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Nicole A. Loudis

Missouri State University, Loudis333@live.missouristate.edu

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**K-8 GENERAL MUSIC EDUCATORS AND TECHNOLOGY:
BELIEFS, APPLICATION AND MOTIVATION**

A Master's Thesis

Presented to

The Graduate College of
Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree
Master of Music, Education

By

Nicole Ann Loudis Baptiste

December 2020

K-8 GENERAL MUSIC EDUCATORS AND TECHNOLOGY: BELIEFS, APPLICATION AND MOTIVATION

Music

Missouri State University, December 2020

Master of Music, Education

Nicole Ann Loudis Baptiste

ABSTRACT

Technology is constantly evolving in the classroom, and some educators choose to embrace that technology more than others. This study investigates the uses and motivations of educators who integrate technology frequently in their K-8 general music classrooms in Missouri. Three music educators were identified with 10 years of experience who had established reputations for teaching with technology effectively. A single semi-structured interview with each participant was used to explore the participant's motivations and beliefs and the specific technology applications that were frequently used in their classrooms. The analysis of the interviews revealed that the participants believed that integrating technology motivated a broad spectrum of students and engaged them in relevant content for their lives outside of the school building. Participants also indicated that a variety of software, applications and web tools were used for listening/watching, assessing/responding, and creating/performing. The results were consistent with existing research on technology-related uses and motivations in music classes. Limitations of COVID-19 and time hindered a more meaningful analysis of self-efficacy and socialization by numerous interviews and observation of participants' teaching methods, which is suggested for further research.

KEYWORDS: technology, music education, general music, professional development, accessibility, national standards, integration, attitudes, student engagement, COVID-19.

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Approved:

Daniel S. Hellman, Ph.D., Thesis Committee Chair

John S. Prescott, D.M.A., Committee Member

Andrew Homburg, Ph.D., Committee Member

Julie Masterson, Ph.D., Dean of the Graduate College

In the interest of academic freedom and the principle of free speech, approval of this thesis indicates the format is acceptable and meets the academic criteria for the discipline as determined by the faculty that constitute the thesis committee. The content and views expressed in this thesis are those of the student-scholar and are not endorsed by Missouri State University, its Graduate College, or its employees.

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I dedicate this thesis to my Dad, Anthony Loudis.

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CHAPTER I: INTRODUCTION

Introduction

What influences a teacher to integrate technology into their general music classroom? Factors such as professional identity, self-efficacy, and educational philosophy are included in a teacher's pedagogical choices. Journal and educational magazine provide teachers with descriptions of software and digital tools and recommendations for using those resources (e.g. Dunbar, 2018b; Lehimler, 2019; Rajan, 2014; Wash, 2019). Current research states that preservice teachers have the experience with technology integration to teach using technology, as many universities are focusing on technology use in their own curricula (Bauer & Dammers, 2016; Haning, 2016). Other factors that have been studied as to why teachers choose to integrate technology include professional identity, self-efficacy, reaching a broad scope of students, and engaging students in relevant music making (Dammers, 2012; Dorfman & Dammers, 2015; Elpus & Abril, 2019; Gudek, 2019; Ruthmann & Mantie, 2017). This study investigated the motivations for the frequent use of technology integration in the Missouri K-8 general music classroom.

The use of technology in schools and in music education has grown over the last 10 years, and even further since the ConnectEd initiative that stated 99% of American students would have access to high-speed internet, and teachers would have the professional development to lead students in academic success with the use of technology (Obama, 2013). Access to hardware, software, and funding for the like have increased in our educational society with millions of dollars being spent on creative hardware and software for the classroom (Phillips, 2013). Recommendations and new resources are shared constantly to promote the use of

software and digital tools for creating, listening, and assessing in the music classroom through scholarly journals, articles, and books (Carlisle, 2014; Dunbar, 2018b; Lehimler, 2019; Wash, 2019).

Educating preservice teachers in music technology has been a focus of many universities, especially in recent years (Bauer & Dammers, 2016; Dammers, 2019; Haning, 2016). A survey conducted by Bauer & Dammers (2016) revealed that 80% of music education majors take a music technology course created for all music majors or specifically for music education students. Haning (2016) surveyed undergraduate students, with a reported 67% of students who were required to take a course for music technology. If technology is available and most preservice teachers are being taught to teach with technology during their university years, what factors continue to motivate some teachers to integrate technology frequently in the classroom? Socialization and outer forces help to create a professional identity which then influences the teacher's philosophical and pedagogical perspectives of technology integration.

Socialization from birth, relationships built during preservice teaching, and self-efficacy help to create a teacher's professional identity (Isbell, 2008; Natale-Abramo, 2014; Parker & Powell, 2014; Wagoner, 2015), as well as their self-efficacy perception toward technology integration (Bauer & Dammers, 2016; Dorfman, 2018; Elyes, 2018; Gudek, 2019; Partti, 2017). A preservice teacher is strongly influenced by homelife, preservice education, and student teaching (Haston & Russell, 2012). A teacher who completes student teaching in an environment where technology is used frequently is more likely to have a positive attitude and self-efficacy toward using technology (Pope, Hare, & Howard, 2005). It is reported in Gudek's (2019) and Dorfman's (2018) survey that preservice teachers have a high level of self-efficacy for technology. The inservice teachers surveyed by Elyes (2018) and Partti (2017) had much lower

self-efficacy levels. Many inservice teachers had a negative disposition toward technology integration because due to preservice experiences, inadequate funding and resources or malfunctioning technology (Elyes, 2018; Partti, 2017). Drawing on these findings, this study will focus on the effects that influence how teachers with 10 years or less experience utilize technology.

As a teacher begins their inservice years, they are challenged with many pedagogical decisions about how to reach a broad scope of students and engage them in relevant music making. Common factors that have been addressed in research as motivations for integrating technology are engaging students fully in the learning, decision making, and music making process (Dammers, 2019; Ruthmann & Mantie, 2017). Students who may or may not read music, or be able to play an instrument, are music students can may connect with the use of technology (Dammers, 2012; Elpus & Abril, 2019; Williams, 2012). Integrating technology often puts the students at an equal decision-making level with their teacher and allows for collaboration with peers and teachers (Chrysostomou, 2017; Giebelhausen, 2015; Ruthmann & Dillon, 2012; Ruthmann & Mantie, 2017). This study was used to better understand these are factors and if other factors need to be researched.

Purpose of the Study

The purpose of this study is to examine the use and motivation for technology use by K-8 general music educators in Missouri. This study will help to portray how technology is being used for listening/watching, assessing/responding, and creating/performing in the general music classroom. The factors studied more in depth are technology use in the K-8 general music classroom and motivations for deciding to integrate technology.

Research Questions

The following research questions are used to direct the study:

1. How do teachers describe how they integrate technology into listening/watching, assessing/responding, and creating/performing activities in the K-8 general music classroom in Missouri?
2. What motivates a teacher to frequently integrate technology?

Research Design

To obtain the information presented in the research question, interviews were conducted to examine technology integration in the general music classroom and the motivations for frequent technology integration. Participants were Missouri K-8 general music educators who frequently integrate technology. The interview approach was chosen because it allowed for comprehensive perspectives from selected participants who had high levels of self-efficacy. Open response interview questions allowed for personalized, meaningful, and honest responses.

Assumptions

It was assumed that all participants were honest about their responses and told their whole perspective according to the interview questions. Identities were kept confidential to promote honesty and unbiased responses.

Limitations

Limitations of this study included a small sample size of participants and the inability to meet in person or observe teaching due to COVID-19. This limited the way the data were collected. Time was also a limitation as a deadline was applied to this research.

Definitions

- Technology Integration – Using hardware (computer/laptop, iPad/tablet, interactive white board, recording and sound equipment), software, and digital tools in the teaching of students in the classroom.
- Digital Tools – Websites, software, and applications, both paid and free.
- Professional Development – Education of preservice through university courses, field experience, and student teaching.
- Professional Identity – How a preservice teacher or inservice teacher sees themselves, and the way they perceive how others view them (Haston & Russell, 2012).
- Self-Efficacy – A teacher’s perception of their effectiveness, comfort, and confidence when using technology in the music classroom.
- Nontraditional Music Student - “A student not in a performance ensemble, may or may not read music, may play an instrument or sing (typically percussion if an instrument is played), use musical abilities outside of school, possibly lower socioeconomic status, academically unmotivated and/or often having discipline issues.” These may also be students with special needs (Williams, 2012, p. 137).
- 1:1 Device Ratio – 1:1 refers to each student having a personal computer, iPad, or tablet for their academic use. This is usually brought about through a technology initiative by the school district.

CHAPTER II: LITERATURE REVIEW

Introduction

K-8 general music education has many traditional methodologies such as Kodaly, Dalcroze, and Orff, and hardware and software are entering the music classroom for teachers to integrate into their curricula to engage a broad spectrum of students in engaging and relevant content (Carlisle, 2014; Murillo, 2017; Ruthmann, 2012; Ruthmann & Dillon, 2012). There is a vast array of online tools, streaming services, web-based games, applications, and digital instruments that are available to support general music education for teachers and students (Dunbar, 2018a; Lehimler, 2019; Rajan, 2014; Wash, 2019). Resources are readily available for listening/watching, assessing/responding, and creating/performing lessons (Carlisle, 2014; DeVito, 2017; Dunbar, 2016b; Dunbar, 2018b; Lehimler, 2019; Rajan, 2014; Wash, 2019). Though these resources are readily available, factors such as preservice education, professional identity, and student engagement contribute to the level of technology integration in a teacher's classroom.

Research has been conducted on how effectively music education coursework focuses on technology and translates technology integration into classroom instruction. Preservice teachers are often encouraged or required to take a music technology course during their undergraduate years and are often presented with a one-size-fits-all course where notation software and editing are the focus (Bauer & Dammers, 2016; Gudek, 2019; Haning, 2016). Dammers (2019) states that to create prepared music teachers, preservice education must also explore how to integrate the technology into a teacher's pedagogy. Cooperating teachers often feel their student teachers are prepared to integrate technology, but many student teachers do not feel adequately prepared

to teach using technology in the music classroom (Dorfman, 2018; Haning, 2016). This lack of preparation can turn into low self-efficacy for technology use (Dorfman, 2015; Gudek, 2019).

A teacher's professional identity, self-efficacy, and personal history also contribute to the integration of technology in the music classroom. Professional identity is how a teacher sees him or herself and is created by primary and secondary socializations before and during their inservice teaching (Canrinus, Heims-Lorenz, Beijsaard, Bultink, & Hofman, 2011). If a teacher is socialized to use technology in the home and earlier in their career, they will likely have a higher level of self-efficacy. Further, if a teacher feels confident in their efficiency when using technology, they will be more likely to integrate technology frequently (Dorfman, 2015; Gudek, 2019).

Music Educator's perceptions about reaching a broad spectrum of students, engaging students in their learning, and adding relevance to music education often drives their decision to integrate technology (Dammers, 2012; Dorfman, 2015; Elpus & Abril, 2019). Many teachers who integrate technology frequently are trying to reach "nontraditional" music students and create a broader scope of musicians (Dammers, 2012; Elpus & Abril, 2019). Some teachers see technology as a means to engage students in authentic music making (Dorfman, 2018; Albert, 2015; Reese, 1999; Dorfman & Dammers, 2015; Ruthmann & Mantie, 2017). K-8 general music students live in a technological world and integrating technology into the music classroom brings relevance to what is being taught (Ruthmann & Mantie, 2017). Technology also allows students to be a part of their own learning process (Dorfman, 2015). While technology integration can enhance student engagement in music classes, much remains unknown about the factors that lead to effective technology use in music classes.

The purpose of this chapter is to investigate and support the reasoning for the research questions that were presented in the previous chapter. In this chapter, I review existing research on the following: (a) technology use in the K-8 general music classroom, (b) music-technology-focused preservice music teacher education, (c) the role of identity and self-efficacy in technology integration, and (d) strategies for increasing student reach and engagement through technology integration. The research in these categories illustrates that a plethora of resources are available to teachers (Dunbar, 2016b; Lehimler, 2019; Rajan, 2014; Wash, 2019), and some problems reveal how music technology integration often falls short of its promise in instruction (Bauer & Dammers, 2016; Dammers, 2019; Dorfman, 2015; Haning, 2016). Opportunities for developing skills has expanded greatly in preservice music technology courses (Bauer & Dammers, 2016; Haning, 2016), yet many inservice teachers often have low self-efficacy levels when integrating technology (Elyes, 2018; Partti, 2017). Technology use is also shaped by music teachers' personal history, experience and socialization. For some teachers, technology becomes part of their professional identity, influencing many decisions that teachers make when integrating technology (Isbell, 2008; Natale-Abramo, 2014; Parker & Powell, 2014; Wagoner, 2015). Examining these issues allows for a better understanding of how technology integration helps engage students fully in their learning and makes music education more relevant for society. Through examining the resources available, and the professional learning experiences offered, this study explores the possible reasons for the efficacy of technology integration among select Missouri K-8 general music teachers.

Technology Use in the K-8 General Music Classroom

Ideally, the music classroom is provided with many current-date hardware devices. Those that are commonly accessible include PC, laptop, interactive whiteboards (IWB), audio recording equipment, MIDI keyboards, video cameras, iPads/tablets, web-based games, and applications (Dunbar, 2018a; Giebelhausen, 2016; Heath-Reynolds & VanWeelden, 2015; Ruthmann, 2012). Numerous hardware devices, software, applications, and web-based tools and other resources are available in the K-8 general music classroom.

Music educators and music education researchers provide recommendations and summaries of technology trends in research articles in journals such as *General Music Today*, *Journal of Music, Technology, & Education*, and *Journal of Technology in Music Learning*. The recommendations described in this section reflect the available research from the last several years due to the constant creation of new resources and reflect influential in the choices that teachers make in their classroom. Notably, this review does not reflect every possible use as teachers constantly develop and experiment with new ideas about implementing technology. It directly reflects technology that is used in classroom general music, without a performance focus, such as guitar class, music technology class, piano class, etc. This review focuses on the most common and prevalent trends of technology use reflected in journals and scholarly articles in the field, which are segmented into three major categories: Listening/Watching Resources, Assessment/Responding Resources, and Creating/Performing Resources.

Listening/Watching Resources. Websites and streaming services are commonly used because they provide opportunities for a wide variety of instructional possibilities and ease of use with little to no cost. Teachers frequently use YouTube because there is an extensive number of videos with different genres, cultures, instruments and styles of music for students to experience

(Lehimler, 2019; Rajan, 2014; Wash, 2019). YouTube gives students opportunities they may not have otherwise, such as viewing operas, music halls, and dances. Teachers also use YouTube for presenting their own videos for class examples, flipped instruction or to provide easy-to-use instruction for a substitute (Nichols, 2015). Other streaming services such as Spotify and Apple Music are used in similar ways (Lehimler, 2019).

Assessment/Responding Resources. Teachers use digital tools such as Quizlet, Kahoot, Google Forms, Nearpod, and Plickers because they allow for differentiation, efficiency and motivation in the assessment process (Dunbar, 2016a; Dunbar, 2018b; Wash, 2019). In reviews of these and similar resources, music teachers have recognized how these tools provide different options for formative assessments of the student's understanding (Dunbar, 2016a; Dunbar, 2018b; Wash, 2019). For example, Nearpod is a presentation tool that gives teachers control of the pace of the presentation while students follow along on their own device. Throughout the presentation, teachers can add formative assessments in the form of quizzes, polls, and open-ended questions (Dunbar, 2016a). Other possibilities such as Google Forms are less comprehensive but can be used to ask students questions ranging from multiple choice to open response. Results are easily exported into a Google Sheet to be reviewed (Dunbar, 2018b). Resources are constantly being created to add efficiency to the assessment process, though teachers use technology for assessment less frequently than the other categories mentioned (Gudek, 2019; Lehimler, 2019; Murillo, 2017).

Music teachers also report using video and audio recordings so that students can record and listen to their own performance as a means of self and teacher assessment (Carlisle, 2014; Dunbar, 2018b; Wash, 2019). When recordings were used, teachers were also able to review the assessments at a more convenient time (Dunbar, 2018b). Recordings were also used for students

to listen and respond to themselves playing and singing (Carlisle, 2014; Wash, 2019). Younger students can also use record to give and receive feedback even if they are unable to type or write by using such applications as Flipgrid and Seesaw (Dunbar, 2019). Audio and video recordings allow for meaningful and efficient feedback for all levels of students for self and teacher assessment.

Creating/Performing Resources. Technology is a way to introduce young students, and students with special needs to creation and composition with limited music making experience (e.g. DeVito, 2017; Dunbar, 2018a; Freedman, 2017). Incredibox and Soundtrap are online resources, both free and paid, that allow students to create compositions from musical samples that have been created in websites (Wash, 2019). Garageband, Groove Maker, GroovePad, Soundprism, among thousands of other applications for iPads and tablets, give students a simple way to create music through digital instruments, loops, musical samples, and vocal samples that can be performed both live and from recordings that students have made (Giebelhausen, 2016; Lehimler, 2019; Rajan, 2014). For more advanced students, software and digital tools such as Finale, Sibelius, and noteflight.com allow students to use standard notation to compose vocal, piano, or orchestral compositions (Lehimler, 2019; Giebelhausen, 2016).

Summary. The hardware that is commonly available in the music classroom, such as iPads, PCs, laptops, and tablets allow for software, streaming, and online tools to be incorporated in lessons (Dunbar, 2018a; Giebelhausen, 2016; Heath-Reynolds & VanWeelden, 2015; Ruthmann, 2012). Students have musical excerpts at their fingertips with YouTube, Spotify, and Apple Music (Lehimler, 2019; Nichols, 2015; Rajan, 2014; Wash, 2019). Assessments and responding resources, such as video recordings, Kahoot, Quizlet, and Flipgrid, are used to make the process efficient and available to younger students (Carlisle, 2014; Dunbar, 2018b; Dunbar,

2019; Wash, 2019). Garageband, Soundtrap, and countless applications are available to help students create music using samples, loops, and digital instruments that can later be performed (Giebelhausen, 2016; Lehimler, 2019; Rajan, 2014; Wash, 2019). From this research, it is apparent that many resources are available for teachers to use no matter what hardware is available to them, and these resources allow students to fully engage with a voice in their own learning (Murillo, 2017).

Music Technology-Focused Preservice Teacher Education

Preservice teacher education is focusing on the implementation of technology resources (Bauer & Dammers, 2016; Dammers, 2019). When a teacher does not know how to use the equipment that they are given, teachers will most likely not integrate that resource into their future classrooms (Dorfman, 2015). Ideally, professional development in technology provides teachers with the skills for using technology as a possible tool for curriculum design and implementation. In recent years, most preservice teachers have taken music technology courses as part of their preservice education (Bauer & Dammers, 2016; Haning, 2016), and this section of the review reports what is known about how teachers transfer these skills to the classroom and how technology preparation affects their beliefs, attitudes and efficacy for technology use. Given the wide array of influences and regional differences in technology use, this section of the study will primarily focus upon music technology education during university years.

Preservice Music Technology Courses and Preparedness. Recent research suggests that music technology has been an increased focus for preparing preservice music teachers but courses and requirements vary considerably in scope and focus (Bauer & Dammers, 2016; Dammers, 2019; Haning, 2016). Dorfman (2015) concluded that a lack of music technology

instruction for students at the university level was a hinderance to preservice teachers feeling comfortable with integrating technology when they become inservice teachers. A survey conducted by Bauer & Dammers (2016) reported that 47% of preservice teachers took a music technology course designed for all music majors, and 33% of participants in the same survey reported having to take a music technology course that was designated only for music education majors. Haning (2016) also conducted a survey of undergraduate music education majors, which indicated that 67% of students were required to take a music technology course.

Research has been conducted on the scope of music technology courses and beliefs about how better to prepare preservice music teachers (Bauer & Dammers, 2016; Dammers, 2019; Haning, 2016). Musical notation writing, mixing, and editing were common concepts that were taught in these courses as a one-size-fits-all for music majors (Bauer & Dammers, 2016; Dammers, 2019; Haning, 2016). Dammers (2019) states in his chapter, *The Role of Technology in Music Teacher Education*, that to create prepared teachers, preservice teachers must be taught fundamental technology concepts in the early university years. Some fundamental concepts are recording and mixing a performance, understanding the basics of digital audio, and creating a musical presentation with hardware and software. Dammers (2019) also states that preservice teachers must be taught to take the fundamental knowledge they've learned and adapt it to the pedagogy used in the classroom.

The body of research available presents a mixed picture of the preparedness of preservice teachers for using technology with students in actual classroom settings (Bauer & Dammers, 2016; Dorfman, 2018; Gudek, 2019). Bauer and Dammers (2016) surveyed preservice teachers on the frequency of technology integration in their practical teaching experiences. They observed cooperating teachers as using technology "sometimes," but when asked about the frequency of

the technology that they use while creating their own lessons during field experiences, the preservice teachers indicated that they integrated technology “frequently” (Bauer & Dammers, 2016). Cooperating teachers have a positive perception of student teachers’ preparedness to integrate technology in their future classrooms. Dorfman (2018) surveyed cooperating teachers and found that 29% of participants reported they “strongly agreed” that student teachers were knowledgeable and prepared to use technology in their profession. Another 32% percent of participants in the same study “somewhat agreed” that student teachers were prepared to use technology in their teaching. Forty-three percent of student teacher participants in Haning’s (2016) survey felt unprepared to use technology in their own classrooms. Many participants indicated that they would like more instruction using student-centered applications. While cooperating teachers often believe that students teachers are prepared to use technology in their classroom, some student teachers feel unprepared (Dorfman, 2018; Haning, 2016).

Summary. Many preservice teachers are required to take music technology courses while studying at the university level. In the studies examined, 67% of Haning’s (2016) participants were required to take a music technology course during their preservice years, and Bauer & Dammers’ (2016) survey reported that 80% of participants were required to take some type of music technology course, whether that be for all music majors or specifically music education majors. Dammers (2019) believes that music technology courses for preservice teachers should focus on concepts that teach the fundamentals of music technology such as notation, recording and mixing, and creating music with appropriate software so that teachers may adapt them into their own classroom. When a preservice teacher begins field experience and student teaching, he or she is reported to use technology frequently in the lessons created (Bauer & Dammers, 2016). Though cooperating teachers often feel that student teachers are prepared, some student teachers

still do not feel prepared to integrated technology meaningfully into their pedagogy (Haning, 2016). While preservice teachers are learning resources and technical knowledge during their preservice years, some have reported difficulties integrating these resources into their pedagogy (Bauer & Dammers, 2016; Haning, 2016).

Role of Professional Identity and Self-Efficacy When Integrating Technology

Music teachers may have resources available to them, and previous education from preservice years, but professional identity and self-efficacy views also play a role in a teacher's decision to integrate technology (Haston & Russell, 2012; Isbell, 2008; Pope, Hare, & Howard, 2005). A person's professional identity is shaped in their homelife through childhood, musical experiences, and field experience/student teaching (Isbell, 2008; Natale-Abramo, 2014; Parker & Powell, 2014; Wagoner, 2015). This socialization has an effect on a teacher's self-efficacy toward technology, as well as a teacher's likelihood to integrate technology in the classroom (Haston & Russell, 2012; Isbell, 2008; Pope, Hare, & Howard, 2005). It is also been found that a person's self-efficacy affects the way an inservice teacher views and utilizes technology. This section will focus on socializations that influence their integration of technology, and also present research examining technology self-efficacy of preservice and inservice teachers.

Professional Identity and Socialization. Before a student decides to become a music educator, he or she comes into the profession with a professional identity that has been developing since birth (Isbell, 2008; Natale-Abramo, 2014; Parker & Powell, 2014; Wagoner, 2015). Research confirms that a person's relationships with others plays a large role in how a music educator sees himself or herself, as well as how he or she believes their peers see them (Haston & Russell, 2012). As professional identity has been studied in general education and

music education, common influences of a person's identity that have been found include (a) personality traits, (b) social structures, (c) work environments, and (d) social justice issues (Endo, Reece-Miller, & Santavicca, 2010; Troman, 2008).

In music education specifically, Cox (1997) and Mark (1998) found that the home environment can impact a young musicians' road toward a career. Researchers have found music education majors to be, "acculturated more than others to professional norms through primary socialization," because of their musical home environments and the relationship built between the pupil and former music teachers (Isbell, 2008, p. 163). Isbell concluded that a musician's home environment, music teachers and private instructors have the most impact on one's musical professional identity. When a child is young, their parent often engages them in musical activities, and as the student goes through their schooling, the impact of school music teachers and private instructors keep the interest going, sometimes into a career choice (Isbell, 2008).

The socialization of a music educator through the early and later school years is a primary factor on the development of one's professional identity. Many research studies found that a future music educator is socialized into the profession from a very young age (Isbell, 2008; Natale-Abramo, 2014; Parker & Powell, 2014; Wagoner, 2015). This may be through early experiences with friends and family and extends into the school years as music teachers develop into students' role models. Experiences in the home and during the first 12 years of schooling are considered primary socialization, while the relationships with music teachers during their preservice years is considered secondary socialization (Woodford, 2002). When a future music educator is in school and home during primary socialization, they are viewing and choosing traits, attitudes, and roles from the people who play a significant role in that child's life. As the

preservice teacher enters their curriculum-specific path, they are able to adopt, mimic, or create their own norms for their professional identity. (Berger & Luckman, 1966).

During the preservice years of a music educator, field experience is one of the most influential factors in creating a professional identity (Haston & Russell, 2012). Many researchers consider it to be essential for the secondary socialization of a future music teacher (Ballantyne & Packer, 2004; Campbell, 1999; Conkling, 2003; Conway, 2002; Isbell, 2008). Wolfgang (1990) explained that a preservice teacher's field experience is important because it allows for the pre-service teacher to practice feeling, acting, and thinking like a teacher (Wolfgang, 1990). Because of this practical experience, Ballantyne (2017) states that preservice teachers need more time in the classroom to understand the profession actively and to bridge the gap between university and practical experiences.

As preservice teachers come closer to their graduation, they have an opportunity to complete student teaching with a cooperating teacher who may vary from the ideals taught at the university. It is also these types of challenges that create a preservice teacher's professional identity (Britzman, 2003). Medvinsky (2017) argues that there is a disconnect between the need to use technology in field experience versus the need during preservice courses. Technology use seems to be integrated more often than what is expected in preservice courses (Medvinsky, 2017). A survey by Gall (2017) contrastingly reports that while cooperating teachers feel technology integration is important, they feel more comfortable leaving it to more experienced colleagues because many do not feel confident integrating technology effectively. Pope, Hare, & Howard (2005) found that when a student teacher was paired with a cooperating teacher who uses technology fluently that student teacher is more likely to integrate technology into their own classroom eventually. This technology integration of the cooperating teacher bridges the gap

between university courses and technology integration in the classroom (Pope, Hare, & Howard, 2005).

When a pre-service teacher then becomes an inservice teacher, the professional identity of the teacher is subject to change. No undergraduate education can fully prepare the teacher for the innovations that will happen, and it is the teacher's responsibility to continue to think, plan, and grow (Medvinsky, 2017). Teachers are constantly taking ideas from other "various political, social, pedagogical, and institutional discourses" (Natale-Abramo, 2014). The professional identity can also be developed by the culture of the school in which they teach, and the needs of the students being taught, such as special learners (Ballantyne, 2017; Nilsson, 2017). The professional identity is a continuously changing entity, even as an inservice teacher grows throughout their career.

Self-Efficacy. Some researchers focus on the self-efficacy of preservice teachers, with respect to technology integration through surveys and interviews. Gudek (2019) reports that preservice teachers who have been socialized with computers in the home have a higher level of technology self-efficacy than those who do not. Gudek (2019) found that the majority of preservice participants felt they had a high level of technology self-efficacy, but not exceptionally high. Results of his survey research suggest that when a preservice teacher feels more confident in their technology skills, the teacher will be more likely to integrate technology in the music classroom (Gudek, 2019). In related research, Dorfman (2018) found that 82% of preservice music teachers felt comfortable and confident when integrating technology into their lessons. This high level of self-efficacy by preservice teachers might suggest a correlation with the 80% of music majors surveyed who must take part in a music technology course during their university years (Bauer & Dammers, 2016).

Inservice teachers' self-efficacy with regards to technology integration has also been studied. Elyes (2018) reported that 61% of inservice teacher participants in a study felt confident using technology for personal use, but only 48% felt confident when integrating technology into their teaching. Reasons that were identified as barriers were not enough resources, lack of funding, and reliability of technology. Contrastingly, the results of a study of Finnish inservice teachers reported that less than one-fifth of participants rated their self-efficacy as "excellent" or "good," and half of all participants rated themselves "below average" or "poor." Participants stated often they felt their undergraduate studies were out of date, reflecting that participants could be in later stages of their career (Partti, 2017). This research suggests a mixed review of the self-efficacy toward technology integration, and that further studies would be beneficial.

Summary. Primary and secondary socialization influence the professional identity of music teachers, as well as their field experience and student teaching (Wagoner, 2015). Often a music teacher's home life and their relationship with music teachers and cooperating teachers have a significant impact on their personal focus in the classroom (Isbell, 2008; Wagoner 2015). Preservice teachers adapt and create their own ideas of teaching during their student teaching experience. This body of research reveals that when a cooperating teacher incorporates technology effectively, the student teacher will likely use that technology in their own classroom (Natale-Abramo, 2014; Pope, Hare, & Howard, 2005).

When preservice teachers feel they are more effective when using technology, they are more likely to have a positive attitude toward technology integration in their own lessons in the future (Gudek, 2019). Dorfman (2018) reports that most preservice teachers have a high level of self-efficacy about using technology in their future classroom. Elyes' (2018) study reports that half of teachers in Australia felt confident integrating technology into the concepts and lessons

taught, and many of those participants with a high level of self-efficacy have zero to five years of teaching experience. A survey from Finland reports much lower self-efficacy while stating that their undergraduate preparation is now out of date. This trend could show that teachers who have recently graduated from university have a higher level of self-efficacy when integrating technology than those later in their inservice career.

Increasing Student Reach and Engagement Through Technology

The primary purpose for integrating technology in music classes is to leverage it as a tool for reaching students (Ruthmann & Mantie, 2017). While differences in professional identities and personal dispositions for teaching are mitigating factors, the two most compelling reasons are reaching a broader scope of students and bringing relevance to the music classroom. In this section of the chapter, I will review recent studies that have examined the effectiveness of technology integration for reaching nontraditional music students and describe what is known about the ways in which music technology use has increased the relevance of music education and promoted student engagement. This is a review drew upon prominent music education journals archived articles available in ERIC database within the past several years, and *The New Oxford Handbook of Technology and Music Education*.

Reaching Nontraditional Music Students. Numerous music educators have argued that music technology can be used effectively to increase the broader scope of students who benefit from music education (e.g. Dammers, 2019; Ruthmann & Mantie, 2017). This broader scope of students often refers to the engagement of nontraditional students through technology use. A list of characteristics of a nontraditional music student was created in 2012: “(a) a student not in a performance ensemble, (b) may or may not read music, (c) may play an instrument or sing

(typically percussion if an instrument is played), (d) use musical abilities outside of school, (e) possibly lower socioeconomic status, (f) academically unmotivated and/or often having discipline issues.” These may also be students with special needs (Williams, 2012, p. 137).

Elpus & Abril (2019) recommend research to determine the needs of “music” and “nonmusic” students, as a resource for reaching all students. Sixty-eight percent of teachers who were instructing technology- driven lessons strongly agreed that, “Reaching nontraditional music students (i.e. not in band, choir, or orchestra) is an important consideration in the planning and execution of your music class” (Dammers, 2012, pp. 78-79). Students of low socioeconomic status have lower participation in performance courses and lack access to more general music courses (Elpus & Abril, 2019). Teaching music to all learners and helping create musicians capable of making thoughtful musical choices for lifelong music-making is a goal that can be closer obtained through technology integration (Chrysostomou, 2017; Giebelhausen, 2015; Lum, 2017; Williams, 2017). Teaching nontraditional music students by integrating technology can allow for musicians with little experience and musical knowledge to create, respond, and listen to musical ideas with ease (Chrysostomou, 2017).

Several music educators emphasize that it is important for them to remember that the musicians in their classrooms may not continue their musical life as traditionally-trained musicians (e.g. Dorfman, 2018; Giebelhausen, 2015; Lum, 2017; Partti, 2017; Williams, 2017). Giebelhausen (2015) promotes the idea that the music teacher’s role is to introduce music into the lives of all students. If we do not integrate technology, a type of learner may be missed, and Dorfman (2018) states, “We need to consider the possibility that the music students of today may not be the classically trained performers of tomorrow; rather, they might be the engineers, producers, game music composers, mash-up artists, DJs, or music software developers of

tomorrow,” (pp.16-17). This foundational idea is not newly-invented, for John Dewey (1947) stated, “If we teach today’s students as we taught yesterday’s, we rob them of tomorrow” (p. 167). Engaging students in technology integration and relevant content allows teachers to bridge a gap between music education and the society in which students live (Ruthmann & Dillon, 2012).

Increasing Relevance and Engagement. While accessibility in schools is important for integration, technology in the home, both in general and in music, is continuing to grow and develop. Creating connections between a student’s life outside of school and in school gives the teacher an opportunity to build a relationship with the student. (Ruthmann & Dillon, 2012). Phillips (2013) found that in most American homes, there is more than one computer. The internet-infused youth have the ability to facilitate their own learning through software applications, internet radio stations, social media, and websites (Dorfman, 2015; Giebelhausen, 2015; Ruthmann & Dillon, 2012). Students are often aware of technologies available, such as creation applications, but they do not have the expertise to use them in a meaningful way. Teacher assistance can bridge the gap for students between their musical experiences in school and at home (Chrysostomou, 2017). Use of cell phones, mp3 players, web services, and streaming services have become so accessible and affordable that no matter a student’s socioeconomic status, they are able to engage in listening and experiencing music outside of the school day (Ruthmann & Dillon, 2012).

Music education curriculum has evolved to remain current and relevant and integrate music technology as a way to show relevance (e.g. Bauer & Dammers, 2016; Dorfman, 2015). Some music educators (e.g. Kratus, 2007; Ruthmann, 2012; Ruthmann & Dillon, 2012; Ruthmann & Mantie, 2017) believe that music education should reflect the society that students

are living in by integrating technology and social media into the music classroom. In Bloom's Digital Taxonomy for 21st Century Learners, the highest order of musical thinking involves composing, filming, remixing, and podcasting (TeachThought Staff, 2018). In this vision, teachers become collaborators with the students as the students' interests drive their learning. The focus shifts from teacher-centered classes and rehearsals into student-centered decision-making processes (Ruthmann & Mantie, 2017).

In the past, most music educators used technology in the classroom mainly for administrative and planning purposes rather than having the students interact directly with the technology (Dorfman, 2018; Reese, 1999). Traditional music education consists of teachers leading the rehearsal or learning, making the decisions and corrections as lessons progress (Chrysostomou, 2017). Instead of the superficial uses for technology such as emails and listening examples, educators are moving toward using technology to fully engage students (Dorfman & Dammers, 2015). Researchers state that teachers are using applications, software, and web-based tools to prompt creation and feedback from both teachers and students (e.g. Dunbar, 2018a; Lehimler, 2019; Rajan, 2014; Wash, 2019). Researchers believe that technology allows students to interact and collaborate with peers and teachers and engage fully in their learning and performance (Albert, 2015; Giebelhausen, 2015; Ruthmann & Mantie, 2017). The use of technology also engages more students in lessons as it allows for differentiation (Nichols, 2015).

Summary. Reaching nontraditional students and increasing student engagement have been found to be reasons as to why a teacher integrates technology into the classroom (Chrysostomou, 2017; Dammers, 2012; Ruthmann & Mantie, 2017). Researchers have examined the understanding that many students will have musical experiences outside of the traditional fashion, and teachers must prepare students for those experiences (Dammers, 2012; Dorfman,

2015; Elpus & Abril, 2019). As students are engulfed in the internet, cell phones, and social media, music educators have the opportunity to use technology and social media integration to continue bringing relevance content to their classes (Dorfman, 2015; Giebelhausen, 2015; Kratus, 2007; Ruthmann, 2012; Ruthmann & Dillon, 2012; Ruthmann & Mantie, 2017).

Technology use has the ability to make the student an equal to the teacher as students drive their own learning and collaborate with teachers and peers in music that relates to their lives (Ruthmann & Mantie, 2017). Students are also able to engage in differentiated ways, which can appeal to all types of learners and engage more students in musical experiences (Albert, 2015; Dorfman, 2015; Giebelhausen, 2015; Nichols, 2015).

Chapter Summary

Through this literature review, factors such as resources, preservice teacher education, socialization and professional identity, self-efficacy, and motivations have been addressed in order to better understand teachers' decisions for frequent technology integration. Extant research indicates that many general music educators utilize web tools, software, and applications such as YouTube, GarageBand, and FlipGrid in their general music classrooms for listening, assessing, and creating lessons (e.g. Carlisle, 2014; Dunbar, 2016a; Dunbar, 2018b; Rajan, 2014; Wash, 2019). The resources for technology integration continue to lead universities to incorporate technology education into their courses, and many offer music technology specific courses to better prepare teachers for this integration. (Bauer & Dammers, 2016; Dammers, 2019; Dorfman, 2015; Gudek, 2019; Haning, 2016). Other reasons found for integrating technology are having a positive self-efficacy of technology integration (Dorfman, 2018; Elyes, 2018; Gudek 2019). This self-efficacy is often due to previous socialization, preservice education, and professional

identity created from childhood and preservice education (Haston & Russell, 2012; Isbell, 2008; Pope, Hare, & Howard, 2005; Wagoner, 2015). Teachers integrate technology to engage students in relevant content and reach a nontraditional and a broad scope of students according to research (Chrysostomou, 2017; Elpus & Abril, 2019; Ruthmann & Mantie, 2017; Ruthmann & Dillon, 2012). These findings informed this study and provided a basis for exploring the uses and motivations for technology integration among particular K-8 general music classrooms in Missouri.

CHAPTER III – METHODOLOGY

The purpose of this chapter is to explain the method used to study the use and motivation for technology integration by teachers in K-8 general music classroom. This study was conducted through interviews with selected Missouri K-8 general music teachers who frequently integrated technology in lessons and had a high level of music technology self-efficacy. This approach allowed for in-depth responses of the research questions presented. During the interviews, I asked questions that related to the technology used for listening, assessing, and creating in music classed. The interviews also addressed preservice teacher education, socialization, and professional identity. Lastly, this interview focused on these teachers' motivations for technology integration.

Participants

The participants of this study were researcher-selected volunteers from schools that educate students in general music classes grades Kindergarten through 8th grade in Missouri. All of those interviewed were required to have valid initial level teaching certification or higher, and had taught in the music classroom setting as of January 2020. Participants had 10 or less years of teaching experience. This narrowed the sample to teachers who were in the early to mid-stages of their careers and was done to provide meaningful data about music technology-focused teacher education and perception of preparedness through university courses. Participants were also required to have a high level of self-efficacy when using technology in the music classroom, and regularly use technology frequently and effectively. This high level of self-efficacy was a criterion in order to gain meaningful insight to the research questions. Participants remained

anonymous in accordance with the IRB approved study (Appendix A). Participants were given pseudonyms in the results, discussion, and appendices to conceal their identities.

Data Collection

The strategy for investigating the research questions was a semi-structured, open-response interview of the participants given through a virtual format, such as Zoom, or over the telephone. An interview guide was created to gain knowledge of demographic and teacher information, technology use for listening, assessing, creating, music technology preservice teacher education, socialization and student teaching experience, and motivation to integrate technology. The interview guide and purpose of research for study# IRB-FY2020-703 were approved with Exempt status on August 31st, 2020 before interviews took place (Appendix A).

Analysis

The interviews of the participants were recorded through Zoom, and automatic transcripts were created through Zoom's transcription service. The transcriptions were then compared against the recording to make corrections that were needed for the accuracy of the transcriptions. These transcriptions were then be sent to the participants for review and corrections (Appendix B). After review by the participants, the transcripts were coded for common phrases and common trends of the participants in regard to the research questions.

CHAPTER IV: RESULTS

This chapter contains a reporting and analysis of the interviews. These were conducted with music educators who were known by colleagues to use technology effectively and frequently. I designed a set of questions to better understand how preservice education, motivations, and personal innovation affected the integrations of technology by this group of music educators. The interview questions consisted of (a) biographical concepts questioning experiences of technology use in the home, school, and preservice education, (b) direct questions about motivation for the instructional uses of technology integration, and (c) questions on how technology was directly used in the general music classroom.

I manually coded transcriptions of the interviews along with physiological responses of the interviewees, and then looked for trends within responses. Those responses were analyzed for repeated concepts, repeated phrases, and physiological responses that created trends between the participants. I will describe the interview process in the next section.

Sample and Data Collection

This research was conducted by interviewing three music educators who used technology in the K-8 general music classroom to aid in their pedagogy. I chose these participants because of my knowledge of their technology capabilities and my previous observation of their pedagogical style firsthand. The interviewees are teachers within Missouri and within their first ten years of teaching. While all participants were located in Missouri at the time of the study, each had attended a different university for their undergraduate studies. All participants have taught in both low and high socioeconomic demographics within the public-school system, in a range of locations in Missouri.

Responses from the participants were obtained through approximately twenty-minute semi-structured individual interviews with each participant. Participants responded to open-response questions with narratives and reflections of their personal experiences. Interviews were informal in nature with a few additional questions added after the interview guide was complete. Transcripts of the interviews were created by Zoom's automatic transcription and reviewed by me against the recorded interviews to make any corrections needed to the transcriptions. The transcripts were then sent back to the participants for validation. No corrections or misinterpretations were requested by the participants. Transcriptions with participant pseudonyms can be found in Appendix B.

Analysis

All interview transcripts were coded using a deductive approach after each interview with respect to the research questions. An outline was created to organize the responses with headings of research question ideas such as "technology use", "Tech experiences K-preservice", and "motivations." Keywords (recurring words and phrases) and common themes from the interview were found within the transcripts and recorded on the outline. This process was repeated for each participant's interview under the headings of an identical outline. Those themes were then compared against each other to find common themes between participants. These common themes were examined across the participants to explore similarities. Coding and outlining were used to create continuity between participant interviews.

Perspective of the Researcher

I am an advocate for technology integration in music classes. During my childhood I was very fortunate to live in a household which held technology, especially video and audio technology, in high regards and a parent who was the catalyst for the newest technology available. I have a high level of self-efficacy with technology integration because of my socialization. I believe that technology can reach a large section of students that may otherwise not enjoy or connect with music education. I was explicitly aware of my perspectives throughout data collection and as I analyzed the results. I kept field notes and reflected upon my own feelings about the perspectives of each participant and examined how my own subjectivity and bias may have played a role in interpreting the results of the participant interviews. I address this explicitly in the reporting of the results and the discussion.

Results

Participant 1 (Michael). The interview began with questions about Michael's use of technology during his childhood. Michael stated that he was born in the 1990's and referred to video games as his main use of technology during his childhood years. He spoke of Gameboy, Nintendo64 and playing Pokémon, Donkey Kong, and Mario. He noted that he was not a "huge, huge technology person" outside of playing video games. Michael also said that he did not have a cell phone until high school. Michael made no mention of a computer in the home during the interview. While Michael used technology during leisure time through video games while in his childhood home, he did not consider himself a person who identified with technology as part of his personality.

The reported use of technology in Michael's K-12 education was centered around watching movies and musicals. Michael stated that, during middle school, movies and musicals such as *The Sound of Music* or *Oliver* were shown on a television that was rolled into the classroom on a cart. No interactive whiteboards were used during Michael's K-12 education and "projectors were in the classroom but for academic purposes," with no touch capabilities. He stated YouTube and similar tools were not available when he was in the classroom. Michael said, "when it was time to use them, you know, that was going to be a really fun day." His experience with technology during their K-12 education was not abundant but was responded to with excitement.

Michael did not recall a focus on technology in his university courses and seemed a bit uneasy answering immediately. He hesitated to answer for a moment and moved in his chair but did not indicate why. He indicated the use of PowerPoint, Word, and presentation tools during music and education courses but no technology-specific course. Michael said, "I don't recall them talking a lot about technology." He did note a colleague had given him guidance for integrating technology in his own classroom, but the majority was self-taught. Michael explained that this colleague always had an agenda on the board that would direct all students in the lesson from one location. Michael expressed that he advocates for students to have their own materials, but he considers it beneficial for students to look in a single location because of the convenience of changing material quickly and keeping students on task. He expressed that his personal growth of technology integration occurred during the course of his inservice career rather than during his preservice years.

Michael stated that an advantage to technology use was the ability to change information instantly, but he also brought attention to some of the disadvantages to technology integration.

He spoke of being able to change misspelling and add information, instantly add student responses, and add pictures to lessons for younger students. He also discussed the occasional incident when the technology did not function properly. Michael indicated the importance of making sure a teacher is not too reliant on technology, and instead uses it only as a tool, in case it malfunctions. He stated that he does not rely on technology solely because of these occasional obstacles. He shared a story of his SmartBoard not functioning and spoke of being slightly irritated. Michael explained that he makes sure to have another plan for the lesson in case of these malfunctions. Through these successes and challenges, Michael said the following about his technology use, “I cannot let this define me, but I can use it as a tool; as long as it’s not a crutch.”

The interview transitioned to Michael’s motivation for technology integration. He immediately sat up in his chair with excitement and began discussing being able to bring relevant content to students. He stressed the importance of entering the students’ world and interests because the teacher is asking the student to enter the teacher’s world during each class. Michael said, “This generation is kind of a microwave generation where they just want stuff quick and fast, and I think that if they can see it, they are able to achieve it.” Michael stated that an advantage to technology integration is not only to build relevant content but also to gain trust and build relationships between teachers and students.

Michael reported using technology for listening/watching, assessing/responding, and creating/performing when asked about specific uses of technology in the general music classroom. He described using YouTube often for presenting musical examples, information about musicians, and videos just for entertainment. He revealed using Canvas (a course management system) and web sites such as tonesavvy.com to assess the students’ knowledge of

content. He explained that this type of formal assessment was completed multiple times throughout the year and also allowed for students to see their own progress made because they were quickly able to see their proficiency scores. Michael described also using recordings for assessing/responding by presenting performances of various artists and asking for students to assess a performance. He also discussed having students create, perform, and record their own performances and presenting the recording for self-assessment. He also indicated that he posts examples of student work on social media. He uses this to encourage the students to do their best because it will be shown to the public, as well as entering the student's world of interests. Technology integration made its way into Michael's classroom almost daily in a variety of ways.

Participant 2 (Anthony). When asked about the use of technology during Anthony's childhood, he began by stating he felt he was part of "a transitional generation where I wasn't born with the technology that we have today, like our students today have per se, but it still happened pretty early in my life." Anthony was born in the mid-1990s and used technology in the home primarily for playing computer games with his brother. He reported getting his first cell phone with internet capabilities before going into high school.

Anthony revealed that his 6th -12th grade private school had 1:1 iPad access (each student had a personal iPad) beginning in the eighth grade, and how the exposure was helpful. He said he can still remember the excitement of the new first-generation iPads that students received. He described using iPad in a global studies class for research but had trouble with accessing information due to restriction by the school. He said he eventually got a computer and used it throughout college. Anthony reiterated that the exposure to the 1:1 iPad ratio at the middle school and high school level and later having a computer during college were beneficial to him in preparation for using the technology today.

When asked about Anthony's university experience with technology, he responded with curiosity about how university courses look currently. He stated that he did not graduate long ago but understands that technology changes so rapidly and would expect course availability to change as well. He then disclosed that he did not feel that technology was the professors' "primary language," and Anthony frequently felt that he knew more than the professors about the practical application and potential of integrating technology in the classroom. Technology was given to Anthony at an early age and said, "It was more of just being raised in the movement. It just kind of became a second language to me, and I think that might be why it just happened more naturally." Anthony reported feeling well prepared to integrate technology, but not necessarily because of his preservice education.

The direction of the interview transitioned into the motivation for integrating technology, and Anthony immediately started talking about using iPads to engage students "on their level." Not only did he discuss meeting students at their knowledge level, but also engaging the students in relevant content relevant to the students' interests. Anthony said that he understands technology is so important in students' lives and that students are used to engaging with technology throughout their day.

Anthony also indicated using technology integration to reach higher numbers of students. He described engaging students who would not otherwise be interested in music by having the student create music using GarageBand. The participant described a student who disliked singing and playing instruments but was willing to work relentlessly on a composition using technology. He expressed that integrating technology in the general music classroom allowed for a variety of students, with a variety of interests, to be involved in the general music classroom.

Anthony unexpectedly mentioned the ease and convenience of using technology in the classroom as possibly being the primary reason for using technology so frequently. He described the ease of having endless musical examples on hand at any given moment, without the classroom management logistics. He also described being able to change from one item to the next with no preparation needed. This ease for the teacher made a large impact on why Anthony decided to use technology in his general music classroom.

Anthony discussed throughout the interview specific uses of technology for listening/watching, assessing/responding, and creating/performing. He spoke of using YouTube for listening/watching in the classroom. Rehearsal tracks were also created for students to listen to independently. For assessing/responding, he cited using apps and web tools such as Blob Chorus, Sightreadingfactory.com, and Google Forms. He also spoke of recording performances and asking students to respond to the performances. GarageBand was reported as being used most often for creating/performing with general music students, while other apps such as iMovie were also used to create and perform. Anthony's frequent use of technology was shown in various ways, to reach many different students and standards.

Participant 3 (Jonathan). The interview began with Jonathan describing the use of technology during his childhood. He explained that his household had one computer due to the father's career, but otherwise he did not have much other technology in the home. Video games were spoken of as his primary use of technology until high school, when Jonathan received his first cell phone with cellular phone use only. The participant reported getting a personal laptop in college and used it throughout his schooling.

During Jonathan's K-12 education, he spoke of using technology mostly for watching educational material and playing educational computer games. He also described using laser

disks and DVDs in the classroom, and he described learning to type and play educational games in the school's computer lab. There was no 1:1 computer to student ratio throughout the participant's K-12 education, but students were using computer labs for most purposes.

The next section of the interview led Jonathan to discuss the way preservice education affected his technology integration. He did not recall having a technology course at his university, but he suggests that learning how to run sound equipment and how to integrate technology creatively and innovatively would have been beneficial. Jonathan found his experiences using Finale in his composition class, and Blackboard in his college classes useful for adapting to his district's use of Canvas. Jonathan identified benefits and drawbacks in his preservice education but considers himself his own biggest advocate for learning how to integrate technology.

The conversation led to discussing the variety of students he taught in many different socioeconomic cultures, and how he uses technology integration to connect with students from all backgrounds. Jonathan said, "They just have a different way of thinking and they have different values and being able to connect with them in different ways is very important. Because relationships for those kids are more important than anything." He described using technology to reach a different group of students who might not otherwise enjoy music class. For Jonathan, technology integration was said to be a way of connecting with students and engaging students in enjoying general music.

The final section of the interview explored the specific technologies that Jonathan used in the classroom. Listening/watching activities were infused with technology through the use of YouTube, recorded musical examples, and recorded musical performances. Jonathan regularly asks students to listen to and/or watch musical artists and examples of music that they might not

otherwise experience. He reported using web tools such as musictheory.net, Canvas quizzes, and recordings of students' performances to assess the understanding of content, as well as self-reflection of the students. Jonathan's students would often listen or watch a performance or themselves or other performers and analyze performances. For creating/performing, he used various web tools and applications, such as GarageBand, Noteflight, Soundation.com, and Chrome Music Lab. During one lesson, he taught students how to create music using Soundation.com or GarageBand for different scenes of film and how the music affects the audience reaction to the film. Jonathan provided examples of how he uses technology often to enhance and innovate lessons of all kinds.

Themes Across Participants

Examples of Technology Use. Questions throughout the interview also led the participants to respond to types technology that they used often in the general music classroom for listening and watching, assessing and responding, and creating and performing. For listening and watching, all three participants utilized YouTube often to display music and videos for their students. Participants had students listen to music and describe what they heard, and one participant even centered the beginning of his classes around an "Artist of the Week" to demonstrate different arts and music. They discussed showing examples of music and performances that their students might not otherwise have access to.

They often used technology to give rehearsal tracks to students for independent study. Hyperlinks were also helpful for students to follow individually for listening examples as their students were all 1:1 with Chromebooks. Students were able to listen to musical examples and to rehearse independently. This has been especially useful for virtual learning that many

students are taking part in due to COVID-19. Objectives and agendas were discussed by two participants as often being displayed on the interactive whiteboard or projector to help students stay on task. These participants also indicated that it helped them and students keep pace with the agenda of the class. Participants explained that students were instructed to look at the interactive white board or projector throughout for instructions and updated agendas.

Trends that appeared in participants' responses for assessing and responding were the use of Google Forms and Canvas (a course management system). These tools were used by participants to assess students' knowledge through formal assessments such as quizzes or assignments. Participants also referenced music theory and sight singing apps and web tools, including Musictheory.net, Sightreadingfactory.com, and Tonesavvy.com to assess students' understanding of fundamental music theory and ear training. Recorded responses from students were used by all three participants. Participants asked students to respond to each other's work and to performances with recorded video. All three participants also alluded to recording students' performances for playback and reflection.

A wide variety of creation and performance apps were used by participants. GarageBand was cited as often integrated by two of the three participants and in a variety of ways for creation and composition. Two of the three participants also reported using social media as a way to integrate technology into their classroom. The participants said they make social media posts of performances and student work. Other apps and web tools such as Soundation.com, Noteflight.com, and Chrome Music Lab were mentioned when asked what they used for student-creation and performing lessons.

Motivations of Technology Integration. Motivations were explored in the interviews by asking participants their reasoning for integrating technology into their general music classrooms. The primary motivation was to relate to nontraditional music students and build relationships with all students. This was done by bridging the gap between the teacher's and students' interests and allowed students to connect music in the classroom to the music they enjoyed outside school. Convenience was also a strong trend from the participants. Two of the three participants stated that it was convenient to adjust the lessons instantly, as well as the convenience of endless musical examples. The last trend that was reported was the ability for students to evaluate their own progress and to understand the achievements that they have made through recordings and formal assessments.

Summary of Findings:

- Participants reported that they grew up during a transitional era of low to high availability to technology.
- The participants used YouTube frequently for presenting music content and engaging students in responding to their viewing. GarageBand was also used frequently for student composition and digital performances of students. Recordings were used often for students' self-assessment and ease of assessment. Sight singing/ear training web tools were often integrated to drill concepts and assess students' progress in the participants' general music classrooms.
- The participants reported that their motivations for integrating technology ranged from building relationships with students, engaging nontraditional music, and convenience for modifications and musical examples. All participants discussed using technology integration to connect with students through building connections, relationships, and trust. Participants explained how technology integration had reached students through other digital music who were not interested in traditional "classical" music.

CHAPTER V: DISCUSSION

This research was completed to help better understand what music technology was being integrated in the K-8 general music classroom and what motivated these teachers to integrate technology effectively. The results of the interviews indicated that the participants were in a technological transition phase during their childhoods from having a limited amount of technology available to abundant access. These participants indicated that while they felt prepared to utilize technology in their own classroom; their preservice education only slightly affected this outcome. Participants discussed teaching themselves to use and integrate technology with the hopes that it would help build relationships with students, reach nontraditional music students, and be convenient. These results frequently reflected similar conclusions by previous researchers (e.g. Dammers, 2012; Elpus & Abril, 2019; Ruthmann & Mantie, 2017) in regard to reaching a nontraditional and broader scope of students, and the technology innovations being utilized in the general music classroom. New ideas were also unveiled such as focusing on the convenience of teaching with technology.

Discussion

Participants reported using many of the same applications and web tools that have been reported in previous research on music technology use (Lehimler, 2019; Rajan, 2014; Wash, 2019) as well as the motivation for integrating music technology frequently (Dammers, 2019; Elpus & Abril, 2019; Ruthmann & Mantie, 2017). The participants revealed that they did not have ample training during their preservice courses, but instead educated themselves about integrating technology in their pedagogy. This section will discuss the interpretation of the

results in relation to previously-conducted research studies and recommendations from the field (e.g. Bauer & Dammers, 2016; Dammers, 2019; Haning, 2016).

Technology Used in K-8 General Music. The examples of technology reported by the participants reflect what previous researchers have found on technology integration in the K-8 general music classroom (e.g. Dunbar, 2018a; Giebelhausen, 2016; Lehimler, 2019; Wash, 2019) but did not reflect any lab use of music technology. YouTube continues to lead in use for listening and watching, as stated in previous research (Lehimler, 2019; Rajan, 2014; Wash, 2019). Participant responses also reflected the research of assessment and responding technology tools, such as Google Forms and video responses for younger students and/or performance assessments (Dunbar, 2016a; Dunbar, 2018b; Wash, 2019). Creating and performing themes of GarageBand as the primary use alongside a vast array of applications and web tools corresponded with previous research (Giebelhausen, 2016; Lehimler, 2019; Rajan, 2014). The majority of participant responses directly support the uses of technology while one new trend of a course management system was revealed (Dunbar, 2018a; Giebelhausen, 2016; Lehimler, 2019; Rajan, 2014; Wash, 2019).

Socialization, Professional Identity, and Preservice Education. Many trends identified in the literature review were not mentioned by the participants during their interviews (e.g. Bauer & Dammers, 2016; Dammers, 2019; Gudek, 2019; Isbell, 2008). Two of the three participants reported having one computer in the home during childhood and all of the participants said that they had each taught themselves most of their technological skills. Similarly, Gudek (2019) states that teachers with home computers have a higher self-efficacy when using technology; however, each participant suggests that they were the catalyst for technology in their household rather than the adults in the home. No participants specifically named a teacher or private

instructor who memorably influenced their decision to integrate technology, though Isbell's (2008) research stated that preservice cooperating teachers and private instructors influence a teacher's self-efficacy and pedagogical decisions.

During the interviews, participants' body language showed hesitation to discuss whether their university courses and student teaching experience prepared them for integrating technology in their own general music classrooms. All of the participants attended different universities for their undergraduate studies, and all participants stated not being offered a music technology-specific course. Bauer & Dammers (2016) and Haning (2016) concur that most undergraduate music education majors are required to take a music technology course; however, these types of requirements differ significantly with state certification and university requirements. Dammers (2019) suggests that preservice teachers should be offered a course in the fundamentals of technology and how to adapt technology knowledge into their pedagogy. These participants discussed using technology for notation, composition, and presentations during their courses, but they also indicated that music technology-specific courses were not offered or required.

Motivation for Technology Integration. The results from the participant interviews revealed similar findings from previous research about the reasons and motivations for technology integration in the general music classroom. Participant responses reflect Dammers (2019) and Ruthmann & Mantie's (2017) recommendations for integrating technology to reach students who might not otherwise be interested in music classes or performance ensembles. Participants in this study used technology to reach students who otherwise were not interested in general music class or performance with Chrome Music Lab and GarageBand lessons for creation, as well as provided a variety of musical examples and artists to students through

YouTube and web tools. All participants emphasized how technology integration allowed for teachers to bridge the gap between the students' home and social lives and the music classroom. The participants often used social media to encourage and communicate with the music community in their school, and to provide listening/watching examples of musicians or artists that bridge the gap of students and teacher's lives. This motivation was very similar to the recommendations provided by many researchers who had presented the idea of bringing more relevant content to students through technology integration (e.g. Dorfman, 2015; Giebelhausen, 2015; Ruthmann & Dillon, 2012).

The trend of using technology for the convenience of the teacher was one that was unexpected. Two teachers in the study commented numerous times on the ease of being able to change information instantly and how this is useful in incorporating musical examples. They also recognized the ease of giving and receiving teacher-student assessment and student self-assessment. This could suggest that not only are teachers who are more knowledgeable about technology using it for the good of their students, but they are also using it for their own convenience.

Implications and Limitations

Many of the results from the interviews are similar to other research findings on technology-related use and motivations in the music classroom (e.g. Bauer & Dammers, 2016; Dammers, 2019; Haning, 2016; Rajan, 2014; Ruthmann & Mantie, 2017; Wash, 2019). The results revealed that these teachers believed in the value of using technology for listening/watching, assessing/responding, and creating/performing in the general music classroom and providing support for expanding technology integration in music instruction.

Numerous resources exist that can provide educators with guidance and professional development on incorporating new technologies into K-8 music instruction. The participants' responses are also reflected in previous claims that technology is an effective means of creating relevant content for a broad spectrum of students. At a time in which many students are currently learning every day in their homes, this seems to be the correct opportunity to bridge the divide between home, society, and the music classroom. Education has a strong need for the use of technology due to COVID-19, and perhaps the pandemic will help to increase the knowledge and skills with which music educators integrate technology in general music classrooms.

The constraints of time and COVID-19 obstacles during this study limited the amount of information that could be determined about socialization. I was unable to interview the participants multiple times to gather more information due to these time limitations and being unable to meet in person due to COVID-19. While the participants reported using video games often during their childhood and movies and musicals during their primary schooling, this did not provide enough information about the participants' experiences and relationships with others to determine the effect of socialization on their technology integration. I recommend that future research utilize an in-depth case study approach with interviews and observations that focus on examining the factors of socialization of technology use.

This study is not without its limitations and information that cannot be gathered from these interviews. I was also unable to observe the participants' teaching due to not being able to enter other schools during the pandemic, which hindered the ability for a more meaningful case study. A recommendation would be for further research involving these participants with additional interviews and observation of their teaching and interactions with students and technology.

A limitation that also needs to be discussed is the trustworthiness of participants and degree to which the data can be confirmed. Each participant was sent a copy of their transcripts to review before the results were compiled, and then were shown the results of the study after they were written for any corrections or misinterpretations. While these steps were taken to ensure the understanding of the participants result, my personal bias and the bias of the participant should also be considered when analyzing the results. My perspective is informed by my high technology self-efficacy, but this could have swayed the analysis because of my optimism and personal beliefs toward technology integration. This could also be the case for the participants. As a precaution to these biases, multiple interviews and an observation of teaching are suggested to delve deeper into the personal and socialization factors of the participant's technology use. Furthermore, no assumptions should be drawn that the perspectives of these three participants reflect any other teachers' classroom practices.

Recommendations

Many trends were exposed by the responses of the three participant interviews, but more participants should be utilized in future research. The limited time for study-completion and COVID- 19 hindered the ability to gather information with classroom observations and multiple interviews. Further research would be beneficial that explores the availability and requirements of music technology courses during graduate studies and summer workshops, and how universities integrate music technology into pedagogy courses. Interviews and polls could be used to examine the course offerings, as well as examine the trend of using technology not only for student growth but also for teacher convenience.

Conclusion

Teachers make decisions in their classrooms because of their professional identity and their motivations for what is important in music education. Some teachers choose to integrate technology frequently while others choose a more traditional approach. The results of the interviews completed with the three participants revealed some multiple uses of technology in the music classroom such as recordings and digital audio. The interviews also helped to examine the motivations for incorporating technology in their pedagogical decisions. Personal interest and inventiveness were found to often guide these teachers' direction and classroom decisions. Technology will continue to expand and change, and the motivations for professional development will continue to be needed for those who are interested in integrating technology for more significant and motivating student experiences.

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APPENDICES

Appendix A. Human Subjects IRB Approval

To:

Daniel Hellman

Music

Date: Aug 31, 2020 5:42 PM PDT

RE: Notice of IRB Exemption

Study #: IRB-FY2020-703

Study Title: Technology Integration and Motivation by K-8 Missouri General Music Educators: An Exploration of Socialization, Identity, Engagement and Relevance

This submission has been reviewed by the Missouri State University Institutional Review Board (IRB) and was determined to be exempt from further review. However, any changes to any aspect of this study must be submitted, as a modification to the study, for IRB review as the changes may change this Exempt determination. Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB.

This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

Researchers Associated with this Project:

PI: Daniel Hellman

Co-PI:

Primary Contact: Nicole Loudis

Other Investigators:

Appendix B. Participant Interview Transcriptions

Michael's Interview Transcript

Niki Loudis: We already. So, my first question for you is, would you please tell me a little bit about your technology use during your childhood.

Michael: Oh, my childhood. Let's see. Um, so x i was born in the 90s time at 1990s, so I think if I will answer correctly, but I was a Gameboy Nintendo 64 type person. I'm saying and that was the technology because cell phones weren't really a thing back then, you know, not until high school did we have cell phones or something. So, we were big on you know Game Boys and those little consoles Pokémon you know things.

Michael: So that's kind of my biggest thing. It wasn't a huge, huge technology person, but I was a Donkey Kong you know go or, oh yeah, Mario, yeah.

Niki Loudis: Very cool. Um, so how was. Did they use technology during your K through 12 experiences when you were in school, or was it still just evolving. Do you remember

Michael: I remember in middle school we would watch movies, but it wasn't on like a smart board there was like the big TVs have you rolled into the class

Michael: Yeah, so we had a movie. It was like, we're gonna watch Sound of Music We're gonna watch Oliver, you know, so they would roll the TVs in

Michael: Of course, we used projectors in the classroom but that was like for academic purposes, we don't really have YouTube and those things back then.

Michael: But I mean, when it was time to use them, you know, that was going to be a really fun day. So that was, that was the indication right, fun is coming, you know,

Niki Loudis: I'm well. How do you feel that your university courses and field experience prepared to integrate technology now?

Michael: Let's see, so I got my bachelor 2012, and I don't recall them talking a lot about technology.

Michael: I guess be, me being who I am. You know I love students having their own papers and their own binders and their own things. However, I'm over my course of teaching. I have. I've liked that students are able to look at one thing universally

Michael: You know, so we're doing a sight reading of we're doing a reading or if we're doing, you know, a paragraph or we're trying to alter the paragraph having them all look

Michael: Keeps the class focused. (Colleagues name) He used to put the agenda on the board on the screen. So, it wasn't necessarily he used it as a technology thing, but it did keep us on track for what's coming up. okay, this is something that can use. So as a teacher. Now I always have what's going on the board.

Michael: I always have, like, what's happening. If I have something and that helps the class they focus that also helps me with kids don't have to, you know, looking at book for a while. I can go and walk around and help monitor kids more.

Michael: And I get a chance to work with kids, that don't understand what's going on.

Michael: Also, I can change. You know, if I make my own slides I do, I can go and change my slide instantly I can go in, like, take it out of project mode and go ahead and change this word I spelled wrong or the font size. So, I think that's way more accessible than if something was printed in a book. Now we have said, Okay, we have to omit this, you know, it just really helps to have something you can change on the spot.

Niki Loudis: For sure. Yeah, I didn't even think about that.

Niki Loudis: Exactly, yeah. For sure. Um, so when you are doing your let's stick with undergrad I guess. Did you have to have a music technology course or a course that had you integrate technology, even if it was like a do a PowerPoint slide or something like that. What did you have to do?

Michael: Their courses that more education courses that did have, you know, present a PowerPoint. Make a slide about this. I thought that was very useful because especially somebody who does conferences and I do a lot of clinics, go around it knowing how to do that.

Michael: One for students, knowing how they can read it also knowing how to do it for adults who want to learn how to do it for students is important too, so I did have a couple of courses where I did have to make a PowerPoint and make something on Excel you know make where of course we have to write papers so Word is always something that we use all the time, you know, I think PowerPoints really effective, especially when you are a presenter knowing how to do that. And knowing how to keep them engaged because you can't just make a big PowerPoint. You need more visuals, you need, especially for kids. You need something that's why it gets their attention.

Michael: Something I learned this year is, you know, the hyperlinks. You know, so clicking on a hyperlink. That gives you a link to a YouTube thing. I think that's really cool. There's just a lot of different things that you're able to do example.

Niki Loudis: Yeah, so you're able to like quickly have students in the same place or exactly maneuver them. Gotcha. All right. Um, could you describe the first memorable moment when you integrated technology into your classroom. This could be during your actual teaching or field experience or student teaching

Michael: I want to say last year is when it when I really started using it heavy. I actually credited to my assistant. I noticed that he uses a lot and I used it. But like I said, I'm very old school, so I was very, you know, we're going to look in the book. And we're going to have our own which I still am. You know, but I felt like having something on the board. Every day one. I didn't have to write anything you know by hand. I could type it up. Also, the kids will make one more focus because they knew what was coming up so, for this year, you know, we only see kids twice a week. So every Tuesday or every Friday. They do what's called a "do now".

Michael: So I put that on the board. I say, hey, these are the questions, or you know setup, you “do now” after “do now” I want you to practice page six through 10 in the purple book. So, when I still like to do individuals things I have what's on the board that's helps them to say, Okay, this is what's coming up next, and that is that is just been a really cool thing. There have been times when my Smart Board has gone out or something's happened and it's slightly irritates me because I don't want to depend on technology too much for that reason, you know,

Michael: I have to try to make sure if something does go wrong with my smart board that I have a plan ready to go. I think that was my fear with the smart board using it. I didn't want to get to a point where I was so dependent on it and then something happened to it, but

Michael: It's more reliable than I think I just have to be ready if something does go wrong, where I am able to snap and just keep going with the lesson. I think that's just a skill you make over.

Niki Loudis: Well, I really appreciate bringing it up, why people don't use technology as much because the glitches that could happen and the mayhem that could happen in your classroom after.

Michael: Today, you know, so we were doing sight reading and if you don't touch your screen for a certain period of time, it will, you know, sleep, and after like 10 seconds, it'll lock down and you have to like go in and type in your password and everything.

Michael: So I tried you know, I stayed by my laptop. I try to keep it on me and there was an incident in a couple days ago where it wouldn't work. And so, I was like, and I took. I took my you know my marker and I wrote on my white board. There we go. It will keep going. But I have, I have to remember, I cannot let this define me. But I can use it as a tool. As long as I'm not, it's not a crutch.

Niki Loudis: Um, can you please describe the student population of the schools and what you've taught

Michael: Sure, let's see. Um, this year is not an abnormal year there's some classes I have 10 in some classes. I think the smallest I had was three. The biggest I've had a is in a normal year will be like 50-60 kids in the room at one time and so that is what we are because of Coronavirus right now because of the pandemic. We are cut down the classes. So that's helped a lot. I do miss, you know, and I have my advanced choir having things on the board, ready to go or sixth graders done learning how to sing in the camaraderie. But that's where we are right now the class that way smaller than normal.

Niki Loudis: Are your students coming in with a lot of musical knowledge already are, or are they

Michael: You know, so I did something this year. Part of me regrets it and part of me is like, I'm going to work with it. So normally their sixth-grade choir and then there's six general music. I switched all of my sixth graders to sixth grade general music in the hopes that I would see more kids and that I would be able to recruit more kids for choir but what I didn't know is that was

going into my schedule around so where last year, me and my assistant we always taught together both sixth grade I made 6 grade general music,

Michael: This year, me and my assistant, we don't teach, teach together. So that's difficult and it kind of through off my plan. So, I have my own set of kids. He has his own set of kids. And so we have to make alternative plans to go into each other's rooms and do some things and sing with each other, you know, but my goal next year is to turn everything back and suggest choir.

Niki Loudis: Some factors for technology integration that we found that I found in my research we're reaching a broader scope of students and engagement in content relevant to their lives and their society. What motivates you to integrate technology into your classroom.

Michael: I think that it's, you know, a teacher is always trying to go into the student's world, go into the student's mind. And so, the first thing I do when they come into the room. There's always something on.

Michael: The other day we had on That's So Raven, the other day, we had on her, you know, and I try to find different things that makes me more relatable to them. Today I had on Looney Tunes, you know cartoons. The other day I had on America's Got Talent, you know, different people who made to the goal. But, you know, there's always something playing and technology is their world they live in. A world of technology.

Michael: I don't want them to be bored and I also want them to come into my world. So, I have to venture to theirs for them to come into mine. But I do love, going back to the hyper linking. I love that I can play a clip of a song like a college concert or a concert from a collegiate group and then play something from you know the Pentatonix or play some funny video. You know, I always have stuff that's entertaining them.

Michael: This generation is kind of a microwave generation where they just want stuff quick and fast. And I think at if they can see it. They are able to achieve it. So, so I keep a lot of videos going from, you know, what is that, you know, Pentatonix so I found some girl group videos I found them, you know, singing videos from just people. Keeping things relevant I found some Tick tock videos I played those in the morning, sometimes, you know, and if that's their world. I think they are able to trust me more to know, hey, he understands me. He gets me.

Niki Loudis: Yeah, so it's almost like a relationship.

Michael: I've also noticed that it's helped to really cut down on discipline expressive When we're watching a video I give the rules of so I'm going to turn the lights off. You know, I'll give the warning and if you're talking out

Michael: That you know you're talking again I'll turn one light on, you know, my room is in a place where if the lights are on. You really can't see the screen so kids really want to see what's on the on the screen so I've had less behavior issues

Michael: Also, this is kind of irrelevant but I use the phrase method. A lot. So, I'll freeze the screen or what's going on, then I can work on stuff and then I can pop it into what's going on and it's just great to have.

Niki Loudis: Yeah. That's awesome. All right. Well, you kind of answered my next question. So, I was asking what do you do for listening and watching. How do you integrate technology into assessment and responding from the students?

Michael: Sure. And so a lot of times what I will do is I will, I will post the questions that we're going to do on the board so I can do all four of a lot of times they really like heavy questions. So, I'll post them on four different slides and I will just keep them moving and it causes them to focus something and then they get to respond. Another thing, like I said, going back to the "do now". So, every day, or every second day, I have them they do an assessment related to music. So I might have 10 questions about lines and spaces, you know, what's the third space was the fourth space.

Michael: So, I get there, they're ready response then I get to go back and ask them what's, what's the answer this question, I use the site tonesavvy.com a lot. And so we have theory games have,

Michael: A time game of how fast can we all named lines and spaces, you know,

Michael: Yeah, but again, and then, you know, they get it the first time in 35. Second. It's just the excitement, they get when they know that they are making progress is just you can explain that, you know,

Niki Loudis: Yeah. And are there any specific I mean I'm just, I'm assuming you use Canvas, because that's what we have. We all have to use. Are there any specific like assessment for responding tools, do you mean you use zoom probably

Michael: Every week, I also go into Canvas with them. On days and I don't have them, I want to make sure they know how to do this assignment. So I'm going to go to student view and I'm going to show you what you see. I think a lot of times, especially because we're virtual and students.

Michael: I think that students, mentally, aren't I don't want to say they're not capable of handling virtual but this is a big change for them. I had one I had one online class and I almost didn't pass it because I it was out of sight, out of mind.

Michael: I didn't exactly. Oh, so because they get on three times a week. Hopefully that's better, but

Michael: I've taken I've listened to their talks about virtual and what they like what they don't like. And it's really difficult for them. So a lot of my younger kids sixth grade, seventh graders, they don't get on and maybe they don't have internet access at home.

Michael: A lot of older kids, they do. But yeah, I do go into Canvas with them and I make sure like this is how you go into Canvas. This is what the assignment looks like.

Michael: This is how you know I have to copy and paste the template and then they put it into the submissions.

Michael: Assignments. So making sure they know. So if the student doesn't do it correctly. I can say, hey, these are the instructions and I can kind of redirect them versus just giving them the answers.

Niki Loudis: Right. Yeah. All right. That's awesome. All right, I have just a couple more, um, how, how do you integrate technology into creating and performing lessons and how did they create using technology or perform. Maybe they record themselves singing and you give them feedback or so.

Michael: I haven't done it.

Michael: This will be a canvas assignment, maybe next quarter, but I will have them. So, I do a lot of things, you know, with rhythm examples or with some sight reading. So, I'll have them eventually to record themselves at home.

Michael: And also, on a fun tip. What I've done is I told them starting in the second quarter assumes you don't have concerts, a lot of times I might pull a set of students and we might record a video of them singing, I might post it on Instagram. Hey, we're able to you know we're not seeing any concerts, but we are still here. Sometimes I've posted the class singing some, some warm ups and I post that on Instagram. When I acquire page and that gets them involved and let them know, hey, I want to post you guys but you guys have to be ready and that causes them, hey, I want to go on internet. So thats really, really good.

Michael: It's a really cool thing also. So today, we went outside and I asked them random questions. You know what animal would you be and, you know, just having kids do weird stuff and I love, I love to get their feedback and I like to post that on our thing to show them that you know our kids we're still here. And we're still human. And we're still having fun and we still go through stuff and it's you know, it's just a fun time here, you know,

Niki Loudis: Yeah. Awesome. All right, well, how this, I guess. You kind of answered some of just in case. How do you plan to use technology this year versus how you integrated it in past years. With the pandemic and such...

Michael: I think going back to, I think I'll use it more because I want students to see other performing especially older performance either high school groups or college groups, you know, performing their videos of me on YouTube video but the video for me in college when I was in my college route.

Michael: And so when we talk about I showed a video of a young singer and then heard five years later.

Michael: You know, maybe showing the video of myself and then a video of me, you know, ten or 15 years later. So, in videos of you know, maybe Kickapoo's choir, maybe some of the high school choirs around here and then showing them a Missouri State or Drury or, you know, maybe the all state choir, so they can know what they're going to be like, eventually.

Niki Loudis: That's awesome. All right. Well, that was my last question, I'll give you a little outro spiel. Thank you again for participating in this interview, I will send you the transcripts of this interview so you can review it and tell me if I misinterpreted anything.

Anthony's Interview Transcript

Niki Loudis: All right, so the whole main point of the thesis is I wanted to pick some people who were really good at using technology.

Niki Loudis: in K through 8 general music and want to know what drove them to do it because some people will really steer away from technology, some people are really into it.

Niki Loudis: And what's the deciding factor? Why do people do that? So, we're going to start at the very beginning. Could you tell me how you use technology during your childhood?

Anthony: Oh,

Niki Loudis: Even like even like video games or, you know, listening to certain music...

Anthony: Wow. Okay, well I'm, I guess I was part of the transitional generation where I wasn't born with the technology that we have today like our students were per se,

Anthony: But it's still happened pretty early in my life.

Anthony: I definitely didn't have a cell phone that could connect to the internet in the way that

Anthony: We do now until I was kind of come in high school. I certainly didn't have one in middle school. I can't even imagine what that would have been like if Tick tock had been around.

Anthony: Um yeah, I remember playing computer games, with my brother. We had one computer in the house that could kind of play those games and it was pretty retro is Missile Command and it was stuff like that.

Anthony: Yeah, that was probably one of the last generations to really play this, probably, but I did that and then

Anthony: Wow.

Anthony: I might. I was actually pretty fortunate because in my middle school, high school because it was six through 12 went to a private school. We were one to one.

Anthony: And we had, we had iPads.

Anthony: We had, we had like first generation iPads.

Anthony: I remember. Yeah. I mean, we were pretty well funded private school for the most part, but still I remember the fascination and excitement when I went into, I think it was eighth grade and we started using iPads all the time. And I remember as a student dealing with the website blockers and dealing with it even when I was trying to do all the proxies UK i remember trying. I had a global studies class and I was trying to get research for papers that I was trying to write and I couldn't access anything

Anthony: Oh boy, but anyway regardless. I remember as a kid, this kind of all goes back to technology. I never really learned how to type I kind of have my own way to type a very self-conscious about it but my science teacher, back in the day. Didn't to actually teach us any typing skills, she just kind of told me in sixth grade to figure it out. And she was, she was a great teacher in every way except for that.

Anthony: Having my iPad in front of me as a kid and trying to type and just I mastered the hunt and peck method.

Anthony: But having that technology back in the day was great. And then eventually I got a computer and I kind of use that all through college, and then became more current. So I've had pretty a lot of good exposure, especially in middle school and high school to technology right so

Niki Loudis: How old are you kind of explain that one. Okay. How did your university courses and field experience student teaching prepare you to integrate technology in your classrooms. Now,

Niki Loudis: Or in your classroom.

Anthony: Well,

Niki Loudis: Because, I mean, that's

Niki Loudis: That's part of the paper is some people it helped them and some people did not

Anthony: Right, um...

Anthony: I, I'm really curious as to what collegiate classes look like now compared to see because, I mean, I honestly, it has not been a long time since I graduated. Yeah, so like

Niki Loudis: When did you graduate?

Anthony: 2017, it really has not been. Yeah, I know, I know.

Anthony: I think that technology changes so rapidly. Right, like it's crazy. Zoom. Zoom was not a thing. Or at least wasn't as big of a thing as it is now.

Anthony: So I felt, and especially when you consider the professors that I had at the time, this was not their primary language when they were teaching it.

Anthony: So a lot of the times in my undergraduate degree. I felt like I needed more than my professors when it came to technology and the ways in which I would integrate it were just a little more natural.

Anthony: Because the students that I was around tended to be closer to my age than they were to my professors. So, I remember feeling like I was excelling in that department. And then when it came time to do the, one of the giant state exams that we had to just write essays after essay on what we were doing in the classroom and student teaching

Anthony: When it comes to technology integration, I felt like I was pretty well prepared. But I don't know how much of it I would necessarily associate with my education. It was more of just a being raised in the in the movement. It just kind of became a second language to me. And I think that might be why it just kind of happened more naturally when I taught it.

Anthony: No one really told me to do it or how to do it. It's just something that you just connect the dots to when you're when you grow up around it.

Niki Loudis: Right, I completely agree. Well that fix that very much helps. Yeah, um, could you describe the first memorable moment when you integrate technology in the classroom. This could have been in your own classroom or during field experience or during student teaching

Anthony: Want to think of a time and it was really my idea.

Anthony: If I cuz. Let's see. Because my colleague would use technology.

Anthony: Well, no, I would see him do Sight Reading Factory, but that was really the extent

Anthony: I use the iPads in the classroom. A lot

Anthony: Especially for general music

Anthony: And it was more of just a way to engage them on their level. So I used. I'm trying to remember exactly what they were. But there was one I think called Blob Chorus.

Anthony: Yeah, I love that because, especially with my kids that just don't even know what matching pitch means

Anthony: Right, and then they and then they feel like they're good at it. That was like the perfect app. I like to use that one within the first month

Anthony: For the, for those kids. I think my favorite ways to use technology which they hated but I loved was I would record them on my phone and I would live and I would live stream it to us.

Anthony: So, I would have my phone set up on a tripod and it was basically acted like a mirror.

Anthony: All right, really see what they look like, what are they saying

Anthony: It was always the best thing only for performance. But then I would usually pause the video, just the right time and just point kids out and be like, What are you thinking about, like, yeah.

Niki Loudis: That's a great idea. Thank you. I'm happy. Can't wait.

Niki Loudis: We can all just laugh at each other, you know, it is

Anthony: Not it just takes the pressure off performing

Niki Loudis: Exactly right. Love it. Okay, um, kid, you describe the student population of the students, you've taught like socio economic age level any of that kind of stuff.

Anthony: Yeah, well, similar to you. They yes six or eight. There's a spectrum. Definitely. I'm more tends to be on the lower end of the socio-economic side of things. So

Anthony: Kids go through a lot at home. There's a lot of just family strife. That is then brought to school. A lot of kids don't have the resources that

Anthony: That some I'd say the minority at that school do. Yeah. And you'll end. What's fascinating about my school and I'm sure many schools as they walk side by side, you'll have kids that don't have a phone, their family, maybe has one

Anthony: And don't as doesn't any internet and then you have a kid that has the new iPhone walking right next to them and like three Apple watches and the latest phones, and they somehow coexist. So there was that wide spectrum of students.

Anthony: And that kind of brought a wide plethora of issues as soon as well.

Niki Loudis: Do you think the student. The student population had anything to do with your reasoning for using iPads more in general music or using technology. Or

Anthony: Well, I think, I think the probably the biggest factor was just their age.

Anthony: I knew, you know, the kids in middle school now technology is, in my opinion, to bigger role in their lives.

Anthony: I am. I'm not extremists in a way that I'm saying, like, they shouldn't have technology at all. It's definitely something that is part of our world now.

Anthony: However, I think that maybe as a culture, we go a little bit too far in terms of the importance of social media and our identity of self, especially in middle school when they're really developing that sense of identity. I think it's a crisis for sure.

Anthony: So, but like I said that's still the language that those kids speak. They're used to engaging with the screen. They're used to technology being digital and even if they don't have it at home. They're used to their peers, having it. And there's that sense of belonging that kind of comes with being able to use technology so it was certainly easier for them to kind of pick up on those iPads and that kind of made them just, I don't know. I guess the material was just more accessible to them.

Niki Loudis: So some of the factors for technology integration found in my research were being able to reach a broader scope of students, not just your traditional instrument playing folk, but those people who are not into those kind of music or who may not want to do those sort of things.

Niki Loudis: Is that, is that something that motivates you, or what motivates you. What are other ideas that motivate you to teach with technology.

Anthony: Could you say the first part of the question?

Niki Loudis: Sure. Um, what are some things that motivate you to teach with technology, the research I've found a lot is being able to reach other students who are not traditional instruments or vocalists but may love music at the same time. So, what, what's your reasoning?

Anthony: I mean I maybe the primary reason why I like to use technology is because it to me. It's just easier sometimes

Anthony: For example, but

Anthony: super convenient be the best example I can think about that is sight reading factory.

Anthony: Rather than having to hand out and collect and

Anthony: You know, kids will literally eat paper sometimes

Anthony: You can just beam it up on the screen and then, oh, you want a different example one click of a button. And it's in a different key, a different meter, or different parts. It's fantastic. And the kids love that and just how quick and efficient, it is

Anthony: At the same time, I also really agree that music in technology is an industry that has a role in society. There were some kids in my general music class that absolutely hated singing, hated the idea of learning to play an instrument, but could spend hours without even looking up or breathing, messing around with Garage Band.

Anthony: And they absolutely loved making, making songs and tracks and then like writing lyrics over them. That was always one of their favorite projects that was like the one thing that engaged them and the entire class.

Niki Loudis: Now, little more specific part of the paper is like certain specific ways that technology is used. So, how did, or do you integrate technology. When you're listening and watching lessons. So, when you're trying to allow students to listen to music and watch stuff. What do you use?

Niki Loudis: I use. I use YouTube nonstop. I mean,

Anthony: You do not use absolutely necessary, especially for just

Anthony: Getting students respond to performances. I think it's great.

Anthony: I, I know that we implemented it right as I was kind of leaving, but I have used quaver in the past.

Anthony: And I do find that there are certain resources on that program that can be great for visualizing music and gaining a sense of a beat. Specifically, I remember back when I was doing practicum at an elementary school, they used quaver nonstop, and for the kids that made it easier for them because they could physically see something going along with the music. Um, I guess it can help it can just help students with sensory perception.

Anthony: All right, trying to trying to mix things up. I'm trying to think of other things. I already said sight reading factory is one that I use every single day for the most part.

Niki Loudis: What about like assessment and responding sorry factory to assess

Niki Loudis: Yes.

Anthony: Actually, so I usually when it came to assessment. I'm in the formal sense. I didn't really, I didn't use as much technology, other than recording performances and then kind of in there were when I did have to turn in any sort of data, I would usually reference the recordings and say, based off this scale that we set up at the beginning of the year. Here's where we are now.

Anthony: And here's 11 points that I totally did not make up the night before to justify where we are.

Anthony: The one that I really loved using and use often was to evaluate I use Google Forms.

Anthony: Time to the point that my kids were kind of sick of them.

Anthony: Are you used it when we had like a bad day.

Anthony: Or when we had maybe a not so great performance, and I would really ask the questions to make them analyze what made that performance. Great. What made it not great. What do you enjoy about our rehearsals. There was one assignment where I had them literally just make their own rehearsal plan and then like the next week. I actually did one of their rehearsal plans.

Anthony: They loved it.

Anthony: I let them shows choose the warm ups, choose the rounds that we do choose the sire eating and just felt like they were able to engage with the lesson better because they can just put some buttons and it was done.

Niki Loudis: How would you create or how do you integrate technology with creating and performing lesson. So you talked about Garage Band when they're creating music. And do you. Did you ever have them like perform using technology like an iPad band or anything.

Anthony: Well, I'll tell you when the pandemic started I really tried

Anthony: I oh my goodness, did I try. I had, I kind of took from i'm sure you might have seen Blake Richter's stuff floating around there.

Anthony: And I, I took that idea and I ran with it. I made my own virtual choir stuff I made all the materials made all the learning tracks and all that stuff. And I really tried to get them to take more ownership of that. I thought we really could.

Anthony: The only problem with it was I got like so little responses.

Niki Loudis: That's what

Niki Loudis: That's what I was scared. I was like, I don't think this is gonna work for my group, but

Anthony: Right. Right. And I mean,

Niki Loudis: I thought it would have worked for you.

Anthony: The first time I did it. I had to just be one of my top choirs and it didn't really flies. We're like, okay, well maybe if we just open it up to anyone in the school and

Anthony: Did slightly better but still not enough that we could actually produce something

Anthony: However, I, I obviously have seen success with that and other schools and other organizations. So, I do think it's valid.

Anthony: But aside from that, we, we would use technology when it comes to creating I remember with its general music class. We were studying silent films.

Anthony: So I had to make their own silent films. It was kind of a class wide project because I did all the editing for to make it look quote unquote good

Anthony: Yeah, but they still really enjoyed the idea of being filmed and using the phones. And then the next day they got to watch their silent film.

Anthony: Oh yeah, it was. It's always fun to do that type of stuff.

Niki Loudis: What do you remember what you use to do that. What app or

Anthony: Oh, I think I just use iMovie

Niki Loudis: iMovie. Okay. And that's what I want to hear.

Jonathan's Interview Transcript

Niki Loudis: All right, so I want to start way back in the day, if you don't mind. Could you tell me about what technology you used when you were a child? How did you use technology in childhood?

Niki Loudis: Could be games. Well, it could be really anything

Jonathan: Yeah so early elementary is just, we had a TV. That's it. Then we got, you know, a gaming system. So, we got like from a yard sale we gotten Nintendo 64 or something

Jonathan: And a Gameboy so that was my biggest technology because I was pre-internet like we had it computer with internet because my dad did was an accountant. So, we needed that. But otherwise, I'm kind of pre-internet and post-internet where you know we have the AOL dial up that with the cards and stuff and

Niki Loudis: Oh, yeah.

Jonathan: And so I had that an elementary school. But then I also got the other side of really quickly and middle school switched over. And so, video games were probably the thing that I had with technology and then freshman year of high school, I GOT A CELL PHONE WITH I think 100 texts, the month, and no, we didn't have texting. Yeah, we just had 100 minutes a month, I think, um, and then it just morphed into, we give us our family computer and then college we started with our own laptop, you know. And that was kind of the progression of technology in in my household

Niki Loudis: Where did you grow up?

Jonathan: St. Charles Missouri. Yeah, yeah.

Niki Loudis: All right. And so how was technology used when during your K through 12 musical experiences.\? Did you guys use anything in the classroom or

Jonathan: Well, first grade. I remember is a big deal. We got these new things that were the laser discs or whatever the big DVDs. You know they were massive and they're like this new thing. If you scratch it, you know it's done, you know, and that happened for like a year or two and then DVD is like surpassed it in like two years but um

Jonathan: So, I remember that specifically elementary school. We had typing classes which had this they had a recording of something that was like type a type a type A type a type A.

Jonathan: Type B. I still remember it in my head. Um, and so that was my typing and then we did math blasters Oregon Trail, like, you know, those which I love.

Jonathan: And so, I think those were the beginnings of like tech with games, you know, an elementary definitely remember. I remember my fifth-grade regular teacher using it. Ask Jeeves to ask some questions on the computer.

Jonathan: And then quickly turned to middle school, you know, use computer labs and stuff and then high school we used them.

Jonathan: But, you know, we didn't have anything one to one. If you had to go somewhere, you had to go schedule the computer lab in order to do it. My teachers had smart boards by high school or at least projectors, some sort of projector.

Jonathan: And so the the sports teachers, which generally were history teachers shows history videos because they're too tired from the game before

Niki Loudis: Yeah.

Jonathan: And yeah. Besides that, that was tech K through 12 that I remember there was not. Yeah, because it was every tech was still stationary was too expensive to have laptops and stuff like that,

Niki Loudis: What year did you graduate high school

Jonathan: 2009. Okay.

Niki Loudis: Um, next thing. How did your university courses and field experience student teaching prepare you to integrate technology in your classrooms? In my research I've seen that. Like some of some people had like music technology specific university courses.

Niki Loudis: And then some did a little more. And just like their regular ed courses or sometimes it was just like mattered here and there.

Jonathan: I don't think I had a tech courses in college. If I remember correctly, I think.

Jonathan: It would have been nice to have a course on sound equipment. I was lucky that I

Jonathan: Went to church and I knew basics of sound equipment. You know, my worship pastors, show me some more. When I became teacher, you know, I had two different sound systems at (school names)

Niki Loudis: Why is that why do people think that like requires no sound equipment.

Niki Loudis: I just

Niki Loudis: In every job I've had. They're like, Oh, well, you've got the board.

Jonathan: Yeah, exactly.

Jonathan: It's like we gotta learn so I feel like that should be some component

Jonathan: That would be tech wise, um, I don't think otherwise tech wise they do much. And quite honestly, most of my teachers weren't like really techie.

Jonathan: Anyway, so like there's techie as at least to a certain degree. I think using Blackboard helps me understand canvas. Now, so, like, that was an easy integration, when

Jonathan: I think that was helpful as a university using that on the music side of it. There was not much if anything on the tech side that I specifically remember it's more just stuff. I saw that I was like, ooh, I want that, or I want to do that, you know, like

Niki Loudis: Yeah. Do you guys ever have to use like finale or

Jonathan: Yeah, you know, we did use finale in our, in our composing class.

Jonathan: And think no, yeah, we used that. But, like, did we ever do anything where like here's, you know, Chrome Music Lab. And here's Garage Band and here's how you can make innovative lesson with technology students? Like there's none of that.

Jonathan: So, which is good and bad. I mean, one sense it's like there's only so much you can teach, but on the other sense. It needs to be taught a little bit, you know, and your secondary methods like talk about some in elementary methods needs to be talked about some, as well to make sure everyone's at least on some sort of standard I

Niki Loudis: I agree completely.

Niki Loudis: Would you say your education of technology was just motivated by your interest in technology or?

Jonathan: Yeah, I always love technology and figuring out, you know, and I was a push for technology in my household growing up. I mean, I'm the one that got us because I'm a triplet. So, all three of us had to get phones at the same time and my dad wouldn't get one on to school as if they don't have a payphone at school, you said that your lying. So, it goes up the school setting. They don't happen at school. You know what, I'll get your cell phone.

Jonathan: So, we up a school, they didn't have a cell phone. I said I didn't have a pay phone and I got cell phone.

Jonathan: I've always been pushing for technology. I think it's very, it's very useful in a lot of scenarios.

Niki Loudis: What's your most memorable moment when you integrated technology. What's one the first memorable moments that you had using technology in your own classroom. This could be during student teaching or field experience or where was it could be a leader or something that was like oh wow that kids really liked that.

Jonathan: Something that I really enjoyed doing that kind of did it first at (school's name) and then I've just done it ever since. With my kids we talk about movie soundtracks, and then so with fourth through sixth. We do soundtracks number one we talked about, because they don't even realize that there's music being played in the background of a movie that is making them feel a certain emotion. And so, they have to feel a certain emotion and so they need to analyze that and know that and said okay now we're going to go to soundation.com, you know, and we're going to was like Garage Band.

Jonathan: And we're going to make our own little, you know, eight bars, saying, and you're gonna make it. But you have to write on this card what the emotion is supposed to be. So now I have these cards, your audience doesn't know then you play it for the class and everyone says what emotion. They felt right, because it's not about what you think it is. It's how your audience actually felt because it's not about you. So, it's making them think about their audience and not how they feel. And so, so it was interesting.

Jonathan: You know, and it's a fun thing to show how music is everywhere and then they use their Chromebooks to make their own music. I mean there's just so many higher-level thinking and that that's one thing that was just like, I really like this. I do it every year in some capacity.

Niki Loudis: Very cool. I like that a lot. If you don't mind, I will try something like that.

Niki Loudis: All right. Um, could you please describe the student population of the schools that you have taught

Jonathan: Okay.

Jonathan: (School name) and (School name). They're both title one (School 1) was barely title one and generally Springfield areas is, you know, Caucasian, you know, 90% Caucasian and so that population we had at (school 2) we had Harmony House kids as well. So, we had a lot of that trauma as well. Educating that was also a piece of it, (school 1), was a high special needs population, and there were seven special need classrooms. The population at (school 3). It was a very poor demographic social economically and dealing with that and very different ways of teaching for that specific age group and then just different way of thinking and they have different values. Sometimes, and then being able to connect with them in different ways, is very important. Because relationships for those kids are more important than anything.

Jonathan: Then I'm at (school 4), which is a very affluent area generally and I think at least 90% Caucasian as well. Um, and yeah...

Niki Loudis: All right, thanks. A little background that um okay so some factors that we found in technology integration was being able to reach like a broader scope of students when engaging content relevant to their society and their and their lives. What motivates you to integrate technology in your classrooms. And when I say broader scope of students. I mean like not band Choir. Orchestra kids. Yeah.

Jonathan: Yeah, um, I use it. Number one, it has to be a tool whenever it's no longer a tool. It's the end all be all then that's we've missed the entire boat. Like I don't use a lot of technology and

my everyday classroom. When we use technology, we use it and we use it for a few weeks and we do a unit because they're on their Chromebooks all the time. When we do use Chrome, because I want them hands on learning. But when it is you in a way that augments and makes better their learning than we do it. Like practice tracks, that is something that where they can practice at home.

Jonathan: But for technology making stuff with Soundation and doing like dubstep stuff and making those connections for kids to otherwise are not the band choir kids.

Jonathan: That brings in this whole other group that says, oh, I don't like music, is what they'll say, it's like, "No, you like music. You just don't like music that's in this class that we're doing."

Jonathan: So, you like music. Everyone likes music, but we just need to figure out what music you like and how can we use and usually technology for those kids is something that they can do once they can grasp it and make stuff. I mean, it's just then it becomes theirs. And so that's why I like to use technology and those aspects, especially the general music aspects.

Niki Loudis: So next is kind of a little technical part of it. If you could give me like specific apps that you use or specific like foundation and things like that. How do you integrate technology into listening and watching lessons? What kind of, what do you use

Jonathan: So, like last week, we did a list. Anything with first grade, and it was almost a pre-thing where they had to listen. I have a new sound system and everything. So I have a microphone. Number one, because it's with a mask and everything is super important, but I would play the music. It couldn't see anything. And I talked to first grade about, what do you think is happening. If this were a movie, what would be happening?

Jonathan: And there it was hard for them at first, but then I did that, you know, dun, dun, dun, dun Denton, Denton, Denton, Denton (William Tell Overture), you know, I got to the race. You know, it's a they're hunting or their whatever

Jonathan: So, made some that were easy. And so, using that, just even the sounds of everything and then they had to draw the scene, you know, and use their environment. So, in that way. That's more of the, you know, listening aspect, the digital aspect I use videos were having I started so we could sing a little bit less five minutes of an artist of the week. So, I showed last week. Tom Holland.

Jonathan: And Tom Holland, who spider man he was in Billy Elliot when he was a child, he was the Billy Elliot on Broadway, like not no joke. He did ballet. He did tap with it all of it and you should totally look it up.

Jonathan: And he is so they're like a spider man. I'm like, yeah, why did he get why did he get picked to be spider man because he had that balance from ballet and the flipping from all his other things. So, all these things he did when he was 10 set him up to get you this role and so and so, we talked about the, like, Wow, that's so cool. I was like, yeah.

Jonathan: You know, all these things that are really cool can be set up by the art, you know, and so the video aspect, can, you know, open their eyes to stuff that's outside of their world that they don't get at home.

Jonathan: So even so in a five-minute video just it gives them. Oh wow, this musical that I would have never heard of before, you know, I still remember fifth grade watching a musical all the way through. Besides Wizard of Oz, all the way through. And it was a music man and I fell in love with it.

Jonathan: And it's like these kids should know musicals, even just listening or watching one. Yeah.

Niki Loudis: How do you integrate technology into assessment and responding

Jonathan: Um, so, like in sixth grade band. We do will do musictheory.net or whatever that is to do there.

Jonathan: There letter names are treble clef notes and we'll just have them do a five-minute quiz and submitted via canvas of what percentage. They got and the track how much better they're getting at reading the notes so they can play better.

Jonathan: So, so that's one way I used to assess. I also can make mini quizzes on there. I don't use much to assess formally I will probably once a quarter once a semester but it's just a hassle to do all of it. So, and we only have so much time. So, so, yeah. I also use recordings for the younger kids. We video a video their performance.

Jonathan: Then we get to watch it.

Jonathan: And then we assess, our performance. So that essentially is also another one.

Niki Loudis: So definitely, definitely. Yeah. How do you last one of these movements? How do you integrate technology into creating and performing?

Jonathan: Goodness, um, creates, like you said, like it's, it's, you know, we use it to create music on Soundation or Noteflight, and then we use it on Chrome Music Lab to create different things and the younger grades.

Niki Loudis: That's perfect. That's great.

Niki Loudis: That definitely gives me some help. All right. And how do you last one. And how do you plan to use technology this year, or how are you using it more this year than you have in the past years.

Jonathan: Yeah, so I'm using it for the videos. Number one, you know that the musician of the week. You know, I'm doing that. Number two is when it becomes winter and if things get a little bit dicier. We will can go to completely no singing and we will do my foundation units. And that's what I'm saving my keyboard lab units and the other things is when they get cold outside. We can't do stuff outside or inside because sicknesses happening I'm saving those units. It's more of when I do them. I guess is it's just being more strategic

Niki Loudis: All right. Do you have any other questions or comments that anything that I'm that I did not get to ask you that you're like, oh, I wanted to bring that up?

Jonathan: No, I think, I think is pretty good.