expectancy of our aging computer population and preserve space on the district server. In doing so, our school district has taken steps to make basic technology accessible to all students for a portion of their school day experience.

Curriculum

The curriculums of both the 8th grade general music class and the 8th grade communication technology class were considered for this section of the project. Eighth grade students attend thirty general music classes per year and each class is held for forty-five minutes. In addition, pupils in eighth grade attend seventy-two communication technology classes per year and each technology class is forty-five minutes in length. Both courses explore a broad range of topics and skills in their subject area.

The curriculum map for general music is specific in content, but vague in approach. It is up to the teacher to determine the delivery process and the subject details for inclusion. The

middle school music curriculum map lists many items that are very engaging. Learning to play the guitar and composing drumming patterns encourage focus and participation from all students and would most likely result in successful activities that are in line with current Pennsylvania standards. Learning about twentieth century music, on the other hand, could be hit or miss. A “miss” would include watching endless hours of music videos and documentaries supplemented with paper and pencil projects and presentations. With limited computer availability, this is the current path that is chosen for the twentieth century curriculum. By student and teacher description, it is boring, repetitive and dull. A higher level of engagement and learning is not achieved and few standards correlate with the lesson. A “hit” could include items of technology such as: creating a Podcast comparing several twentieth century music composers, groups or styles; finding music loops in Garageband that match the style of selected musical genres of the twentieth century (country, hip hop, disco, etc.); interview a famous composer or musician via Skype (or similar technology); create an iMovie trailer as an advertisement for a twentieth century musician or music group. For success, students must be engaged, create within the lesson guidelines and make discerning choices regarding content development. Information retention and comprehension of the topic will be greater in this energized, stimulating environment.

Imagine the excitement in a music classroom when students are able to take a baroque or classical keyboard tune from the public domain selections and update it to feel and sound like a twenty-first century piece. Scott Watson’s *New Clothes for an Old Tune* lesson (Watson 204) describes the objectives, materials, procedures and standards involved in the execution of this task. Students begin this project by listening to examples. Listening samples would include professionally recorded pieces like *Switched-On Bach* by Wendy Carlos and *Manheim Steamroller* by Chip Davis as well as exemplary projects completed by earlier students. In the

second step, the children select “an existing MIDI file of a Baroque or Classical-era piece as a starting point for their arrangement” (205). Using a program, such as Garageband, and “possibly a keyboard (synth or controller)” (204) for note entry, students transform their Baroque or Classical selection into a twenty-first century masterpiece. “This is the artistic/creative stage of the activity and involves students making creative decisions and additions in several interrelated areas” (207). These areas include: timbre, texture, loops, tempo and altering the form. Finished arrangements will be played “as part of the in-class recital” (207). Teacher and peer feedback is encouraged as a point for understanding and growth. This lesson addresses the following

Pennsylvania Department of Education Academic Standards for the Arts and Humanities:

Standard 9.1.8.A., Know and use the elements (music: duration, intensity, pitch, timbre) and principles (music: composition, form, genre, harmony, rhythm, texture) of each art form to create works in the arts and humanities.

Standard 9.1.8.B., Recognize, know, use and demonstrate a variety of appropriate arts elements and principles (music: sing, play an instrument, read and notate music, compose and arrange, improvise) to produce, review and revise original works in the arts.

Standard 9.1.8.D., Demonstrate knowledge of at least two styles within each art form through performance or exhibition of unique works.

Standard 9.1.8.J., Incorporate specific uses of traditional (instruments) and contemporary technologies (e.g., MIDI keyboards, Internet design, computers, interactive technologies, audio/sound equipment, board mixer, video equipment) within the design for producing, performing and exhibiting works in the arts or the works of others.

Standard 9.1.8.K., Incorporate specific uses of traditional and contemporary technologies

in furthering knowledge and understanding in the humanities.

Standard 9.2.8.C., Relate works in the arts to varying styles and genre and to the periods in which they were created.

Standard 9.3.8.A., Know and use the critical process of examination of works in the arts and humanities (compare and contrast, analyze, interpret, form and test hypotheses, evaluate and form judgments).

Standard 9.3.8.B., Analyze and interpret specific characteristics of works in the arts within each art form (e.g., pentatonic scales in Korean and Indonesian music).

Standard 9.3.8.C., Identify and classify styles, forms, types and genre within art forms (e.g., a ballad and a patriotic song).

The technology in this lesson allows the children to delve deeper into the subject matter and establish a clear understanding of the topic. While working within the parameters of the project, students are actively problem solving, composing, improvising, analyzing, evaluating and comprehending.

Our administration and music staff must also consider the advantages and usefulness of global Internet access to our music instruction both inside and outside of the classroom. The digital natives are quite comfortable with navigating within the World Wide Web. Access is commensurate to opportunity. Music and music videos are downloaded onto their digital devices with amazing frequency. Free Internet applications, such as Noteflight and Audacity, are available to all who have an interest in creating music. The online learning possibilities provided through MusicFirst offer a unique opportunity for students and music educators to expand the depth of learning and resources beyond the natural school day. “For the most comprehensive music education experience, the MusicFirst Choice and Complete packages deliver powerful

apps for notation, recording, ear training, music history, theory, and so much more” (MusicFirst). For a small subscription fee per student, this cloud-based environment gives us extraordinary tools to manage, engage and interest students through music. They are serious about innovation and integration of technology into our music lessons.

A review of the 8th grade communication technology curriculum and a survey of the instructors produced findings similar to the 8th grade general music course. The curriculum map for our communication technology class is specific in content and in time frame. The seventy-two day computer course includes lessons to acquaint students with items needed to conduct themselves in a business or professional environment. Creative and engaging lessons are limited.

A more accurate title for this class might be “Typing with Technology.” Proper keyboarding technique is a major element on this curriculum guide. As keyboard skills are refined, students are able to practice their technique to perfection in databases, spreadsheets and word processing projects. Technology lessons focus on the commands and keystrokes needed for specific office software. (Even though these software titles may not exist when the children enter the business world in the year 2023). Projects are shared with the teacher and with other students through print media.

There is one surprising and modern element on the communication technology curriculum map. Among the tedious typing tasks listed in the map, a creative project emerges – *The Elements of Video Production*. This video project gives students the opportunity to explore many movie-making essentials. Pupils will practice importing video clips, editing video sections, importing audio tracks, voice over recordings and narrations, transition fundamentals and creation of both title and ending credit screens. Final video projects are shared with the teacher and the class in a celebratory film festival classroom environment.

The lack of music technology in this curriculum creates a glaring gap within the communication technology course work. Students learn to type business letters and brochures and then, suddenly, they are thrust into the creation of a video production piece. As we know, music is a major element in any successful video composition. Music's style, theme and sound effects impact the visual message. The production of a video without emphasis on the music is superficial.

Business professionals in the twenty-first century are charged with the task of creating presentations that are engaging and entertaining. Knowledge of music editing and selection will be helpful. Proficiency with simple editing functions could be the difference between a "sale" and "no sale." In his lesson, *Creating a Sound Clip to Share*, Scott Watson describes how, in one class period, students will be able to perform the basic editing operations (Watson 163). Using a waveform editor (such as Audacity) or digital audio workstation (such as Garageband), students will be able to: "select, cut, delete, and/or crop ("trim") and be able to create a volume fade in and fade out" (163). Their final thirty-second sound bite will include both a smooth fade in and a smooth fade out. Students will share their sound clip with the class for evaluation.

Scoring a Video (217), a Scott Watson lesson, provides a fun, creative and engaging platform for exploration of sound effects and music in a video scoring project. The student will "gain an understanding of the relationship between visual and musical expression by creating a musical score for a brief video" (217). The teacher will create a small collection of thirty-second videos to choose from. Video clips for this project can be downloaded for free from www.archive.org. Old commercials and cartoons work well. Multi-track music production software (such as Garageband) or multi-track web applications are suitable for this project. Students will work on problem-solving skills with timing, appropriateness and texture of the

score for their video clip. Students will share their video clip with the class and give peer feedback. The Pennsylvania Department of Education Academic Standards for the Arts and Humanities addressed in this lesson reflect a plethora of desirable twenty-first century education verbs:

Standard 9.1.8.A., Know and use the elements (music: duration, intensity, pitch, timbre) and principles (music: composition, form, genre, harmony, rhythm, texture) of each art form to create works in the arts and humanities.

Standard 9.1.8.B., Recognize, know, use and demonstrate a variety of appropriate arts elements and principles (music: sing, play an instrument, read and notate music, compose and arrange, improvise) to produce, review and revise original works in the arts.

Standard 9.1.8.J., Incorporate specific uses of traditional (instruments) and contemporary technologies (e.g., MIDI keyboards, Internet design, computers, interactive technologies, audio/sound equipment, board mixer, video equipment) within the design for producing, performing and exhibiting works in the arts or the works of others.

Standard 9.1.8.K., Incorporate specific uses of traditional and contemporary technologies in furthering knowledge and understanding in the humanities.

Standard 9.2.8.C., Relate works in the arts to varying styles and genre and to periods in which they were created.

Standard 9.3.8.A., Know and use the critical process of examination of works in the arts and humanities (compare and contrast, analyze, interpret, form and test hypotheses, evaluate and form judgments).

Standard 9.3.8.E., Interpret and use various types of critical analysis in the arts and humanities (contextual criticism, formal criticism, intuitive criticism)

Standard 9.4.8.C., Describe how the attributes of the audience's environment influence aesthetic responses.

This lesson could be used as a building block to lead children to the final video production project in our communication technology course. Through discovery and engagement, it offers a thoughtful and methodical approach to the addition of sound to any meaningful video production.

For more than a generation, the nation has engaged in a monumental effort to improve student achievement. We've made progress, but we're not even close to where we need to be. It's time we focus on *what* students need to learn – and on *how* to create a 21st century education system that delivers results. In a digital world, no organization can achieve results without incorporating technology into every aspect of its everyday practices. It's time for schools to maximize the impact of technology as well" (Vockley).

The Upper Perkiomen Middle School needs to increase the availability of digital devices, replace aged computer hardware with newer models, implement the use of technology in more learning areas and upgrade the importance of both their communication technology and general music courses. The current Pennsylvania school year contains one hundred and eighty-one days of instruction for children. Of these, the middle school students in the Upper Perkiomen School District spend seventy-two days in a communication technology class and thirty days in a general music class. One hundred percent of middle school students will benefit from an additional seventy-nine days of music technology instruction to fill the void in their current practice of twenty-first century skills.

The Upper Perkiomen Middle School has appropriate physical space for the addition of a music technology classroom within its current music suite. The average exploratory class (art, music, technology, etc.) in this school has twenty-four students. Therefore, the proposal for the new music technology classroom will include twenty-four workstations. Each station will include a desktop computer (Apple iMac), a music production desk, a chair, piano keyboard, a QWERTY keyboard, a mouse, headphones and a USB microphone (Snowball). The classroom will also need one SMART Board (or similar technology) and a Group Education Controller (GEC) for efficient instruction.

With the addition of seventy-nine days of music technology instruction, middle school music staffing will need to be increased. Currently, each general music teacher teaches for three days in a six-day cycle. These music educators will need to be reinstated to full time status to accommodate the increase in need for their expertise. Time must also be allowed for revision and updating of their curriculum and for training on lessons and tools in music technology.

One hundred percent of our seven hundred and fifty-two Upper Perkiomen Middle School students are relying on us, twenty-first century educators, to help them to forge the skills necessary to compete and excel in their twenty-first century lives and careers. If it is our goal to develop well-rounded, confident and academically diverse citizens, we must incorporate engaging, meaningful creativity-centered music lessons into our everyday instruction.

“Technology is an important means by which we can teach music – introduce its concepts, reinforce them, provide experience, provide practice, assess and evaluate achievement, structure aesthetic interactions, and do all the educational activities that make learning music a distinct, artful pursuit” (Dorfman 4).

REFLECTION

The wheels of progress often turn slow in the Upper Perkiomen School District. New ideas are met with a that's-not-the-way-we-do-it here attitude. Budget money is carefully controlled and money for new projects is scarce. Change is approached with hesitation and skepticism.

In order to convince the school district administration, community and staff to install a music technology classroom in the middle school, I have much work to do. The first step in such an undertaking is education. Several summers have been spent taking music technology classes for myself so that I could learn the details and the benefits of a music technology classroom for my students. Educating the administration and teaching staff at the middle school regarding the inception of music technology lessons is the second step in the education sequence. As predicted, this step is arduous and often discouraging in our small school district, but not impossible. With the hiring of a new school superintendent, a new middle school principal and the establishment and hiring of an Education and Technology Innovation Specialist position (all are new for the 2014-2015 school year), the music technology classroom proposal may begin to take steps that will turn this project into a reality.

Networking with fellow public school music educators, Villanova University music staff and instructors within the University of the Arts has provided a wealth of resources. Advice on practical equipment for the classroom, where to find the necessary grant money to fund the project and music technology curriculum ideas were forthcoming at every turn.

Teaching in the elementary schools in the Upper Perkiomen School District is another excellent source of information and inspiration. Our elementary teachers, particularly the technology teachers, seem to have an endless supply of creative lesson ideas that will foster

problem-solving skills in our young people. Our technology teacher in the Hereford elementary school calls his instruction “Techxploration.” In one lesson, students combine physical elements such as toothpicks and clay to create a bridge and then, in a second lesson, explore similar bridge construction apps or games on the computer. In yet another session of Techxploration, the children write computer code to create real applications. The environment in our elementary technology classrooms is thrilling, engaging, meaningful and fun. Unfortunately, this feeling is absent at the middle school level.

Through this project, I have been able to increase awareness of our need for music technology in the middle school to both teachers and students. While the communication technology and the general music teachers are fearful of what the changes will mean to them, the middle school students are getting really excited about the possibilities. After showing orchestra students how to work within Noteflight, a free on-line music notation program, their eyes lit up and ideas started flowing. It was as if I had shown them how to do a secret magic trick. They were awestruck with the possibility that they could typeset music and then modify it to their own creation. A similar thing happened when I showed members of the chorus how I make their rehearsal tracks with Sibelius and Garageband. At first, they couldn’t believe that I made their practice tracks with just a MacBook and a microphone. As I demonstrated the ease of creation, their jaws dropped and then the questions came to me at an excited pace. Our students crave the ability to compose and create music with technology.

My grandfather, Orville, lived to be one hundred years old. Orville was a scientist and probably the most intelligent, well-educated man I ever met. It was always his belief that for a human to be healthy (mentally and physically) one must be physically active, learn daily with stimulating and challenging notions and, in addition, we must engage our brains in regular music

activity (listening, playing an instrument, singing, etc.). As music educators, it seems that our overarching music goal is to give our students the tools to help them lead fulfilling, healthy, peaceful and productive lives. An appreciation and understanding of music could be one of the most valuable factors in determining their future path. We know that music engagement and problem solving will help our students to develop a higher level of comprehension and achievement. Toward this end, revising the general music curriculum and the communication technology curriculum to include creative elements of music technology is necessary for our students' life-long wellness. The school district music supervisor and I are taking this notion seriously and are working together to create an official proposal and presentation for the inclusion of music technology instruction at our middle school and at our high school. The Education and Technology Innovation Specialist has offered to help us find the grant funding needed to establish music technology classrooms.

Growth through education is important for our staff as well. Through observation and study of this subject area, it became very clear to me that many of our teachers have no idea how much technology has changed in a few short years. Yes, they all have the latest and greatest cellular telephones, but their awareness of applications and software in education that would be helpful in their classroom is limited. As they teach and re-teach the same lessons, there is a world of fresh ideas and information passing them by. Continuing (frequent) education has to be a priority if we are truly to be effective educators in any subject. For us to stay current and relevant, we must be enthusiastic and diligent with our own education and research.

There is no doubt that I learned a great deal from this project and my graduate classes at the University of the Arts. I am always seeking to change and revise instruction for the greater good of my students. Right now, this revision includes the implementation of music technology

tools into our learning environment and our lessons. We need to reach *all* of our digital natives in a classroom where they are comfortable to explore, create, and develop problem-solving skills through music education. “We are music teachers; it is what we do and who we are. It is our passion. It is our purpose. Our life’s work begins with little dots places on five lines and four spaces. It ends with lives that are changed forever” (Boonshaft 240).

Appendices

APPENDIX A: UPSD 8th GRADE GENERAL MUSIC CURRICULUM MAPS

General Music Grade 8 - Nase		UPPER PERKIOMEN SCHOOL DISTRICT Curriculum Map		
September Semester 1	October Semester 1	November Semester 1	December Semester 1	January Semester 1
February Semester 2	March Semester 2	April Semester 2	May Semester 2	June Semester 2
Drumming (8 Days) Written, improvised, rote, and composed drumming patterns.	<u>Drum (Cont.)</u>	<u>Drum (Cont.)</u> Guitar (7 days) Extended first position notes Full Versions Am, C, D, Dm, Em, G, and G7 chords. Strumming patterns - dotted rhythms and shuffle patterns. Finger picking technique. Rhythmic notation Musical vocabulary/theory Music appreciation/history	<u>Guitar (Cont.)</u>	<u>Guitar (Cont.)</u>
Core Text/Materials: <u>Guitar</u> ... Guitars; extra guitar strings; staff paper; Essential Elements for Guitar Book 1; supplementary song material selected for each class. <u>Performance Evaluation</u> ... Worksheets; Recent concert video recording; TV/SmartBoard/Computer/DVD player; paper/pencils <u>Drumming</u> ... Classroom percussion including djembe, hand drum, guiro, claves, cowbell, shekere, agogo, maracas, conga, bass drum; Worksheets; Chart for Tropic from Congatown p. 30; World Music Drumming by Will Schmidt (Ensemble 1, p. 14)				

Music 8_11-8-2011

General Music Grade 8 - Maldonado		UPPER PERKIOMEN SCHOOL DISTRICT Curriculum Map		
September Semester 1	October Semester 1	November Semester 1	December Semester 1	January Semester 1
February Semester 2	March Semester 2	April Semester 2	May Semester 2	June Semester 2
<u>Music History - Twentieth Century (15 days)</u> Twentieth Century Classical Rock and Roll Motown British Invasion Woodstock Festival and Concert Country Heavy Metal Disco/Funk Hip Hop/Rap Film Score	<u>Music History - Twentieth Century Cont.</u>	<u>Music History - Twentieth Century Cont.</u>	<u>Music History - Twentieth Century Cont.</u>	<u>Music History - Twentieth Century Cont.</u>
Core Text/Materials: Powerpt. Presentations, Rock 'n Roll Project, Artist Interview, YouTube videos, Library books, Ebooks, Laptop cart, CDs and mp3s				

11-8-2011

APPENDIX B:

UPSD 8th GRADE COMMUNICATION TECHNOLOGY CURRICULUM MAP

<div> <div> Communication Technology Grade 8 <i>(72 Day Course)</i> </div> <div> UPPER PERKIOMEN SCHOOL DISTRICT Curriculum Map </div> </div>		
Month 1	Months 2 and 3	Month 4
<u>Keyboarding Technique</u> (20 Days) Alphabet, Numbers, Symbols, Punctuation <u>Review of Computer Components, Software and</u> <u>Safe Internet Search Strategies</u> (10 days) Input and Output Devices Central Processing Unit Memory Storage Media/Devices System Software Application Software Networks Advanced Search Strategies Privacy Protection Digital Footprint Awareness <u>History of Computers</u> (10 Days) Abacus to IBM Generations of Computers Chip Manufacturing Calculating Speeds	<u>Keyboarding Technique</u> (20 days) Alphabet, Numbers, Symbols, Punctuation <u>Elements of Databases</u> (5 days) Fields, Records, and Entries Construction of Databases Sorting and Filtering Databases <u>Elements of Spreadsheets</u> (5 days) Cells, Values, and Formulas Construction of Spreadsheets <u>Desktop Publishing Review</u> (8 days) Brochures Text Boxes Integrated Graphics Design and Layout	<u>Keyboarding Technique</u> (20 days) Alphabet, Numbers, Symbols, Punctuation <u>Elements of Video Production</u> (35 days) Video Commercial Production Project Storyboard techniques PowerDirector 8 Interface Importing Stock Video Clipping Video Flip Camera Instruction Importing from Flip Importing Audio Tracks Narration Recording Transitions Titles and Credits
Core Text/Materials: Essential Introduction to Computers, Shelly Cashman-Thomson Learning, 2008 Office 2007 Simplified, Visual Learning, 2008 All The Right Type, Ingenuity Works, 2005. Power 8 Director Software		
		Revised 11/9/11

APPENDIX C: UPPER PERK MIDDLE SCHOOL COMPUTER INFORMATION TABLE

Upper Perk Middle School Computer Information									
Sept. 2014									
Desktop Computers									
333	Desktop computers installed								
15	Admin/Staff computers								
318	Computers for Student use.								
There are 5 computer labs. 2 are dedicated to Technology instruction.									
2 are general use labs and one is in the library which can also be general use.									
Desktop computers by age									
Count	Year	Make/Model							
57	2002	IBM NetVista PCs							
31	2003	IBM NetVista PCs							
88	2003	IBM NetVista PCs							
11	2005	IBM NetVista PCs							
146	2007	HP DC5700 PCs							
333									
Mobil Computers									
Count	Year	Make/Model							
59	2013	HP Pro Laptops - staff and teacher use							
150	2009	IBM Thinkpad R500 - Student use (COWs)							
11	2011 ?	iPads for Special Ed students							
190	2014	HP Chromebooks - student use in literature classrooms							

APPENDIX D: SOUNDTREE PROPOSAL

Still waiting for this one.....

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