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## A Comparative Study on Parent Engagement Through the Lens of Instrumental Music

Chad Altman

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Chad Altman

Long Island University

January 2024

## Acknowledgements

I would like to express my deepest appreciation to the following, who have been instrumental in my academic journey.

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To my parents, whose unwavering support and encouragement never allowed me to stop reaching for the stars. Don't worry Mom; I'll continue to keep learning and never settle for the status quo. Big Bro- Jason, thank you for setting the path and always having my back!

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Thank you to each one of you for being an integral part of this academic adventure.

## Declaration of Originality

A Comparative Study on Parent Engagement Through the Lens of Instrumental Music

Submitted by: Chad Altman

I have read and confirm I adhered to the Academic Ethics and Professional Standards for Long Island University. I have obtained permission from the author to use and modify a framework for defining six types of parental involvement by Dr. Joyce Epstein of Johns Hopkins University. This dissertation represents my original work, except where I have acknowledged the ideas, words, or material of other authors.

When another author's words have been referred to or quoted, I have acknowledged with appropriate use of quotation devices and citations in the required style.

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## Abstract

Lowel Mason highlights the importance of integrating music learning into the curriculum alongside other fundamental skills such as reading, promoting his belief in the transformative power of music education and its impact on child development. Mason stated, “Children must be taught music as they are taught to read” (Pemberton, 1992). The benefits of music extend beyond mere enjoyment among children, as they actively participate in class by singing, dancing, and playing instruments. The arts offer cognitive benefits that extend beyond student engagement, and researchers continue to explore the association between music and academic achievement.

Participating in a string orchestra or concert band provides children with a sense of teamwork. Similar to the contributions of a defensive player on a soccer team, each member of an instrumental group provides a critical role in the overall success of the entire group. These contributions give students ownership over their own learning and create greater opportunities for children to demonstrate success. Researchers continue to examine the perceived connection between music and intelligence, demonstrating a range of possible explanations and opportunities for expanded discussion and future research.

While there are clear examples that children with music education outperform their non-musically trained peers, attempts to account for this among researchers remain inconsistent. Parent engagement and their partnership with a school certainly may contribute to student achievement as well. On one hand, ensuring that music remains part of the instructional program is supported by legislation; on the other, parent engagement varies widely, and government doesn’t appear poised to begin legislating whether or not a parent reads emails from their teacher or double-checks that their child completes their homework each night.

On the Federal level, Every Student Succeed Act (ESSA) establishes music as part of an educational program. Locally, this has not translated to music becoming front and center in

schools. In fact, in my 11 years as a New York City Principal, funding was a major hurdle in starting an instrumental music program.

For this study, I will examine parent involvement and identify preferred types of involvement of middle school students that play an instrument compared to those who do not. To examine this, middle school parents of a Long School District will be surveyed to identify their preferred type of parent engagement.

*Keywords: parental engagement, instrumental music, music education*

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## Chapter 1: Introduction

### Personal Connection to Research Topic

As my wife and I awaited the arrival of our firstborn, we casually adopted the habit of including our unborn child in our conversations. This involved being mindful of our words, expressing sensitivity, and even exposing the yet-to-be-born to music. Every evening, amidst our busy schedules, we made a point to engage with our unborn child, incorporating music and movement into our routine. At the time, I hadn't explored the cognitive benefits linked to prenatal exposure to music, but it seemed like a harmless addition. Many friends followed a similar practice, with some attempting to explain it through what they referred to as the Mozart effect. Mozart effect refers to a set of research results that indicate that listening to Mozart's music promotes improvement on spatial-temporal reasoning. (Hetland, 2000). Lowell Mason, a trailblazer in shaping the foundations of music learning in schools, by integrating vocal music into the Boston Public Schools curriculum in 1838, supported the early introduction of training sessions for teachers reflected the importance of advancing music education on a larger scale (Pemberton, 1992). When my first son was born, I wasn't too surprised to learn that he demonstrated some of the same qualities of typical babies. His first word was "buh-ble," and it wasn't until he was about 24 months, before he put words into sentences, all pretty typical, despite our pre-natal musical practices. Despite the absence of any prodigious musical talents in my firstborn, we persisted in our ritual of lullabies and the daily incorporation of music into the environment for our second son during his time in the womb, his first word turned out to be, "mamma." While my insights are confined to the experiences with my two children, their enduring love and enthusiasm for music are evident. Both actively participate in their school's concert band, with a shared affinity for playing the trombone. Witnessing their involvement in music brings ongoing joy and pride to our family. This personal connection serves as a compelling motive for my continued exploration into the correlation between music and academic success. I recognize that our approach to integrating

music into our family life is not unique, and it doesn't surprise me to discover that such practices are widespread. In fact, the United Nations International Children's Emergency Fund (UNICEF) advocates for the perceived benefits of exposing newborns to music, even before birth. This aligns with my belief in the commonality of such musical engagement practices, further motivating me to delve into research that explores the association between music, parent engagement, and academic achievement.

Expanding on the widely recognized impact of music and academic success, recent research delves into the intricate connection between music and brain activity. A study featured in the *Music Educator's Journal* titled, *How and Why Does Music Move Us?* (Hodges & Wilkins, 2015) explores the correlation between music and brain function. This research focuses on monitoring tiny brain voxels, akin to pixels on a TV screen, through Network Science, a groundbreaking technique that allows researchers to examine the brain's interconnectivity as individuals engage with music (Hodges, et al., 2015). Interestingly, as people listened to their preferred music, interconnectivity in the Default Mode Network became active. Default Mode Network (DMN) is a network of brain regions that remains in active state while a person is not focusing on anything specific; the brain is considered within wakeful rest. The DMN deactivates once again when the brain is engaged in tasks that require external attention. (Hodges, et al. 2015, Esterman, et al. 2016). Simply put, the brain has different areas working together when you're thinking or doing things, one area is known as the Default Mode Network, and it activates when you're not doing anything specific. Within one study, researchers showed that when young adults listen to their favorite music, the DMN becomes more active, as if the music is making the Default Mode Network work even better. This all takes place in the front of the brain, where important thinking takes place. To better illustrate this, brain images are shown in color, highlighting the levels of interconnectedness and activity while music is playing. Importantly, advances in technology provide additional information for researchers to consider as they expand theories and understanding of the impact of music. Specifically, research

suggests increased connectivity in the Default Mode Network, specifically, the frontal part of the brain, activating higher-order thinking processes as young adults listen to their preferred music (Hodges, et al., 2015).

In addition to my personal journey as a parent, my perspective is enriched by professional experience as a school principal. Throughout my tenure, I've observed significant influence of both music and parent engagement on students' success and development. This dual impact has sparked my curiosity, leaving me eager to unravel the intricate connections between the melodies that fill our school lobby during concert season and the active involvement of parents in shaping the academic journey. The question of how these two crucial elements synergize to impact students has become a source of genuine curiosity, prompting me to delve deeper into understanding this fascinating interplay.

### **Goals of the Study**

1. Explore current research demonstrating connections between music education and academic success.
2. Review and analyze existing research to determine the importance of parent involvement on childhood success.
3. Conduct a mixed methods study to explore parent engagement. Specifically, the study will examine parent involvement and identify the preferred involvement type of parents of students who play instruments and those that do not.

Reviewing articles within the *Music Educators Journal* was an initial source that broadened my understanding of trends and research within the field of music education. Accomplishing the first objective of exploring research to better understand the connection between music education and academic success required a thorough analysis of existing research. It is expected and widely understood that music education positively impacts academic success, researchers tend to be cautious about presenting evidence that definitively asserts music education is the sole factor

contributing to this success. (Jaschke, et al., 2018 and Schellenberg, 2011). In the study, *A Population-Level Analysis of Associations Between School Music Participation and Academic Achievement* (Emerson, et al., 2020), student performance data of 112,916 students in British Columbia, Canada was reviewed, and the results suggested a positive relationship between music education and academic performance. The sampling was quite large, re-affirming the anecdotes I've seen as a parent and educator. Now in my 21<sup>st</sup> year working in public education, in my 17<sup>th</sup> year as an elementary school principal, I certainly consider myself a practitioner. As a school-based leader, I have the privilege of observing music education first-hand, and often develop strong opinions on how children learn best. I have begun to recognize that the goal of a good study is not to find the research that backs up your claims, but to look beyond the confirming information, and look for insights of what other questions I should explore, and to highlight disconfirming data. In fact, one study looking at 538 young adults associates overparenting with lower quality parent-child communication and a higher sense of entitlement of the young adult (Bauer, et al., 2012). Alternatively, despite its limitations, one study emphasizes the critical role of teachers in promoting parent involvement for the academic success of middle school students. The findings highlight the importance of perceptions and actions regarding parent involvement and calls for further research to enhance our understanding of effective strategies for fostering meaningful parent involvement, specifically for middle school aged students, ages 12 to 14 years of age (DePlanty, et al., 2007). Specific areas of parent engagement referred to within this study fit into three categories: academic support at home, communication with teachers, and understanding the importance of parent involvement. Narrowing the topics down further, include specific actions such as: helping with homework, discussing school activities with your child, planning and organizing educational programs at home, engaging in open communication with teachers during parent-teacher conferences, and recognizing and understanding the importance of parent involvement in academic success. Similarly, researcher Joyce Epstein talks about how schools, families, and communities

can work together to help children succeed. When working in sync, these constituent groups can improve school programs, provide support for families, and enhance the skills of teachers and parents. (Epstein 1995). The Framework of Six Types of Involvement, which includes parenting, communicating, volunteering, learning at home, decision making, and collaborating with the community, is presented as a comprehensive guide to parental involvement. It forms the basis for advocating a holistic approach to education, involving collaboration between schools, families, and the community. The goal is to create supportive and caring environments for students to succeed in education and beyond. Both the study and Epstein's framework recognize the value of collaboration among schools, families, and communities in enhancing the educational experience and outcomes for students. (Epstein 2019).

Parents as partners is more than just a catchy slogan that I've borrowed and used over the years to share the importance between home and school. In fact, during my 20+ years in public education, there has never been a time where I've dismissed the importance of such a relationship. Researchers offer many perspectives on the importance of parent involvement, and often include perceived challenges as well. "The interests of parents need to be considered when planning parent activities." (Pena, 2000). Barriers to parent involvement such as the home situation, childcare, work schedules, should all be considered, with one important overall consideration, the parent's preferred engagement type (Epstein, 2009).

In summary, the journey from the anticipation of parenthood to witnessing my children's active engagement in music has fueled my commitment to exploring the significance of instrumental music, parent engagement, and middle school success. This personal connection not only brings ongoing joy and pride to our family but also motivates my continued exploration into the correlation between music and academic success.

As a school principal, where I have prioritized and valued parent engagement, this personal connection resonates even more profoundly. Recognizing the impact of parent involvement on a

child's overall development, I am driven to explore how instrumental music and parent engagement can synergistically contribute to middle school success. The research findings, particularly from Hodges and Wilkins (2015) shed light on the intricate connection between music and brain activity, offering insights into the potential cognitive benefits that can be harnessed through intentional musical engagement. In the educational landscape, the importance of parent engagement is well-established (DePlanty, et al., 2007, Pena, 2000, and Epstein 2009) and my role as a school principal has only reinforced its significance. Understanding the cognitive benefits associated with instrumental music and parent engagement provides a valuable perspective for shaping educational practices. As technology continues to provide new avenues for exploration, this research not only expands theories but also underscores the relevance of fostering collaboration between schools, parents, and students to create a holistic educational environment that nurtures success in middle school and beyond.

### **Research Questions and Hypothesis**

The research questions of this study focus on key aspects of parent engagement to identify specific behaviors of involvement aligned:

1. To better understand parent engagement, what are the types of parent engagement favored by parents of students that play an instrument compared to those that do not?
2. What are preferred parent engagement types of middle school aged parents?
3. What actions supported their child in retaining their instrumental or sports participation through the Covid-19 pandemic?

Sub Question:

1. Does the survey respondent (parent) have additional insight of how they kept their child motivated during remote learning while the child was out of school during remote instruction?

## Summary

In citing researchers such as Pena (2000) and Epstein (2009), I aim to underscore the rich perspectives and insights that affirm the significance of parent involvement. Pena's (2000) assertion that when organizing activities for parents, it's important to consider the interests and preferences of the parents involved serves as a reminder of the proactive stance required in engaging parents. It advocates for an approach that is not only inclusive but also tailored to resonate with the specific concerns and priorities of parents. The barriers to parent involvement, such as diverse home situations and demanding work schedules, reinforce the understanding that these challenges need to be addressed to create an inclusive educational environment. By recognizing and actively working to overcome these barriers, schools can better facilitate parental engagement.

The reference to Epstein's work adds another layer to the discussion by introducing the concept of preferred parent engagement types. This is an important shift from a generic approach to involving parents that emphasizes the need to understand and respect the diverse ways in which parents prefer to be involved in their child's education. This study supports the paradigm shift, a move away from a one-size fits-all mentality towards a nuanced, inclusive, and personalized approach to parent involvement. By doing so, schools can foster a genuine and impactful partnership with parents, creating an educational experience that is not only enriching for the students but also collaborative and supportive for everyone involved.

## Definition of Terms

- 1. Default Mode Network:** "A set of interconnecting brain networks that are involved in conscious awareness, self-reflection, and autobiographical memories and emotions."  
(Hodges, et al. 2015).
- 2. Sampling:** A portion of the population. (Hammond and Lester, 2022)

## Chapter 2: Literature Review

“Children must be taught music as they are taught to read” (Lowell Mason, 1826, as cited by Pemberton, 1992).

Broadly studying music education includes a vast amount of existing research that can open a tidal wave of topics and keep a researcher quite busy. Recognizing the cognitive benefits associated with music education, including evidence of far transfer effects to mathematics, language and reading, executive functions, and IQ and cognitive abilities. (Hodges, 2015, Guhn, et al. 2020, & Jaschke, et al 2018). Several studies are discussed below to highlight associations between music education and success of our adolescent learner. Initially, this study will set out to highlight existing research demonstrating connections between instrumental music and academic achievement. This will provide a necessary basis to form our next area of focus, which focuses on parental engagement; most specifically preferred engagement types of parents and why they matter.

### **Association Between Music Education and Academic Achievement**

In their study *Longitudinal Analysis of Music Education on Executive Functions in Primary School Children*, Honing, Jaschek, and Scherder, (2018) share that there is a high level of interest in looking at the effects of music education on cognitive abilities, and there appear to be relationships between music education and academic achievement, possibly aligned to executive functions. The authors of this study express that longitudinal studies for investigating such effects of music education remain rare, which certainly generates additional excitement around this topic. The participants, as described in the study (Honing, Jaschek & Scherder 2018), included the initial screening of 230 participants across six schools. 176 were tested at baseline, with about 15% dropping out as a result of various factors including illness, dropout, and incomplete testing. In total, 147 children, median age: 6.4 (SD .65) participated in the study through completion. socio-economic background was considered by assessing the highest education level of both parents. The design and procedure included grouping participants into four groups: two music intervention



groups, one active visual arts group, and a no arts control group. A series of tests were provided to each child every 6 months making up the neuropsychological test battery. The neuropsychological test battery, as outlined in Honing et al. (2018), included assessments such as the Tower of London for planning, Klingberg Short Term and Working Memory Test for visuospatial memory, Go/No-Go Task for inhibition, and the Wechsler Intelligence Scale for Children for IQ.

**Baseline Assessment:** The inclusion of non-musical tests in the study serves several important purposes. The non-musical tests, such as the Tower of London for planning, Klingsberg Short Term and Working Memory Task for visuospatial memory, Go/No-Go Task for inhibition, and the Wechsler Intelligence Scale for Children for verbal IQ, provide a baseline assessment of the participants' cognitive functions. This baseline is crucial for understanding the starting point of each child's cognitive abilities before any intervention.

**Holistic Evaluation:** By incorporating various cognitive assessments, the study aims to holistically evaluate the impact of music education on not only musical abilities but also on broader cognitive functions. This approach allows researchers to explore whether the benefits of music education extend beyond music-specific skills to more general cognitive domains.

**Comparison Across Domains:** Including non-musical tests enables the researchers to compare the effects of different types of arts interventions. For example, comparing the music intervention groups with the visual arts group and the no arts control group allows for a sophisticated understanding of how different forms of artistic engagement may influence cognitive development.

**Educational Relevance:** Assessments such as the Dutch National Pupil Monitoring System for academic performance directly measure the participants' performance in their academic endeavors. This is particularly relevant for understanding the real-world implications of any observed changes in cognitive functions resulting from music education.

**Identifying Transfer Effects:** The study aims to investigate the possibility of far transfer effects, where improvements in specific executive functions (tested through non-musical assessments) might contribute to enhanced academic performance. These non-musical tests help in identifying potential transfer effects from music education to broader cognitive and academic domains. The inclusion of non-musical tests enhances the comprehensiveness of the study, allowing researchers to draw connections between music education, specific cognitive functions, and academic achievement. It provides a detailed picture of the potential benefits of music education beyond musical skills.

In this study, trained research assistants administered each test in quiet environments during school hours. The whole test protocol was administered in one session with short breaks, and presented in a child-friendly manner aimed at making the session feel as if it was a computer-game environment. According to this study, there are limited examples in research that examine sub-functions of executive functioning as seen here. This study acknowledges limitations, but also suggests that the use of neuropsychological test battery has shown higher results with inhibition, planning, and working memory. To further explain the tests, the Go/No-go task in an assessment requires participants to respond by pressing a button when they see a “go” signal, and not respond when they see the “no-go” signal. The behavior being measured is the ability to withhold the response with a no-go signal. The Tower of London test is used for assessing executive functioning. The tasks are puzzles most commonly used to measure planning ability. (Shallice, 1982). The implications of the study are aligned with the academic assessment that was utilized.

The test that was used, a National assessment in the Netherlands, CITO was not compared to other tests that measure phonological awareness in the context of writing or critical listening. The rationale as to why they did not expand the testing is it would have increased testing time to nearly 3 hours, which the researchers worried would have other negative influences such as

overall disturbances and concentration of participants. This study also examined verbal IQ, not the full IQ scale, which could have shown a different result in intelligence measures.

As illustrated in Figure 1 (Jaschke, Honing, & Scherder, 2018), the Split Plot Anova results demonstrated music participation has statistically significant higher performance in planning compared to the visual arts group. Combined with Verbal IQ and Inhibition Scores, a Sobel analysis was conducted to determine if these results could explain an increase in assessment results of the Netherlands national pupil monitoring system (CITO). It was determined that active music participation did significantly differ in average performance scores compared to the “no arts” control group.

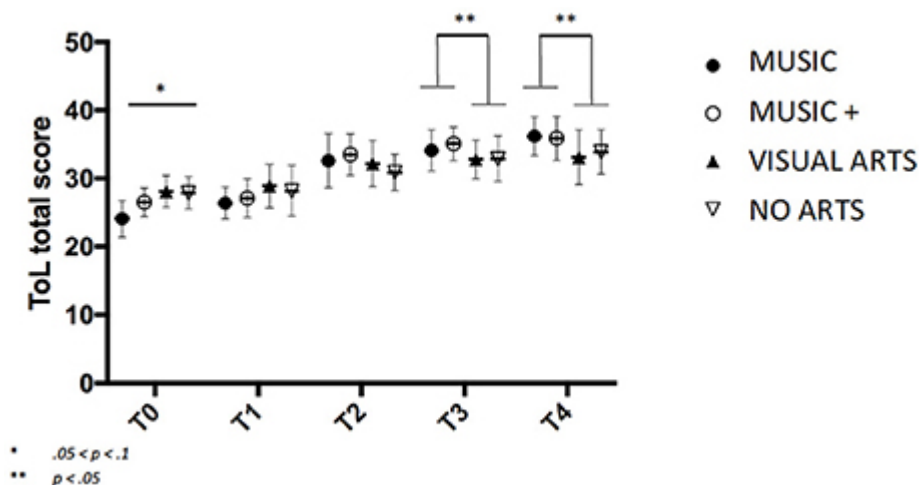


Figure 1. Split Plot ANOVA

Source: *Frontiers in Neuroscience*, 12. By Jaschke, A. C., Honing, H., Scherder, E. J. (2018).

The results can be generalized to show that when compared to children with no music education, children with structured music lessons perform better on tasks measuring verbal IQ, planning, and inhibition. As acknowledged by Honing, Jaschek, & Scherder (2018), a limitation of this study is that most other studies on executive functioning do not examine sub-components independently, but rather as a whole sum. This study concluded that added emphasis needs to be placed on the importance of arts as it has an influence on cognitive development. Ethically, it is noteworthy to mention that the control group missed out on academic music intervention that

their peers received. Observable data demonstrated significant improvements and associations between music education and sub-components of executive functioning. The research provided participants with uneven access to instructional practices resulting in differing results for children, the question remains, would there be a more ethically appropriate way to measure this study? Regardless of survey methodology, the findings indicate a positive association with cognitive strength.

The major findings provide evidence to suggest that sub-functions of executive functions are positively impacted by music education. It was noted that executive functions are usually researched as lump sum cognitive functions, not as individual components as they were tested in this study. This study found that children in the visual arts group perform better than the no arts control group. Far transfer effect from executive sub-function to academic performance scores was seen as a possibility based on the research involving students with music education.

Findings of researchers Honing, Jaschek, & Scherder (2018) conclude:

1. Participants with formal music training were positively correlated with higher scores in English, mathematics, and Science.
2. Instrumental music participation showed stronger relationships with achievement compared to vocal music.
3. School music achievement was positively related to scores in all subjects, with stronger correlations for instrumental music achievement.
4. Higher levels of music engagement (number of courses) were associated with higher exam scores, especially for instrumental music.
5. The effect sizes of group differences were larger than average annual gains in academic achievement during high school suggesting significant academic benefits for highly engagement instrumental music students.

This study provides added rationale for children to take part in a combination of music, visual, and general arts education. The study compared children with a range of arts instruction to children with no arts education and concluded that arts does have a positive impact on sub-components of executive functioning, which shows that music and arts can have a positive impact on the developing brain.

*How and Why Does Music Move Us?* (Hodges & Wilkins (2015), Donald Hodges, a professor of music education, and Robin Wilkins, a network neuroimaging scientist, both affiliated with the University of North Carolina at Greensboro, converge their expertise to unravel the intricate connections within the brain during music engagement. This collaborative effort seeks to identify insights from psychology and neuroscience about the inherent value of music, culminating in an acknowledgement of Sister Wendy Beckett that music embodies our full humanity.

Hodges and Wilkins approach this interdisciplinary process, as technology continues to evolve, where the prevalence of brain-imaging experiments involving music underscores the growing significance of this field. Importantly, their collaborative endeavor synthesizes knowledge from two distinct domains, bridging music education and neuroimaging to deepen our comprehension of music's impact (Hodges & Wilkins, 2015). The discourse on brain research and the influence on the brain is shaped predominantly by the insights of Dr. Valerie Reynolds, neuroscientist, and Dr. Steven Reynolds, a cognitive psychologist. Dr. Valerie Reynolds underscores the imperative for neuroscientists to scrutinize the entire brain's engagement with music, advocating for a holistic investigation while a listener is immersed in musical experiences. To illustrate, she uses an analogy of voxels, three-dimensional constituents of brain tissue similar to pixels on a digital monitor, each comprising millions of neurons and billions of synapses (Hodges & Wilkins, 2015).

If listening to preferred music increases connectivity of DMN, which stimulates deep internal thought, it's certainly reasonable to suggest that participants may be more creative and

thoughtful as they listen to music they enjoy based on the findings within this article. The brain research referenced within this article continues to evolve and provide better opportunities for scientists and researchers to better understand how and why music moves us and the connection to music making us more human. The implications for better understanding DMN and how music increases connectivity, particularly music we enjoy are far reaching. As educators, it's important to consider additional strategies to promote creativity among our students, and maximize the learning outcomes for each student.

*A Population-Level Analysis of Associations Between School Music Participation and Academic Achievement* (Emmerson, Gouzouasis, & Guhn, 2020), the researchers included a large-scale study which also suggested a positive relationship between music education and academic performance by looking at educational records of 112,916 students in British Columbia, Canada. Emmerson, Gouzouasis, & Guhn (2020) emphasize that their study is the largest of its kind, contributing significant evidence to the relationship between music education and academic achievement.

This study leveraged multi-year population-level data from British Columbia to investigate the correlation between sustained engagement in music classes and performance on secondary exams in Math, Science, and English. Emmerson et al. (2020) aimed to address key questions, such as exploring variations in academic achievement between students with musical training and those without formal music education. The primary focus was on Science, Math, and English subjects, examining whether the impact varied based on the type of music learned. Additionally, the study explored whether students excelling in music achievement and engagement demonstrated greater success in other academic areas. The hypotheses posited the idea that students enrolled in music education would perform better than their peers, those that excelled in music education would perform even higher since there is a perceived impact on executive functioning, and those that excelled in instrumental music would perform at a higher

rate than vocal music education, but vocal music education would still associate with higher academic performance than no music at all. The school records of all 60 school districts in British Columbia for students K-12 were utilized to develop the full sample size for this study. Of the initial 134,238 students, 15.8% were omitted due to missing variables (many due to not beginning by Grade 1 in the British Columbia Public Schools). In all, data representing 112,916 students within the public secondary school system were examined within this study. In order to determine if a child took music or not, a binary variable of yes/no was determined based on each child's arts selection which was mandated for their arts requirement to graduate. Students enrolled in either music, drama, dance, or visual arts. Music was further broken down to include concert band, conservatory (piano, violin), orchestra, jazz band, concert choir, or vocal jazz. Emmerson, Gouzouasis, and Guhn (2020) defined and articulated within the study parameters to support their review of course grades, music engagement, academic courses, previous academic achievement, and sociodemographic control variables. Aligned to the researcher's hypothesis, of the 15,483 who took music courses, mean scores demonstrated higher mean scores across all courses compared to the mean scores of the 97,433 students with no music courses.

Table 2  
*Unadjusted and Adjusted Mean Exam Grade Differences Between Public Secondary School Students Who Took School Music and Those Who Took No School Music*

School music participation	English 12	English 10	Math 10	Science 10
Unadjusted Analyses				
No participation in school music				
<i>n</i>	63,131	96,216	75,616	95,873
Mean [95% CI]	67.97 [67.45, 68.48]	68.74 [68.19, 69.28]	63.62 [62.87, 64.38]	64.62 [64.03, 65.22]
Participation in school music				
<i>n</i>	11,419	15,391	13,772	15,416
Mean [95% CI]	72.66 [72.11, 73.21]	74.46 [73.88, 75.04]	70.02 [69.23, 70.82]	71.03 [70.41, 71.65]
Mean difference (Cohen's <i>d</i> )	+4.69* (.36)	+5.73* (.40)	+6.40* (.36)	+6.41* (.46)
Adjusted Analyses				
No participation in school music				
<i>n</i>	63,131	96,216	75,616	95,873
Mean [95% CI]	69.71 [69.30, 70.13]	70.87 [70.47, 71.27]	67.03 [66.47, 67.58]	67.23 [66.83, 67.62]
Participation in school music				
<i>n</i>	11,419	15,391	13,772	15,416
Mean [95% CI]	72.18 [71.74, 72.63]	73.59 [73.15, 74.02]	70.75 [70.16, 71.34]	70.99 [70.56, 71.41]
Mean difference (Cohen's <i>d</i> )	+2.47* (.22)	+2.72* (.23)	+3.72* (.25)	+3.76* (.34)

*Note.* Analyses performed using multilevel models accounting for nestedness of students within schools and adjusted for covariates. Reported *n* values denote total number of participants with scores on each exam.

\* Statistically significant ( $p < .05$ ).

Figure 2. Music Participation and Academic Achievement

Source: *Journal of Educational Psychology*, Emerson, et al. (2020)

Emerson, Gouzouasis, and Guhn, (2020) share findings of music participation and academic achievement within Figure 2.

Emmerson, Gouzouasis, and Guhn (2020) set out to extend prior research by looking at specific forms of music education while controlling for influences such as prior academic performance and socioeconomic status, which both might directly impact success in secondary school science, mathematics, and English. Another conclusion contradicts the positions of others on a policy debate aligned to opportunity costs of music education. The authors reference school policy debates suggesting that more time spent on music results in less time on core academic areas, suggesting decreased performance. This study showed that increased time with vocal or instrumental music supported increased performance within these core academic areas, contradicting studies that suggest opportunity cost of music education as negatively impacting other core instructional areas. The population size of this study supports the generalizability providing educators, policy makers, and other stakeholders insights into the association between



instrumental and vocal music instruction and academic success in other areas. The researchers used secondary course registration information, which may introduce limitations. Emmerson, Gouzouasis, and Guhn (2020) refer to current research of Jaschke, et al. (2018). Emmerson, Gouzouasis, and Guhn (2020) and Jaschke's research (2018) both delve into the relationship between music education and academic achievement but with different emphases.

Emmerson et al (2020) conducted a large-scale study exploring how school music participation relates to high school exam scores in English, mathematics, and science. They discovered positive associations, especially for instrumental music, and highlighted the considerable academic benefits for highly engaged instrumental music students. On the other hand, Jaschke et al (2018) focused on associations between various forms of school music participation and academic achievement in English, mathematics, and science. They proposed pathways such as executive functioning, motivation-related characteristics, and social-personal development to explain the positive correlations between music education and academic success.

Connecting the two researchers, both Emmerson et al (2020) and Jaschke et al (2018) conducted studies that contributed to understanding how music education impacts academic outcomes. Emmerson et al (2020) provide evidence for specific benefits related to instrumental music engagement, while Jaschke et al (2018) explores broader associations between different music forms and academic achievement, offering pathways that might explain these connections. Both studies highlight the positive influence of music education on students' academic success.

*The Effect of Jazz Improvisation Instruction on Measures of Executive Function in Middle School Band Students* (Norgaard, et al 2019) investigates the links between academic achievement and active music instruction. The study conducted by Norgaard et al. (2019) provides a specific focus on differentiating between types of instruction. Involving 155 seventh and eighth grade middle school band students, the research explores the impact of two months of instruction in jazz

phrasing, scales, and vocabulary, with the experimental group additionally receiving training in improvisation.

Existing literature has extensively examined the correlation between active music participation and academic outcomes. Longitudinal studies have indicated potential enhancements in general IQ, standardized test scores, linguistic abilities, and verbal intelligence (Schellenberg 2004). However, conflicting evidence suggests that music students may consistently outperform nonmusicians on standardized tests and academic achievements (Elpus, 2013; Sala & Gobet, 2017).

Norgaard et al. (2019) argue that previous research lacks differentiation between types of music training. The study introduces a focus on music improvisation training, an area overlooked in prior investigations. Music improvisation demands real-time adaptation and integration of sound sequences, posing unique cognitive challenges that have not been explored in depth. The research aims to contribute to a more thorough understanding of far-transfer effects of active music participation by specifically examining the impact of jazz improvisation training. The hypothesis posits that such training will result in enhanced measures of executive function, particularly in cognitive flexibility and inhibition, which are deemed essential for improvisation thinking. The study suggests that music improvisation training may play a critical role in cognitive development, emphasizing the importance of interpreting research outcomes in the context of the type of music-making engaged by participants. Insights from this study contribute to our understanding of holistic cognitive development. Music education, especially when exploring diverse aspects like improvisation, has the potential to enhance cognitive skills that extend beyond the musical domain.

### **Association Between Music Instruction and Intelligence**

*Examining the Association Between Music Lessons and Intelligence*, Schellenberg (2011) looks to extend our understanding of the association between music lessons and intelligence. Schellenberg (2011) aimed to deepen our understanding of the relationship between music lessons, intelligence, and executive functioning. While the connection between music education and

intelligence was considered established, the study sought to explore the causality of this link, particularly regarding executive functioning, which is known to correlate with IQ.

The study involved 106 participants (9-12 years old, 54 boys, 52 girls) from a middle to upper-middle-class suburb of Toronto. Roughly half were musically trained. IQ was measured using the Wechsler Abbreviated Scale of Intelligence (WASI), focusing on the Full Scale Intelligence Quotient (FSIQ). Additionally, five executive function tests were administered:

- Digit Span: Measures working memory by assessing an individual's ability to recall a series of digits in the correct order.
- Sun-Moon Stroop: Assesses cognitive flexibility and inhibitory control. Participants are asked to name the color of the ink in which words denoting celestial bodies are written while ignoring the word's meaning.
- Tower of Hanoi: Evaluates planning and problem-solving skills. Participants manipulate disks on three pegs, following specific rules, to reach a target configuration.
- WCST (Wisconsin Card Sorting Test): Assesses cognitive flexibility, set-shifting, and abstract thinking. Participants match cards based on changing sorting rules, requiring adaptation to new criteria.

Three trials of the Phonological Fluency test were also conducted. The study found a statistically significant correlation, indicating that musically trained children had a higher FSIQ than untrained peers. However, it did not provide evidence supporting the hypothesis that music training directly impacted executive functioning, subsequently influencing higher IQ.

The conclusion suggested a general link between music and cognitive abilities but questioned the casual connection. While musically trained children often excel academically, the study cautioned against attributing academic success solely to music training. Further research is

encouraged to explore why children with higher IQ's are more likely to take music lessons. In summary, Schellenberg's research acts as a catalyst for deeper exploration into the intricate connections between music education and cognitive abilities. By encouraging further investigation into causation, underlying mechanisms, and broader educational implications, Schellenberg's work prompts a more nuanced understanding of the potential role of music education in shaping cognitive development in children. This holistic approach can contribute to informed educational practices and policies that recognize and leverage the cognitive benefits of music education.

The inclusion of the diverse studies explored in this literature review not only underscores the profound impact of music education on cognitive abilities and academic achievement but also sheds light on its interconnectedness with parent involvement, especially during middle school years. Honing, Jaschek, and Scherder's (2018) longitudinal analysis accentuates the positive influence of instrumental music on executive functions, emphasizing the holistic benefits that can enhance a student's overall cognitive development during these crucial years. Emerson, Gouzouasis, and Guhn's (2020) large-scale study challenges assumptions of a trade-off between music and core academics, highlighting the potential role of music education as a bridge between home and school for enhanced student achievement. Norgaard et al.'s (2019) focus on jazz improvisation contributes to the understanding active music instruction and its role in cognitive development, offering insights into how parent involvement in encouraging such activities can impact a middle schooler's academic journey. Roscigno and Southgate's (2009) investigation reveals consistent associations between music, parental involvement, and student achievement, underscoring the significance of parental engagement during the middle school years. Hodges and Wilkins (2015) bridge the realms of music education and neuroimaging, unraveling the intricate connections within the brain during music engagement and emphasizing the role of parents in fostering a positive musical environment at home. Schellenberg's (2011) study on music lessons and intelligence prompts a deeper exploration into the casual connections, urging a nuanced

understanding of music education's role, coupled with parent involvement, in shaping cognitive development during these formative years. Together, these studies advocate for an integrated approach to middle school education, recognizing the multifaceted benefits of music and the crucial role parents play in supporting their children's academic and cognitive growth.

### **Interconnectedness of Parent Engagement with Music Education**

*The Impact of Music on Childhood and Adolescent Achievement* (Roscigno & Southgate, 2009), the researchers initially began by acknowledging the known public link between music involvement and student achievement, referencing several studies aligned to higher matriculation rates, higher rates of acceptance to medical school, and lower rates of current and lifetime alcohol, tobacco, or drug use, and lower rates of disruptive classroom behaviors. In this study, Roscigno and Southgate set out to extend current research by looking at the association between music involvement and academic achievement. They examined this association by establishing criteria for music participation including three measures related to: in school, outside of school, and looking at concert attendance to measure parental involvement. Roscigno and Southgate (2009) analyzed information from both the National Educational Longitudinal Survey (NELS:88) and the Early Childhood Longitudinal Survey (ECLS-K). ECLS-K included 20,000 U.S. kindergarten students in 1998-1999 in over 1,000 schools, with follow-up waves in first, third, and fifth grade. The NELS:88 had a base year of 1988, initial sample size of over 25,000 and focused on students between eighth grade and beyond high school, with a follow up every two years. Through completion of longitudinal study, the final sample sizes for ECLS-K and NELS:88 were 4,376 and 7,781 respectively. These data utilized in this longitudinal study accounted for parallel indicators of achievement, music involvement, and student achievement. Roscigno and Southgate discussed the benefit of utilizing two large nationally representative data sets in extending the current research by addressing determinants of music participation across cohorts. In this study, the

researchers looked at the connection between music participation and parental involvement to consider the inter-relatedness of these factors on student achievement.

Interestingly, as Roscigno et al. (2009) present their findings, they acknowledge these data consistently show an association between music, parental involvement, and student achievement. Participation within all forms of music studied showed higher overall results in reading for both age groups studied. Ethnicity took on an important role, showing that African Americans were at a disadvantage in both English and Math achievement, and for Hispanics, there remained a disadvantage in Math, although the study did show less overall association between music participation and Math compared to achievement in English.

Description of Key Measures, Mean, and Standard Deviation

		ECLS-K		NELS	
		Mean	SD	Mean	SD
<i>Mathematics Score</i>	Standardized reading IRT score	44.55	8.70	50.81	10.04
Music in school		44.65	8.62	51.66	10.05
Music outside school		44.97	8.72	52.73	10.00
Parent attend concerts		44.72	8.72	51.77	9.98
<i>Reading Score</i>	Standardized mathematics IRT score	57.07	13.00	50.59	9.89
Music in school		57.01	12.98	51.44	9.87
Music outside school		57.46	13.41	52.33	9.77
Parent attend concerts		57.46	13.40	51.42	9.80
<i>Music Involvement</i>					
In school	Music in school, at least once a week	0.97	0.18	0.51	0.07
Outside school	Music outside of school = 1; no = 0	0.10	0.29	0.27	0.07
Parent attend concerts	Parent attends concerts = 1; no = 0	0.40	0.49	0.63	0.07
Amount of music coursework	Coursework between 8th and 10th grades? (0.5 yr; 1 yr; 1.5 yrs; 2 yrs)	—	—	0.89	1.47
<i>Family Background and Status Attributes</i>					
SES	Socioeconomic status composite	0.05	0.74	0.00	10.86
Two parents		0.81	0.39	0.69	0.46
Single parent	Coded yes = 1; no = 0	0.16	0.37	0.28	0.37
Neither parent	Coded yes = 1; no = 0	0.03	0.16	0.03	0.17
Number of siblings	Continuous variable	1.51	1.15	1.52	1.21
Female	Coded yes = 1; no = 0	0.51	0.50	0.50	0.50
Black	Coded yes = 1; no = 0	0.10	0.30	0.10	0.30
Hispanic	Coded yes = 1; no = 0	0.09	0.29	0.12	0.33
Asian	Coded yes = 1; no = 0	0.04	0.20	0.07	0.26
White	Coded yes = 1; no = 0	0.76	0.42	0.70	0.45
More than 50 books	Coded yes = 1; no = 0	0.72	0.45	0.71	0.30
Prior math achievement	Standardized base-year mathematics IRT score	29.07	8.51	51.83	10.22
Prior reading achievement	Standardized base-year reading IRT score	33.63	10.53	51.56	10.01

Figure 3. Description of Key Measures, Mean, and Standard Deviation

Source: The impact of music on childhood and adolescent achievement. *Social Science Quarterly*, 90(1), 4–21. Southgate, D. E., & Roscigno, V. J. (2009).

Roscigno & Southgate (2009) conclude that their analysis shows a statistically significant relationship exists showing that music matters for achievement, however, not as a predictor of achievement. The association between music participation and achievement is clear, however, the correlation does not necessarily imply causation. Within the study, as music indicators were added, variance among the indicators changed very little. The study shows more that music is not

meaningful as a predictor of achievement but rather as a mediator as associated with family background and student status. The study sets out to better understand the relationship between music and student achievement. It provides a great starting point to extend the conversation and research further to include the role of parental involvement, and social status to consider music participation along with other factors attributed to academic success.

While research promises to continue to expand in its understanding of far transfer as it connects with music education, insights into another contributing factor of student achievement is a specific focus of this study. Identifying a school population that offers instrumental music as a choice, and then looking closely at that population of parents offers measurable insights regarding preferred parent engagement types. *The Underlying Structure of Parental Involvement-Home Environment in Music* Zdzinski S.(2002), Zdzinski, S. (2002) includes a focus on 248 vocal and instrumental music students, looking at not only achievement as measured by the Iowa Tests for Music Literacy (ITML), but also at parent involvement, but including a Parental Involvement Measure (PIM). Procedures included a multivariate analysis of variance (MANOVA) and descriptive analysis, with findings suggesting that parent involvement was associated with musical achievement and musical attitude scores, with differences noted for different age levels from middle school through high school and additional differences based on instrumental and vocal. Despite the differences noted and limitation of the focus on a single school, there was a conclusion that “parent involvement was related to both musical attitudes and musical achievement.” (Zdzinski S. 2002). Zdzinski mentions several other studies that focus on parental involvement within instrumental music, and shares that his findings are similar to other studies, including reference to his own previous research. Most notable within this study, specific actions on the part of the parent such as whether they attended concerts or talk about music with their child contributed to the differences of scores for music achievement.



## Types of Parental Engagement

*School/Family/Community Partnerships Caring for the Children We Share*, Epstein, J. L. (1995) highlights the importance of collaboration among researchers, policy leaders, educators, and parents for advancing partnerships in schools, families and communities. Epstein promotes a nationalized network of partnership schools, “Partnership 2000 Schools” Epstein (1995). The implementation involves using Epstein’s framework of six types of involvement and a action team approach. Researchers from Johns Hopkins will provide information and guidance to coordinators with the goal of enabling leaders in all states and districts to strengthen school, family, and community partnerships. The research includes six specific types of involvement and sample practices, including: Parenting, Communicating, Volunteering, Learning at Home, Decision Making, and Collaborating with Community.

Epstein, J. L. (1995) defines the six types of involvement and key strategies to foster collaboration between schools, families, and communities, summarized below:

***“Parenting:*** *Help families establish home environments supporting children as students*

*Sample practices include workshops, family support programs, suggestions for home conditions.*

***Communicating:*** *Design effective forms of school-to home and home-to-school communications.*

*Sample practices include conferences with parents, regular schedule of notices, newsletters, and communications.*

***Volunteering:*** *Recruit and organize parent help and support*

*Sample practices include school and classroom volunteer programs.*

***Learning at Home:*** *Provide information and ideas to families on helping students at home.*

*Sample practices include information on skills required for students at each grade, regular schedule of interactive homework, family math, science, and reading activities in school.*

***Decision Making:*** *Includes parents in school decisions, developing parent leaders.*

*Sample practices include active PTA or other parent organizations, and District-level councils and committees for family involvement.*

***Collaborating with Community:*** *Identify and integrate community resources to strengthen school programs.*

*Sample practices include information for students and families on community programs, service integration through partnerships with community agencies.”*

*Epstein, J. L. (1995).*

In summary, Epstein, J. L. (1995) outlines a comprehensive framework of six types of parent involvement in education: Parenting, Communicating, Volunteering, Learning at Home, Decision Making, and Collaborating with the Community. Epstein, J. L. (2019). These involvement types encapsulate various practices and challenges. Epstein underscores the significance of collaborative efforts among researchers, policy leaders, educators, and parents to fortify school, family, and community partnerships. The article connects with my strong belief as an educator the pivotal role of such partnerships in realizing progress in education reform and elevating the overall learning experience for students.

### **Summary**

I've had the privilege of being an elementary school principal since July 2007, and working over the past 17 years in just two school buildings. In these years as a school leader, I've always recognized the importance of celebrating the arts within our school. While my school experience is just a single example, my anecdotal observations support my view that there are certainly benefits of music education which extend to: self-esteem, teamwork, enjoyment of school, perseverance

through tasks, relationship building, organization skills, and respect of self and others. Through the review of the articles and studies reviewed, the responses of the brain associated with music, the association of music training and academic success, and the association with music and executive functioning testing seem to indicate that music training has positive impacts on executive functioning. Future considerations for research within the field of music training and the impact on adolescent achievement are far reaching and should include mixed methods of research including quantitative and qualitative measures, including considerations for brain imaging research. Our educators have a responsibility to better understand the role of music in education as a means of maximizing potential for each child.

## Chapter 3: Methodology

### Aim of the Study

In the article, *The Impact of Music on Childhood and Adolescent Achievement* (Roscigno & Southgate, 2009), a longitudinal study was conducted, and the researchers set out to build on previous research to better understand the impact of music education on academic achievement. The researchers included a third dimension of parental involvement in the form of parents attending concerts. This decision leaves the door open for additional measures and research to determine other, more specific types of parental engagement and their association or impact on music education, specifically participation in instrumental music. Examining the association between music involvement and academic achievement revealed a correlation and association but did not establish a causal relationship. “This suggests to us that music is meaningful not as a predictor of achievement in and of itself, but rather as a mediator, to some degree, of family background and student status, thus supporting arguments and theorizing pertaining to cultural capital.” (Roscigno, et. al, 2009). Roscigno, et. al. (2009) presented an association between parent participation, academic performance, and music education. My additional research will focus on the role and type of parent involvement and its impact on music education. To build on prior research that shows that both instrumental music education and parent involvement are positively associated with academic success, my research seeks to better understand parent engagement of middle school parents. To further enhance the discussion, a mixed methods study is utilized to better understand the role of parents in supporting their child’s school experience, including a look into adjustments needed during a public health crisis; Covid-19 pandemic. A survey administered to a North Shore of Long Island School District provides both quantitative and qualitative measures to better understand preferred parent involvement. Further information will be asked of parents to provide key insights into the actions that supported their child in retaining their instrumental participation through the Covid-19 pandemic. Cohorts of survey data will be reviewed, comparing

the parental involvement of students who play a musical instrument and those who do not. A thorough analysis of this survey data will be aligned to Joyce Epstein's framework of the six types of parent engagement, with prior permission received from Dr. Epstein of John Hopkins University. Better understanding parent involvement, particularly differences of parents of students that play instruments and those that do not relies on parent feedback within a survey administered to all parents, Grades 6-8 of a North Shore of Long Island Middle School. For the purposes of this study, types of parent engagement are measured based on two cohorts, parents of students that play an instrument and those that do not.

### **Research Questions**

1. To better understand parent engagement, what are the types of parent engagement favored by parents of students that play an instrument compared to those that do not?
2. What are preferred parent engagement types of middle school aged parents?
3. What actions supported their child in retaining their instrumental participation through the Covid-19 pandemic?
4. Does the survey respondent (parent) have additional insight of how they kept their child motivated during remote learning while the child was out of school during remote instruction?

Variable: Child plays a musical instrument

Variable: Preferred parent engagement type

In this study, the types of parent engagement: parenting, communicating, volunteering, learning at home, decision making, collaborating with the community (Epstein, 2019) are being studied to determine if they are influenced by the child playing an instrument or not. In quantitative terms, the Likert scale questions are used to measure the degree of different types of parent engagement for both groups (parents of children who play musical instruments and those who do not). This allows the analysis of the differences in preferred parent engagement between the two groups.

### **Hypothesis:**

1. Understanding preferred parent engagement is important for school leaders and policy makers.
2. Parents of middle school-aged students have a preferred engagement type.
3. Parents of children who play an instrument prefer different engagement types than parents of children who do not.

While considering the research regarding types of parental engagement favored by parents of students that play an instrument compared to those that do not, it is important to consider the types of parental engagement compared to the full view of types of engagement. Epstein (1995) focuses on all types of engagement being valuable for the partnership between home and school. For the purposes of this study, my hypothesis would be that parents perceive themselves as engaged in each of the six types of engagement assessed in this study. To underpin this investigation, the preliminary hypothesis posits a theory aligning with the idea that increased parent engagement corresponds to enhanced student success. This encompassing engagement involves various facets such as parenting, communicating, volunteering, facilitating learning at home, participation in decision-making, and collaborating within the community, as outlined by Epstein, J. L. (2019). Whether the parent is called in to deal with behavioral challenges or simply recognizes the importance of involvement, parent involvement directly associates with academic achievement (Hill, 2001). To further research this theory, this study included the survey administration to Middle School parents to gauge preferred parent involvement. Without judgment, parents differ on their own belief as far as the optimal amount of parent engagement to provide. Epstein, J. L. (1995). "In some schools there are still educators who say, if the family would just do its job, we could do our job, and there are still families who say, I raised this child, now it is your job to educate her." (p. 83).

To gauge parent involvement, parents respond to a set of Likert style questions that are randomly ordered, and directly aligned to the six types of parent engagement Epstein, J. L. (2019). The initial null hypothesis is that no difference will be observed between engagement levels of parents of children that play and do not play an instrument. The values of each type of engagement will be assessed to determine the differences and level of statistical significance. Within this study, there will be a non-experimental focus that offers a unique view into the survey respondents at a given point in time in their children's academic and social journey. For the purpose of this study, parents of Middle School students were selected since the children are not new to instrumental music and at this point, are no longer required by the school to continue their participation with their instrument. While some parents may still require their child to play an instrument, my belief is that the child's self-selection to play or opt out of an instrument provides a stronger data set to evaluate parent engagement when comparing parents of instrument and non-instrument playing students. To the extent that correlation is observed between instrument parents and engagement, it is understood that correlation does not imply causation. Opportunities for future research exist to better understand causation and correlation among the variables.

The focus will be on presenting the results of this mixed methods study and discussing their implications. The data collected from the survey will be analyzed, and the findings will be categorized based on the research questions and sub-questions above.

### **Parent Engagement Types Being Evaluated**

**Overall Engagement:** To address question one, which aims to understand the types of parent engagement favored by parents of students that play an instrument compared to those that do not, the survey responses will be analyzed. Likert scale questions, aligned with Epstein's framework (Epstein, J. L., 2019), will provide quantitative insights into the overall engagement preferences of parents in both groups.

**Preferred Engagement:** To address question two, the study will delve into preferred engagement types of middle school parents overall. This broader perspective will provide context for understanding the specificities related to instrumental and non-instrumental parents.

**Impact of Parental Engagement During the Covid-19 Pandemic:** To address question three, focusing on understanding the actions that supported children in retaining their instrumental participation during the Covid-19 pandemic, open-ended responses from the survey will be qualitatively analyzed to extract themes and patterns related to engagement strategies.

**Supporting Child During Remote Learning:** This question investigates whether survey respondents have additional insights into how they kept their child motivated during remote learning. Qualitative responses will be explored to identify common strategies and challenges faced by parents.

As I delve into the examination of engagement levels, the integration of open-ended responses from parent surveys will be a continuous and integral aspect. The approach ensures that the study transcends mere statistical analysis, offering a rich narrative and nuanced insights that complement and deepen the understanding of the results obtained.

To discern disparities in preferred parent engagement types, composite scores will be created for each engagement type. Throughout the survey, questions are scattered, but the responses will be paired together as they relate to each of the six engagement types as per Epstein, J. L. (2019). Statistical analyses on these composite scores will be conducted utilizing the Statistical Package for the Social Sciences (SPSS) to explore relationships between parent engagement types and other variables. The results will be interpreted for each parent engagement type. Specifically, the engagement preferences of parents with instrumental students will be compared to those without, allowing for a comprehensive exploration of mean differences across the six parenting types using t-tests. The research not only sheds light on the identified parenting types but also delves into the practical strategies parents employ to sustain their children's



motivation amid the challenges posed by the Covid-19 pandemic. This qualitative dimension from interviews makes our story more interesting. It helps us see the different ways families help their children stay motivated in and out of school, including activities outside of regular classes. It is anticipated that families differ significantly in their approaches to supporting their child's motivation in school. A noteworthy observation lies in the distinction between parents of non-instrumental music students, who may perceive their responsibilities differently than parents of instrumental music students. It is important to note, however, that both sets of parents engage in different ways. This nuanced difference contributes to a more comprehensive comprehension of parent engagement dynamics within the study, providing valuable insights for educators, policymakers, and researchers alike.

### **Qualitative Research Approach**

According to Pathak, Jena, and Kalra (2013), qualitative research can be utilized to research people's "beliefs, experiences, attitudes, behavior, and interactions" (Pathak, Jena, & Kalra, 2013). Conducting qualitative research can include, history model, grounded theory, narrative model, case study, ethnographic model, and phenomenological model (Leonard & Seidel, 2019). To further support participants in sharing additional perspective, open ended parent engagement questions will be included for each of the six types of parent engagement. The framework of family engagement includes parenting, communicating, volunteering, learning at home, decision making, and collaborating with the community. (Epstein, 2019). The inclusion of open-ended responses adds a qualitative dimension to this study, providing valuable insights into the practical strategies parents employed during the pandemic.

This study uses a qualitative research approach inspired by different models such as the history model, grounded theory, and narrative model. This diverse foundation helps thoroughly explore parents' beliefs, experiences, attitudes, behaviors, and interactions related to their

involvement in their children's education. The Framework of Family Engagement, encompassing parenting, communicating, volunteering, learning at home, decision making, and collaborating with the community (Epstein, 2019), provides a structured lens through which to understand the multifaceted nature of parent involvement. The qualitative component of the study, embedded within this framework, delves into the diverse ways parents navigate and contribute to each aspect, shedding light on the complexity of their roles in supporting their children's education. In response to the unique challenges posed by the Covid-19 pandemic, the inclusion of open-ended responses takes on added significance. The qualitative dimension serves as a window into the adaptive strategies employed by parents during this unprecedented time. Exploring how parents adjusted their engagement practices in the face of remote learning and disruptions to traditional schooling adds a temporal and contextual layer to this study.

### **Quantitative Research Approach**

This study uses correlational research to examine connections between different types of parent involvement. It focuses on comparing survey data from parents of children in instrumental music with those whose children are not involved with instruments. To comprehensively assess the diverse types and perceived extent of parent engagement, the survey incorporates Likert-scale questions. To facilitate nuanced analysis, the collected data will be subjected to cohort analysis, allowing for the categorization of respondents into two distinct groups: Group A comprises parents of students actively participating in instrumental music, while Group B consists of parents whose children are not involved in instrumental music. The binary classification is based on the students' current engagement with musical instruments.

The quantitative analysis encompasses several statistical techniques to delve into the differences in parent engagement between the two groups. Independent sample t-tests and crosstabulations will be employed to conduct a thorough examination of the variations in parental involvement based on whether their children are instrumentalists or not. These statistical

approaches provide valuable insights into the comparative levels and patterns of engagement across the identified cohorts.

To enhance this analysis, the use of a statistical method, Multivariate Analysis of Variance (MANOVA) was included. This approach provided insights into the differences of multiple aspects of parent engagement all at once. With MANOVA, the study aimed to gain a complete picture of how various dimensions of parent engagement differ between parents of students who play instruments and those whose children do not.

### **Data Collection Tools**

The collaborative efforts with North Shore Middle School were instrumental in implementing a well-coordinated survey distribution process. The active involvement of the Superintendent and the Parent Association President not only lent credibility to the research but also helped establish a direct channel of communication with the parent community.

To initiate the survey distribution, the school administration played a pivotal role in disseminating information about the research and its importance. The Superintendent's endorsement added an official and authorized touch, fostering trust among parents. Simultaneously, the Parent Association President, as a representative of the parent body, helped bridge the communication gap and emphasized the significance of parent involvement in the study.

The survey window, spanning four weeks, was strategically planned to strike a balance between providing participants with sufficient time to respond and maintaining a sense of urgency to encourage timely submissions. This collaborative and inclusive approach not only ensured a high level of engagement but also promoted a sense of community involvement in the research process. The concerted efforts of the school administration, coupled with ongoing reminders, aimed to maximize the response rate and gather comprehensive insights into parent engagement within the North Shore School Community (Go Vikings!).

## Summary

The utilization of mixed methods in this study serves as a strategic framework, seamlessly integrating anecdotal perspectives to complement the quantitative data collection process. By incorporating open-ended questions alongside Likert-scale queries, the research gains a nuanced understanding of the various dimensions of parent engagement aligned with Epstein, J. L.'s (2019) Framework.

Acknowledging the established association between music participation, parent engagement, and student achievement, the survey design deliberately distinguishes between instrumental and non-instrumental respondents. This deliberate differentiation aligns with the comprehensive approach advocated by researcher Stephen Zdzinski, who emphasizes the pivotal role of parents in diverse aspects of music education (Zdzinski, 2013). The exploration of parent involvement types within the realm of instrumental music education not only enriches the study's scope but also contributes valuable insights for educational leaders and policymakers. By dissecting and analyzing various facets of parental involvement, this research empowers stakeholders to target and prioritize specific approaches, thereby maximizing the impact of participation in the educational landscape.

## Chapter 4: Survey Analysis

### Introduction:

To identify the types and extent in which parents involve themselves in connecting with their middle school aged student's school experience, I administered surveys to collect data. The Superintendent of a North Shore Long Island school and the Parent Association supported me in distributing the survey through the district email, ensuring that it reached every parent. As part of the survey, participants had the opportunity to reach out to me directly to ask questions about the survey or process, or to request a hard copy of the IRB consent letter. The survey was designed to collect data to be used to answer research questions, which included:

1. What types of parent engagement are favored by parents of students who play an instrument compared to those who do not?
2. What are preferred parent engagement types of middle school-aged parents?
3. What actions supported their child in retaining their instrumental participation through the Covid-19 pandemic?

Out of approximately 659 students enrolled in Grades 6-8, 137 parents responded to the survey. Four participants completed the full survey but indicated non-consent, leaving 134 completed surveys for this study. Enrollment data for the current school year (2022-2023) was determined by advancing enrollment figures for Grades 5-7 from the prior school year. The breakdown is as follows:

Grade 5: 217

Grade 6: 214

Grade 7: 228

(Source: <https://data.nysed.gov/enrollment.php?year=2023&instid=800000048966>)

It is unclear if more than one parent completed the survey, therefore, precise survey respondent rate would depend on the factors such as one or two parent households. The rate ranges between 10% and 20% depending on the number of parents that received a link to the survey based on the School District distribution list.

### **Quantitative Results**

Survey respondents are all parents of Grades 6-8 students at a North Shore of Long Island Middle School. Respondents answered questions about their age range:

- 1 (<1%) was under 35 years
- 43 (32%) between 35-44 years
- 84 (63%) between 45-54 years
- 6 (4%) between 55-64 years of age

The parents that answered the survey also indicated their level of education:

- 1 (<1%) indicated high school
- 2 (1%) indicated some college
- 45 (34%) have a college degree
- 86 (64%) the majority of respondents have a graduate degree.

To compare responses of parent engagement for each survey question for children who play an instrument (1) and those who do not (0) in SPSS, an independent sample t-test was conducted. To conduct this independent sample t-test, parent engagement variables were input as “test variables,” and instrument playing was the grouping variable. The grouping variable was defined as a “1” for an instrument-playing child and “0” for non-instrument-playing child. The results of the tests are provided below in Table 1.

**Table 1: Descriptive Analysis of Survey Questions**

<b>Group Statistics</b>					
	My child plays a musical instrument in school	N	Mean	Std. Deviation	Std. Error Mean
I volunteer in my child's school	0	60	2.12	.993	.128
	1	74	2.50	1.010	.117
I help my child with homework	0	60	3.13	1.049	.135
	1	74	3.43	.966	.112
I discuss school events and activities with others in my community	0	60	3.77	.981	.127
	1	74	3.68	.878	.102
I closely monitor my child's academic performance, looking at Infinite Campus grades, etc.	0	60	4.43	.789	.102
	1	74	4.27	.833	.097
I monitor my child's homework and ensure it is completed regularly	0	60	3.70	1.212	.156
	1	74	3.62	1.056	.123
I take part in fundraising initiatives to support my child's school	0	60	3.25	1.284	.166
	1	74	3.36	1.267	.147
I attend PTSO (SCA) meetings	0	60	1.87	1.081	.140
	1	74	2.12	1.292	.150
I carefully plan after-school activities, monitoring and balancing time spent on homework, sports, clubs, instrument practice, chores, etc.	0	60	3.90	1.145	.148
	1	74	3.85	1.106	.129
I reach out to my child's teacher(s) to discuss academic performance	0	60	3.00	1.074	.139
	1	74	2.93	.896	.104
I attend parent workshops to better understand curriculum being taught	0	60	2.20	1.005	.130
	1	74	2.70	1.095	.127
I attend "virtual" Board of Education Meetings	0	60	1.78	.783	.101
	1	74	2.08	.947	.110
I attend "in-person" Board of Education Meetings	0	60	1.62	.761	.098
	1	74	1.91	1.036	.120
I connect with families in my child's classes outside of school	0	60	3.73	1.023	.132
	1	74	3.58	.794	.092

*Table 1: Descriptive Analysis of Survey Questions*

The analysis involved several key parent engagement variables, each pertaining to different aspects of involvement in their child's education. The t-test was conducted by designating instrument playing as the grouping variable, with a value of 1 instrument playing and 0 for non-instrument.

Table 1 includes group statistics such as the mean, standard deviation error mean for each parent engagement variable within both groups.

**Table 2: Parent Engagement Variables by Instrument Playing Status**

<b>Parent Engagement Variable</b>	<b>Instrument Playing (Mean)</b>	<b>Non-Instrument Playing (Mean)</b>
Volunteering in School	2.50	2.12
Helping with Homework	3.43	3.13
Discussing School Events	3.68	3.77
Monitoring Academic Performance	4.27	4.43
Monitoring Homework Completion	3.62	3.70
Participation in Fundraising	3.36	3.25
Attending PTSO (SCA) Meetings	2.12	1.87
Planning After-School Activities	3.85	3.90
Connecting with Teachers	2.93	3.00
Attending Parent Workshops	2.70	2.20
Attending Virtual Board of Education Meetings	2.08	1.78
Attending In-person Board of Education Meetings	1.91	1.62
Connecting with Families Outside of School	3.58	3.73

In Table 3 below, the results of independent samples t-tests are provided, comparing the responses of two groups (parents whose children play musical instruments and those whose children do not). This includes each of the survey questions measuring parent engagement. These results provide statistical evidence of differences of parent engagement between the two groups, depending on the activity being considered.



**Table 3: Comparison of the Two Groups: Instrumental and Non-Instrumental**

		Independent Samples Test												
		Levene's Test for Equality of Variances				t-test for Equality of Means						95% Confidence Interval of the Difference		
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	Lower	Upper			
						One-Sided p	Two-Sided p							
I volunteer in my child's school	Equal variances assumed	.042	.838	-2.201	132	.015	.029	-.383	.174	-.728	-.039			
	Equal variances not assumed			-2.205	127.181	.015	.029	-.383	.174	-.727	-.039			
I help my child with homework	Equal variances assumed	.004	.951	-1.715	132	.044	.089	-.299	.174	-.644	.046			
	Equal variances not assumed			-1.700	121.589	.046	.092	-.299	.176	-.647	.049			
I discuss school events and activities with others in my community	Equal variances assumed	1.116	.293	.566	132	.286	.572	.091	.161	-.227	.409			
	Equal variances not assumed			.560	119.706	.288	.577	.091	.163	-.231	.413			
I closely monitor my child's academic performance, looking at Infinite Campus grades, etc.	Equal variances assumed	.370	.544	1.154	132	.125	.251	.163	.141	-.116	.443			
	Equal variances not assumed			1.161	128.779	.124	.248	.163	.141	-.115	.441			
I monitor my child's homework and ensure it is completed regularly	Equal variances assumed	2.367	.126	.400	132	.345	.690	.078	.196	-.309	.466			
	Equal variances not assumed			.394	117.914	.347	.694	.078	.199	-.315	.472			
I take part in fundraising initiatives to support my child's school	Equal variances assumed	.098	.754	-.519	132	.302	.605	-.115	.221	-.553	.323			
	Equal variances not assumed			-.518	125.638	.303	.605	-.115	.222	-.554	.324			
I attend PTSO (SCA) meetings	Equal variances assumed	1.877	.173	-1.221	132	.112	.224	-.255	.209	-.668	.158			
	Equal variances not assumed			-1.243	131.859	.108	.216	-.255	.205	-.661	.151			
I carefully plan after-school activities, monitoring and balancing time spent on homework, sports, clubs, instrument practice, chores, etc.	Equal variances assumed	.161	.689	.249	132	.402	.804	.049	.195	-.338	.435			
	Equal variances not assumed			.248	124.468	.402	.804	.049	.196	-.339	.437			
I reach out to my child's teacher(s) to discuss academic performance	Equal variances assumed	1.675	.198	.397	132	.346	.692	.068	.170	-.269	.404			
	Equal variances not assumed			.390	114.888	.349	.698	.068	.173	-.276	.411			
I attend parent workshops to better understand curriculum being taught	Equal variances assumed	1.244	.267	-2.742	132	.003	.007	-.503	.183	-.865	-.140			
	Equal variances not assumed			-2.766	129.926	.003	.006	-.503	.182	-.862	-.143			
I attend "virtual" Board of Education Meetings	Equal variances assumed	2.314	.131	-1.953	132	.026	.053	-.298	.152	-.599	.004			
	Equal variances not assumed			-1.992	131.942	.024	.048	-.298	.149	-.593	-.002			
I attend "in-person" Board of Education Meetings	Equal variances assumed	3.757	.055	-1.800	132	.037	.074	-.289	.160	-.606	.029			
	Equal variances not assumed			-1.858	130.818	.033	.065	-.289	.155	-.596	.019			
I connect with families in my child's classes outside of school	Equal variances assumed	4.077	.046	.970	132	.167	.334	.152	.157	-.158	.463			
	Equal variances not assumed			.945	109.582	.173	.347	.152	.161	-.167	.472			

Table 3: Independent sample t-test of survey questions

**Table 4: Independent Samples T-Tests for Parent Engagement Variables**

Parent Engagement Variable	Levene's Test p-Value	t-Test p-Value	Conclusion
Volunteering in School	0.838	0.015	Significant Difference
Helping with Homework	0.951	0.044	Significant Difference
Discussing School Events	0.293	0.286	No Significant Difference
Monitoring Academic Performance	0.544	0.125	No Significant Difference
Monitoring Homework Completion	0.126	0.345	No Significant Difference
Participation in Fundraising	0.754	0.302	No Significant Difference
Attending PTSO (SCA) Meetings	0.173	0.112	No Significant Difference
Planning After-School Activities	0.689	0.402	No Significant Difference

Connecting with Teachers	0.198	0.346	No Significant Difference
Attending Parent Workshops	0.267	0.003	Significant Difference
Attending Virtual Board of Education Meetings	0.131	0.026	Significant Difference
Attending In-person Board of Education Meetings	0.055	0.037	Significant Difference
Connecting with Families Outside of School	0.046	0.167	No Significant Difference

**Volunteering in School:** Levene's Test for Equality of Variances provides a p-value of .838, indicating that the assumption of equal variances is met. The t-test for Equality of means is .015, suggesting a significant difference in means. Parents of children who play instruments have a higher mean in volunteering in school compared to parents of children who do not play instruments.

**Helping with Homework:** Levene's Test for Equality of Variances provides a p-value of .951, indicating that the assumption of equal variances is met. The t-test for Equality of means is .044, suggesting a significant difference in means. Parents of children who play instruments have a higher mean in helping with homework compared to parents of children who do not play instruments.

**Discussing School Events:** Levene's Test for Equality of Variances provides a p-value of .293, indicating that the assumption of equal variances is met. The t-test for Equality of means is .286, suggesting a no significant difference in means. Parents of children who play instruments and those who do not have similar means in discussing school events.

**Monitoring Academic Performance:** Levene's Test for Equality of Variances provides a p-value of .544, indicating that the assumption of equal variances is met. The t-test for Equality of means is .125, suggesting no difference in means. Parents of children who play instruments have a higher

mean in helping with homework compared to parents of children who do not play instruments.

Parents of children who play instruments and those who do not have similar means in monitoring academic performance.

**Monitoring Homework Completion:** Levene's Test for Equality of Variances provides a p-value of .126, indicating that the assumption of equal variances is met. The t-test for Equality of means is .345, suggesting no significant difference in means. Parents of children who play instruments have and those who do not have similar means in monitoring homework completion.

**Taking Part in Fundraising Initiatives:** Levene's Test for Equality of Variances provides a p-value of .754, indicating that the assumption of equal variances is met. The t-test for Equality of means is .302, suggesting no significant difference in means. Parents of children who play instruments have and those who do not have similar means in taking part in fundraising initiatives.

**Attending PTSO (SCA) Meetings:** Levene's Test for Equality of Variances provides a p-value of .173, indicating that the assumption of equal variances is met. The t-test for Equality of means is .112, suggesting no significant difference in means. Parents of children who play instruments have and those who do not have similar means in attending PTSO (SCA) meetings.

**Carefully Planning After-School Activities:** Levene's Test for Equality of Variances provides a p-value of .689, indicating that the assumption of equal variances is met. The t-test for Equality of means is .402, suggesting no significant difference in means. Parents of children who play instruments have and those who do not have similar means in carefully planning after-school activities.

**Reaching out to Teachers to Discuss Academic Performance:** Levene's Test for Equality of Variances provides a p-value of .198, indicating that the assumption of equal variances is met. The t-test for Equality of means is .346, suggesting no significant difference in means. Parents of

children who play instruments have and those who do not have similar means in reaching out to teachers to discuss academic performance.

**Attending Parent Workshops:** Levene's Test for Equality of Variances provides a p-value of .267, indicating that the assumption of equal variances is met. The t-test for Equality of means is .003, suggesting a significant difference in means. Parents of children who play instruments have a higher mean in attending parent workshops compared to parents of children who do not play instruments.

**Attending "Virtual" Board of Education Meetings:** Levene's Test for Equality of Variances provides a p-value of .131, indicating that the assumption of equal variances is met. The t-test for Equality of means is .026, suggesting a significant difference in means. Parents of children who play instruments have a higher mean in attending "virtual" Board of Education meetings compared to parents of children who do not play instruments.

**Attending "In-Person" Board of Education Meetings:** Levene's Test for Equality of Variances provides a p-value of .055, indicating that the assumption of equal variances is met. The t-test for Equality of means is .037, suggesting a significant difference in means. Parents of children who play instruments have a higher mean in attending "in-person" Board of Education meetings compared to parents of children who do not play instruments.

**Connecting with Families Outside of School:** Levene's Test for Equality of Variances provides a p-value of .046, indicating that the assumption of equal variances is not assumed. There is a statistically significant difference between parents of students who play instruments and those who do not, as indicated by the p-value of .046. Parents of children who play instruments have and those who do not have similar means in connecting with families outside of school. As a result, interpreting the t-test must take into consideration potential variance differences between the

groups. The t-test for Equality of Means is .167, suggesting no significant difference in means. However, the significant differences between parents of students who play instruments and those who do not might influence the reliability of this result. Further exploration may be needed due to uncertainty introduced by the unequal variances.

### **Preferred Parent Engagement**

To better gauge preferred parent engagement types, Epstein, J. L. (2019) provides the types of engagement, including: Parenting, Communicating, Volunteering, Learning at Home, Decision Making, and Collaborating with Community. The survey included two questions per parent engagement type, with one exception that respondents indicated their level of participation for each. Decision making includes an additional question to determine if there is a difference between rate of participation at virtual or in-person Board of Education meetings. By stringing together the appropriately linked survey questions, more thorough analysis of each preferred parenting type was evaluated.

#### **Parent Engagement Types and Survey Questions:**

**Parenting:** survey questions 7 and 11

**Communicating:** survey questions 6 and 12

**Volunteering:** survey questions 1 and 9

**Learning at Home:** survey questions 2 and 13

**Decision Making:** survey questions 10 and 14/15 (virtual and in-person)

**Collaborating with Community:** survey questions 3 and 16

In line with J.L. Epstein's (2019) six engagement types, each representing distinct ways parents involve themselves in school, the survey responses were analyzed. To enhance interpretation, the SPSS transform option was employed to create a new column. This column comprises concatenated Likert scale responses derived from paired questions related to each

engagement type. The resulting concatenated data allows for a meaningful comparison of preferred engagement types, offering a focused perspective on the overall preferences of middle school parents.

**Table 5: Descriptive Analysis of Concatenated Variables**

<b>Descriptive Statistics</b>			
	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Parenting	134	3.7649	.99187
Communicating	134	3.6530	.72087
Volunteering	134	2.8209	.96246
LearningatHome	134	2.8881	.80562
VirtualDecisionMaking	134	1.9776	.91534
CollaboratingwithCommunity	134	3.6828	.81236
InPersonDecisionMaking	134	1.8918	.94065
Valid N (listwise)	134		

*Table 5: Concatenated variables of preferred parent engagement-*

Within the table above, the mean displayed within each preferred parent engagement type includes the mean of Likert scale score provided by the survey respondents for the concatenated variables included within each. The n=134 indicated that “Parenting” had the highest indication of engagement of 3.76, while “in Person Decision Marking” provided the lowest mean Likert scores. Within this table, the standard deviation is the measure of how much the scores deviated from the mean. The lowest standard deviation of .721 is seen within the “Communicating” engagement type with a mean of 3.653, and the highest standard deviation of .992 is observed within the “Parenting” category of preferred engagement (mean=3.765).

### **Cross Tabulation of Survey Questions**

Following that analysis, a more targeted focus is provided to compare the single “Parenting” variable with the binary variable (indicating whether the child plays an instrument or not). A cross-tabulation was then conducted for each of the engagement types to determine if there is a significant association between the two variables.

**Table 6: Crosstabulation of Concatenated Variable: Parenting****Case Processing Summary**

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Parenting * Instrument	134	100.0%	0	0.0%	134	100.0%

**Parenting \* Instrument Crosstabulation**

Count

		Instrument		Total
		0	1	
Parenting	1 1	0	1	1
	1 2	1	0	1
	1 4	1	0	1
	2 1	1	2	3
	2 2	3	1	4
	2 3	3	6	9
	2 4	2	2	4
	2 5	1	1	2
	3 1	0	1	1
	3 2	3	1	4
	3 3	2	5	7
	3 4	5	6	11
	3 5	3	5	8
	4 2	1	0	1
	4 3	2	10	12
	4 4	7	11	18
	4 5	4	5	9
	5 2	1	0	1
	5 3	2	0	2
	5 4	2	2	4
5 5	16	15	31	
Total	60	74	134	

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	18.313 <sup>a</sup>	20	.567
Likelihood Ratio	21.864	20	.348
N of Valid Cases	134		

a. 35 cells (83.3%) have expected count less than 5. The minimum expected count is .45.

Table 4: Crosstabulation of "Parenting"

The table above provides insights into the "Parenting" variable, which represents the concatenated data of combined survey questions, and then compared with the binary variable of the child playing an instrument or not. In this case,  $n=134$ , the table shows the count of cases for each combination of "Parenting and Instrument." The chi-square value is 18.313 with 20 degrees of freedom, and the p-value (.567) is greater than .05. The likelihood ratio chi-square value is 21.864 with 20 degrees of freedom, and the p-value of .348 is greater than .05. The p-value of .567 is greater than .05, suggesting that there is no significant association between "Parenting and Instrument." The same analysis was conducted for each of the concatenated variables. The chi-square table is provided for each:

**Table 7: Crosstabulation of Concatenated Variable: Communicating**

	Case Processing Summary					
	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Communicating * Instrument	134	100.0%	0	0.0%	134	100.0%



### Communicating \* Instrument Crosstabulation

Count

		Instrument		Total
		0	1	
Communicating	1 3	1	0	1
	2 2	0	2	2
	2 4	0	1	1
	3 1	0	1	1
	3 2	3	4	7
	3 3	2	4	6
	4 1	1	1	2
	4 2	7	7	14
	4 3	10	17	27
	4 4	1	2	3
	4 5	1	0	1
	5 1	2	1	3
	5 2	7	5	12
	5 3	12	18	30
	5 4	6	6	12
5 5	7	5	12	
Total		60	74	134

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.802 <sup>a</sup>	15	.832
Likelihood Ratio	12.069	15	.674
N of Valid Cases	134		

a. 20 cells (62.5%) have expected count less than 5. The minimum expected count is .45.

Table 7: Crosstabulation of "Communication"

Similar with "Parenting," the results of the chi-square tests, there is no significant association between the variables "Communicating" and "Instrument."

The results from “Volunteering” provide a different result.

**Table 8: Crosstabulation of Concatenated Variable: Volunteering**

**Case Processing Summary**

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
Volunteering * Instrument	134	100.0%	0	0.0%	134	100.0%

**Volunteering \* Instrument Crosstabulation**

Count

		Instrument		Total
		0	1	
Volunteering	1 1	6	1	7
	1 2	2	5	7
	1 3	7	1	8
	1 4	1	1	2
	1 5	5	2	7
	2 1	1	2	3
	2 2	4	9	13
	2 3	7	9	16
	2 4	2	8	10
	2 5	2	3	5
	3 1	0	3	3
	3 2	3	1	4
	3 3	5	5	10
	3 4	8	9	17
	3 5	2	5	7
	4 3	0	1	1
	4 4	1	2	3
	4 5	4	3	7
	5 5	0	4	4
	<b>Total</b>	<b>60</b>	<b>74</b>	<b>134</b>

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	26.598 <sup>a</sup>	18	.087
Likelihood Ratio	30.843	18	.030
N of Valid Cases	134		

a. 30 cells (78.9%) have expected count less than 5. The minimum expected count is .45.

Table 8: Crosstabulation "Volunteering"

The crosstabulation and chi-square test results for "Volunteering" and "Instrument" (1 or 0) are provided above. The p-values for both tests are relatively low (.087 for Pearson Chi-Square and .030 for Likelihood Ratio), especially the Likelihood Ratio test. There is some evidence to suggest a significant association between the variables "Volunteering" and "Instrument" at the .05 significance level.

Table 9: Crosstabulation of Concatenated Variable: Learning at Home

	Case Processing Summary					
	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
LearningatHome * Instrument	134	100.0%	0	0.0%	134	100.0%

### LearningatHome \* Instrument Crosstabulation

Count

		Instrument		Total
		0	1	
LearningatHome	1 1	1	0	1
	1 3	1	0	1
	2 1	4	2	6
	2 2	6	7	13
	2 3	5	1	6
	2 4	0	3	3
	2 5	1	1	2
	3 1	6	5	11
	3 2	10	4	14
	3 3	4	12	16
	3 4	1	3	4
	3 5	0	1	1
	4 1	5	6	11
	4 2	4	3	7
	4 3	4	11	15
	4 4	1	4	5
	5 1	0	1	1
	5 2	3	0	3
	5 3	2	4	6
	5 4	1	6	7
5 5	1	0	1	
Total		60	74	134

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	30.481 <sup>a</sup>	20	.062
Likelihood Ratio	35.632	20	.017
N of Valid Cases	134		

a. 32 cells (76.2%) have expected count less than 5. The minimum expected count is .45.

Table 9: Crosstabulation "Learning at Home"

The crosstabulation and chi-square test results for “Learning at Home” and “Instrument” indicate p-values for both tests are relatively low (.62 for Pearson Chi-Square and .017 for Likelihood Ratio). Since the p-value is less than .05, the data and the results of the chi-square tests indicate there is evidence to suggest a significant association between the variables “Learning at Home” and Instrument.” At the .05 significance level.

**Table 10: Crosstabulation of Concatenated Variable: Collaborating with Community**

	<b>Case Processing Summary</b>					
	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
CollaboratingwithCommunity * Instrument	134	100.0%	0	0.0%	134	100.0%

**CollaboratingwithCommunity \* Instrument Crosstabulation**

Count	Instrument		Total	
	0	1		
CollaboratingwithCommunity	1 1	1	0	1
	1 2	0	1	1
	2 2	2	1	3
	2 3	1	4	5
	2 5	1	0	1
	3 2	3	2	5
	3 3	9	16	25
	3 4	6	3	9
	3 5	1	2	3
	4 2	1	0	1
	4 3	6	10	16
	4 4	10	19	29
	4 5	3	4	7
	5 3	1	3	4
	5 4	4	5	9
	5 5	11	4	15
Total		60	74	134

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.660 <sup>a</sup>	15	.340
Likelihood Ratio	18.443	15	.240
N of Valid Cases	134		

a. 24 cells (75.0%) have expected count less than 5. The minimum expected count is .45.

Table 10: Crosstabulation "Collaborating with Community"

In this case of "Collaborating with Community" and "Instrument," the p-values for both the Pearson Chi-Square test, p-value of .340 and the Likelihood Ratio Test, p-value of .240, both greater than .05, indicating that there is not statistically significant evidence to suggest a significant association between the concatenated variable of Collaborating with Community and the instrumental variable.

Table 11: Crosstabulation of Concatenated Variable: Virtual Decision Making

	Case Processing Summary					
	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
virtualDecisionMaking * Instrument	134	100.0%	0	0.0%	134	100.0%

**virtualDecisionMaking \* Instrument Crosstabulation**

Count

		Instrument		Total
		0	1	
virtualDecisionMaking	1 1	22	20	42
	1 2	5	10	15
	1 3	4	2	6
	1 4	0	1	1
	2 1	2	3	5
	2 2	8	6	14
	2 3	2	8	10
	3 1	1	0	1
	3 2	9	3	12
	3 3	3	8	11
	3 4	0	1	1
	4 1	0	1	1
	4 2	1	4	5
	4 3	1	0	1
	4 4	0	1	1
	5 1	0	1	1
	5 2	1	0	1
	5 3	0	3	3
	5 4	1	2	3
	Total		60	74

**Chi-Square Tests**

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.717 <sup>a</sup>	18	.165
Likelihood Ratio	28.366	18	.057
N of Valid Cases	134		

a. 28 cells (73.7%) have expected count less than 5. The minimum expected count is .45.

**Crosstabulation of Concatenated Variable: In-Person Decision Making****Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
inPersonDecisionMaking * Instrument	134	100.0%	0	0.0%	134	100.0%

### inPersonDecisionMaking \* Instrument Crosstabulation

Count

		Instrument		Total
		0	1	
inPersonDecisionMaking	1 1	23	23	46
	1 2	7	9	16
	1 3	1	0	1
	1 4	0	1	1
	2 1	5	5	10
	2 2	5	7	12
	2 3	2	5	7
	3 1	3	4	7
	3 2	7	3	10
	3 3	3	4	7
	3 4	0	1	1
	4 1	0	1	1
	4 2	1	1	2
	4 3	1	3	4
	4 5	0	1	1
	5 1	1	1	2
	5 3	0	3	3
	5 4	1	1	2
5 5	0	1	1	
Total		60	74	134

### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12.428 <sup>a</sup>	18	.824
Likelihood Ratio	15.904	18	.599
N of Valid Cases	134		

a. 30 cells (78.9%) have expected count less than 5. The minimum expected count is .45.

Table 11 Crosstabulation "Decision Making"

The tables above analyze concatenated "Decision Making" variables with slightly different input. Parent respondents were asked to consider how often they attend in-person Board of Education meetings, and also asked separately about virtual Board of Education meetings. The other variable remained consistent in both concatenated data sets. The consistent question asked respondents how



often they attended PTSO (SCA) meetings. The p-values for both data sets for the Pearson Chi-Square test and the Likelihood Ratio test are greater than .05, suggesting that, based on these results there is not statistically significant evidence to reject the null hypothesis. Therefore, there may not be a significant association between the “Decision Making” and “Instrument” variables, regardless of whether they are in-person or virtual.

### Multivariate Analysis

To examine whether there are significant differences in the mean scores of several dependent variables among parents of students who play instruments and those that do not, a Multivariate Analysis of Variance (MANOVA) was conducted.

<b>Between-Subjects Factors</b>		N
4	0	60
	1	74

**Descriptive Statistics**

	4	Mean	Std. Deviation	N
Parenting	0	3.8000	1.03006	60
	1	3.7365	.96594	74
	Total	3.7649	.99187	134
Communicating	0	3.7167	.73857	60
	1	3.6014	.70701	74
	Total	3.6530	.72087	134
Volunteering	0	2.6833	.94764	60
	1	2.9324	.96630	74
	Total	2.8209	.96246	134
LearningatHome	0	2.6667	.77932	60
	1	3.0676	.78655	74
	Total	2.8881	.80562	134
VirtualDecisionMaking	0	1.8250	.81732	60
	1	2.1014	.97566	74
	Total	1.9776	.91534	134
InPersonDecisionMaking	0	1.7417	.79985	60
	1	2.0135	1.03027	74
	Total	1.8918	.94065	134
CollaboratingwithCommunit	0	3.7500	.90432	60
	1	3.6284	.73121	74
	Total	3.6828	.81236	134

**Box's Test of Equality of Covariance Matrices<sup>a</sup>**

Box's M	44.396
F	1.495
df1	28
df2	55474.082
Sig.	.045

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

- a. Design:  
Intercept +  
column4

**Multivariate Tests<sup>a</sup>**

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.975	711.388 <sup>b</sup>	7.000	126.000	<.001
	Wilks' Lambda	.025	711.388 <sup>b</sup>	7.000	126.000	<.001
	Hotelling's Trace	39.522	711.388 <sup>b</sup>	7.000	126.000	<.001
	Roy's Largest Root	39.522	711.388 <sup>b</sup>	7.000	126.000	<.001
column4	Pillai's Trace	.149	3.154 <sup>b</sup>	7.000	126.000	.004
	Wilks' Lambda	.851	3.154 <sup>b</sup>	7.000	126.000	.004
	Hotelling's Trace	.175	3.154 <sup>b</sup>	7.000	126.000	.004
	Roy's Largest Root	.175	3.154 <sup>b</sup>	7.000	126.000	.004

a. Design: Intercept + column4

b. Exact statistic

**Levene's Test of Equality of Error Variances<sup>a</sup>**

		Levene Statistic	df1	df2	Sig.
Parenting	Based on Mean	.824	1	132	.366
	Based on Median	.399	1	132	.529
	Based on Median and with adjusted df	.399	1	131.942	.529
	Based on trimmed mean	.706	1	132	.402
Communicating	Based on Mean	.540	1	132	.464
	Based on Median	.349	1	132	.556
	Based on Median and with adjusted df	.349	1	131.603	.556
	Based on trimmed mean	.534	1	132	.466
Volunteering	Based on Mean	.005	1	132	.945
	Based on Median	.001	1	132	.971
	Based on Median and with adjusted df	.001	1	131.998	.971
	Based on trimmed mean	.012	1	132	.912
LearningatHome	Based on Mean	.082	1	132	.775
	Based on Median	.376	1	132	.541
	Based on Median and with adjusted df	.376	1	129.294	.541
	Based on trimmed mean	.131	1	132	.718
VirtualDecisionMaking	Based on Mean	3.149	1	132	.078
	Based on Median	2.562	1	132	.112
	Based on Median and with adjusted df	2.562	1	130.878	.112
	Based on trimmed mean	2.693	1	132	.103
InPersonDecisionMaking	Based on Mean	3.068	1	132	.082
	Based on Median	3.465	1	132	.065
	Based on Median and with adjusted df	3.465	1	127.647	.065
	Based on trimmed mean	3.157	1	132	.078
CollaboratingwithCommuni- ty	Based on Mean	2.697	1	132	.103
	Based on Median	2.596	1	132	.110
	Based on Median and with adjusted df	2.596	1	127.098	.110
	Based on trimmed mean	2.684	1	132	.104

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + column4

**Table 12: Multivariate Analysis of Parent Engagement**

<b>Tests of Between-Subjects Effects</b>						
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Parenting	.134 <sup>a</sup>	1	.134	.135	.714
	Communicating	.441 <sup>b</sup>	1	.441	.847	.359
	Volunteering	2.056 <sup>c</sup>	1	2.056	2.240	.137
	LearningatHome	5.325 <sup>d</sup>	1	5.325	8.679	.004
	VirtualDecisionMaking	2.530 <sup>e</sup>	1	2.530	3.067	.082
	InPersonDecisionMaking	2.449 <sup>f</sup>	1	2.449	2.805	.096
	CollaboratingwithCommunity	.490 <sup>g</sup>	1	.490	.741	.391
Intercept	Parenting	1881.984	1	1881.984	1900.536	<.001
	Communicating	1774.456	1	1774.456	3410.765	<.001
	Volunteering	1044.952	1	1044.952	1138.578	<.001
	LearningatHome	1089.505	1	1089.505	1775.588	<.001
	VirtualDecisionMaking	510.807	1	510.807	619.146	<.001
	InPersonDecisionMaking	467.240	1	467.240	535.229	<.001
	CollaboratingwithCommunity	1803.848	1	1803.848	2728.081	<.001
column4	Parenting	.134	1	.134	.135	.714
	Communicating	.441	1	.441	.847	.359
	Volunteering	2.056	1	2.056	2.240	.137
	LearningatHome	5.325	1	5.325	8.679	.004
	VirtualDecisionMaking	2.530	1	2.530	3.067	.082
	InPersonDecisionMaking	2.449	1	2.449	2.805	.096
	CollaboratingwithCommunity	.490	1	.490	.741	.391
Error	Parenting	130.711	132	.990		
	Communicating	68.673	132	.520		
	Volunteering	121.145	132	.918		
	LearningatHome	80.995	132	.614		
	VirtualDecisionMaking	108.902	132	.825		
	InPersonDecisionMaking	115.232	132	.873		
	CollaboratingwithCommunity	87.280	132	.661		
Total	Parenting	2030.250	134			
	Communicating	1857.250	134			
	Volunteering	1189.500	134			
	LearningatHome	1204.000	134			
	VirtualDecisionMaking	635.500	134			
	InPersonDecisionMaking	597.250	134			
	CollaboratingwithCommunity	1905.250	134			
Corrected Total	Parenting	130.845	133			
	Communicating	69.114	133			
	Volunteering	123.201	133			
	LearningatHome	86.321	133			
	VirtualDecisionMaking	111.433	133			
	InPersonDecisionMaking	117.681	133			
	CollaboratingwithCommunity	87.771	133			

a. R Squared = .001 (Adjusted R Squared = -.007)

b. R Squared = .006 (Adjusted R Squared = -.001)

c. R Squared = .017 (Adjusted R Squared = .009)

d. R Squared = .062 (Adjusted R Squared = .055)

e. R Squared = .023 (Adjusted R Squared = .015)

f. R Squared = .021 (Adjusted R Squared = .013)

g. R Squared = .006 (Adjusted R Squared = -.002)

Table 12: Multivariate Analysis of Parent Engagement

**Table 13: Levene's Test Results for Equality of Error Variances**

Engagement Type	Levene's Test Significance	Interpretation
Parenting	0.366	No Significant difference in error variances
Communicating	0.464	No Significant difference in error variances
Volunteering	0.945	No Significant difference in error variances
Learning at Home	0.775	No Significant difference in error variances
Virtual Decision Making	0.078	Marginally significant difference in error variances
In-Person Decision Making	0.082	Marginally significant difference in error variances
Collaborating with Community	0.103	No Significant difference in error variances

Within the Tables above, Leven's Test of Equality of Error Variances revealed the following:

**Parenting:** Levene's test for Parenting engagement did not show a significant difference in error variances between parents of students who play instruments and those who do not (significance=.366).

**Communicating:** Levene's test for Communicating engagement did not reveal a significant difference in error variances between the two parent groups (significance=.464).

**Volunteering:** Levene's test for Volunteering engagement did not reveal a significant difference in error variances between the two parent groups (significance=.945).

**Learning at Home:** Levene's test for Learning at Home engagement did not reveal a significant difference in error variances between the two parent groups (significance=.775).

**Virtual Decision Making:** Levene's test for Virtual Decision-Making engagement revealed a marginally significant difference in error variances between the two parent groups (significance=.078). The statistical test used to assess whether the variances (spread or variability) of scores differed between parents of students who play and instrument and parents of students who

do not with marginal significance. The p-value associated with the test is .078. In this case the p-value is close to .05 and will provide a cause for future consideration. This result suggests that there may be a slight indication of a difference in variability of scores for Virtual Decision Making between parents of students who play instruments and those who do not.

**In-Person Decision Making:** Levene's test for In-Person engagement did not reveal a significant difference in error variances between the two parent groups, and once again is marginally significant. (significance=.082).

**Collaborating with Community:** Levene's test for Collaborating with Community engagement also did not reveal a significant difference in error variances between the two parent groups (significance=.103).

## Qualitative Analysis

Survey respondents offered additional insights through open ended survey questions. In this section, I sought to unveil nuanced motivational techniques employed by parents to encourage sustained engagement in their child's musical or athletic pursuits to add a qualitative layer to the study. This qualitative section serves as a reflective lens, providing parental voice, contributing to a deeper understanding of effective involvement beyond the confines of a structured survey. It's not just about numbers, it's about what really works in everyday life.

### Summary of Open-Ended Responses

#### Daily Schedule and Structure:

- Parents created daily schedules to keep children busy.
- Home tutoring and routines created by the school were mentioned.
- Incorporating time frames for sports and instrument activities were observed.

#### Online Engagement

- Despite the challenges of no in-person lessons, parents utilized online classes, virtual lessons, and workshops.
- Participation in online programs such as Virtu Academy and private music schools were mentioned.

#### Family Engagement:

- Parents played with their children, practiced together, and engaged in family outdoor activities.
- Organized sports games and tournaments with other families.
- Mini-concerts, videos, and playing music with friends and families to maintain interest.



**Individual Motivation:**

- Some children were self-motivated for sports or instruments.
- Encouragement played a significant role in keeping children engaged.

**Variety of Activities:**

- Mixing up physical activities to keep them fun and engaging.
- Exploring different sports, outdoor play, walks, and trips to parks.

**Adaptation to Restrictions:**

- Adhering to safety measures such as masking and distancing during outdoor sports.
- Hiring private coaches and having small group sessions when deemed safe.

**Instrument-Specific Strategies:**

- Virtual instrument lessons, online contests, and playing in local parks.
- Encouraging participation in virtual clubs and maintaining practice over Zoom.

**Holistic Extracurricular Engagement**

- Some parents felt the focus on sports and instruments was narrow, emphasizing the importance of a broader range of extracurricular activities.

**Flexibility and Reward System:**

- Allowing children to participate in various activities without instilling fear.
- Implementing reward systems tied to practice and earning game time.

**Impact of Social Interaction:**

- Emphasizing the importance of social interactions, playing with friends, and avoiding feelings of loneliness.

**Flexibility and Individual Tailoring:**

- Acknowledging that each child is different; some were self-motivated, while others needed more encouragement.

These key insights highlight the multifaceted approaches parents took to keep their middle school-aged children engaged in sports and instrument activities during the challenges posed by the Covid-19 pandemic.

**Summary**

In this chapter, I analyzed survey respondents from 134 parents of middle school students to understand how they're involved in their child's school life. This included an examination of differences of involvement between parents with children who play an instrument and those who do not. The findings showed variations in volunteering, helping with homework, and attending workshops when looking at preferred parental involvement types, using Epstein, J. L. 's (2019) framework. Some activities showed differences depending on whether the child played an instrument or not. This chapter included a closer look at how parents motivated their children during the pandemic through daily schedules, online engagement, family involvement, and adapting to restrictions. Overall, it paints a picture of the different ways parents support their middle school children in school and extracurriculars.

## Chapter 5: Discussion of Findings and Implications

This mixed methods study builds upon existing research to better understand the relationship between parent involvement and music education. Utilizing Epstein, J. L. 's (2019) framework of six types of involvement provides more depth into the vast range of how parent support and interaction differs. This research has lasting implications for policy makers, school leaders, and researchers in a variety of predictable ways. The analysis of parent perception survey responses, including open ended questions created a narrative of perceived parent engagement which can then be used as a basis for school leaders to adjust their approach to provide a more refined and targeted approach to maximize parent involvement. For example, on a very basic level, teachers and students both benefit when parents actually read letters sent home from the school. As we get more in depth, parents' range in level of participation at Board of Education meetings, parent meetings, curricular discussions, and direct instructional support with their child. The greater the awareness of this range of participation, the more targeted the approach by those interested in maximizing parent engagement and participation. The survey analysis within Chapter 4 provides key insights referenced below.

### Parent Engagement Trends:

- **Volunteering:** Parents of instrumental students within this study are significantly more engaged in volunteering compared to those children that do not play instruments ( $p=.015$ ).
- **Helping with Homework:** Parents of instrumental students show a higher mean score, indicating increased engagement in helping with homework ( $p=.044$ ).
- **Attending PTSO (SCA) Meetings:** Instrumental parents have a higher mean score, indicating increased attendance at PTSO (SCA) meetings ( $p=.112$ ).
- **Attending Parent Workshops:** Instrumental parents are significantly more likely to attend parent workshops ( $p=.003$ ).

**Preferred Parent Engagement Types Epstein, J. L. (2019):**

- **“Parenting” Engagement:** Parents, in general, show a high level of engagement in parenting activities with a mean score of 3.76.
- **“In-Person Decision Making” Engagement:** This engagement type has the lowest mean score, suggesting that parents are less involved in in-person decision-making processes.

#### **Significant Differences in Engagement, Epstein, J. L. (2019):**

- **“Volunteering” Engagement:** There is some evidence ( $p=.030$ ) suggesting significant association between volunteering engagement and whether the child plays an instrument.
- **“Learning at Home” Engagement:** There is a significant association ( $p=.017$ ) between learning at home engagement and whether the child plays an instrument.

#### **Effects of Virtual Engagement:**

- **Virtual Board of Education Meetings:** Parents of instrumental students show significantly higher engagement in attending virtual Board of Education meetings ( $p=.026$ ).

#### **Multivariate Analysis:**

- **MANOVA Results:** In general, there are no significant differences in mean scores of dependent variables among parents of students who play instruments and those who do not.
- **Marginally Significant:** The marginal significance in the variability of scores for “Virtual Decision Making” suggests a potential area for further investigation.

### **Mixed Methods Analysis**

#### **Parent Engagement Types:**

- **Quantitative:** Table 1 and Table 2 highlight mean scores for various parent engagement variables, comparing parents of instrumental students with those of non-instrumental students.

- **Qualitative:** The open-ended responses reveal that parents engaged in a variety of activities to support their children, including playing together, organizing sports games, and participating in music-related events.
- **Connection:** The quantitative data shows specific areas of higher engagement of parents of instrumental students (ie. Volunteering, helping with homework), while the qualitative insights illustrate the diverse range of activities parents undertake to engage with their children.

**Preferred Engagement Types Aligned to Epstein, J. L. (2019):**

- **Quantitative:** Table 3 provides a concatenated view of preferred engagement types, showing mean Likert scores for different categories.
- **Qualitative:** Open-ended responses offer more nuanced insights into how parents motivate and engage with their children, including creating daily schedules, participating in online programs, and encouraging individual motivation.
- **“Parenting” Engagement:** responses reveal that parents engage in activities like playing with their children, incorporating routines, and participating in family outdoor activities. This aligns with the high mean score for “Parenting” in the quantitative data, emphasizing its importance among middle school parents. An aligned parent survey response further supports the engagement type, “I make sure my son practices his violin and piano daily. He does not participate in sports but does join many clubs such as Jazz club, Chamber, Mandarin, and theatre club.” Another aligned response refers to creating a schedule, “used a schedule and had discussions about how the day would look. Lots of conversations and lots of check-ins. We also looked at goal setting and progress monitoring,”
- **“Communicating” Engagement:** Qualitative insights indicate that parents utilize online classes, virtual lessons, and workshops for communication. This aligns with the high mean

score for “Communicating” in the quantitative data, showcasing the significance of communication channels. An aligned parent survey response further supports this engagement type “I have three children. They would play their instruments together and play for us (their parents). They would still play their sports outside-but alone, practicing drills, etc.”

- **“Volunteering” Engagement:** The qualitative data highlights activities such as organizing sports games and tournaments, indicating a hands-on approach. This corresponds with the positive mean score for “Volunteering” in the quantitative analysis, demonstrating engagement of middle school parents surveyed.
- **“Learning at Home” Engagement:** Qualitative responses underscore the importance of home tutoring, routines, and virtual lessons. This aligns with the high mean score for “Learning at Home” in the quantitative data, emphasizing the role of parents in supporting their children’s learning. One survey response highlighted demonstrates adapting the instructional day during the pandemic, “we allowed our children to attend less ‘school’ than was prescribed. After a morning of virtual school, our kids spent the afternoon doing other activities. These included art and music.”
- **“Decision Making” Engagement:** The qualitative data may offer insights into how parents involve themselves in decision-making processes related to their children’s activities, providing context for the mean scores observed in the quantitative analysis.
- **“Collaborating with Community” Engagement:** Qualitative responses may shed light on how parents collaborate with the community, such as organizing events or participating in shared activities. This provides context for the quantitative mean scores related to community collaboration. This engagement type is highlighted in one parent’s open-ended

response, “We had a neighborhood performance involving other kids in the neighborhood who played instruments.”

### **Limitations of the Study**

The survey analysis provides valuable insights into parent engagement with middle school-aged students’ school experience, especially in the context of instrumental participation. However, there are several limitations and potential sources of bias that should be considered:

**Survey Distribution Bias:** The survey was distributed through the District email, which may introduce bias as not all parents may have equal access to or regularly check their emails. The extended survey window did not increase participation, most respondents completed the survey within the first three days of its initial emailing.

**Self-Selection Bias:** Participants who are more engaged or have stronger opinions on this topic may be more likely to participate, especially with the open-ended responses.

**Assumption of Homogeneity:** The analysis assumes homogeneity in the responses of parents within Grades 6-8. There might be variations in engagement levels and preferences among parents of students in different grade levels.

**Potential Social Desirability Bias:** Respondents may be inclined to provide socially desirable answers, especially about their level of engagement in their child’s education. This bias could result in an overestimation of positive engagement behaviors. While respondents were reminded that there was no personally identifiable information being collected, some respondents may be impacted by this.

**Quantitative Emphasis:** This analysis provides valuable quantitative data that might be further supported by more in-depth qualitative exploration of certain themes, especially when interpreting the results of open-ended questions.

**Potential Confounding Variables:** The questions and results do not account for potential confounding variables that might influence parent engagement, such as socio-economic status, ethnicity, or the student's academic performance.

### **Implications for Policy Makers and School District Leaders**

Building off of the work of researcher S. Zdzinski (2013), this study provided a thorough analysis of types of engagement preferred by parents using J.L. Epstein's (2019) framework to further define engagement types for parents of instrumental students and non-instrumental students. Future research may extend on this study, providing added focus on strategies to motivate parent engagement for Middle School aged students.

Implications for policy makers must continue to include strategies to prioritize integrating instrumental music programs into all schools. Two factors that may limit the extent of instrument participation for all students might relate to the financial cost and balancing of academic demands. While it is likely that in higher wealth areas, parents may have the means to pay for instrument rentals and drive their children to before/after-school practices, the value placed on music education may be harder to emphasize if a child is struggling in core subjects such as math or reading. Supplemental reading and math support services will add an additional complexity for scheduling instrumental music as well. The challenge in this case is not merely financial, it is an important consideration for school leaders to prioritize implementation, while accounting for supplemental and necessary academic interventions as well.

Guhn, et. al (2020) included a sample of more than 100,000 students and concluded an association between music class participation and academic performance. The importance of parent involvement, in coordination with increased opportunity for music instruction in school go hand in hand. Children benefit most when all factors are met, which include strong pedagogy, parent



involvement, and of course, integration of music instruction to round out the perfect harmony of a well-balanced curriculum.

### **Summary**

This dissertation sheds light on the intricate relationship between parent involvement and music education, offering valuable insights for educators, policymakers, and researchers. By employing Epstein, J. L. 's (2019) Framework for six types of involvement, this study unveils a nuanced understanding of how parents support and interact with their children, with the added context of instrumental music education.

The analysis of parent perception survey responses, both quantitative and qualitative, creates a comprehensive narrative of perceived parent engagement. These findings serve as a foundation for school leaders to refine their strategies, fostering a more targeted and effective approach to maximize parent involvement. From the basic level of reading school letters to more in-depth activities such as participation in Board of Education meetings, the awareness of the diverse range of parent participation levels allows for a tailored approach to enhance engagement.

Drawing on the work of S. Zdzinski (2013) and building upon Epstein, J. L. 's (2019) Framework, this study lays the groundwork for future research focused on strategies to motivate parent engagement, especially for middle school-aged students. Policymakers are urged to consider these findings when formulating strategies, emphasizing the importance of integrating instrumental music programs into schools and addressing potential barriers such as financial constraints and academic demands.

The study's implications for policymakers extend to prioritizing the integration of instrumental music, as highlighted by Guhn, et al. (2020), who found a positive association

between music class participation and academic performance in a large sample of students. The perfect harmony of a well-balanced curriculum is achievable when strong pedagogy, parent involvement, and music instruction are integrated. Of course, I don't lose sight of other contributing factors, such as the importance of physical education and sports. I encourage others to explore additional research in the broader field of overall wellness as a prerequisite for success in school.

## Appendix

### Parent Engagement Survey Questions:

Chad Altman  
LIU Post, College of Education, Information and Technology  
720 Northern Blvd  
Brookville, NY 11545  
Research Survey

#### Survey Questions:

1. These questions will be administered using a Google Form.
2. The topic headings will be removed, and questions will be presented in a randomized order.
3. Questions will provide a Likert response including (never, rarely, sometimes, often, frequently)

#### Parenting

1. I monitor my child's homework and ensure it is completed regularly.
2. I carefully plan after-school activities, monitoring and balancing time spent on homework, sports, clubs, instrument practice, chores, etc.

#### Communicating

3. I closely monitor my child's academic performance, looking at Infinite Campus, grades, etc.
4. I reach out to my child's teacher(s) to discuss academic performance.

#### Volunteering

5. I volunteer in my child's school.
6. I take part in fundraising initiatives to support my child's school.

#### Learning at Home

7. I help my child with homework.
8. I attend parent workshops to better understand curriculum being taught.

#### Decision Making

9. I attend PTSO (SCA) meetings.
10. I attend "in-person" Board of Education meetings.
11. I attend "virtual" Board of Education meetings.

#### Collaborating with Community

12. I discuss school events and activities with others in my community.
13. I connect with families in my child's classes outside of school.

#### Other

14. Does your child play a musical instrument in school: \_\_\_\_\_ YES \_\_\_\_\_ NO
15. Do you currently play a musical instrument: \_\_\_\_\_ YES \_\_\_\_\_ NO
16. If yes, did your child participate in a solo at NYSSMA? \_\_\_\_\_ YES \_\_\_\_\_ NO
17. What sport(s) does your child play, if any?

18. Throughout the Covid pandemic, how did you keep your child motivated to maintain interest with their instrument and/or sports participation?

### Demographic Questions

#### Personal Information:

1. Gender \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_

#### 2. Age range:

\_\_\_\_\_ Under 35 Years

\_\_\_\_\_ 35-44 years

\_\_\_\_\_ 45-54 years

\_\_\_\_\_ 55-64 years

\_\_\_\_\_ 65 Years +

#### 3. Education Information:

\_\_\_\_\_ Doctorate

\_\_\_\_\_ Master's Degree + post-graduate work

\_\_\_\_\_ Master's Degree

\_\_\_\_\_ Bachelor's Degree

\_\_\_\_\_ Other

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**NOTICE TO ALL  
RESEARCHERS:**

*Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation, suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.*

**TO:**

David Bennardo - Principal Investigator  
Chad Altman - Student Investigator

**FROM:** LIU Institutional Review Board

**DATE:** November 20, 2023

**PROTOCOL TITLE:** A Comparative Study on Parent Engagement Through the Lens of Instrumental Music

**PROTOCOL ID NO:** 23/10-121

**REVIEW TYPE:** Exempt

**ACTION:** IRB Exempt Determination/Approval

Your application has been reviewed using the University's Institutional Review Board's (IRB) administrative review process and can be considered to be an EXEMPT methodology/approach as defined in 45 CFR 46.104.d.2:

Category 2: Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: i. The information obtained is recorded by the investigator in such a manner that identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects, ii. Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation, or iii. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subject, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Please note: Revisions and amendments to the research activity must be promptly reported to the IRB for review and approval prior to the commencement of the revised protocol. **If the project is amended so that it is no longer considered to be exempt**

**research as per the federal definitions, it will be necessary for the investigators to submit an application for full committee review.**



**Verification of Institutional Review Board (IRB) Exempt**

**Determination/Approval LIU IRB ID:** 23/10-121

**Project Title:** A Comparative Study on Parent Engagement Through the Lens of Instrumental Music

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