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Funding a Middle School Technology-Based Music Class: An Investigation on Trends in Funding and a Proposed Curriculum

Submitted to Dr. Jerry L. Newman and Dr. Thomas Seel

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An Investigation on Trends in Funding and a Proposed Curriculum

By Shebbie L. Williams III

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Abstract

This paper investigates trends of district funding in relation to music programs. The appendix contains a proposed technology-based music curriculum. The study is a convergent mixed-methods design that reviewed current literature on funding sources for music programs; literature about technology-based music courses was reviewed as well. The results revealed the many factors that play a part in a school board deciding to keep or termimnate a music program. Findings also include a correlation in funding and music class quilaity, less funding usually meant lower quality. This paper can be a tool for educators that wish to make a change in the fiscal status of their program.

Contents

Chapter I: Introduction

As one of the most primitive forms of artistic expression, music is an integral and enjoyable part of society. Evidence of music production can be dated back to the Paleolithic era in the discovery of flute-like instruments, while the history of music technology predates 1877. The development of Thomas Edison's phonograph is seen by many as the first invention used in musical technology. This piece of technology contained a simple needle that traveled along with a wax cylinder that moved. As expected, the initial sound quality was inferior and challenging to improve. Music technology was unknown territory, and a significant amount of exploration and troubleshooting was expected. This increased the drive to develop more innovative and quality music technology.

The beginning of electricity in the late 19th century and early 20th century greatly expanded the possibilities of music technology and led to the development of microphones. In the 1870s, the first microphone was created by Alexander Graham Bell. This primitive microphone was much different from the modern-day recognized current day. A current of a direct electrical nature was passed through a thin wire to transmit sound. Bell also improved modulation with the creation of a transmitter that operated using liquid. A year later, Emile Berliner expounded upon his invention by using a ball and a stretched piece of metal as the primary mechanism of his microphone. Francis Blake then expounded upon Berliner's invention by creating a system that further increased the ability to send telephone signals but had a short range of frequency range. Instead of a steel ball, Blake used a much smaller platinum sphere and, instead of a metal sheet, used a flattened carbon cylinder to increase electrical resistance. Vinyl records were created in the late 1920s, followed by the first tape recorders a decade later. The

1940s brought jukeboxes and higher-quality record players. The first track with multiple instruments playing on one track was developed. This was a monumental development for recording artists. Being able to record multiple instruments on one track saved resources and made playback more seamless. This also meant that recording mistakes resulted in having to discard the whole tape. In 1982 the first compact discs (CDs) were developed. The MP3 sound was essentially a digitally compacted music file. With the improvement of the internet, MP3s were readily available and able to be shared seamlessly from person to person. Those digital music files are the precursors to the music streaming services that are used in the present day.

The perpetual advancement of technology has brought new inventions and quality of life changes. One quality of life change is how music is experienced. Listening to music has advanced from live performances to music streaming services like Apple Music, Tidal, and Spotify. The same advances have happened for the composition of music. Music notation and production software have allowed musicians and composers to record and transcribe their craft using software like Finale, Sibelius, GarageBand, and ProTools. These tools are not always readily available to students until the high school or collegiate level. Instilling a music technology curriculum in middle school will allow the students to learn the software earlier; this ensures more time for students to flourish. This can result in a decline in the diversity of American composers and producers. Special funding is usually needed to establish and maintain such programs. Budget cuts for music programs in public schools significantly impact music students due to their effect on purchasing necessary learning materials. This research seeks to find the effects funding has on music programs. This research will also discuss the potential benefits and career opportunities for music-based technology, specifically composition and

music production. This research will assist in incorporating a middle school music technology course.

Middle school music programs, in most cases, in the United States, consist typically of band, chorus, and orchestra classes. General music classes teach the fundamentals of music, but the other three classes have students take on the roles of musicians as they learn basic theory while demonstrating it through performance; it is more like a lab class. These classes can have one of the following schedules: meet daily for forty-five minutes or meet every other day for ninety minutes, also known as block schedule. These classrooms usually lead to a big performance at the end of the year. Students learn music fundamentals, rehearsal etiquette, and practice habits while preparing for the final performance.

Curriculum

The proposed curriculum is an introductory course to music technology that will help the student understand the different means by which music is created, its use in the real world, and career paths. Music has been evolving since the dawn of time. Music is used on television, movies, social media, and streaming sites. With most schools moving away from traditional pencil and paper to strictly computers, introducing music technology at an earlier age would be beneficial to aspiring musicians and composers. Students begin to find their musical niche in high school; having access to music technology earlier allows them to further explore their niche before committing to college. This course will prepare students to create original compositions by utilizing music notation software and recording software. The class does not require students to join band, chorus, or orchestra before taking the class. Upon completion of the course, students will be able to define the terminology associated with music, MIDI, and computer

usage; identify different genres of music, operate music notation software and recording software; create multi-tracks on music software, and compose original compositions using midi/electronic instruments or voice.

The required text for the class includes Lina Ng's "Music Theory Made Easy for Kids" series. The curriculum does not require participation in music classes before beginning the course; this book series is a tool that teaches and reinforces note values, note names, staff markings, clefs, time signatures, and note positions on a keyboard. The book features lessons and review activities that spiral older material with new material. This is a helpful tool for explaining the basics of music theory. The book has pictures and little words that allow the teacher to freely teach with enough space for students to take minor notes.

"Finale Primer 2014 Edition Mastering the Art of Music Notation with Finale" by Bill Purse is a manual on using the Finale software. The book contains instructions for Windows and Macintosh software to fit most hardware situations. The book's organization allows for a smooth transition through the software and is easy to navigate for specific needs. *Pro Tools 101: Official Courseware, Version 9.0*. Boston, MA: Cengage Learning, 2011 serves a similar function as the Finale Primer book, but for the ProTools software.

Purpose

The purpose of this research is to determine the impact of technology-based music classes in middle school. Career opportunities are not often placed at the forefront of music classes. Most assume that music classes are for aspiring general music teachers or performers. Music technology brings more opportunities for young students to aspire to at a younger age. Nearly every movie, television show, and video game come with a soundtrack, which features

original works and compositions. Music can also be found in commercials and elevators. Music performance is promoted more often than music production, implying that music performance is the only career path in music. Career opportunities in music technology should be taught in middle school grades. Along with raising awareness of technology-based music classes, this research seeks to find the effects funding has on music programs. A decline in funding for music programs hints towards a decline in programs.

Significance

The results of this study would be beneficial to a young student that aspire to a career in music technology. The curriculum would help students that wish to make music while overcoming some physical shortcomings. Composition will be introduced and encouraged at an earlier age.

Funding for music programs would affect the implementation of a technology-based music curriculum. The results could provide school administrative boards with a clear idea of the funding required to run specific music programs. It may also serve as a guide for music educators that better allocate their current funding. This research can serve as a tool in funding and establishing a technology-based music program for middle schools.

This study benefits future researchers that are analyzing trends on funding and music program. It could also assist in the development of new technology-based music curricula as technological advancements continue. Those researching diversity in the music technology industry can use this information to gain an understanding of demographics in music-based technology classes before college.

Research Questions

The research seeks to answer multiple questions. "*What are the effects of funding on music programs?* The formulated sub-questions include: (1.) Is there a correlation between student participation (in situations where students have a choice) in music and school funding in the music program? (2.) Will the incorporation of a middle school technology curriculum have an impact on funding for the music program?[1] (3.) Is there a correlation between students participating in music after grade school and school funding in the music program? (4.) What is the frequency and variation of state-issued music exam scores for students in schools varying in sufficient funding? Funding can be affected by a multitude of factors. Technology-based music classes may increase interest in music programs, leading to increased participation and funding. The second question to be answered is "*What does the literature say about technology-based music classes at the middle school level?"* Literature may reveal descriptions of the classroom environment and statistics. This research would answer when students typically begin classes based on computer-based music technology. The next research question is "*Would the inclusion of a middle school technology curriculum impact basic computer literacy?"* Education is transitioning away from pencil and paper, pushing for a new form of computer literacy. Composition has made the shift to electronic composition with software like Finale and Sibelius. The action of composing with notation software can be compared to writing essays with Microsoft Word. Students in Georgia complete essay portions of state exams using computers rather than pencil and paper. Understanding the software takes a level of computer literacy that may impact overall computer literacy.

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[1] Sufficient funding refers to being able to afford the necessary learning materials.

Hypothesis

A possible outcome is an access to information on funding music programs, especially technology-based music classes. This research may yield insight into the uses of funding in school districts to better understand how music program money is decided; this information can be used to develop a budget. The research may yield that funding is directly related to the lifespan and maintenance of the program. The research may reveal that the proposed technology-based curriculum is financially feasible in all school districts.

The study may increase student computer literacy rates. Notation software is another avenue for students to build their computer competencies. Incorporating technology-based music classes could result in more students pursuing a formal education in increased involvement in music outside of school. Computer-based learning requires a level of computer competencies so that it could impact computer literacy. Outside of computer literacy, the study could yield to the areas known for technology-based music classes. The data may show that technology-based music classes thrive in areas of higher socioeconomic status. The most used software and hardware could be found.

Research Plan

The research design is a similar convergent mixed-methods design. The research of technology-based music programs requires multiple pieces of data. The research calls for information about a school that has music-based technology in place. Information will be gathered from scholarly articles and surveys. Data will be gathered on the quantity of technology-based-music programs and the area in which they reside. One focus will be where

technology-based music programs are. The next focus will be on the classroom culture and norms.

The research also needs the schools' title funding status. The geographic areas will be taken into consideration when comparing funding. Information on how public funds are disbursed between different scholastic programs will be analyzed. This information will yield how music programs are generally prioritized. Family groups, or booster parents, provide financial assistance through multiple fundraising ventures; the goal is to discover different means of raising money for programs and what fundraisers dominate the rural, suburban, and inner-city areas. The number of student enrollment and participation in music programs will be needed.

Summary

Music technology has been in development since the 19th century. Beginning as rudimentary instruments that have transformed into wireless listening devices and multi-user streaming services, the possibilities in the present day now seem limitless. This study is exploring the impact of middle school technology-based music programs. This study may aid students who seek to enter a music technology-based career. This research also provides a sample music technology curriculum to streamline the creation of music technology classes in a middle school. By providing a curriculum, benefits from a music technology program will be able to be received quicker than if a curriculum had to be developed and gather the materials from the program.

Chapter II: Literature Review

Keywords: Budget, school funding, school music programs, budget cuts, budgetary reductions Music education, Spending, Funding, fundraising, music booster groups

The Literature Review is organized into sections two sections. One section will be peer-reviewed and published works dealing with technology-based music classes. The second section revolves around funding for music programs.

Funding

Fundraising has become an essential source of funds for music booster groups. In the article, *Music Booster Groups: Alleviating or Exacerbating Funding Inequality in American Public School Education,* Kenneth Elpus, and Adam Grisé explored the relationship between the socioeconomic status of the school community and the number of funds raised by that school's music booster group. This article had two purposes. One purpose was to explore the parallel between the funds earned by public school music booster groups and the financial status of the communities surrounding the public schools. Awareness of the assets of music parents' associations and music booster programs was the other purpose. The 2015 IRS fiscal data of 5,575 United States music booster groups was collected, and as a whole, at least $215 million was raised for public school music education programs. Over 723 of those groups raised at least $100,000 each, while a minimum of 4 groups topped $1,000,000. The article also found that "Each additional $1,000 of local median household income was associated with an additional $305 in revenue for booster groups filing IRS Form 990-EZ ("short form") and with an additional $1,637 in revenue for booster groups filing the full IRS Form 990." It was found that the amount of money that school booster programs raised directly correlated with median

household income. New fundraising strategies can be invented to accommodate lower median household incomes. The article implies that third-party funding is a great asset that is not government funding. While research should be conducted on the expenditures of the private third-party accounts, they show to generate additional funds.

There are factors other than funding that affect music programs. The perception of factors impacting elementary music teachers, music programs, and teaching positions was examined in Abril, Carlos R., and Julie K. Bannerman's study, *Perceived Factors Impacting School Music Programs: The Teacher's Perspective*. The teachers' response to those factors was also examined. 4 research questions guided this study: "What factors are perceived to impact music programs and teaching positions? What is the nature of these factors? How and within what socio-ecological levels do teachers act on behalf of their programs or positions?

Furthermore, to what degree are specific actions, people, or groups thought effective in impacting music programs".[2]Four hundred thirty-two music teachers in the United States responded to a survey that answered the found research questions. The surveys showed that the majority of the teachers believed that schools had a significant impact on their music programs. Some teachers were also focused on the school district engagement, which they believed was vital to the state of their music program. State and national entities were not viewed as significant factors in the quality of their music programs. In summary, the results displayed that the elementary school teachers viewed entities that were further away from the micro-level as

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[2] Carlos R. Abril, and Julie K. Bannerman. "Perceived Factors Impacting School Music Programs: The Teacher's Perspective." Journal of Research in Music Education 62, no. 4 (January 2015): 344–61. doi:10.1177/0022429414554430.

less impactful on the improvement and maintenance of their music programs. This sheds light on more setbacks aside from budget cuts; district decisions on school music programs play a factor.

In *Money for Music Education: A District Analysis of the How, What, and Where of Spending for Music Education*, Mark L. Fermanich explored the lack of funding for school music programs. Schools across the country are having to reduce expenditures due to financial pressures, and in several states, there is inadequate information on the impact of these actions. A detailed expenditure analysis of the music programs of a large suburban school district was conducted. The expenditures were broken down by school, object, and program area (general, instrumental, or choral). It was found that a mere 1.6% of the total operating budget was spent on music program instruction. 90% of the spending was for the salaries of instructional staff salaries and benefits. It was also found that student characteristics such as poverty and minority status had an insignificant influence on the variations in budget spending from school to school. The factors that influenced differences in school spending amounts were total school spending, teacher education and experience, and music participation. This gives insight into the financial decisions made on funding for the music programs.

Budget cuts take a heavy toll on music educators. In the article, Frederick William Burrack, Phillip Payne, Dale E. Bazan, and Daniel S. Hellman explored budget cutback to music teaching positions and district funding. *The Impact of Budget Cutbacks on Music Teaching Positions and District Funding in Three Midwestern States*; the states explored were Kansas, Nebraska, and Missouri The results of this study showed that without a decrease in 2011-2012 school year student enrollment, there were budget cuts to the staffing and district funding of school music programs. As a result of those budget cuts, teaching responsibilities and student fees trended upward. Music teaching position reductions and budget cuts result in increased

teacher workload. This will increase the turnover rate for teaching positions. This study includes resources and recommendations for advocates of music education, music teacher education programs, and state music education organizations. These recommendations are to help these entities to adapt to ever-changing fiscal situations and the complex requirements of schools.

A study was conducted in Detroit, Michigan, by Marci Major.[3] Major studied the Lekbery School District's decision-making process regarding its music education program during a time of financial hardship. Marci Major conducted two in-depth interviews with one music teacher and one upper school administrator, a focus group interview with eight music teachers in the Lekbery School District, and 13 focused interviews involving two current music teachers, one retired music teacher, one principal, four current upper administrators, two former upper administrators who were working in other districts, and three parents. Other information was gathered through conversation confirmation emails. The results found many factors that went into the decision-making process. The school district placed importance on the music program. The music program appealed to students of different educational and financial backgrounds, which helped in retention. Student enrollment played a factor in the funding and retention of a program. The research implies that the fate of a program, at least in Lekbery Public Schools, lies in the program's ability to produce a product that is appealing to students and the community while aiding in the journey to academic success, which would potentially lead to additional funding for the program.

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[3]   Marci L. Major "How They Decide: A Case Study Examining the Decision-Making Process for Keeping or Cutting Music in a K–12 Public School District." Journal of Research in Music Education 61, no. 1 (April 2013): 5–25. https://doi.org/10.1177/0022429412474313.

The purpose of this study was to explain how to use stories to teach music composition to students with non-classical backgrounds.[4] This is so that every student may partake in learning about musical composition. The author suggested that music abides by the same guidelines and structure as literary works. The author then compared sonata form with the monomyth and, later, five-part rondo and Freytag's pyramid. The author then revealed the results of using this concept on a student with severe writer's block and found that the student's writer's block was resolved. The student left the meeting with the author of this study feeling eager and motivated. Implications include this strategy being used for students with musical composition writer's block and those with non-classical musical training. This may increase student success in music composition courses and possibly increase student enrollment in musical composition courses.

In the study by Abril and Gault, the purpose was to explore what secondary school principals thought about the music program curriculum. The participants were secondary music program principals in the United States. The data was collected by sending out a survey of three questions to 1,000 secondary school principals.46% percent of respondents were from rural areas, 32% from suburban areas, and 22 from urban areas. There was a 54 percent response rate to the surveys. The study found that socioeconomic status of each school created differences in music course options. Some survey participants stated that some students were excluded from music programs because of the expensive costs. Implications of this study include possible increased awareness and support for music programs from school principals.[5]

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[4] Greg Simon "Tell Me A Story: Teaching Music Composition Through Narrative Design." *College Music Symposium* 59, no. 2 (2019): 1-24. Accessed July 26, 2021. https://www.jstor.org/stable/26902587.

[5] Carlos R. Abril and Brent M. Gault. "The State of Music in Secondary Schools: The Principal's Perspective." *Journal of Research in Music Education* 56, no. 1 (Spring, 2008): 68-81, http://ezproxy.liberty.edu/login?qurl=https%3A%2F%2Fwww.proquest.com%2Fscholarly-journals%2Fstate-music-secondary-schools-principals%2Fdocview%2F1094079%2Fse-2%3Faccountid%3D12085.

This study aimed to explore how school choice influenced the music teacher workforce, music curricula, and music education funding.[6] The participants included several parents of students and teachers at United States schools in which data was received from the National Center for Educational Statistics. The charter and magnet school enrollments were around 2.5 million in 2014. Private school enrollment also rose to over 4.5 million. School choice was more prevalent in urban and suburban areas. Lower-income families were less likely to demonstrate school choice. Implications include possibly increasing the quality and quantity of the music teacher workforce, music curricula, and music education funding.

Music Technology

In *Technology-Based Music Classes in High Schools in the United States*, Richard Dammers[7] study was conducted to determine the frequency that technology-based music programs were available at different high schools across the United States. Multi question surveys were the primary source of data for this study. The questions asked included: To what extent do comprehensive public high schools in the United States offer technology-based music classes? To what extent does the socioeconomic status of the district affect the likelihood of offering technology-based music classes? To what extent does the district's geographic location affect the likelihood of offering a technology-based music class? To what extent do/would school administrators value, technology-based music classes? What is the curricular nature of these classes? To what extent do these classes address nontraditional music students? What is the

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[6] Lisa Martin. "Music Education in the Era of School Choice." *Music Educators Journal 105, no. 1* (September 2018): 39–45. https://doi-org.ezproxy.liberty.edu/10.1177/0027432118788130.

[7] Richard J. Dammers, "Technology-Based Music Classes in High Schools in the United States." *Bulletin of the Council for Research in Music Education*, no. 194 (2012): 73-90. Accessed July 21, 2021. doi:10.5406/bulcouresmusedu.194.0073.

professional background of teachers of technology-based music classes? What types of software and hardware are being utilized in technology-based music classes? How long have these classes been offered, and how were they initiated? What level of support do school districts provide for these classes for schools that did not offer music classes were excluded from the survey.

The surveys were emailed and mailed to decrease bias towards high schools that may be more technologically advanced. The survey found that 14% of the surveyed high schools had technology-based available for students to take. The results of the survey concluded that technology-based music programs in high schools are becoming more prevalent. In addition to an increase in the numbers of programs available, these programs value increased from the perspective of these schools' principals.

The influence of classroom culture on music education was examined in the article, The classroom culture of a middle school music technology class.[8] A middle school in America was the point of examination and data collection. The classroom culture was tested to reveal how a class may influence the students' musical success. Aspects like creativity and even social behaviors may be influenced during youth by classroom culture. Recordings and verbal group discussions were two sources of data collection. The findings of the study varied from student to student. While some students felt that pupil involvement most heavily shaped classroom culture, others believed the instructor was the most significant influence. The classroom was observed from the second portion of the 20-week semester, so information was limited and may have been expanded had the study took place during the whole semester or school year.

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[8]   Daniel J. Albert, "The Classroom Culture of a Middle School Music Technology Class." International Journal of Music Education 38, no. 3 (August 2020): 383–99. https://doi.org/10.1177/0255761419881483.

Stuart Wise researched teaching composition utilizing digital technology in his article *Secondary school teachers' approaches to teaching composition using digital technology.* He aimed to understand how digital technology could be used to educate students on composition techniques. By means of surveys and structured interviews, information was gathered from music educators from an independent boys' school, an independent girls' school, a large co-educational state school, and a small co-educational state school. The information was gathered from four secondary schools in New Zealand. These schools were considered to be well equipped for technology-based composition classes by the community. Three of the schools focused on understanding the notation software more than taking part in composing. The results imply that teaching the art of technology-based composing classes should be approached without a structured pattern of tasks that emphasize an understanding of working the software.

In an article by Sam Reese and James Rimington titled *Music Technology in Illinois Public Schools,* the level of technological capabilities of K-12 public school teachers was explored to justify better the need for increased technology in classrooms of various subjects. The data from this study also provided information on whether the goals put in place by the Music Educators National Conference and the Illinois State Board of Education were being met or not. This study was conducted in Illinois. Questionnaires were developed to obtain information for this study. Topics were received from educators teaching K-12 and beyond via interview and email. Six music educators then critiqued the questionnaire and a director of survey research then reduced it to a 46 item five-section survey. Information from a database containing 3,837 public Illinois schools made up the initial sample size, and this number was later decreased to 493 due to some schools not having a music instructor. The results showed that 83 % of teachers had computer training, 59% believed their level of competency was average or

below, 45% self-learned these computer skills, and larger and metropolitan schools provided an increased amount of music training at least once a year. Lack of time, lack of funding were the most reported reasons for decreased participation in computer training. 65% of teachers used a computer for some sort of instruction. 41% of teachers received school budget funds. Many voiced that they experienced hindrances from lack of funding. Implications of results suggest the desire for increased technological instruction and increased funding to public school teachers. This study shows that plenty of work may be required to fund public school technology and technology education.

A study examined the use of technology in music programs across Ohio. In Jay Dorfman's study *Technology in Ohio's School Music Programs: An Exploratory Study of Teacher Use and Integration,* he examined multiple factors in the music programs: the kinds of technology, teachers' comfort level with technology, training for technology use, and teachers' comments on challenges regarding technology use. Data was collected utilizing surveys sent to 1,477 music teachers in Ohio. The survey was comprised of three sections; each section examined the teacher, their comfort/training level with using technology, and comments for future integration of technology. Female music educators represented a slightly higher percentage in responses than males; most of the total responses held a bachelor's degree. From the results, one can infer that music technology was used more for planning purposes. Technology was used more by the teachers than the students implying the need for integrating it into the music classroom. A lack of training would lead to the failure of implementing a curriculum for the technology-based music classroom.

William Hungate researched how music technology can assist high school students in becoming better musicians. The purpose of the study was to provide teachers that lacked

training, felt uncomfortable using technology, or lacked proper funding with a resource guide to improving their students' musicianship using technology.[9] Data was collected from peer-reviewed and published works on best practices and strategies around the subject; the study was geared towards high school students. The source guide aimed to improve time, sight-reading, general music theory, singing and playing in time, improvisation, and composition. The results were a list of applications to assist in the forementioned areas with descriptions of best practices. This study implies that music educators are not as equipped for modern times and the lack of a central place to access such resources with ease.

Mark A. Minott conducted an action research study was conducted to communicate the instructional duties appropriate to using technology in the music classroom. Such tasks include: preparation, exposition and demonstration, technical, classroom management, monitoring computer usage, allocation, and learning support tasks. This study was a qualitative action research framework conducted in an independent high school for girls in Southwest London, England. It began with a study on the literature pertaining to music education. Next, 41 ninth-graders participated in questionnaires with the following questions: "1. What tasks were assumed by the teacher in the music technology composition classroom? 2. What else could be done to help students in the music technology composition?"[10] The results showed that the most cited task was the learning support task, followed by the exposition task. Implications of this study are the training of teachers to incorporate technology into the music classroom.

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[9] William M. Hungate, 2016. *Music technology in high school music education: how music technology can increase musicianship skills in high school students*.

[10] Mark A. Minott "Teaching Tasks and the Composition of a 'Piece' Using Music Technology in the Classroom: Implications for the Education and Training of Teachers." *Journal of Music, Technology & Education 8, no. 3* (December 2015): 261–72. doi:10.1386/jmte.8.3.261_1.

Zhang Peiwei and Xin Sui examined the significance and application of digital music technology in music pedagogy in middle school.[11] This study aimed to examine the characteristics of digital music to justify the availability of digital technology in music pedagogy. The authors compare how music technology is used in his home country, China, and other countries like Europe and the US Digital music technology allows students to participate without dealing with finding percussion equipment like the Beijing Opera gong and drum drop. Their results show that technology has an "important developmental significance"in music pedagogy. Peiwei and Sui continue to analyze how the music industry was evolving, implying that music curriculums should be updated for a more efficient music experience.

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[11] Zhang Peiwei, and Xin Sui. "Application of Digital Music Technology in Music Pedagogy." *International Journal of Emerging Technologies in Learning 12, no. 12* (December 2017): 4–13. doi:10.3991/ijet.v12i12.7966.

Chapter III: Methodology

This research will help serve as a guide to understanding the effects that funding has on music programs. It will also provide multiple means to generate funds for schools, no matter the area or title status. The research topic will have a lifespan as long as music programs continue not to have sufficient funding. The research will bring light to how music is generally prioritized, which will hopefully spark change. This chapter will explain the design of the research. The literature will provide quantitative information on the different factors that go into the funding of music programs. The information from the literature will assist in concluding when compared to the findings in the interviews and surveys.

The research design is a similar convergent mixed-methods design. Researching the effects of funding on music programs requires multiple pieces of data. The research calls for information about school geographical locations like rural, suburban, or inner-city areas. The research also needs the schools' title funding status. The geographic areas will be taken into consideration when comparing funding. Required information includes how public funds are disbursed between different scholastic programs; this information will tell how music programs are generally prioritized.

Family groups, or booster parents, provide financial assistance through multiple fundraising ventures to discover different means of raising money for programs and what fundraisers dominate the rural, suburban, and inner-city areas. Directors' perspectives on functioning under such financial restraints will be needed. The number of student enrollment and participation in music programs will be needed.

The research began by researching what literature had to say about music technology classes in middle schools. Further information was collected from sources about technology-based music classes that were not in middle school. This information would provide an understanding of the classroom setting. Demographics and school Title status would be collected from the sources. Information on funding for schools was researched to understand how music programs were prioritized. Literature was reviewed with a focus on funding for music programs. A limitation of the study is the timeliness of the literature. Another limitation is the specificity of the topic.

Data will be analyzed with a lens on funding for music programs and data regarding technology-based music classrooms. Patterns for funding priorities will be observed., especially for the music programs. With technology-based music classrooms, a thematic analysis will be conducted. Data from surveys will be compared. There will be a focus on common trends and practices as well as educator-recommended equipment and procedures.

Chapter IV: Research Findings

This chapter will cover the findings of the research. Each research question and hypothesis point will be addressed with the information gathered. The research questions revolved around technology-based music classes at the middle school level. Some studies included information collected from elementary, middle, and high school music educators; this will be considered in the findings. Studies that were about technology-based music classrooms, but not middle school, were not considered as strongly towards the research questions.

What are the effects of funding on music programs?

The number of students affects the existence of a program. Extracurricular programs in schools must reach a student minimum in order the program to exist. It is to be noted that every school does not allow students to decide on extracurriculars. School funding is mainly spent on teacher salaries and benefits. Less than 2% of the budget is spent on music programs. Some music programs are subjected to whatever student is placed into the class while others are tasked with recruiting and retaining numbers for their program; some juggle both simultaneously. Cuts in budgets can increase laid-off staff members, consequently raising the workload for the remaining staff members. Another side effect would be an increase in student band fees. The decision-making process for utilizing school funding is complex; there are many factors to consider, like class size. Other factors to be considered include the administration's philosophy, relationships with faculty, staff, and stakeholders, and economic, political, and educational effectiveness.

Will the incorporation of a middle school technology curriculum have an impact on funding for the music program?

The school's socioeconomic status determined the availability and variety of music courses being offered by the school. Roughly less than 15% of schools in the US offer technology-based music classes. The program would need to appeal to the multiple considered factors in the decision-making process of installing a program. The program would need to fit within the framework of the administration's philosophy while adhering to politically and educationally appropriateness. If most of the students are interested in the class, recruitment and retainment would happen naturally.

Is there a correlation between students participating in music after grade school and school funding in the music program?

A direct correlation was not found in the current literature. This could be an independent study.

What is the frequency and variation of state-issued music exam scores for students in schools varying in sufficient funding?

This information was not explicit in the current literature. It can be inferred that schools that score well have a quality program which implies sufficient funding.

What does the literature say about technology-based music classes at the middle school level?

Literature implies that music technology has been on the rise in classrooms since 2012. talk about middle school classes. Technology-based music classrooms are increasingly being valued. The teacher and students shape the classroom environment. Creating an atmosphere of constructive criticism allows students to express themselves freely. The most used software and hardware could be found. Composition has made the shift to electronic composition with software like Finale and Sibelius. Technology-based music classes allow students to participate without purchasing an instrument.

Would the inclusion of a middle school technology curriculum impact basic computer literacy?

Literature did not reveal an explicit correlation with music technology impacting computer literacy rates. However, it assists in making students and teachers more acclimated to working on computers. Most academic classes are transitioning to computer-based work, so a technology-based music class for middle school would be effective in improving comfortability with using computers. It should be noted that all teachers are not technologically savvy enough to teach a technology-based music class; training would fix this. Literature did not speak much on incorporating technology-based music classes resulting in more students pursuing a formal education in increased involvement in music outside of school. This could be an area of further, independent study.

Chapter V: Discussion

This section will reflect what has been covered throughout the thesis. Here, a brief overview of the material will be provided. The findings will be restated. The significance of the research will be touched on, along with limitations and recommendations for future research.

This study is to explore the effects of funding on a music program. This research seeks to answer the questions: (1.) Is there a correlation between student participation (in situations where students have a choice) in music and school funding in the music program? (2.) What is the frequency and variation of festival scores for students in schools varying in sufficient funding? (3.) Is there a correlation between students participating in music after grade school and school funding in the music program? (4.) What is the frequency and variation of state-issued music exam scores for students in schools varying in sufficient funding? The research sought to find the effects of funding on music programs along with what literature had to say about middle school technology-based music classes.

Budget cuts can lead to increased teacher workload and band dues. Money raised by boosters is correlated to household income. District decisions on music programs play a factor. About 1.6% of school spending goes to music program instruction. Many factors go into the district decision-making process of retaining or terminating a music program. Increased enrollment in composition classes can help with funding a program. School socioeconomic status affected the quality and quantity of music courses offered.

Since 2012, music technology classes have become more prevalent. Music technology classes are becoming more valued. The teacher and student feedback influence the classroom culture of a technology-based music class. When teaching a technology-based composition class,

be wary of teaching the software rather than the creative experience. Teachers would need to be trained to run a technology-based music class. Music technology can allow a student to participate without having an instrument.

This study benefits future researchers that are analyzing trends on funding and music program. Hopefully, this research will inspire districts to reprioritize funding music programs and reveal new means of generating funds for booster programs. The results of this study would be beneficial to those aspiring in a career in music technology.

A limitation was that this was not an independent study but rather a literature review that already exists. This came as a challenge when seeking specific correlations. Some sources provided quantitative data from a pool of educators in all states. The sources that provided detailed qualitative data came from a pool of educators from another country or select states in the US.

There are some recommendations for future research. An independent study should be conducted focusing on festival scores and state-mandated tests and funding for this research. More qualitative studies should be conducted in rural areas and southern states. Computer literacy rates of students can be traced to find a relationship in the rates of students taking technology-based music classes and those who are not.

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This section features the proposed technology-based music curriculum for middle school grades.

COURSE SYLLABUS

NAME OF COURSE: BEGINNING MUSIC TECHNOLOGY

COURSE DESCRIPTION

An introduction course to music technology that will help the student understand the different means at which music is created, its use in the real world, and career paths.

RATIONALE

Music has been evolving since the dawn of time. Music is used on television, movies, social media, and streaming sites. With most of school moving away from traditional pencil and paper to strictly computers, introducing music technology at an earlier age would be beneficial to aspiring musicians and composers. Students begin to find their musical niche in high school; having access to music technology earlier allows students to further explore their niche sooner before making a commitment in college. This course will prepare students to create original compositions by utilizing music notation software and recording software.

I. **PREREQUISITES**
    A. **NONE**

II. **REQUIRED RESOURCE PURCHASE(S)**
    A. Ng, Lina. *Music Theory Made Easy for Kids*. Penang, Malayasia: Rhythm MP, 2010.
    B. Purse, Bill. *Finale Primer 2014 Edition Mastering the Art of Music Notation with Finale*. Van Nuys, CA: Alfred, 2014.
    C. *Pro Tools 101: Official Courseware, Version 9.0*. Boston, MA: Cengage Learning, 2011.

III. **ADDITIONAL MATERIALS FOR LEARNING**
    A. Access to classroom rules/syllabus/computer usage agreement
    B. Access to computers/tablets/iPads
    C. Access to the Internet
    D. Headphones with microphones
    E. Access to MusicTheory.net
    F. Access to MusicTechTeacher.com or app

G.   Access to Hooktheory.com
H.   Access to Audacity
I.   Access to Finale & Finale.com

IV.   MEASURABLE LEARNING OUTCOMES

Upon successful completion of this course, the student will be able to:

A. Define terminology associated with music, MIDI, and computer usage.

B. Identify different genres of music

C. Operate music notation software and recording software

D. Create multi-tracks on music software.

E. Compose original compositions using midi/electronic instruments and/or voice.

V.   COURSE REQUIREMENTS AND ASSIGNMENTS

A.   Textbook readings and lecture presentations

B.   **Praxis (5):**

       Students will be asked to properly operate the music software to perform tasks. They will be graded on performance and knowledge of content.

C.   **Assignments (5):**

       Students will be asked to complete different tasks on each software of the week. Files will be submitted to Google Classroom.

D.   **Quizzes (3):**

       Each quiz will cover reading materials over the course. The quizzes will be multiple choice with some performance tasks. The performance tasks will include different tasks being completed on different software.

E.   **Final Project:**

       Students will compose a 2 minute composition using two music software of choice.

VI.   **COURSE GRADING AND POLICIES**

     A.   Points

         Praxis   (5 at 42 pts each)   510   *Green point totals are a result of necessary adjustments to make room for daily quizzes.

         Assignments   (5 at 42 pts each)   210

         Quizzes   (3 at 30 pts each)   90

         Final Project   200

Total: 1010

     B.   Scale

A = 940–1010   A- = 920–939   B+ = 900–919   B = 860–899   B- = 840–859

C+ = 820–839   C = 780–819   C- = 760–779   D+ = 740–759   D = 700–739

D- = 680–699   F = 0–679

     C.   Late Assignment Policy

Assignments must be submitted by the given due date. Assignments submitted a week past the due date will receive a 10% deduction.

Students must be present for praxis and quiz days. Students that will not be able to attend testing days will need to make arrangements for a make-up test.

VII.   **CLASS CODE OF CONDUCT AND SAFETY PROCEDURES** *This content was added later rather than revised, so there is no yellow here

STUDENTS WILL REFRAIN FROM DOING THE FOLLOWING:

- **EATING OR DRINKING IN THE LAB.**
- **RUNNING IN THE LAB.**
- **VISITING SITES THAT ARE NOT APPROVED IN THE SCHOOL HANDBOOK**
- **DISRUPTING OTHER TEACHER OR OTHER STUDENTS**
- **FIGHTING**
- **MISUSING OR DESTROYING SCHOOL OR LAB EQUIPMENT**

FAILURE TO ABIDE BY THESE GUIDELINES WILL RESULT IN THE CONSEQUENCES LISTED THE DISCIPLINE POLICY IN THE SCHOOL HANDBOOK.

CURRICULUM PROJECT – ANALYSIS CHART

PART I: CURRICULUM INFORMATION

Student: Shebbie Williams III	**Course for which you are creating curriculum:** Beginning Music Technology
Required Textbook for Class (at least two textbooks should be entered with complete information in Turabian style): Ng, Lina. *Music Theory Made Easy for Kids*. Penang, Malayasia: Rhythm MP, 2010. Purse, Bill. *Finale Primer 2014 Edition Mastering the Art of Music Notation with Finale*. Van Nuys, CA: Alfred, 2014. *Pro Tools 101: Official Courseware, Version 9.0*. Boston, MA: Cengage Learning, 2011.	
Identify the problem: *(What does the student not know how to do? What is the student's gap in the training or experience?)*	
The student does not understand how to use different types of technology used in the realm of music.	
Who are the learners and what are their characteristics? *(Age, major, pre-requisites, residential, online, or a hybrid of the two)*	
This course is for grades 7-8.	
What is the new desired behavior? *(Overall, what is the main change or new addition to the student's demonstrated ability?)*	
The student will be able to properly utilize different types of music software and technology.	
What are the delivery options? *(Explain the materials you will develop for the course.)*	
This is a residential course that will meet on alternating days for 45 minutes.	
What are the pedagogical considerations? *(Describe your general content and methodology for the course.)*	
The course will address the importance of music technology, fundamental skills, terms associated with music, MIDI, and general computer usage. Career paths in music technology will be explored.	
What learning theory applies to your curriculum? Why?	
The experiential learning theory will be used in this course to create an atmosphere of active learning and doing. As we cover new materials, students experiment by incorporating previously learned material. These experiences will give the students application and practice.	

Part II: Learning Outcomes

Learning Outcomes
IMPORTANT: Make sure that you begin each of the learning outcomes with an action learning verb from Bloom's Taxonomy. Also, make sure that the action learning verbs you selection begin with the left hand side of the column, and then choose your next learning verb from the next column to the right (move from left to right).
At the end of the course, the student will be able to:
1. Define terminology associated with music, MIDI, and computer usage.
2. Identify different genres of music.
3. Operate music notation software and recording software.
4. Create multi-tracks on music software.
5. Compose original compositions using midi/electronic instruments and/or voice.

CURRICULUM PROJECT – DESIGN CHART

I. **Evaluate the Analysis Chart and Learning Outcomes and include a full twelve weeks of curriculum. Make sure that you include praxial activities for your students.**

Student: Shebbie Williams III	Course for which you are creating curriculum: Beginning Music Technology		
Concept Statement: Demonstrate ability to properly utilize different types of music software and technology.			
Learning Outcomes *(List in the order you plan to address in 12 weeks)*	**Content** *(What must be learned to reach this objective?)*	**Learning/Training Activity** *(How will you teach the content?)*	**Assessment** *(How will you know that the student has met the objective?)*
1. Define terminology associated with music, MIDI, and computer usage.	Week 1: • Define the different terms of music and computer usage. Week 2: • List musical terms and computer usage terms. • Define terms associated with MIDI	Week 1: • Begin constructing quick reference notebook Week 2: • Vocabulary Bingo using the different functions, terms, and definition.	Week 1: • Assignment: write music and computer terms definitions in reference notebook. Week 2: • Assignment: write MIDI terms definitions in reference notebook.
2. Identify different genres of music.	Week 3: • Define the different genres of music. • List defining terms of each genre. Week 4: • Review terms associated with music, computer usage, and	Week 3: • Listening Exercise: Students will listen to different genres of music in class and will write down what they hear. Week 4: • Pictionary using the icons and their	Week 3: • Assignment: Add characteristics and three songs of each genre to the quick reference notebook. Week 4: • Quiz: A quiz will be given on the terms and genres.

	MIDI, and musical genres and their definitions.	corresponding functions.	
3. Operate music notation software and recording software.	Week 5: • Identify the functions on the Main Tool, Simple Entry, and Simple Rest Entry Palettes. Week 6: • Review the functions on the Main Tool, Simple Entry, and Simple Rest Entry Palettes. Week 7: • Identify the functions on the File, Edit, View, and Track menus. • Week 8: • Review the functions on the Main Tool, Simple Entry, and Simple Rest Entry Palettes.	Week 5: • Find terms in Finale book. • Experiment with different functions on Finale. Week 6: • Recreate a document that requires the use of the Main Tool, Simple Entry, and Simple Rest Entry Palettes. Week 7: • Find terms in ProTools book. • Experiment with different functions on ProTools. Week 8: • Recreate a sound file that requires the use of the File, Edit, View, and Track menus. • Make a mnemonic: create a mnemonic to remember the different functions on ProTools and Finale.	Week 5: • Assignment: Student will list the Main Tool, Simple Entry, and Simple Rest Entry Palettes and their functions in their quick reference notebook. Week 6: • Praxial Assessment: Student will recreate a document utilizing the Main Tool, Simple Entry, and Simple Rest Entry Palettes. • Quiz: The quiz will cover the different functions covered in Finale. Week 7: • Assignment: Student will list the File, Edit, View, and Track menu and their functions in their quick reference notebook.

			Week 8: • Praxial Assessment: Student will recreate a mix utilizing the File, Edit, View, and Track menus. • Quiz: The quiz will cover the different functions covered in ProTools.
4. Create multi-tracks on music software.	Week 9: • Record audio clips with Audacity ad edit them on ProTools. • Upload Audacity files to ProTools and edit the audio. Week 10: • Create multi-tracks with recorded audio from Audacity.	Week 9: • YouTube Video • Experiment recording audio with Audacity. • ProTools book. Week 10: • Review YouTube Video about Audacity. • Think, pair, share audio ideas.	Week 9: • Quiz: The quiz will cover the different functions covered in Finale and ProTools. Week 10: • Praxial Assessment: Create multi-tracks with recorded audio from Audacity.
5. Compose original compositions using midi/electronic	Week 11: • Compose an original piece on Finale that is at least	Week 11: • Peer Review: Students will listen and review	Week 11: • Praxial Assessment: Compose a piece of music that is at

instruments and/or voice.	sixteen measures long. Week 12: • Produce and mix an original song on ProTools.	to the creative ideas of others. Week 12: • Peer Review: Students will listen and review to the creative ideas of others.	least sixteen measures long. Week 12: • Praxial Assessment: Produce and mix an original song on ProTools.

II.   Enter each learning outcome according to Bloom's Taxonomy, and describe what you believe the sequence is most effective.

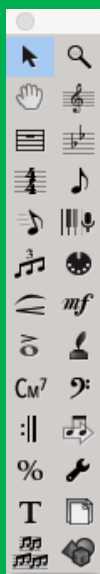| Learning Outcomes *(List them in the order you plan to address during the 12 weeks of curriculum.)*	Rational for Sequence *(Describe why you believe this sequence is the most effective.)*
1. List and define terminology associated with music, MIDI, and computer usage.	In this learning outcome, this is the beginning phase of being introduced to terminology that will help the student navigate through tasks.
2. Identify different genres of music.	In this learning outcome, the students are introduced to the different styles of music that will help the students differentiate between styles.
3. Operate music notation software and recording software.	In this stage, students apply the terminology to the software. Previous terms will assist students in understanding the functions of the different software. Students explore and experiment on the software.
4. Create multi-tracks on music software.	During the process of this learning outcome, the students will formulate ideas then notate them on Finale and record their musical ideas on ProTools.
5. Compose original compositions using midi/electronic instruments and/or voice.	By this stage, students will have the knowledge acquired to begin preparing for their final exam by being able to compose, produce, and mix an original composition/song.

CURRICULUM PROJECT – DEVELOPMENT CHART

Student: Shebbie Williams III	**Course for which you are creating curriculum:** Beginning Music Technology
*Consider the 3 advance organizer methods below. You must create an advance organizer for **each** method below to use as a* *pre-instructional strategy (to prepare the student to link what they **do** know to what they **do not** know).*	

Expository *(You are verbally describing the new content you are about to cover; enter below what you will say to the class as though it is in a script format)*
Good morning, class. Last week we began learning and exploring the Main Tool Palette, the Simple Entry Palette, and the Simple Rest Entry Palette. Ask student to name some tools listed under the Main Tool Palette. Ask students to name the function of the Simple Entry Palette. Ask students to name the function of the Simple Rest Entry Palette. Excellent work recalling what we discussed last class. On your desk you will see a chart that will be added to your quick reference notebook. Start up Finale and select the MUSX file named, Finale Task 1. We will begin by creating a blank document. Using the different buttons on the three palettes, we will work to recreate the document exactly as it looks. I will guide you through the first steps. You will use the rest of class to finish the task. I will be floating around to assist those who need assistance. If I am helping another student, please refer to your quick reference guide or textbook until I am finished helping that student.

Narrative *(You are presenting the new information in a story format; enter below what you will do or say.)*
I begin the class period with a discussion on last week's material, the functions of the tool palettes on Finale. The discussion is guided from one palette to the next beginning with asking about the different functions that come with the Main Tool Palette. Students that give functions from other palettes will be revisited when we get to the palette with which the given function fits. We will then discuss the buttons on the Simply Entry Palette; each answering student must select the next student to contribute to the discussion. After which we discuss the functions on the Simple Rest Entry Palette. I will show the students the diagram to add to their quick reference notebooks. I will have the students start up Finale on their computers and instruct them to open Finale Task 1 file. I will lead them through the first steps of the lesson before letting the students finish the rest on their own. I will float around the class assisting students that are stuck or lost.

Graphical Organizers *(You are presenting an original visual pictograph, chart, or concept pattern.)*   *Describe the visual below and then copy and paste your original graphic.*
The graphic organizer lists the icons of the Main Tool Palette, Simple Entry Palette, and Simple Rest Entry Palette. Each section of the organizer gives a brief description of the functions of each palette. The importance in understanding the main function of each palette and being able to easily recognize the icons of each palette is essential in working more efficiently in the software.

*Color added to graphic organizers

Main Tool Palette

Main tools of Finale

Simple Entry Palette

Durations and Accidentals

Simple Rest Entry Palette

Rest Durations

Gagne's Nine Events of Instruction

Instruction Event	Describe how each instructional event will be addressed in your instructional unit. Cite a reference from you text as to why this approach will be effective.
1. Gain attention	I will review with a discussion of last week's material. For a class-long lecture, the ideal introduction has three parts, the order of which is really an aesthetic decision: (1) a statement that frames the lecture in the context of the course outcomes, (2) a statement reviewing and transitioning from the material covered in the previous class period, and (3) an attention grabber for the new material.[12]
2. Inform learners of objectives	We will review what we have learned from the previous unit and relate it to the current unit. Students will have an understanding of what will be asked of them for the class.[13]
3. Stimulate recall of prior learning	I will ask students to relate old material with the current material, building upon the given answers.[14]
4. Present the content	I will use focused listing to connect theory to application.[15]
5. Guide learning	After I am done presenting the content, I will move forward with any readings, diagrams, or helpful tools to prepare the students with information regarding the topics discussed.[16]
6. Elicit performance (practice)	Students will be asked to work on Finale to recreate the Finale Task 1. The students will demonstrate what they are learning and the teacher will walk them through different concepts.[17]
7. Provide feedback	Summative assessments will be used as landmarks for student progress.[18]
8. Assess performance	Students will perform at the end of most weeks in their assigned praxis groups where they will be assessed on their knowledge of learned subjects and if they are able to successful apply the instruction given to them.[19]
9. Enhance retention and transfer	After each group praxis, students will be given an evaluation or formative assessment to show the student's progress in class.[20]

[12] Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 144
[13] Ibid. 159
[14] Ibid. 8
[15] Ibid. 277
[16] Ibid. 277
[17] Ibid. 101
[18] Ibid. 275
[19] Thomas A. Regelski (2004). *Teaching General Music in Grades 4-8: A Musicianship Approach.* New York, NY: Oxford University Press. 24-28
[20] Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 101

CURRICULUM PROJECT – IMPLEMENTATION CHART

Part I: Evaluate and revise the analysis, design, and development charts and the learning objectives

For this assignment, identify all items and tasks that must be prepared before you begin teaching your instructional lesson

List at least 6 necessary, physical items and provide a rationale for its use (e.g., flashcards, PowerPoint presentations, handouts, activity sheets, flipcharts, etc.)

Student**: Shebbie Williams III**	Course for which you are creating curriculum: Beginning Music Technology
Physical Item	Rationale for Use Cite a reference from your text for each item indicating its effectiveness
Finale 2014	Finale 2014 is the software from which we are working from. I will create worksheets and handouts with this software. The technology helps students acquire the technological literacy that their future occupations will require.[21]
Computers/Screens/Headphones	Students will use Finale and ProTools on computers. Headphones allow students to listen to their work without disturbing others. Screens assist with showing different types of media in the classroom to enhance visual learning.[22]
Midi Keyboard	A midi keyboard allows me to quickly input into Finale and play examples for students. This will open another avenue to use a different teaching mode.[23]
Handouts	Handouts serve as great visual aid for the material. Each handout will be added to notebooks to serve as quick refence guides on the buttons of Finale and ProTools.[24]
Journals	Students will be using these journals to create quick reference notebooks to assist in retaining lesson information. Students will compile notes and handouts here. Journals help them keep up with the course, as well as read and listen actively.[25]
Music Theory for Kids Textbooks	This is the textbook that we will be working from. It is a better tool than the previously listed textbook. It will supplement the lecture and praxis. Questions can be generated from headings and subheadings in the book.[26]

Part II: List at least 6 necessary tasks and provide a rationale (e.g., jobs to be done in advance, such as arranging chairs in a specific formation, photocopying, etc.).

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[21]   Ibid. 47

[22]   Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 258

[23]   Ibid. 256

[24]   Ibid. 261

[25]   Ibid. 255

[26]   Ibid. 242

Task	Rationale for Task Cite a reference from your text for each task indicating its effectiveness
Arranging Chairs	Time before class begins should be taken to arrange the class-room to reflect what will be occurring that day. There will be two computers per desk setup. Chairs will be placed according to the classroom's activities.[27]
Photocopying Materials	Printing handouts is a time consuming, tedious task, but handouts are helpful tools for the students. There should be more copies than students in the event someone misplaces their handout. Having a printer, paper, and ink should always be available and in stock.[28]
Preparing Visual Media	Visual media should be picked prior to class to help save time. Videos that are on the internet should be downloaded and ready to view. I will proof the videos for content appropriateness. Videos on the internet should always be tested before showing the class. If it is YouTube, make sure there are no advertisements.[29]
Preparing MUSX Files	The teacher will create musx files and samples and demos that will assist students with completing tasks on Finale and ProTools.[30]
Setting-up Media	A proper setup is required to view media presentations. A projector is needed for presentations. The teacher will have also created a PowerPoint or document to align with the classroom topic.[31]
Prepare and Maintain Google Classroom for Student Resources	Students will be able to submit assignments to Google Classroom. Class resources will also be poste here. Students love the one-stop convenience of obtaining all the course materials.[32]

Part III: Describe in 4–6 sentences 1 type of Formative Assessment that you would choose to implement and detail its effectiveness for your course.

Formative Assessment Type	Assessment Details
Muddiest Point	This class requires students to be savvy with music notation software and mixing and production software. Lectures are not long, but substantial. Much of the work is based on the software. Most of the possible issues that can be fixed with a simple redirection or correction. Muddiest points makes pinpointing the trouble areas easier, increasing efficiency in instruction.

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[27]   Ibid. 81-90

[28]   Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 73

[29]   Ibid. 258

[30]   Ibid. 52-58

[31]   Ibid. 52-58

[32]   Ibid. 49

CURRICULUM PROJECT – EVALUATION CHART

Part I

Your Evaluation Plan

In the chart below, describe your plan for a formative assessment for each learning outcome in this unit

(This is something you would do before a summative assessment or exam to gauge the learner's grasp of the learning objective)

Student: Shebbie Williams III	Course for which you are creating curriculum: Beginning Music Technology	
Learning Outcomes	**Your Formative Assessment Plan**	**Rationale for Formative Assessment Type** *(Describe why you believe this assessment is the most effective and cite a reference from your text for support)*
1. List and define terminology associated with music, MIDI, and computer usage.	Students will test their knowledge with Self Correcting Exams. They will be able to check their work within a certain time limit to improve their score.	Self-Correcting Exams will motivate students with the bonus incentive of having until the next class meeting to use all their course resources to correct any wrong answers. They receive 2 points for each correct answer on the original test and 1 point for every wrong answer they correct (Gruhn & Cheng, 2014).[33]
2. Identify different genres of music.	Students will be asked to listen to different musical genres in class. They will view multiple videos and review sheets that will cover the definitions of these genres and will be asked to list them each style.	Students will engage in focused listing that will encourage them to list as many genres/styles as they can. We will go into depth as we delve into these lists of singing styles.[34]
3. Operate music notation software and recording software.	The students will engage in a Muddiest Point discussion where we write and talk about areas that they struggled.	This class requires students to be savvy with music notation software and mixing and production software. Lectures are not long, but substantial. Much of the work is based on the software. Most of the possible issues that can be fixed with a simple redirection or correction. Muddiest points makes pinpointing the trouble areas easier, increasing efficiency in instruction.[35]

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[33]   Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 235
[34]   Ibid. 275
[35]   Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 277

4. Create multi-tracks on music software.	Peer Review: Students will review how well others understood the material by listening to their submissions. This is an opportunity for students to hear the creative ideas of others.	Peer feedback not only provides students with more varied, immediate, and frequent feedback than any one instructor can give, but it also helps them develop communication, critical thinking, collaboration, and lifelong learning skills (Dochy, Segers, Van den Bossche, & Gijbels, 2003; Topping, 1998).[36] This is crucial is this sensitive time of creativity.
5. Compose original compositions using midi/electronic instruments and/or voice.	Students will be graded on a final performance task based off of what they have learned throughout the course and will execute their knowledge by composing an original piece that is at least sixteen measures long and producing an original song that is at least 2 minutes long.	Summative Assessment: Students will compose an original piece that is at least sixteen measures long. Students will produce an original song that is at least 2 minutes long.

Part II:

Evaluation and Reflection

Consider all of the charts and stages of development in order to create your syllabus. List 10 issues or strategies that must be addressed to make your unit stronger and more concise. Provide a rationale for your choice.

Issue/Strategy	Rationale for Changing
1. Omit unnecessary learning materials.	The technology does not create new problems, such as distractions and temptations that lure students off-task, increase their cognitive load, or interfere with the basic mental processes of their learning.[37] There is a lot of different software being used and each has its interfaces. Prioritizing which software to use may serve as beneficial in pacing. Students will have more time to explore each software with less to choose from. Having a firm foundation in the few that are decided upon will be enough for the student to explore the removed items at their leisure. do have is about the different websites to be accessed.
2. Change prerequisite for class.	Recommending students complete at least one semester to a performing music course offered by the school may need some tweaking. It would not be entirely fair for students to have to participate with the school is they have musical experience outside of the school. An updated list of prerequisites need to be included on the syllabus.[38]

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[36]   Ibid. 272

[37]   Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 14

[38]   Ibid. 63

3.	Briefly incorporate singing	"Singing depends…on facility in matching pitch. This is extremely important when creating music.[39] Singing allows students to internalize tones before inputting; this makes students less dependent on the playback feature. This additional psychomotor skill will assit in student growth and achievement.[40]
4.	Rebalance workload to make age appropriate	"[Students] ..often resent the amount of reading, research, problem solving, and writing that we assign them and the standards that we hold for their work.[41] I did not completely consider the age of the students when creating the projects. I covered much different music notation software and am now considering narrowing the options to only cover all the most used software in the world.
5.	Insert school policies into syllabus for students to review.	The school's policies or department's required events should be included in the syllabus. It will help the student maintain organization and understanding classroom expectations.[42] This will also supplement the classroom policy.
6.	Combine learning modes.	I would like to switch up the learning methods to encourage different ways of learning, rather than just sticking to lectures. Elliot suggest that to keep our students' interest and facilitate their learning, we must avoid redundancy in the repetition we provide. Using all of the modes (writing, experience, and visual) will help my students understand the material from each approach.[43]

7.	Add Proper safety procedures and conduct for laboratories.	The web contains a wealth of free resources that you may want your students to read, view, hear, critique, analyze, play, or respond to as an assignment, in-class activity, or research source.[44] Because of the use of computer lab equipment, students need to understand how to conduct themselves safely in the classroom and the internet. While you would hope that students would have the common sense to apply good safety habits to their work, you cannot assume that these habits are intuitive. Specify strict rules for lab dress and procedures.[45]
8.	Insert class discipline policy.	Students that fail to follow lab safety, class policies, or school policies will need to know what consequences follow. While the school has rules, my class does as well to better ensure the safety of the students and learning environment. If you don't detail your rules, one of two things can happen: your students may inadvertently violate your and your institution's policies, or they may not work as cooperatively as you'd like.[46]

[39]   Thomas A. Regelski (2004). *Teaching General Music in Grades 4-8: A Musicianship Approach.* New York, NY: Oxford University Press. 196

[40]   Ibid. 19

[41]   Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4ᵗʰ ed.* San Fransisco, CA: Jossey-Bass. 19

[42]   Ibid. 66

[43]   Ibid. 256

[44]   Ibid. 56

[45]   Ibid. 66

[46]   Ibid. 19

9. Creating a more detailed pictograph to reflect more of a concept map.	Building a concept map that has linkable hierarchy and propositions will help keep my idea more focused.[47] This will also provide a better guide for students to use as a study tool or reference in and out of the classroom.
10. Replace two textbooks with one better textbook.	In creating this class, I have found that I have not really used books for classroom purposes; rather, there are other textbooks in the series that are better suited for the course.[48]

[47] Linda B. Nilson (2016). *Teaching at its Best: A Research-Based Resource for College Instructors; 4th ed.* San Fransisco, CA: Jossey-Bass. 263

[48] Ibid. 63

FORMATIVE ASSESSMENT

BEGINNING MUSIC TECHNOLOGY: FINALE

Student: _____

TRUE or FALSE

1) There are multiple ways to input a note on Finale.   *TRUE (5 pts.)
2) The Simple Entry Palette allows you to select rests for input.   *FALSE (5 pts.)
3) The Repitch Tool is located on the Simple Entry Palette   *TRUE (5 pts.)
4) Simple entry is the only way to input music onto Finale. *FALSE (5 pts.)

MULTIPLE CHOICE

1) Which of the following is not a part of the Main Tool Palette? (5 pts.)
   a. Time Signature Tool
   b. Simple Entry Tool
   c. Articulation Tool
   d. Repitch Tool*

2) In Finale 2014, when you select the Staff tool from the Main Tool Palette, you are able to: (5 pts.)
   a. save documents into a folder
   b. input lyrics directly into the music
   c. control the number and placement of staves within your score.*
   d. control the zoom of the document.

3) The Tuplet Tool is located on the: (5 pts.)
   a. Note Palette
   b. Key Signature Palette
   c. Simple Entry Palette*
   d. Lyric Palette

COMPLETION

1) _____ is a very quick and practical way to input score data.   *Speedy Entry (5 pts.)
2) In _____ view, the music is presented as an uninterrupted horizontal band. *Scroll (5 pts.)
3) The _____ is used to enlarge or reduce the music as it is displayed on the screen. *Zoom Tool (5 pts.)

SUMMATIVE ASSESSMENT

BEGINNING MUSIC TECHNOLOGY: FINALE
Student: _____

1) Name 5 tools that are on the Simple Rest Entry Palette (Answers will vary) (10 pts)
2) Name 5 items on the File dropdown box. (Answers will vary) (10 pts)
3) Name 5 time signatures listed in the Time Signature palette. (Answers will vary) (10 pts)
4) Name 5 PALETTES that are on the Main Tool Palette. (Answers will vary) (10 pts)

TRUE or FALSE

1) The SAVE button is located on the Speedy-Entry Tool. * FALSE (5 pts)
2) You can add measures to your document by using the Measure Tool.   *TRUE (5 pts)
3) There are multiple ways to input a note on Finale.   *TRUE (5 pts.)
4) Simple entry is the only way to input music onto Finale.   *FALSE (5 pts.)
5) You can change the directions of stems by pressing the L key.   *TRUE (5 pts)
6) The playback options allow you to enlarge the document.   *FALSE (5 pts)
7) The Simple Entry Palette allows you to select rests for input.   *FALSE (5 pts.)
8) The Repitch Tool is located on the Simple Rest Entry Palette   *FALSE (5 pts.)

MULTIPLE CHOICE

Select the correct answer.

1) All of the following are under the File dropdown box except: (5 pts)
    a. Print
    b. Import
    c. Save as
    d. Speedy-Entry*

2) Which of the following is not a part of the Main Tool Palette? (5 pts.)

    a. Time Signature Tool
    b. Simple Entry Tool
    c. Articulation Tool
    d. Repitch Tool*

3) Which of the following is a shortcut key for UNDO. (5 pts)
    a. CTRL + Z*
    b. CTRL + X
    c. CTRL + S
    d. CTRL + Y

4) All of the following can be found on the Articulation Palette except: (5 pts)
    a. -

   b. Quarter Note*
   c. >
   d. <

5) The smart shape allows you to: (5 pts)
   a. Add Crescendos*
   b. Add Whole Notes
   c. Print the document
   d. Add Quarter Rests

6) In Finale 2014, when you select the Staff tool from the Main Tool Palette, you are able to: (5 pts.)
   a. save documents into a folder
   b. input lyrics directly into the music
   c. control the number and placement of staves within your score.*
   d. control the zoom of the document

7) The Repitch Tool is on the: (5 pts)
   a. Simple-Entry Palette*
   b. File Dropdown Box
   c. Speedy Entry Palette
   d. Simple-Rest Entry Palette

8) The _____ Palette allows you to change the meter of the music? (5 pts)
   a. Key Signature
   b. Articulation
   c. Time Signature*
   d. Simple-Entry

9) The Tuplet Tool is located on the: (5 pts.)
   a. Note Palette
   b. Key Signature Palette
   c. Simple Entry Palette*
   d. Lyric Palette

ESSAY QUESTIONS *Answers will vary, by reflect text and lecture information (10 pts. Each)

DIRECTIONS: Each response should include at least two paragraphs, with at least five sentences each paragraph. Reponses should reflect a thorough knowledge of the text and materials presented in class.

1) Explain the process of creating a 16-measure document, saving, extracting parts, and printing it.
2) Compare and Contrast Speedy-Entry and Simple Entry.

3) Explain the tools of the Main Tool Palette.
4) Provide 3 benefits of using Finale music notation software.