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An Examination Of High School Music Course Offerings In Virginia: A Mixed Methods Study

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AN EXAMINATION OF HIGH SCHOOL MUSIC COURSE OFFERINGS IN VIRGINIA: A
MIXED METHODS STUDY

A Dissertation

Presented to the

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

By

Natalia P. Goodloe

December 19, 2022

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MIXED METHODS STUDY

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Dedication

To God and to my family.

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Abstract

High school music education is not mandated by the Standards of Quality, the Virginia state educational law, and courses offered on the high school level vary among Virginia school divisions. This explanatory mixed methods dissertation study provides an overview of history of development of high school music education in Virginia, reveals what high school music courses currently offered in Virginia school divisions ($N = 131$), and surveys approaches to development of programs of studies of a representative sample of Virginia school divisions ($n = 14$). The study generated three major findings. First, 29 various courses are offered among Virginia school divisions on various levels, five performance type courses and five nonperformance type courses. Out of ten course types offered in Virginia, Band and Chorus are the only courses offered at significantly high rates, while Composition, Guitar, Music Technology, IB Music, Orchestra, and Piano are offered at significantly low rates. This is because Band and Chorus have traditionally been considered as basic high school music courses, and everything else is offered as school divisions can afford and what teachers employed in school divisions can teach. Second, larger Virginia school divisions, located in racially/ethnically diverse cities and suburbs offer more variety of high school music courses. This is because low school budgets and teacher shortages are detrimental to smaller and remote school divisions, as they can afford to hire only so many teachers to teach only so many subjects. Third, administrative approaches to developing high school programs of studies, particularly approaches to stakeholder engagement in program development, influence what courses are offered.

AN EXAMINATION OF HIGH SCHOOL MUSIC COURSE OFFERINGS IN VIRGINIA: A
MIXED METHODS STUDY

CHAPTER 1

INTRODUCTION

“Music education opens doors that help children pass from school into the world around them – a world of work, culture, intellectual activity, and human involvement. The future of our nation depends on providing our children with a complete education that includes music.” – Gerald Ford, Former President of the United States (National Performing Arts Convention, 2012, para. 5)

The value of high school music education must not be underestimated. A primary consideration of its importance has been the aesthetic experience, the depth, the beauty, and the multitude of feelings experienced through music (Labuta & Smith, 1997; Reimer, 2003). Bannister (2018) surveyed 375 participants of ages 18-78 and found emotional reactions to musical experiences occurred during processing relationships between the music and participants’ individual experiences, as reactions to a particular music type, and as reflections on evoked memories. Boer and Fischer (2011) administered an open-ended questionnaire on reasons for listening to music to 222 participants of ages 13-69 from Brazil, Germany, Hong Kong, New Zealand, Philippines, Singapore, and the United States (US). Emotional response was the most important personal reason across all represented cultures. Identification with a culture and social bonding were the most important functions of music. Other reasons included enjoying music in the background, relieving memories, entertainment, and relaxation.

Musical sounds travel through the outer ear canal to the ear drum, a tissue-like membrane that separates outer ear and middle ear (National Institute of Deafness and Other Communication

Disorders, 2018). The ear drum vibrations are passed to the middle ear bones and to the inner ear cochlea, a spiral-like filled with fluid structure, the home of the hearing organ of Corti (U.S. National Library of Medicine, 2020). The organ of Corti contains 25,000 hairlike cells that translate fluid vibrations into electrical impulses transmitted to the auditory nerve and then to the brain (Johns Hopkins Medicine, 2021; Kennedy Center, 2020; National Institute of Deafness and Other Communication Disorders, 2018). Multiple areas of the brain respond simultaneously: the auditory cortex decodes musical sounds, the nucleus accumbens activates rewarding experiences, the hippocampus retrieves memories, and the amygdala processes emotions and behavior (Jourdain, 1997; Khalfa et al., 2005; Wilkins et al., 2014; University of Central Florida, n.d.). Educational and medical researchers found that this brain activity positively affected child development.

A large body of experimental research demonstrated permanent positive effects of music education on cognitive, social, emotional, and physical wellbeing of children (A. Collins, 2014; National Association for Music Education [NAfME], n.d.-b). For example, Fujioka et al. (2006) studied brain responses to sound in children of aged 4–6 and concluded that even 1 year of musical training lead to improved memory and cognitive abilities. Schellenberg (2011) compared an Intelligence Quotient (IQ) test results of 51 undergraduate college students with at least 8 years of musical training to the results of 55 undergraduate college students with no musical training and found that musically trained students had higher IQ. Skoe and Kraus (2012) studied brain responses to sound in 18-31 years old adults with and without musical training and found that participation in musical activities for up to three years in childhood contributed to improved brain function for up to seven years after music education stopped.

Educational researchers confirmed positive impacts of music education on adolescent character, social identity, and cultural appreciation (Abeles et al., 1995; Elliott & Silverman, 2015; Reimer, 2003; West, 2015). Parker (2011) examined philosophical considerations for engagement with music among 18 choral students in Grades 11 and 12 and discovered that the participants valued music as a collective accomplishment, as an interpersonal and uniting experience, as a venue for self-expression, and as an enlightening experience. Bakagiannis and Tarrant (2006) studied 97 14-year-old participants and found similar musical preferences helped to become less judgmental toward peers difficult to socially identify with. Boer et al. (2011) studied 338 participants of ages 17 to 18 and confirmed similar musical preferences resulted in the assumption of common values and in better social attraction. Miranda and Claes (2009) assigned 467 Grades 9-11 students to listen to their favorite music for one hour per week throughout the period of one year and found significant correlations among music preferences and close peer connections and among levels of depression and close peer connections.

The benefits of music education extended to achievement on standardized tests. Table 1 shows that in 2016, Virginia seniors enrolled in music education courses scored higher than the state average Virginia senior on the SAT test measured student knowledge of reading, mathematics, and writing and is used for college admissions (College Board, 2016).

Table 1

A Comparison of Average SAT Scores of Virginia Seniors Graduated in 2016

Students' Experiences	SAT Test Results		
	Critical Reading	Mathematics	Writing
Average performance of a Virginia senior	494	508	482
Students with more than four years of study in Arts and Music	546	533	524
Students with experience in General Music or in Music Appreciation	549	532	527
Students with experience in Music Performance	542	534	521

Note. Table 1 shows differences in SAT scores among Virginia seniors graduated 2016; students with experiences with the arts scored at least 30 points higher than the average Virginia graduate.

A similar tendency was observed across the state of Texas. High school students who participated in all-state ensembles between 2014 and 2018 scored on the SAT tests on average more than 20% higher than their peers on average statewide and nationwide (Texas Music Educators Association, n.d.). Miksza (2010) analyzed standardized mathematical achievement tests of 12,160 Grade 10 students from 603 US high schools and found that participation in high school instrumental and vocal music ensembles was a significant predictor of achievement on standardized tests in mathematics. In 2010, school districts across Missouri reported students with high level participation in fine arts scored almost nine points higher on standardized assessments in mathematics and up to eight points higher on standardized assessments in English Language Arts (Scheuler, 2015).

This brief review uncovered strong evidence of the importance of music education in adolescence. Then, what musical experiences should high school students be offered? Competing music education philosophies existed since Ancient Greece, when Plato considered music as an

essential part of education while Aristotle saw it as a leisure activity (Abeles et al., 1995; Mark & Gary, 1992; McCarthy & Goble, 2011). Even relatively recent music education philosophies disagreed. The 1950s Comprehensive Musicianship concept, developed as an attempt to fix an overemphasis on teaching performance classes, was rooted in idealism - believed an absolute truth lies in conceptual matters and music education should balance performance, analysis, and composition (Abeles et al., 1995; Choksy et al., 1986; Ornstein & Hunkins, 2013). The 1990s praxial philosophy adapted pragmatism, which asserted music should not be taught purely for the sake of music but as a transformational experience, through critical thinking and application to social contexts (Abeles et al., 1995; Elliot & Silverman, 2015; Ornstein & Hunkins, 2013). The 2000s experience-based music education philosophy embraced a synergy of opposing philosophical views in underlining the unique dimensions of music education: feeling, creativity, musical meanings, musical intelligences (as composition, performance, listening, theory, and musicology), and multiculturalism (Reimer, 2003). To understand the trajectory of contemporary high school music education, examined major historical developments in American music education.

Historical Roots of American Music Education

The first documented instances of music education took place in around 3000 B.C.E. in Egypt, in the form of apprenticeship in preparation for religious rituals; in contrast, in the 6th century B.C.E. Confucius China, music education was strictly secular and cooperative and designated to instill discipline and build character (Plummeridge, 2001). In 2000 B.C.E., music education on the Greek island Crete served both secular and sacred purposes, and between the 7th and 5th centuries B.C.E., in Athens, singing, dancing, and playing lyre was a required part of schooling of 7-13 years old children of aristocracy (Mark & Gary, 1992; Plummeridge, 2001).

Between the 7th and the early 6th centuries B.C.E., in militaristic Sparta, music education through song served the purpose of training generations of patriots and preserving military traditions (Mark & Gary, 1992). From the 5th to the 2nd century B.C.E., in Ancient Rome, music education was not important and did not interest the aristocracy (Plummeridge, 2001).

Two early European music history milestones influenced the development of American music education. In the 5th century B.C.E., the Greek mathematician Pythagoras discovered the mathematical relationship between pitches, and in the 11th century, the Italian choir teacher Guido d'Arezzo developed the basics of music notation (Abeles et al., 1995). In the 1600s, these developments instituted the Western classical music tradition brought to North America by European settlers (Abeles et al., 1995; Labuta & Smith, 1997; Mark & Gary, 1992).

The Early Music Education in America

Music education in the Americas existed for centuries prior to the arrival of Columbus. For example, as early as in the middle of the 14th century, the Incas offered musical instruction, singing, and playing flute in 4-year schools for children of nobility (History Collection, 2016; Mark & Gary, 1992). In the second half of the 16th century, with colonization of the Americas and the arrival of the first African slaves, the native populations were forced to adapt European religions and traditions, and African slaves were not allowed to receive education (Colwell et al., 2013; Mark & Gary, 1992; Sandifer & Renfer, 2003). Between 1540 and the 1680s, the Spanish established missions in conquered lands, which today are New Mexico, Texas, New Orleans, and California, and opened schools for the Native Americans; sacred music of the Catholic Church was one of the main subjects in these schools (Mark & Gary, 1992). For example, from 1796, in Santa Barbara, California, the Native American people Chumash were taught choral and

instrumental music and were helped to develop a color-coded music notation they used perform music for the Catholic church services (Redmon, 2010).

Distinct sacred and secular Western classical music traditions played an important role in the development of music education in early America. The English colony established in Virginia in 1607 had much less interest in systematic public music education for everyone than the Northern English colonies did (Labuta & Smith, 1997; Mark & Gary, 1992). The Northern colonies were adamantly pro systematic church singing and against secular music for leisure (Labuta & Smith, 1997). In 1640, the Northern Puritan colonies published the *Bay Psalm Book*, the first American songbook, designated for church services, and by the 1720s, multiple singing schools were established in New England to improve church singing (Labuta & Smith, 1997; Mark & Gary, 1992). In the 1770s, in Pennsylvania and North Carolina, Moravian settlements became centers of German and Eastern European musical heritage (Mark & Gary, 1992). The Moravians, through their German culture, valued music both as a part of religious service and a part of community life; they performed European symphony, opera, and chamber music and organized free vocal and instrumental music education (Abeles et al., 1995; Mark & Gary, 1992; Rothrock, 1987). During the 1700s, in Virginia, music education was mostly private, except for a few public singing schools (Colwell et al., 2013; Mark & Gary, 1992).

Music Education in the United States Public Schools

The long and rich history of curricular music education in the US public schools began in the 1837-1838 school year, when, influenced by European schools of music education, a choir director and organist named Lowell Mason volunteered to teach vocal music without compensation at the Hawes School, a public elementary school in Boston, Massachusetts (Abeles et al., 1995; Birge, 1937; Humphreys, 2017; Keene, 1982). In 1838, the Boston city school board

voted to include music in the curricula of several schools, and by 1872, music offerings expanded to all public schools in Boston (Abeles et al., 1995; Birge, 1937). This success was regarded as the beginning of the music advocacy, a movement that engages teachers, students, parents, musicians, and other stakeholders in justifying the value of music to legislators and to the lay audience (Mark & Gary, 1992; Mark, 2002, 2007; NAFME, 2019).

In the early 19th century, vocal music instruction was offered in US public schools in Buffalo, New York; Baltimore, Maryland; Washington, D.C.; Louisville, Kentucky; and Cincinnati, Ohio (Mark & Gary, 1992). By the later part of the 19th century, most of the US public high schools (Grades 9-12) offered curricular four-part choral singing, and a small percentage of schools offered extra-curricular instrumental ensembles and general music (Colwell et al., 2013; Colwell et al., 2018; Mark & Gary, 1992). This distinction between curricular and extra-curricular courses, as well as course classifications of vocal (such as chorus), instrumental (such as orchestra and band), and general music, have still been in use in the 21st century (Parsad et al., 2012).

The first attempts to standardize high school music education in the US were made in 1902, at the New England Educational League, an educators' conference in Boston (Birge, 1937; Keene, 1982). The first US high school music curriculum committee was appointed and produced a 576-hour curriculum prescribing music classes 4 hours a week for each of the 4 years of high school; the curriculum included music theory and composition, instrumental and vocal ensembles, and music appreciation (Birge, 1937). This curriculum was implemented in Chelsea, Massachusetts, in 1906 as 1 hour a week singing course and laboratory experiences outside of the school day: comprehensive musicianship courses and instrumental ensembles (Birge, 1937; Keene, 1982). This was the first attempt in the US to formalize music curriculum development—

to involve a task force of music educators and administrators in devising educational standards and curricula later adapted on the classroom level (NAfME, 2021; New York State Department of Education, 2023).

In the first half of the 20th century, public school music education continued developing across the country. The first high school instrumental music credit courses were offered in 1905; by the 1920s, 278 string orchestras and 88 wind bands were established (Colwell et al., 2018). Music teacher advocacy continued to play a very important role. One example was the establishment of the first in the US school string orchestra courses. In 1910, Boston Public Schools music supervisor Albert Mitchell went to Europe to study the Maidstone Movement, a method of teaching group violin classes popular at that time in England (Deverich, 1987; Wassell, 1954). After returning to Boston, Mitchell created the first after-school group violin class, which, after 3 years, was included in the regular school day (Keene, 1982). Another example was one of the first wind bands established in 1907 in Connerville, Indiana; the music supervisor, W. Otto Miessner, gave short private band instrument lessons to students whose parents agreed to purchase instruments (Birge, 1937; E. B. Gordon, 1956). These events exemplified the informal curriculum development approach that suggested that teachers addressing genuine classroom needs must be in the center of curriculum development (Elliott & Silverman, 2015).

Unfortunately, these music education advancements did not benefit all American students in equal measure. For the African American population, the 19th century emancipation transitioned into decades of segregation de facto and de jure—schools for African American children received limited funding and low-quality education (Colwell et al., 2013). For example, in the 1930s, in the Tampa area of Florida, used band uniforms of White high school students

were given to high schools for African Americans, and, while high school bands in the Jacksonville area of Florida were open for White students in 1925, African Americans had to wait until 1941 (Groulx, 2016, 2018). Disparities in availability of music education also existed among rural, suburban, and urban public schools. In the beginning of the 20th century, almost 60% of American students lived in rural areas of the South and the West where music education was not accessible (Lee, 1997). Between 1913 and 1920, music educators across the country successfully launched the Community Music Movement that involved college professors in providing materials and instruction for informal community group singing in rural areas (Lee, 1997).

By the middle of the 20th century, US public high school music courses became largely elective, as during the 1945-1991 Cold War, 24 federal educational initiatives directed the emphasis of school education to subjects that could increase the national security, such as science, mathematics, and languages (Colwell et al., 2018; Mark, 2002, 2007; Mark & Gary, 1992; Moon, 2006; National Museum of American History, 2000). Only in 1994, for the first time after the Cold War, the federal legislation Goals 2000 mentioned fine arts as a subject that students should be proficient in (Elpus, 2013). Nevertheless, public music education continued growing. In 2009-2010, 91% of 31,133 secondary and 2,022 combined elementary and secondary schools across the US offered music instruction (Parsad et al., 2011).

In 2015, the federal educational grant program Every Student Succeeds Act (ESSA) gave more significance to the role of music in public schools, including music in the list of subjects necessary for well-rounded education and providing financial support for music programs and teacher professional development (NAfME, 2015; S. Res. 1177, 2015; The White House, 2015). A 2017 survey of 392 US schools found that over 80% of high schools offered band and chorus;

about 40% offered orchestra, general music, jazz band, and marching band; about 20% offered music theory and Advanced Placement (AP) music theory, music appreciation, and instrumental music lessons; other courses, such as piano and guitar, were offered on a less frequent basis (Give a Note Foundation, 2017). High school music courses listed in the most recent national and Virginia state high school music curriculum development frameworks included a variety of course types, such as alternative music ensembles (such as pop, rock, jazz, or other contemporary or specialized vocal or instrumental ensembles); band; chorus; composition; general music; guitar; music technology; music theory; piano; and orchestra (Board of Education, Commonwealth of Virginia, 2020; NAFME, 2020).

By the 2020s, music education in the US has significantly grown, but the same unfortunate disproportionalities in accessibility did not go away. Between 1982 and 2008, around 60% of White children consistently had access to art education, whereas the percentage of African American and Hispanic children with access such education decreased from about 50% in 1982 to less than 30% in 2008 (Americans for the Arts, 2008). Salvador and Allegood (2014) investigated curricular and extracurricular music course offerings in 88% of Detroit, Michigan, and Washington, DC, metro areas public schools and discovered that high schools with large non-White student populations were less likely to offer curricular music instruction in the Detroit metro area and extracurricular music instruction in both, Detroit and Washington, DC, metro areas.

The State Level Music Education Policy in Virginia

In Virginia, the role and responsibility of the state regarding education was defined in the Constitution of Virginia, signed in 1776 and subsequently amended (The Center for History and New Media at George Mason University, n.d.). Specifically, the General Assembly of Virginia

was made responsible for implementing and partially financing high quality free educational programs for all school age children (Va. Const. art. VIII, § 1; Va. Const. art. VIII, § 2). Since 1971, the Virginia Board of Education, the supervising organization for public education in the Commonwealth, prescribed the Standards of Quality for Education, which the General Assembly legislatively enacted in 1972 and periodically revises (Virginia Department of Education [VDOE], n.d.-d; VDOE Office of Policy, 2016; Va. Const. art. VIII, § 2). More specifically, the Standards of Quality included a requirement for local school boards to create and implement fine arts instructional programs and identified music as a course offering (Virginia's Legislative Information System, n.d.-a). Since 2004, the Standards of Quality have mandated public schools to offer general music in Grades K-5, but teaching music in middle and high schools has not been required, even in the latest revision of the legislation (Education, 2019a, 2019b; Virginia's Legislative Information System, n.d.-b). This was different from 44 other states that have required offering fine arts in middle and high schools (National Center for Education Statistics [NCES], 2018).

School staffing requirements delineated in the Standards of Quality have undergone multiple revisions. In 1970, Virginia elementary school teaching certification requirements included completion of three credit hours of college music courses that prepared general classroom teachers to incorporate music in daily instruction; however, this requirement was later eliminated (Stinnett & Pershing, 1970; Virginia Administrative Code, 2018). From 2004 to 2019, the Standards of Quality included the requirement of employment of five visual art, music, and physical education specialists per 1,000 K-5 students, and there have not been guidelines on secondary school music personnel (Education, 2019b; Virginia's Legislative Information System, n.d.-b). Even though the Standards of Quality have not required public schools to offer

music beyond K-5, the VDOE has led the formal high school music curriculum development in the state (VDOE, 2022c; Virginia's Legislative Information System, n.d.-c). For example, the 2006 K-12 Music Standards of Learning (SOLs) were revised in 2013 and 2019 (Board of Education, Commonwealth of Virginia, 2006, 2013, 2020).

As high school music education in Virginia has not been required by the state law, the state's school divisions (local educational agencies referred to as districts in other states; the term school divisions will be used in this study for Virginia local educational agencies) could set their unique high school music education requirements. Studying these differences and potential disparities required a special approach.

Theoretical Framework

In the late 19th century, physical and social scientists proposed that it would be more effective to study a phenomenon through its interaction with the environment rather than in isolation and developed the concept of social systems, complex social phenomena with hierarchically organized interacting sub-parts (Hoy & Miskel, 2013; Meadows, 2008; von Bertalanffy, 1968). In the second half of the 20th century, social science researchers defined organizations as complex social systems, structures comprised of interdependent components, people, goals, job expectations, and relationships that continuously engage in dynamic interactions with one another and with the environment (Hoy & Miskel, 2013; Katz & Kahn, 1978; Parsons, 2007; Social systems theory, 2006; S. L. Watson et al., 2008). Getzels and Guba (1957) were among the first to apply the systems view to the realm of administration when they suggested that organizations are systems that embody interactions of pre-determined hierarchical job statuses with human needs and aspirations.

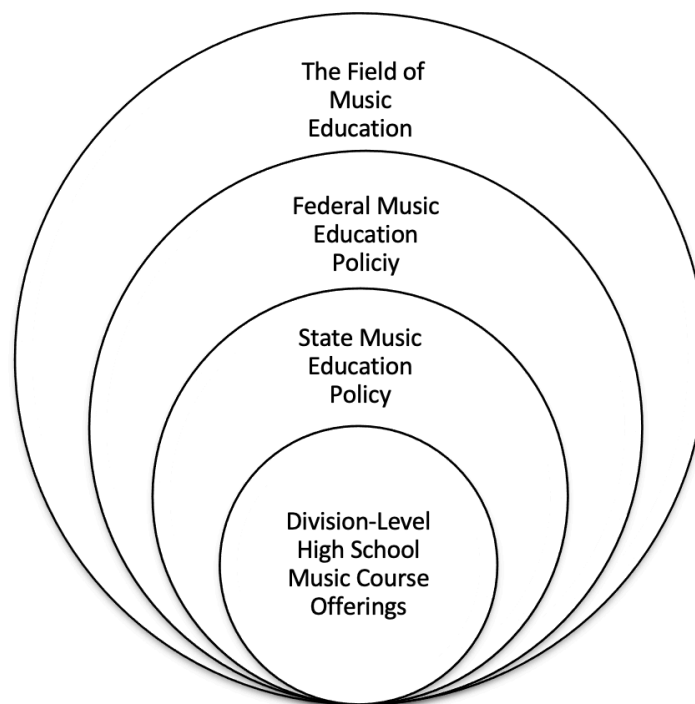
A Virginia school division-level set of high school music course offerings was considered in this study as a phenomenon and a part of a complex social system. As established earlier, multiple factors influenced the development of course offerings: policies, traditions, racial/ethnic demographics, geographic locations, advocacy, curriculum development approaches, and socio-economic status (SES). Thus, to better understand the state of Virginia high school music education, I examined Virginia division-level high school music offerings in multiple contexts. One social systems theory, the ecological systems theory, attempted to explain the influence of environment on human development by hierarchically organizing interacting environmental settings: (1) a microsystem—a physical location, a particular subject, or an event a person engages with; (2) a mesosystem—a larger level of interaction of two microsystems; (3) an exosystem—a level of microsystems interaction that does not directly involve a particular subject involved in a microsystem; and (4) a macrosystem—a large societal level (Bronfenbrenner, 1977; Vest Ettekal & Mahoney, 2017). The ecological systems theory was applied to studying Virginia division-level high school music course offerings: through examinations of the dynamic relationships among the four units of society, the field of music education, the US federal government, the Virginia state government, and the school divisions.

Figure 1 illustrates a view of Virginia public school division level music course offerings as a sub-part of the larger field of music education policy. Virginia divisions' high school music course offerings were considered as a microsystem existing within the exosystem, the state educational policy, as the state SOLs and guidelines for music education determine the content of divisions' music programs (Board of Education, Commonwealth of Virginia, 2020; Commonwealth of VDOE, 2015; Williamsburg-James City County Public Schools, 2019a). Virginia state-level music education policy were considered as a sub-part of the federal

educational policy influencing the course of music education through governmental educational initiatives, such as the ESSA that included music in the list of subjects necessary for well-rounded education. Virginia further individualized the ESSA by making music education compulsory in elementary schools and allowing local School Boards to make decisions on secondary music education (Education, 2019a, 2019b; NAFME, 2015; S. Res. 1177, 2015). Federal music education policy were considered as a sub-system of the macrosystem of the entire field of music education shaping federal policies through research, advocacy, and stakeholder input (F. C. Fowler, 2013). For example, the Music Education Policy Roundtable (2021), a conglomerate of 43 music organizations, recently advocated for increases in governmental funding for art education.

Figure 1

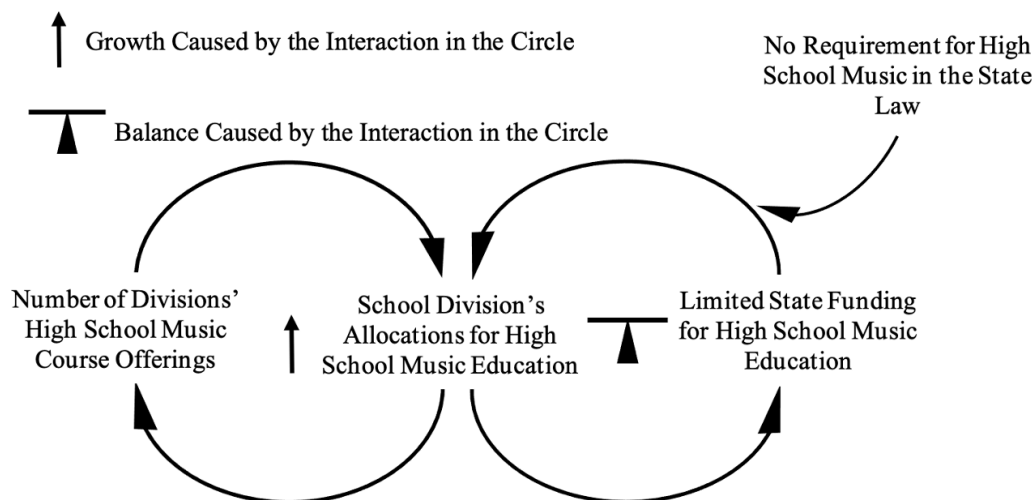
A Social Systems View of Virginia Public School Music Education Policy



Social systems theorist have developed various logical maps to study patterns of interaction among parts of social systems (Meadows, 2008; Senge, 2006; Senge et al., 2012). Senge (2006) designed multiple archetypes, such as the Limits to Growth depicted in Figure 2 as applied to of interactions between local and state music education policy levels. The circle on the left represents an interaction between division-level high school music course offerings and division allocations for high school music. The vertical arrow represents growth caused by this interaction—the more funds a school division designates for music programs, the more teaching positions and materials are budgeted. The scale inside the circle on the right represents a balancing action caused to the first circle - the absence of state funds for high school music education results in lower division-level allocations for high school music. Outside of the circle is the limiting factor that causes the balancing circle to exist. As high school music was not defined as compulsory in Virginia, logically, school divisions could prioritize financing courses required by the state law.

Figure 2

Virginia Public School Music Education State and Division Policy Levels' Interactions



Detecting patterns of interactions within social systems has helped educational leaders to focus on a right path in addressing challenges. Senge's (2006) Limits to Growth archetype was designed to determine a factor impeding progress of multiple parts of a social system. Senge recommended making changes within a system starting with changes to that limiting factor. Such an approach was evident in recent actions of the leadership of the Virginia Music Educators Association (n.d., 2021b), a state level branch of the NAfME. At a recent Virginia state legislative session, the Virginia Music Educators Association advocated for including one separate fine arts credit in high school graduation requirements, which most recently were allowed students to choose either a fine arts or a career and technical education course.

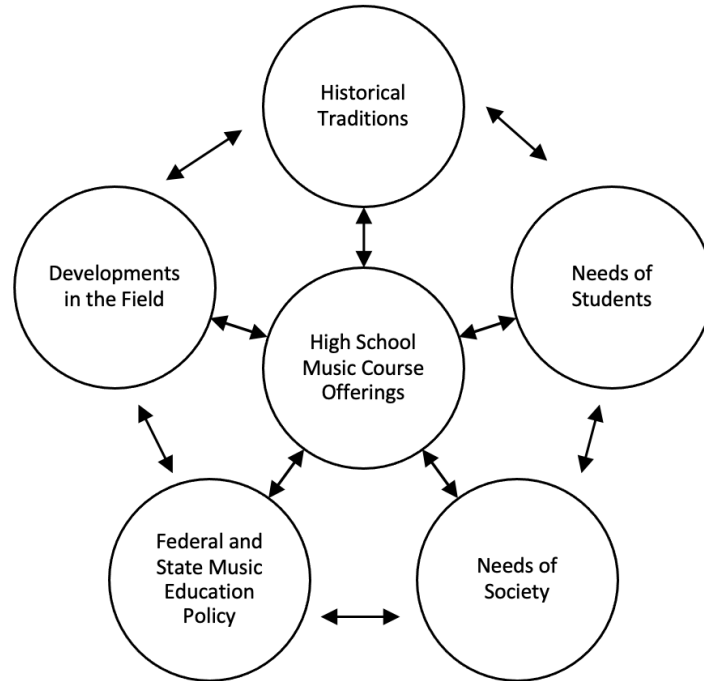
Therefore, as the social systems theory suggested, multiple societal, philosophical, and subject matter sources influenced development of division-level high school music courses.

A Social Systems View of Curriculum Development in Music Education

In his 1949 work on categorizing curriculum development, Ralph Tyler (2013), one of the earliest influential American curriculum theorists, recommended considering each possible source of curriculum. Figure 3 illustrates a social systems view of possible music curriculum sources borrowed from curriculum theories and field practices. Directionality of arrows suggests that all these sources are important in curriculum development and change to one source could result in changes to all. I defined these sources and explained their potential interactions.

Figure 3

Possible Sources for Development of Division-Level High School Music Course Offerings



Needs of Students. Curriculum theorists suggested that various levels of student needs, basic, developmental, psychological, individual, and subject matter related, as well as student interests should be evaluated in curriculum development (Abeles et al., 1995; Cowden & Klotman, 1991; W. R. Gordon et al., 2019; Posner & Rudnitsky, 1997; Tyler, 2013). For example, recent technological advances allowed to instantaneously create and share music; thus, there was a need for technology integration in music programs (W. R. Gordon et al., 2019; Oliva, 2009; Tobias, 2013).

Needs of Society. Curriculum theorists suggested studying societal needs in relation to student needs and designing programs resembling real world experiences (Glatthorn et al., 2019; Oliva, 2009; Tyler, 2013; West, 2015). Oliva (2009) defined six levels of society: human,

international, national, state, community, and neighborhood. W. R. Gordon et al. (2019) suggested curriculum developers to consider multiple aspects, such as, shifts in national and state population, changes in local housing, job market, improving education, and providing more entertainment. For instance, studying national and international job markets helped to define knowledge, skills, and specialized experiences students needed to succeed (Cowden & Klotman, 1991; W. R. Gordon et al., 2019; Tyler, 2013).

State Music Education Standards of Learning. States have published music education standards that served as a point of reference for music program development (Guitar Foundation of America, n.d.-a). For example, the 2020 Virginia Music SOLs included standards for the following high school courses: music, music theory, four levels of instrumental music, and four levels of choral music (Board of Education, Commonwealth of Virginia, 2020).

Research in the Field of Music Education. My Internet searches revealed that there were over 40 professional journals and over 40 book publishers disseminating music education research, as well as higher education research organizations, such as the Center for Music Research at Florida State University (n.d.), and research associations, such as the International Music Education Research Centre (2021) in London (PublishersArchive, 2018; Syracuse University Libraries, 2020).

Music Educators Professional Associations. Music educator associations have influenced field practices through standards and program development recommendations. For example, the 2014 National Music Standards developed by the NAFME (n.d.-a) included the following high school music courses: composition/theory, music technology, guitar/keyboard/harmonizing instruments, and ensemble. More specialized standards were published by such organizations as the American String Teachers Association and the Guitar

Foundation of America (n.d.-b; S. J. Benham et al., 2011). The Virginia Music Educators Association (2021b), a federated state unit of the NAFME, has governed the Virginia Band and Orchestra Directors Association (2020a), the Virginia Association of Music Education Administrators (2021), and the Virginia Choral Directors Association (2020b). These organizations have published specific to Virginia music program guidance (Virginia Choral Directors Association, 2020b).

These analyses of interdependence among curriculum sources illustrated the essence for what Ornstein and Hunkins (2013) called “the curriculum development game...[in which] players...collaborate for diverse and particular ends” (p. 179). Ornstein and Hunkins suggested that multiple actors were engaged in the curriculum development game: students, principals, curriculum leaders, assistant superintendents, superintendents, boards of education, lay citizens, the federal government, state educational agencies, regional government-funded research centers, and other participants, such as professional educator associations and private foundations. However, while some curriculum development theorists asserted the curriculum development game was hierarchical, others stressed that the number, types, and the levels of autonomy of stakeholders could not be fully defined (Abeles et al., 1995; Clinton, 2015; Cowden & Klotman, 1991; Elliott & Silverman, 2015; Oliva, 2009; Regelski, 1975).

The Curriculum Development Game

Research on curriculum development outlined two approaches to the curriculum development game, the technical/rational/systematic, referenced to in this study as formal, and the nontechnical/nonrational/ nonsystematic, referenced to in this study as informal (Cowden & Clotman, 1991; Ornstein & Hunkins, 2013; Sowell, 2000, 2005).

The Formal Approach. The formal approach advocates incorporated three logically pre-planned curriculum development stages: analysis, development, and evaluation (Brown & Green, 2015). For example, Tyler's (2013), Taba's (1962), Clinton's (2015), Hewitt's (2006), and Snyder and Sur's (1959) models contained: examining student needs, selecting and organizing content and experiences, and implementing and evaluating curricular programs. In his Hierarchical Model of Levels and Sectors of Curriculum Planning, Oliva (2009) identified 8 curriculum development game arenas: (a) classroom level where implementation and evaluation occur; (b) team, grade, and departments level that select and sequence content, adapt differentiation, create goals, and make other instructional decisions within authority levels; (c) school-wide curriculum committees that decide on program offerings and content and plan for school improvement based on student performance and teacher and family surveys; (d) division-wide curriculum committees that decide on what school division programs should be offered and make improvement recommendations; (e) state educational agencies that serve as the highest authority in curriculum development, monitoring and auditing instructional programs and allocating funds; (f) regional collaborations of curriculum developers; (g) national level legislations, grants, and research guidelines and public opinion; and (h) field contributions of international professional associations, international-scale assessments, and global direction. Pellegrino et al. (2015) illustrated this formal approach by recommending educational organizations to develop secondary performance classes curricula based on the 2014 National Core Music Standards and to evaluate student learning by carefully devised assessments of student mastery of specific knowledge and skills.

The Informal Approach. The informal approach purported that one person could not unite all elements of the complex process of curriculum development with a single theory, as

curriculum has been constantly evolving, intuitive, and impossible to break down into steps (Brown & Green, 2015; Elliot & Silverman, 2015; Ornstein & Hunkins, 2013; Sowell, 2000, 2005; Walker, 2003). The informal approach proposed more practice-oriented curriculum development: inviting students and teachers to co-create curriculum content and making curricular decisions on school, department, and classroom levels (Brown & Green, 2015; Elliott & Silverman, 2015; Ornstein & Hunkins, 2013; Sowell, 2000, 2005; Walker, 2003). Goals of the informal approach were arrived to in deliberations, in which multiple alternatives were considered and the best was agreed upon (Elliott, 1994; Ornstein & Hunkins, 2013; Walker, 1971). McCutcheon (1995) presented the solo and the group deliberation models, with the solo model being individual teacher's practical curricular adjustments based on field experiences. Barrett's (2005) example of reconceptualization of classroom routines illustrated both solo and group deliberation models. A high school band teacher, realizing the value of teaching chamber music and composition, designated 2 days a week for small group practices and music composition with technology. When some of this teacher's colleagues questioned whether these activities were worthy of time taken away from performance preparation, the teacher insisted that learning how to work independently and develop musical creativity improved student musicianship and positively affected large-group performances and continued this practice.

Blended Approaches. In educational practice, both the formal and the informal approaches have been used simultaneously. According to Hewitt (2006), a school district-level high school program of studies as a policy had to clearly articulate and explain organization of courses, be accepted by teachers and families, and had to be easily replicated across a district (Hewitt, 2006). Certainly, school district and building levels administrators could establish rationale for changes, calculate improvement costs, allocate local financial resources, present to

school boards, identify competencies and qualifications of administrative and instructional personnel, set guidelines for staff development, and facilitate curriculum revisions (J. L. Benham, 2016; Cowden & Klotman, 1991; Major, 2013; Poquoson City Public Schools, 2016; Rebore, 2012). But so could teachers, students, families, and community members do, or at least help with. Rather than being confined to classroom matters, teachers had to be in the center of decision-making regarding every part of division-wide program development (Abeles et al., 1995; Elliott & Silverman, 2015; Regelski, 1975). Thus, district-level music curriculum development had to be approached comprehensively, with considerations for multiple important factors and with appropriate stakeholder engagement. This approach influenced the conceptual framework of the study designed for investigating the complex division-level music curriculum development processes in Virginia.

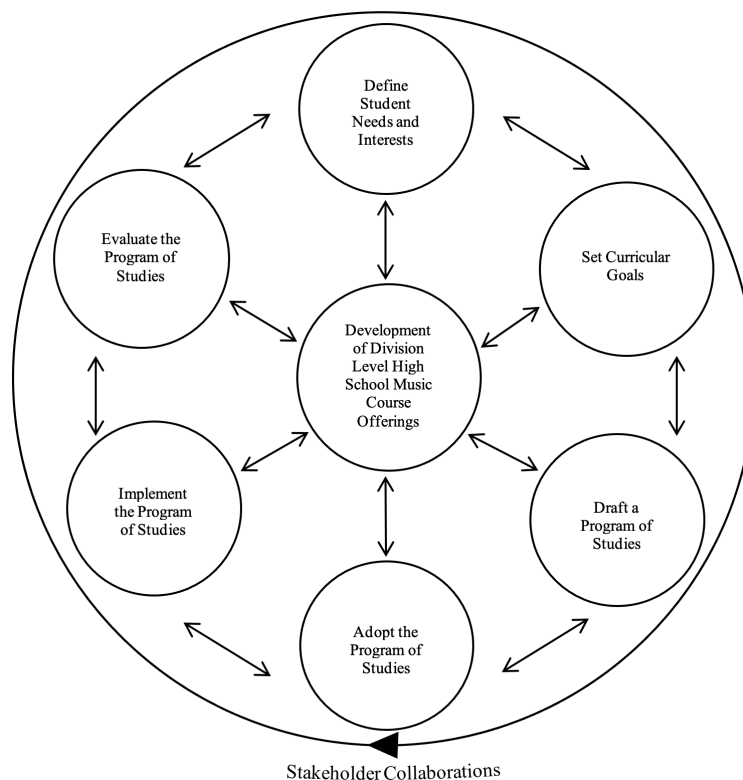
Conceptual Framework

A division-level high school program of studies was considered in the study as a regulatory educational policy, a set of administrative rules that affected large groups of stakeholders (F. C. Fowler, 2013). The educational policy process was defined by F. C. Fowler (2013) as “a sequence of events that occurs when a political system considers different approaches to public problems, adopts one of them, tries it out, and evaluates it” (p. 14). F. C. Fowler specified 6 policy stages: (a) policy definition, when a problem involved multiple stakeholders and tentative solutions were proposed in an expressive political language; (b) agenda setting, when the problem was officially considered through the lens of the latest developments; (c) policy formulation, when a policy was expressed in writing; (d) policy adaptation, when a proposed written policy underwent a chain of administrative approvals; (e) policy implementation, when a policy was implemented and further modified at the

implementers level; and (f) policy evaluation, when a policy practicality and accuracy were assessed with various research methods. Figure 4 illustrates the conceptual framework for the study, the curriculum development policy arena based on the social systems theory considerations, on F. C. Fowler’s policy process, and on multiple formal and informal curriculum development models of prominent education and music education curriculum theorists. The conceptual framework reflected that change could be collaborative and unpredictable—the arrows in Figure 4 connect parts of the conceptual framework without a particular order. Even if a school division had a formal program of studies development process, a call for innovation could emerge from any social system part.

Figure 4

A Model of Development of Division-Level High School Music Course Offerings



Define Student Needs and Interests

This stage involved presenting an evidence-based call for change and proposing possible realistic solutions (F. C. Fowler, 2013). Curriculum theorists suggested that student needs and interests could be determined through examinations of gaps in student development, contemporary life, learning theories, and developments in the field (Glatthorn, 1994; Taba, 1962; Tyler, 2013). Tyler (2013) suggested studying student needs and interests with a variety of methods: observations, student and family interviews, questionnaires, assessments, and public records searches. Edelson (1972) recommended giving high school students annual surveys to ask in what music courses students would like to enroll.

The formal curriculum development approach viewed this stage as generalizing findings to the entire student population. For example, Pendegast and Robinson (2020) surveyed interests of 827 Grades 6 through 12 students in two large school districts. 369 participants took music classes in school, 254 took music outside of school, and 204 did not take music. The results of a 4-point Likert-type scale survey ranked music classes according to student interest, from more to less, as: piano/guitar, music composition with technology, popular music group, large ensemble, music history/theory, and world music group. Among major sources for examining student needs were the NAFME's (2020) Opportunity to Learn Standard that recommended a basic high school music program to have at least one performing ensemble for each 450 students, and a quality program to have an additional alternative performing ensemble for each 450 students.

Informal approaches to defining student needs and interests included individual or group teacher discussions and analyses of real needs of real students (Elliott & Silverman, 2015). Clinton (2015) recommended music education leaders to continually listen to teacher feedback and proposals to change and to give every teacher suggestion a thorough consideration.

Oliva (2009) identified seven levels of curriculum development: classroom, school, school district, state, regional, national, and world. Therefore, curriculum leaders had to analyze multiple perspectives, international, national, state, local, and classroom and to merge formal and informal approaches to accurately diagnose student needs in order to chart curriculum goals.

Set Curricular Goals

This stage involved creating policy goals that addressed educational agencies' standards and guidelines, developments in the field, and discussions in professional literature and in the community of practice (F. C. Fowler, 2013). Curricular goals had to be conceptualized based on educational philosophies and on examinations of multiple sources for what could work for student audiences (Abeles et al., 1995; Hewitt, 2006). For example, in professional literature, Abeles et al. (1995) defined successful music programs as characterized by quality and quantity of course offerings and by teaching to lasting values of music as an art. Abeles et al. proposed music courses should: (a) teach children something new; (b) offer music education experiences that are valid in professional field and could serve students after graduation; (c) structure courses around fundamental musical concepts that lead to wider application of learned material across the field of music; (d) allow for representation of many musical styles, cultures, and historical periods; (e) make experiences relevant to students; and (f) teach what students are capable of learning. The NAFME's (2020) Opportunity to Learn Standards as well contained recommendations for high school music course offerings. With formal curriculum development, curriculum goals had to be created in professional development sessions led by school district administrative personnel. With informal curriculum development, teachers could initiate and lead the process; for example, in the second half of the 20th century, Jacqueline Dillon was one of the first to build large-group heterogeneous string orchestras (Tast, 2016).

Draft a Program of Studies

This stage involved presenting a policy in a written form (F. C. Fowler, 2013). At the school district level, this usually was a program of studies, a document that described graduation requirements and course selections (York County School Division, 2020). Division-level programs of studies in Virginia had to formally align with the Standards for Accrediting Public Schools, which required two credits of either world languages, or fine arts, or career and technical education courses taken in high school for a Standard Diploma or one hour of these for an Advanced Studies Diploma or a Modified Standard Diploma (VDOE, 2019a; York County School Division, 2020). Examples of the formal curriculum development included building curriculum development advisory teams that involve teachers, administrators, field professionals, parents, and students (Glatthorn et al., 2019; Ornstein & Hunkins, 2013). For example, the Arlington Public Schools in Virginia (2021) monthly gathered the Advisory Council on Teaching & Learning; 40 to 50 stakeholders reviewed the division-wide curriculum and produced recommendations for improvement. With formal curriculum development, pilot testing and field testing of curricular initiatives ready for adoption were important (Hewitt, 2006). With informal curriculum development, teacher solo and group deliberations dominated—teachers proposed and developed educational programs that served real student needs (Elliott & Silverman, 2015).

Adopt the Program of Studies

This stage involved assessment of a program of studies draft by rule-makers, chief academic officers, school boards and securing funds (F. C. Fowler, 2013). For example, the York County School Division (2021b) 750-student high school music program's 2022 projected costs were \$679,468, with 94% of the costs allocated to teacher salaries and benefits, and the division's Superintendent cabinet annually gathered community input, created a comprehensive

estimate budget justified by a program of studies, and sought a school board approval (York County School Division, 2021a).

Music education researchers assert that at this stage, both formal and informal curriculum development approaches are vital. Sorenson and Goldsmith's (2018) 10 steps for effective budgeting exemplified a formal curriculum development approach that could be used on this stage: (a) determining allocations, (b) budgeting for fixed expenses, (c) making budget decisions involving all stakeholders, (d) planning for potential expenditures, (e) saving, (f) avoiding borrowing, (g) developing a budget plan, (h) deciding on budget goals and stick to budget deadlines, (i) evaluating budgets, and (j) adhering to a budget. In educational practice, when school budget deficits occurred, elective programs were first to cut, and district level leaders played important roles by practicing informal curriculum development, continually advocating for music programs: participating in music education policy coalitions, including music education in a school vision, building collaborative environment among music teachers, and fostering teacher leadership (J. L. Benham, 2012, 2016; Dillon-Krass & Straub, 1991; Music Education Policy Roundtable, 2021; NAFME, 2019). Clinton (2015) asserted that state and budget allocations, as well as fundraising and parental support groups, helped to offset music program expenses. Teacher input on this stage could be crucial; for example, a music teacher could write a grant to obtain musical instruments to enhance his or her music program or to open one (Great Falls Public Schools Foundation, 2021; Save the Music Foundation, 2019).

Implement the Program of Studies

On this stage, a program of studies is implemented on the classroom level. F. C. Fowler (2013) suggested that success of a policy implementation had to be determined by knowledge and skills of implementers, and that curriculum leaders at the district level had to skillfully

combine both formal and informal curriculum development approaches. Practicing formal curriculum development, curriculum leaders coordinated implementation of a program of studies through building an infrastructure and a capacity of those involved in implementation: organizing curriculum committees, securing financing for course expenses, scheduling, hiring and developing personnel, and keeping stakeholders informed on what has been accomplished (Clinton, 2015; Hewitt, 2006; Rebore, 2012). Jacobs (2010) proposed three interlocking structures for curriculum implementing. First were long and short-term scheduling demands, graduation requirements, daily schedule, and the latest innovations, such as advisory and college transition program. Second was student grouping—institutional (by gender, age, proficiency, type of school, and school function); instructional (by skill development, needs, social learning, and individualized learning); and independent (by clubs, online courses, work-related experiences, and community service). Third were groupings and affiliations of teachers and staff, departments, grade levels, school building levels, and outside-of-school collaborations. The NAfME's (2020) Opportunity to Learn Standards included guidelines for staffing, professional development, program materials, and facilities for every course defined in the National Music Standards (National Coalition for Core Arts Standards, 2014). With informal curriculum development, program of studies implementation was entirely classroom-based: teachers and students decided on what worked and continually adjusted, while administrators continually solicited teacher suggestions (American School Band Directors Association, 1997; S. J. Benham et al., 2011; Clinton, 2015; Elliott & Silverman, 2015; Hedden, 2021; Odegaard, 2009).

Evaluate the Program of Studies

The final stage of the program of studies development process was evaluation. According to F. C. Fowler (2013), policy evaluation for practicality, accuracy, and goal achievement with

various qualitative and quantitative methodologies had to be set forth as a continual process, and curriculum leaders were responsible for wise selection of effective evaluation means. The Joint Committee on Standards for Educational Evaluation (2021) published program evaluation standards for North American educational organizations. These standards contained specific guidance on how to judge quality of educational programs considering evaluation needs and uses: practicality, effectivity, ethics, accuracy, and accountability (Yarborough et al., 2011).

Glatthorn et al. (2019) and Fitzpatrick et al. (2011), both formal curriculum development approach proponents, recommended developing comprehensive plans for evaluating every aspect of instructional programs, including time and financial allocations, teachers, schedules, and enrollments. The NAFME (2020) Opportunity to Learn Standards introduced four parameters for music education program evaluations: curriculum and scheduling, staffing, materials and equipment, and facilities. Logic models, program evaluation models used in formal curriculum development, evaluated program inputs, endeavors, products, and short- and long-term impacts to determine whether program objectives were met (Fitzpatrick et al., 2011). Informal curriculum development approach evaluations included gathering informal feedback from a variety of stakeholders, evaluating audience response at school concerts, gathering personal impressions of school concert performances, conducting classroom observations, and collaborating in professional learning communities (Clinton, 2015; Eisner, 2002; Fitzpatrick et al., 2011).

The Cyclical Nature of Curriculum Development

In both formal and informal curriculum development, the evaluation was considered a beginning of a new curriculum development cycle. Oliva (2009), a formal curriculum development approach advocate, recommended that curriculum re-evaluation should take place every 5 years, with the purpose of determining whether current needs of students are met.

Informal curriculum development approach advocates Elliott and Silverman (2015) suggested curriculum re-evaluation had to be continual and teacher-led. As national and state standards have undergone continual revisions, division-level and classroom curricula have evolved, and music curriculum leaders had to be able to effectively incorporate both formal and informal approaches, continually evaluating curriculum needs through gathering regular feedback from stakeholders, community, students, parents, and teachers (Abeles et al., 1995; Clinton, 2015; Fairfax County Public Schools, 2014; W. R. Gordon et al., 2019; National Policy Board for Educational Administration, 2015; Poquoson City Public Schools, 2021).

This conceptual framework helped me to investigate intricate interactions and circumstances that constituted division-level curriculum development processes in Virginia. Using this conceptual framework, I attempted to gather some understanding of why particular high school music courses are offered in particular areas of the state and what curriculum leaders across the state did to improve quality of high school music education.

Problem Statement

Research showed that race/ethnicity, socio-economic status, and geographic location explained disparities in high school music course offerings. A survey of over 500 US secondary school principals revealed schools with lower SES offered significantly fewer music courses than schools with higher SES, and rural public schools offered less variety of music courses than urban and suburban (Abril & Gault, 2008). In 2004, among graduated US public high school seniors enrolled in band, choir, and orchestra, 65.7% were of a high SES and White (Elpus & Abril, 2011).

An initial examination of select Virginia high school division-level programs of studies revealed disparities in the number and the variety of high school music courses. In the 2019-2020

school year, four Virginia school divisions with similar student populations and operating budgets—Augusta County Public Schools (2019a, 2019b); Bedford County Public Schools (2019a, 2019b); Williamsburg-James City County Public Schools (2019a, 2019b); and York County School Division (2019, 2020)—delivered very different high school music programs (VDOE School Quality Profiles, n.d.). As shown in Table 2, Williamsburg-James City County Public Schools was the only one of these divisions to offer three levels and/or sub-categories of string orchestra, whereas the Augusta County Public Schools was the only one that offered piano and did not offer AP music theory. Levels referred to difficulty/progression, such as beginning, intermediate, advanced, artist, I, or II, and so forth, as classified in the current Virginia Music SOLs; sub-categories referred to instrumentation, voicing, and other classifications, for example, mixed chorus, girls’ choir, percussion ensemble, or jazz ensemble (Board of Education, Commonwealth of Virginia, 2020).

Table 2

A Comparison of Types, Advancement Levels, and Sub-Categories Among High School Music Course Offerings in Four Selected Virginia School Divisions

School Division	2018-2019 Student Population	2019-2020 Operating Budget	Number of Advancement Levels and/or Sub-Categories for Each High School Music Course Type						
			Band	Chorus	Guitar	Piano	Orchestra	Music Theory	Advanced Placement Music Theory
Augusta County	10,407	\$110,100,207	4	2	2	2	0	2	0
Bedford County	9,463	\$107,729,340	3	3	0	0	0	0	1
Williamsburg-James City County	11,813	\$142,515,133	4	3	0	0	3	0	1
York County	12,982	\$145,544,545	14	4	1	0	0	1	1

Table 3 depicts demographic characteristics of the four school divisions. Census defined large suburban areas as located outside of large cities and inside urbanized areas with population over 250,000, whereas rural fringe referred to rural areas located either within 5 miles from urbanized areas or within 2.5 miles from urban clusters (NCES, n.d.). Augusta County and Bedford County had similar demographics, and both were rural, but the Bedford schools' course offerings were not as rich and diverse as the Augusta County's (VDOE School Quality Profiles, n.d.; NCES, n.d.). Both York County and Williamsburg-James City County were suburban areas and had more racially/ethnically diverse student population than Augusta County and Bedford County did; however, the York County School Division offered five course types with 21 levels and/or course sub-categories, whereas the Williamsburg-James City County Public Schools offered four course types and 11 overall levels and/or sub-categories (NCES, n.d.; VDOE School Quality Profiles, n.d.).

Table 3

The 2020-2021 Student Enrollment and Geographic Location Types of Four Selected Virginia School Divisions

School Division	Race							Economically Disadvantaged Students %	School Division Locality Description
	Black %	Hispanic %	White %	Asian %	Multiple Races %	American Indian %	Native Hawaiian %		
Augusta County	3.2	6.5	84.5	1	4.5	0.3	0.1	34.6	Rural, Fringe
Bedford County	8	4.1	80.4	1.9	5.3	0.3	0.1	37.4	Rural, Fringe
Williamsburg-James City County	18.1	14.5	55.4	2.9	8.7	0.3	0.1	38.1	Suburb, Large
York County	13.2	11.5	57.1	6.3	11.2	0.2	0.4	25	Suburb, Large

Note. The National Center for Education Statistics (n.d.) defines rural fringe localities as rural territories that are 2.5-5 miles in proximity to urban areas. Large suburbs are defined as urban territories with population of at least 250,000 and located close to principal cities.

The proposed study examined what high school music courses are offered in all Virginia school divisions and attempt to determine the nature of possible disparities. Were high school music course offerings available to 46.3% White, 22% Black, 17% Hispanic, and 7.7% Asian Virginia's student populations (VDOE School Quality Profiles, n.d.)? 41% of Virginia school age children were economically disadvantaged (VDOE School Quality Profiles, n.d.). Did they receive high quality music education? Was high school music education less accessible to students in 98 Virginia school divisions (74% of the divisions in the state) classified as rural, distant, or remote (VDOE, 2009; VDOE School Quality Profiles, n.d.)? How did high school music courses offered in 42 Virginia school divisions that were rural and low-income differ from school divisions that were affluent and located in cities, towns or suburbs (NCES, n.d.; VDOE, 2009, 2013)? And how did Virginia school divisions' administrators approach programs of studies development challenges caused by these disparities created by demographic patterns? I developed three research questions.

Research Questions

1. What types and levels of high school music courses (for example, band, chorus, orchestra, piano, guitar, vocal ensemble, instrumental ensemble) were offered in Virginia public school divisions in a given school year?
2. How did offering of each high school music course type in a given Virginia public school division correlate with this school division's select demographic characteristics: enrollment, geographic location, socio-economic status, and race/ethnicity?

3. What formal and/or informal curriculum development approaches were associated with offering of particular types of high school music courses in a representative sample of Virginia public school divisions?

Significance of the Study

In Virginia, each school division could have a unique music education program of studies and practice a unique approach to developing this program of studies, and I believed that these were very useful for practitioners and researchers to learn from (Bedford County Public Schools, 2019b; Klein, 1986; Major, 2013; Williamsburg-James City County Public Schools, 2019a; York County School Division, 2020). Researchers examined high school music programs nationwide and in some states, but no one conducted a detailed examination of high school division-level music course offerings in the state of Virginia. Elpus and Abril (2011) studied nationwide demographics of students enrolled in high school instrumental and vocal music ensembles. Klein's (1986) surveyed music education in 47% of Kentucky school districts and analyzed societal and historical impacts on the development of music education in the state. Recent studies explored public school music education accessibility, such as Shaw and Alueto's (2021) study of music teachers employed across the state of Michigan and of how equitable access of music education to minority students is in the state. Major's (2013) study was the only recent study on the district-level decision-making processes that influence high school music course offerings. A study that might provide more insights into such processes was needed.

The importance of high school music education has been a frequent topic of discussion in educational research. Curriculum theorists suggested that high school music curricula rich in course offerings had to be considered desirable because goals of high school education as of a culminating schooling experience had not to be limited to core academics but include vocational

and avocational experiences that prepare students for post-secondary education (Cowden & Klotman, 1991; Oliva, 2009; Tyler, 2013). Gillespie et al. (2014) established that music curriculum breadth was a positive factor for public school music programs and found that adding additional music courses did not detract student enrollment in previously established music courses, but rather attracted new students into music departments. An examination of high school music course offerings across Virginia and of demographic characteristics that possibly affected the development of music programs in the state could serve Virginia music educators and administrators as a reference and a starting point for change in music education policy. This study was important to conduct because it unveiled strengths and deficiencies in Virginia school divisions' approaches to high school music education and, hopefully, encouraged students, parents, teachers, and school administrators to create solutions to address current disparities in high school music education accessibility.

Definition of Terms

Curriculum development process – developing and organizing educational programs; the term is used in multiple situations, from state-developed frameworks to teacher-written units and lesson plans for a course of study (Sowell, 2000, 2005). In this study, the term refers to the development of course offerings at the school district level.

Curriculum development models – educational researchers' theories of curriculum development process.

Decision-making processes – evaluating options and choosing the best available (Simonson, 2007). In education, decisions are made in consultation with multiple stakeholders involved (Hoy & Miskel, 2013; Hoy & Tarter, 2008).

Formal curriculum development – a strictly outlined curriculum development process, with major stages identified as: definition of needs, creating objectives, implementing, and evaluating (Ornstein & Hunkins, 2013; Sowell, 2000, 2005).

Geographic location (or locality) – Virginia school divisions locale categories are defined by Census and are available on the NCES (n.d.) website. This simplified version of the NCES locales was created for the study to obtain representative samples: (a) city – located in an urban area, (b) town – located 10 or more miles away from an urban area and inside an urban cluster; (c) suburban – located outside a principal city and in an urban area; and (d) rural – located five or more miles away from an urban area or two and a half miles away from an urban cluster.

Informal curriculum development – an approach that emphasizes the importance of students and teachers in decision making and is based on deliberations; this process does not specify curriculum development stages (Ornstein & Hunkins, 2013; Sowell, 2000, 2005).

Music Advocacy – efforts that engage teachers, students, parents, musicians, and other stakeholders in justifying the value of music to legislators and to the lay audience (Mark, 2002, 2007; Mark & Gary, 1992; NAfME, 2019).

Music Standards of Learning (SOLs) – defined by VDOE essential music knowledge and skills students are expected to acquire in the process of taking music courses (Board of Education, Commonwealth of Virginia, 2020).

Racial and Ethnic Groups – the VDOE (2015) and the VDOE School Quality Profiles (n.d.) define seven racial and ethnic groups and use this classification in reporting school divisions and individual school data: American Indian or Alaskan Native, Asian, Black or

African American, Hispanic, White, Multiple Races, and Native Hawaiian or Other Pacific Islander.

Socio-economic status – a term used in social sciences to characterize a family’s educational level and social class, both in the US and in the world; socio-economic status is considered as a predictor of educational outcomes for children and adults (American Psychological Association, n.d.). The VDOE School Quality Profiles (n.d.) report a student as an economically disadvantaged when: (a) a student receives free or reduced-price meals; (b) a student’s family receives assistance; (c) a student is eligible for Medicaid; and (d) a student is a migrant or experiences homelessness.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This thematic literature review examined the development of Virginia high school music course offerings, and the identified themes are the history of high school music course offerings in Virginia, the value of music education in high school, and leading the development of high school music courses at the district level (Creswell, 2012; DeCuir-Grunby & Schutz, 2017; Fraenkel et al., 2015; Savin-Baden & Major, 2013).

The History of High School Music Course Offerings in Virginia

Virginian public school music education embodied hundreds of years of traditions of many musical cultures from all over the world, as well as the aftermaths of centuries of racial discrimination and economical inequalities (A&E Television Networks, 2019; The Library of Virginia, n.d.; Mark & Gary, 1992; Smithsonian Institution, 2021; Virginia Museum of History and Culture, 2021). In 1607, English colonists established the Virginia's Jamestown settlement beside the Native American tribes that had populated the land for thousands of years. Throughout two centuries of conflicts and the settler's attempts to enslave and re-culture the natives, the tribes declined in population. Even up to the early 20th century, Native American secular and religious ceremonial music had only found inaccurate and inadequate representation in public school music curricula (Boyea, 1999; Virginia Department of Historic Resources, 2018; Library of Congress, n.d.; Shear et al., 2015; Shefveland, 2021; Virginia Indian Archive, 2021; Volk, 1994; Wolfe, 2021b). From the arrival of the first African slaves to Virginia in 1619 to the inception of compulsory and segregated public education in the state in 1870, the African

American Virginians received almost no education and passed their musical heritage from generation to generation verbally. Even in the early 1900s, 300 years past the arrival of the first slaves and more than 130 years after opening public schools for all children, African American music was only taught in segregated schools to African American children (Bly, 2021; Boyea, 1999; Butchart, 2020; Daughterity, 2020; McCartney, 2021; Volk, 1994).

1600s–1800s

European secular vocal, instrumental, theater, dance, and military musical traditions were brought into the early 1600s Virginia by English, French, German, Irish, Italian, and Scottish immigrants. Although violins, flutes, harpsichords, drums, and trumpets were popular instruments, these types of music were not considered as essential as sacred singing, from which public music education in America took its roots (Cifaldi, 2001; Hildebrand, 2015; Keene, 1982; Mark & Gary, 1992; McGill, 2021). The earliest archival records of a singing class in the colonial America were found in the 1710 diaries of William Byrd of Virginia, and it is known that music education was an expectation for upper class 18th century Virginia gentlemen. For example, George Washington and Thomas Jefferson played the violin, the most popular instrument for men at the time, and even the first national scale fiddling contest took place in Virginia's Hanover County in 1736 (Britton, 1982; National Oldtime Fiddlers' Contest and Festival, 2021; Salgo, 2000; The Washington Library, 1988; R. D. Watson, 2020). However, it is not Virginia, but Massachusetts is regarded as the birthplace of American public school music education.

Beginnings of the American Public School Vocal and General Music Education. In the 1720s in Boston, as in the 18th century in the South and the West of the US, music professionals ran evening singing schools open to the public intended to improve the quality of

church singing and to provide the opportunities for people to socialize (Birge, 1937; Britton, 1982; Humphreys, 2017; Keene, 1982; Mark & Gary, 1992). The first American music books were church hymnals with tunes and rudimentary instruction for church singing: published in 1640 in Cambridge, Massachusetts, the *Bay Psalm Book* and published in 1721 in Boston J. Tuft's *Introduction to the Singing of Psalm Tunes in a Plain and Easy Method* and T. Walter's *Grounds and Rules of Musick Explained* (Birge, 1937; Britton, 1982; Keene, 1982; Mark & Gary, 1992). By 1800, over 150 church music singing methods were published in the US, and by 1900, over 1,000; these singing methods were also used in schools (Britton, 1982). In August 1838, the Boston School Committee, led by Samuel A. Eliot, the president of the Boston Academy of Music and the mayor of Boston, voted for offering vocal music in public schools, and Lowell Mason became the first US public school vocal music teacher (Abeles et al., 1995; Birge, 1937; City of Boston, 1975; Howe, 1992; Humphreys, 2017; Mark, 2002; Wilson et al., 1988).

First Music Education in the US Cities. In the 1820s, vocal, choral, and general music courses existed in the US public schools located in the cities. By 1837, vocal high school music electives were taught at the high school in Northampton, New England (Gary, 1954). In 1844, Louisville, Kentucky, a prosperous city with a population of 10,000, was the first southern US city to offer music programs in public grammar schools with the goal to approximate the quality of music education of private parochial schools (Humphreys, 2017; Riley, 1990). In Louisville, families financially supported a music program at the Female High School, and in 1861, a music teacher was hired on a state salary (Riley, 1990). Throughout the 19th century, music programs in Rochester, Louisville, and Buffalo were periodically closed and reopened, due to the lack of finances and school leadership support (Riley, 1990; Volk, 1988; Wilson et al., 1988). First

music classes appeared in Cincinnati Public Schools around 1838 as recreational activities taught by general education teachers, and in 1843-1844, two music teachers volunteered to teach without pay and later were hired; by 1847, four years of compulsory chorus were added to the Cincinnati high school graduation requirements (Gary, 1954). By 1865, chorus and general music spread and became compulsory subjects in many US cities (Gary, 1954; Humphreys, 2017; Keene, 1982; Wilson et al., 1988). In 1889, a nationwide survey of 1,078 US cities revealed that music was taught in 338 out of 621 respondents (Wilson et al., 1988). However, this was not the case in Virginia.

Beginnings of Public Music Education in Virginia. Public high school music education came to Virginia later than to the Northern states. From the 17th century to the second half of the 18th century, Virginia social class divisions were prominent: only wealthy had the privilege to hire private itinerant music teachers, and, although music education existed in church-based singing schools, the general belief was that music should only be taught in private schools (Keene, 1982; Mark & Gary, 1992; McGill, 2021).

Historical Precursors. Before the 1861–1865 American Civil War, Virginia had the largest slave population in the country, and the state's economy thrived on the slave trade and export to the cotton plantations of the Deep South (Wolfe, 2021a). During the Civil War, Virginia was a Confederate state, fought for seceding from the Union to keep slavery, and, even after the Civil War, during the 1865–1877 period of Reconstruction, when African Americans were given freedom and legal rights, a significant portion of Virginia's White population considered the right to secede was violated, viewed the changes as imposed, and acted with hostility (Wolfe, 2021a). This explains why, even though the US Congress had passed the 1785 law required each town to reserve land for public schools, and the 1810 Virginia Literary Fund

had been designated to provide for education in common schools, it took to the 1870s for Virginia public education to develop, and only under the military rule of 1867–1870, when the state General Assembly did not meet and the governors were appointed by the US Army generals (Daughterity, 2020; Ruffner, 1871, 1873; Tarter, 2020).

Between 1850 and 1870, about 22% of Virginia population could not read and write, and, as slaves were not allowed to be educated by law, disproportionalities were drastic: the percent of school attendance of White students was 4 times higher than that of the non-White students (Bly, 2021; Ruffner, 1871). In 1869, free public education was embedded in the Virginia Constitution, and in 1870, the first Virginia public school law was enacted, the Board of Education was created, the first Superintendent of Public Instruction was appointed, and local school boards began to form (Ruffner, 1871; Virginia Museum of History and Culture, 2021). In November of 1870, first Virginia public schools were opened; many of these schools had already existed as private schools and became free through the transfer of the ownership to the state (Ruffner, 1871). The post-Civil War Virginia, as most of the states in the South, suffered an economic decline, which impacted public education: parents had to provide and maintain school buildings, counties paid teacher salaries, attendance was not compulsory, curricula were not standardized, and the school year duration and attendance in rural areas were more sporadic than in cities (Ruffner, 1873; Virginia Museum of History and Culture, 2021). From its inception, public schools in Virginia were segregated (Daughterity, 2020).

First Instances of Public School Music Education in the Commonwealth. In his First Annual Report, Ruffner (1871), the first Virginia's Superintendent of Public Instruction, mentioned music, calligraphy, and drawing, as third in importance school subjects after English and mathematics. Ruffner's (1872) Second Annual Report suggested offering music as an

elective at a local community discretion, called for trained in music education teachers to teach high school music courses, and published the Graded Course of Studies in the Public Schools of Richmond, where vocal music was taught only in primary school. In the third year of establishment of Virginia public education, Petersburg Public Schools was the first school division in the state to hire a specialist to teach vocal music (Ruffner, 1873). In the 19th century Virginia, classroom teachers taught general music, as it was included in general education curricula, and some larger cities trained and hired professionals to provide support to classroom teachers. Starting in the 1880s and by 1917, this practice in the US and in Virginia almost disappeared, due to the proliferation of music teachers' conventions and early teacher preparation programs (Buchanan, 1886, 1888; Eggleston, 1914; Heller, 2011; Humphreys, 1989, 2010; Keene, 1982; Massey, 1893; Riley, 1990; Ruffner, 1881; Stearnes, 1918; Volk, 1988).

Beginnings of the US Public Schools Instrumental Music Education. In the second half of the 19th century, instrumental music programs began to spread across the US (Humphreys, 1989; Mark & Gary, 1992). The first US school band, the Boston Farm and Trades School Band, was established in Boston in 1857 (E. B. Gordon, 1956; Humphreys, 1989; Wilson et al., 1988). The first extracurricular school orchestras were documented at the Christian Brothers School in Chicago in 1873, in 1870s—in Cincinnati high schools, and in 1895—in Wichita, Kansas (Gary, 1954; Wilson et al., 1988). One of the first large high school orchestra programs was established by Will Earhart in 1898 in Richmond, Indiana (Birge, 1937; E. B. Gordon, 1956; Humphreys, 1989; Wilson et al., 1988). But this was not the case in Virginia.

First Instances of High School Instrumental Music Education in Virginia. In the 19th century Virginia, instrumental high school music made its way only to two schools: in the 1891, at the Virginia Institute for the Education of the Deaf and Dumb and of the Blind (as named at

the time), students who were Blind received instruction in piano, guitar, organ, violin, brass instruments, and piano tuning and had a brass band and an orchestra; vocal and instrumental music was also taught at the Miller Manual-Labor School of Albemarle, a school for economically disadvantaged (Massey, 1891, 1893).

First Professional Music Educators' Associations and High School Music Festivals.

Throughout the history of US public music education, professional music teacher associations have influenced high school music programs through standards, curricula, assessment, adjudicated performance guidelines, teacher professional development, and advocacy (Humphreys, 1995; Mark, 2002; Wilson et al., 1988). These associations started as informal curricular deliberations, general and vocal music pedagogy discussions at singing teachers' conventions that evolved into music education lectures, such as the 1829 New Hampshire Musical Society of Goffstown, the 1840 National Music Convention, and the 1885 New England Public School Music Teachers Association (Keene, 1982). In the second half of the 19th century, music teachers' associations launched the rich American tradition of school music festivals, exhibitions of student work in music classes. In 1865–1867, Boston public schools featured grammar and high school students' performances at the Annual Festivals in Boston Music Hall; in 1869, at the Gilmore's National Peace Festival in the Boston Coliseum, the Boston annual Music Exhibitions started: 6,000 high and grammar school children sang music from all over the world (Howe, 1992). In August 1897, in the state of New York, 4,000 Buffalo Public Schools children sang at the 31st Encampment of the Grand Army of the Republic (Volk, 1988). These events exemplify the benefits of the informal curriculum development approach. I could not find information on the 19th century Virginia music festivals; it was likely that they were not held

until the 20th century, due to the slower development of public education in Virginia as compared to the Northern states.

1900s–1940s

Throughout the 20th century, instrumental music programs have significantly grown nationwide. By 1915, 58 out of 69 US large school districts had string orchestras, with seven being held during the school day, 23 districts issued academic credentials for these courses, and 23 districts provided free instruments (E. B. Gordon, 1956). In the 1910s and 1920s, orchestra programs were established in Hartford, Connecticut; New Albany and Sullivan, Indiana; and Oakland, California (Humphreys, 1989, 2017). In 1915, the governor of Kansas gave a Child Welfare prize of \$1,000 to the town of Winfield for its grade school instrumental music courses and a 60-student orchestra (E. B. Gordon, 1956).

Although a high school band was established in Connersville, Indiana, as early as in 1907, band was not as widespread as orchestra (Wilson et al., 1988). In the 1920s, 278 out of 359 US cities had school orchestras, but only 88 had band programs (E. B. Gordon, 1956; Humphreys, 1989). In 1921, 2,000 students were enrolled in group violin classes in Pittsburg public schools; in 1922, 155 school orchestras existed in Los Angeles (E. B. Gordon, 1956). In 1919, a survey on instrumental music offerings was conducted in 26 states; out of 353 replies, 277 had orchestras, with 156 giving academic credit for orchestra classes (E. B. Gordon, 1956). In the 1920s, the Committee on Instrumental Affairs created at the Music Supervisors National Conference laid a formal curricular foundation for expansion of band in schools, instrumentation, and guidelines; they were published by the National Bureau of Advancement of Music; shortly, band courses started appearing in public schools (E. B. Gordon, 1956; Humphreys, 1989, 1995; Rhodes, 2007; Wilson et al., 1988).

The Growth of Music Education in Virginia Public High Schools. In 1906, when the first high school credit orchestra course was issued in Chelsea High School in Massachusetts, Virginia public high schools were only in the second year of opening (Daughterity, 2020; Wilson et al., 1988). In addition, geographical and economic disparities persisted. In 1908, when instrumental music teachers were employed in public schools across the US, in Virginia's rural public high schools, vocal and general music was taught by general education teachers and instrumental music courses were offered only for a fee (Eggleston, 1908; Humphreys, 1989, 2017). Across the state, the amount of local taxes collected to support rural public education was much less than in cities (Buchanan, 1888; Stearnes, 1916). Rural school attendance was irregular, because students who lived in the country had to work on farms seasonally, and vocal music was only taught in Grades 1-5, the only grades taught in Virginia's country schools at the time (Buchanan, 1888). Thus, rural areas in the state introduced music instruction at a slow pace, for example, Bath County started offering music courses only in 1913 (Stearnes, 1916). High school music curriculum development in the early 20th century Virginia was mostly informal, but this started changing in the 1920s.

First Formal High School Music Curriculum Development Practices in Virginia. By 1920, 507 high schools existed in Virginia, but music was required as an elective subject only in cities and urbanized areas (Hart, 1921). The 1920s Virginia high school graduation requirements included 18 courses, with music being an elective option, and the VDOE relieved rural and small-town high schools from providing electives (Hart, 1921). In the 1920s and 1930s, Virginia high schools incorporated music appreciation and singing activities in Social Studies and Language Arts curricula, and the Virginia State Board of Education (1938) published suggestions on suitable for high school music experiences, such as signing at school assemblies,

glee clubs, vocal ensembles, chorus, orchestra, band, music theory, general music, and other vocal and instrumental music classes (S. B. Hall, 1940; Hart, 1921; State Board of Education, 1934). These guidelines were the first instances of the formal curriculum development in the state.

Even though the Virginia state government encouraged high school music education since the 1920s, geographical and SES disparities impeded the progress. In 1936, a survey of 160 US high school music teachers revealed vocal and instrumental music offerings varied depending on location, community size, history of the program, administrative support, and quality instruction (Music Education Research Council, 1936). This was also the case in Virginia. In 1932, 60 years from establishment of public education in the state, children who lived in the Virginia country were still deprived from high school music (S. B. Hall, 1932). In the 1937-38 school year, the VDOE designated funds to support music education in rural schools: out of the \$2,295.36 VDOE music disbursements, \$1,944 went to county public school music programs (S. B. Hall, 1937, 1938).

In 1937, instances of high school music education in Virginia were reported by the first State Supervisor of Music Luther A. Richman: 519 Virginia high schools had some music course enrollment, 52% of them included music as an educational program, and 14% issued music education credits (S. B. Hall, 1937, 1940). Of these schools, 50% had glee clubs, 34% offered chorus, 19% offered music appreciation, 16% had operettas, 12% offered band, 12% offered orchestra, and 5% had music study club. In 60 high schools, there were instrumental ensembles (S. B. Hall, 1937, 1940). Funds for high school music teacher salaries came from school boards, private citizens, community organizations, student fees, and donations, but only 9% of these schools employed full-time music teachers, and only 11% had qualified band or orchestra

teachers (S. B. Hall 1937). By 1940, the number of full-time music teachers had more than doubled, and 250 part-time music teachers were hired (S. B. Hall, 1941). Whereas a credit for these developments could certainly be given to the VDOE-led formal curriculum development, informal approaches continued playing an important part.

The Growth of Music Educators' Associations and High School Music Festivals.

Several influential professional US music teachers' associations emerged in the 20th century. The most important one was the Music Supervisors National Conference created in 1907 in Keokuk, Iowa. At the 1917 conference of this organization in Grand Rapids, Michigan, the first instrumental music sessions and the first list of recommended compositions for high school orchestra classes were presented. In 1934, this association was renamed as the Music Educators National Conference, and in 2011, as the National Association for Music Education (E. B. Gordon, 1956; Nierman, 2017; Wilson et al., 1988). Table 4 includes select influential to public school music education associations that still exist (American School Band Directors Association, n.d.; S. J. Benham et al., 2011; Music Teachers National Association, 2021; National Education Association, 2021; Virginia Band and Orchestra Directors Association, 2020a).

Table 4*Select Professional Music Educators Associations*

Professional Music Educators Associations	Year Established
National Education Association (NEA)	1857
Music Teachers National Association (MTNA)	1876
NEA Music Education Department	1884
Music Supervisors National Conference	1907
Virginia Band and Orchestra Directors Association (VBDOA)	1930
American String Teachers Association (ASTA)	1948
American School Band Directors Association (ASBDA)	1953

First National Music Festivals. At the 1920s Music Educators National Conference, the Committee on Instrumental Affairs created first guidelines for music programs, and the National High School Orchestra, Band, and Chorus were established (E. B. Gordon, 1956; Humphreys, 1989). In 1923 in Chicago, 25 bands participated in the National School Band Tournament sponsored by instrument manufactures (Humphreys, 1989; Maddy, 1957; Wilson et al., 1988). In 1924, the first official band contest guidelines were published in the US: a music list, recommendations for judging and conducting, and rating scales (Maddy, 1957). Band teachers opposed some of the guidelines, this disagreement was nicknamed “The Battle of Band Instrumentation,” and in 1926, the standard band instrumentation for contests was created and added to guidelines and updated music lists (Maddy, 1957). In 1926, the first National High School Orchestra event was held, with 246 students representing 34 states, and in 1928, the first National High School Chorus with 300 student participants took place. National band contests were annually held in 1927-1931 and from 1933-1937, and national orchestra contests in 1929-1931 (Birge, 1937; E. B. Gordon, 1956; Humphreys, 1989; Wilson et al., 1988). By 1928, state-level orchestra contests were established in 15 states, but complicated travels led to establishing

rather regional level band, orchestra, and chorus festivals, and in 1940, 436 bands and 88 orchestras performed at regional festivals (Humphreys, 1989).

The Virginia Music Educators Association and First Virginia School Music Festivals. In Virginia, the first music educators' association was the Music section of the established in 1874 Virginia Education Association; by the 1930s, this section became the VMEA (1949; S. B. Hall, 1931; Ruffner, 1874). The early Virginia Music Educators Association (VMEA) took part in both formal and informal curriculum development: it published festival guidelines and even influenced music teacher certification process. A separate association, the Virginia Music Conference, launched in 1949, served African American music teachers (VMEA, 1949). First school music festivals were organized in Virginia by the Music Section of the Virginia Education Association (1937) reported two music festivals in 1937: one was for White students, the 2-day High School Competitive Music Festival for individuals and groups, with 39 high school vocal and instrumental groups participation and 2100 overall contestants; the other was for African American students, the fifth Annual Negro High School Music Festival (named at the time), held in Petersburg, with 500 students competing (S. B. Hall, 1937).

The World War II. Under the US federal governmental system, the responsibility for education was designated to the states, but the federal government could influence the course of education through large-scale national grants that address major social, political, and cultural issues (Alexander & Alexander, 2012; F. C. Fowler, 2013; Rubenstein, 2017). From the 1940s, the influence of the federal government on high school music education increased. The first instances of this were the 1935-1939 Federal Music Project and the 1939-1943 Music Program launched during the Great Depression to help out-of-job musicians and music teachers—about 10,000 music professionals were assigned job placements (Library of Congress, 2015;

Livingston, 2007). In response to global, national, and political turbulence, many of subsequent federal initiatives were geared toward basic academic subjects (Lancaster, 1945). Nevertheless, Virginia high school music instrumental and vocal clinics continued even during the World War II and, with the collaboration from the VDOE State Music Supervisor and the Virginia Music Educators Association, division music festivals returned after 1945, with thousands of children in participation; these events were still racially segregated (G. T. Miller, 1946, 1947, 1949). In 1946, about a half of Virginia public school divisions adapted a 12-year school system, with high school being Grades 8-12, and the VDOE's formal curriculum development action of offering exploratory courses in music, vocal and instrumental music, and music listening opened opportunities for informal curriculum development by recommending (Virginia State Board of Education, 1938, 1946). In 1948, the VDOE continued supporting rural music education, approving a partnership between the Radford College and public schools in the rural Southwest Virginia to help develop rural school music programs (G. T. Miller, 1949).

The Second Half of the 20th Century

The 1945-1991 Cold War threats caused the American society to shift the emphasis of education to subjects that could increase national security (Mark, 2002, 2007; Moon, 2006; National Museum of American History, 2000). The US Department of Health, Education and Welfare was established in 1953, and the 1958 National Defense Education Act allocated to the National Science Foundation funds to revitalize high school science curricula (Mark, 2007; Richerme, 2012). Funding for music was not generous, and music educators had to advocate for music as a core academic subject (Mark, 2007; Moon, 2006). These federal formal curriculum developments contributed to the slow growth of music education in Virginia at the time. During 1952-1953 school year, a survey was sent to Virginia high schools; out of 427 responders, nine

offered only instrumental music; 59 offered only choral music; 25 offered general music; 266 offered combinations of vocal, instrumental, and general music; and 69 did not offer any (Howard, 1953).

Major US Federal Educational Initiatives and Music Education. The economic inflation of the 1960s resulted in further decreases in school funding and music programs cuts, but the Kennedy administration supported the arts by creating the Cultural Affairs Branch, the Arts and Humanities Program, subsequently a part of the DOE Bureau of Research, and the National Endowment for the Arts (n.d.-a, n.d.-b; Mark, 2007; Mark & Gary, 1992; Moon, 2006). The Arts and Humanities Program funded 64 research projects in the field of music education, such as the Yale Seminar on Music Education in 1963, the Ronald B. Thomas' survey in 1965, and the Manhattan Music Curriculum Project in 1965 (Heller, 2011; Mark & Gary, 1992; Moon, 2006). One of these formal curriculum development projects, the Manhattan Music Curriculum Project produced a new music curriculum developed by 60 professionals from various disciplines. This curriculum was tested during the 1967-1968 school year and resulted in the publication of the *Manhattan Music Curriculum Project Synthesis: A Structure for Music Education* (Mark & Gary, 1992; Moon, 2006). Another Cold War formal curriculum development initiative, the 1963 Yale Seminar on Music Education, included participants selected by the Arts and Humanities Program, 10 composers and music theory educators, four conductors, three musicology professors, three performing artists, one musical critic, three higher education music administrators, five public school music teacher, one representative from public school administration, and one researcher; they convened and produced a written report (Mark & Gary, 1992; Moon, 2006). A national-scale formal curriculum development initiative, the 1965 R. Thomas' survey, *A Study of New Concepts, Procedures, and Achievements in Music Learning*

as Developed in Selected Music Education Programs, investigated successful music programs and provided curricular recommendations (Moon, 2006).

Desegregation and High School Music Education. From the second half of the 20th century, equity became a major focus of federal educational reforms. In the 1950s, schools across the US were still racially segregated, and schools for African American children received considerably less funding than schools for White children (Mark, 2007). Even after desegregation laws put in place, housing patterns resulted in large poverty regions in urban parts of the US and memories of segregation remained and are alive to this day (Mark, 2007; Mark & Gary, 1992; Siegel-Hawley et al., 2020). Patterns of low academic performance of non-White and low SES students emerged due to these inequalities, and this issue has become a major focus of the Elementary and Secondary Education Act of 1965 and its further reauthorizations, the No Child Left Behind Act (NCLB), and the ESSA (Mark, 2007; Mark & Gary, 1992; NAFME, 2015). In 1967, the Tanglewood Symposium highlighted the importance of multicultural music education in American schools in a report (Livingston, 2007; Mark, 2007). High school music course enrollment priorities changed at that time. By 1973, only 20% of all high school students across the US were enrolled in music, and 94% of them took performance courses; there were over 50,000 secondary school bands and even more choruses, but not more than 5,000 orchestras, frequently offered in prosperous suburbs (Britton, 1982; Hoffer, 2017).

Desegregation and High School Music Education in Virginia. Virginia public schools had been racially segregated until the early 1970s, when federal government threatened to take away funding from segregated public schools (Daughterity, 2020). For these 100 years, only a lower quality education was available to non-White students; African American children received mostly vocational training to perform labor work, and most American Indian children

refused attending public schools for African Americans (Daughterity, 2020; Rowe, 1997; Virginia Museum of History and Culture, 2021). Federal and state desegregation laws of the 1950s and the 1960s were met with resistance from the Caucasian population in Virginia and eventually resulted in an exodus of Caucasian families from cities to the suburbs (Virginia Museum of History and Culture, 2021). But public music education in the state continued growing. Between the middle of the 1950s and the middle of the 1960s, the number of Virginia public school music teachers had grown by 42% (Wilkerson, 1965). In the 1962-1963 school year, from 91,642 Virginia all secondary school students, approximately 31% had been taking music classes: more than 60,000 in chorus, 21,800 in band, 4,735 in general music, and many fewer taking orchestra, music theory, and music appreciation (Wilkerson, 1963). Through the 1960s and 70s, the number of orchestra course offerings and enrollment continued to grow steadily across the state (Wilkerson, 1963, 1965, 1970). Formal curriculum development initiatives continued. In 1970, the VDOE-suggested course offerings included: three levels of chorus, three levels of band, one string class, and one full or string orchestra as adequate offerings; music literature, music theory, small vocal and instrumental ensembles, stage band, and dance band as highly desirable additions (Music Education Service, Division of Secondary Education, State Department of Education, 1970). From 1974, the VDOE's (1974) school accreditation standards included music as a secondary school elective subject.

Music Advocacy Successes. In the 1980s and the 1990s, another wave of federal policies inhibited the growth of music education. Standardized test scores continued to decrease nationwide, and the National Commission on Excellence in Education (1983) published *A Nation at Risk* report that delineated drawbacks and recommended schools to place emphasis on five subjects: mathematics, sciences, social studies, English, and computer science (Branscome,

2012; Mark, 2007). Music as a subject was not mentioned in the report; this caused a strong response from the music education community. Music educators and administrators once again responded with advocacy and formal and informal curriculum development efforts. In 1986, the Music Educators National Conference and the American Council for the Arts formed the Ad Hoc National Arts Education Working Group, comprised of 31 fine arts administrators and educators. The group produced The Philadelphia Resolution, a statement on arts advocacy (Mark, 2002). In 1988, the Music Educators National Conference and the National Association of Music Merchants formed the National Coalition for Music Education centered on arts education policy (Mark, 2002).

In 1990, three nationwide public forums on the importance of music education were conducted in Los Angeles, Chicago, and Nashville (Mark, 2002). In 1991, the National Symposium themed as *America's Culture at Risk* was held in Washington DC (Mark, 2002). In 1990, the National Commission on Music Education was created; it produced and distributed advocacy materials to government officials and to the public (Mark, 2002). State music educators' associations formed their own statewide coalitions to educate state government officials on the importance of the art education (Mark, 2002). Shortly, the National Commission on Music Education (1991) published the report *Growing Up Complete: The Imperative for Music Education* that provided rationale for music education and raised the issues of limited in arts graduation requirements, low state and federal spending on music, decline in high school music course enrollment, shortage of music teachers, and declining rates of college music graduates. The report also included a set of suggestions to various stakeholders on how to advocate for and improve music education in the country.

These music educators and administrators' efforts came to fruition. By 1994, 94% of the Southeastern US of secondary schools offered music, and 39% required a fine arts credit (Carey et al., 1995). From 1988, Virginia included one fine arts credit in high school graduation requirements (National Endowment for the Arts, 1988). In 1992, the Standards of Quality and the VDOE (1992) regulations mentioned the importance of fine arts education in public schools and included fine arts in high school graduation requirements.

Not all 20th century federal educational legislations negatively affected the arts. The 1994 federal legislation Goals 2000 offered states funds to make improvements to education through establishing standards and assessments, and the arts were mentioned among school subjects that students should develop proficiency in (Elpus, 2013). With funding from the Department of Education, the National Endowment for the Arts, and the National Endowment for Humanities, a consortium of fine arts organizations mobilized educators to develop the 1994 National Arts Standards (Elpus, 2013; Hoffa, 1994; National Coalition for Core Arts Standards, n.d.). However, academic curricular and testing demands of the Goals 2000 made little or no positive affect on the number of high school music course offerings across the US (Elpus, 2013). Even by the end of the 20th century, only 17.2% of Virginia divisions offered orchestra programs enrolling high and/or an average SES (Smith, 1997).

The 21st Century

At the start of the 21st century, music educators endured another federal policy change, the federal 2001 NCLB Act, aimed on reducing achievement gap between low SES and high SES students, minority and non-minority students, and student with disabilities and general population students (Kim & Sunderman, 2007). Schools that chose to receive governmental funding were held financially accountable for student performance on standardized tests in

English and mathematics; this resulted in shifting of allocations to these subjects, pulling students out from elective courses, requiring fine arts teachers to incorporate English and math instruction, and even cutting music classes (Beveridge, 2010; West, 2012). However, it appears that the NCLB did not unfavorably affect high school music education. Elpus (2014) found overall nationwide high school student enrollment in music courses between 1982 and 2009 remained steady, except for Hispanic, English language learners, and students with disabilities populations. By 2000, 90-93% of secondary schools offered music (Carey et al., 2002). In 2011, the NCES conducted a study on the state of the arts in the US public schools during 2009-2010 school year in 1,602 out of 31,133 US secondary schools and in 2,022 combined public schools: surveys administered to 1,065 music teachers and 1,013 principals found 91% of secondary schools offered music (Parsad et al., 2011).

The most recent federal legislation, the 2015 ESSA opened new opportunities for high school music education, alleviated stringent testing requirements and called for well-rounded child education, in which music, in row with reading and math, was an important subject; the legislation discouraged removal students from fine arts classrooms for remediation (NAfME, 2015). Enforcing this new legislation, state educational agencies and school districts established innovative pathways to education of the whole child. For example, the Washington state law required annual arts assessments (Education Commission of the States & Arts Education Partnership, 2019). The Profile of a Virginia Graduate, approved by the General Assembly in 2016, delineated 5 desired student competencies, 5 Cs: critical thinking, collaboration, communication, creative thinking, and citizenship (VDOE, 2022d). These competencies and the ESSA assessment flexibility allowed Virginia school divisions to justify high school music education funding and to effectively use informal curriculum development. For example, the

Spotsylvania County Public Schools (n.d.) encouraged secondary school students to compose music; this exemplified the extent to which the school division used an informal curriculum development approach. Although the ESSA appeared promising, it has been yet to determine whether it was advantageous to Virginia music educators in overcoming disparities.

Disparities in Availability of Music Education. SES, location, and race/ethnicity barriers even most recently adversely affected student access to music education nationwide. Kinney (2018) investigated the impact of various demographics on music course enrollment among 13,581 Grade 10 students in the Midwest and found that SES did not predict student choice of band, that African American and Hispanic students were significantly likely to enroll in band, that African American students were less likely to enroll in orchestra, and that higher SES and Hispanic students were less likely to enroll in chorus. Williams (2016) surveyed 108 US rural school music teachers and determined the most widespread high school course offerings: 82-83 districts offered high school band, 81-82 chorus, about 60 orchestra, 32-33 guitar, 21-30 music theory, 18-19 music appreciation, 14-15 piano, 9-11 music history, 4 general music, and 15-16 other courses. Most recently, over a half of Virginia student population was comprised of students who are not White, and 54% of the urban students were qualified for free and reduced-price lunch (Siegel-Hawley et al., 2020). It was yet unknown how student population is distributed among the current high school music courses offered across the state in terms of demographics.

Current Formal and Informal High School Music Curriculum Development. Across the US, music educators' associations continued the long tradition of music festivals. In 2010, in Virginia, the term festival was changed to District Assessment (Virginia Band and Orchestra Directors Association, 2020c). Guidelines for these large-ensemble adjudicated performances,

selective regional and all-state performing honor ensembles, and solo and ensemble festivals published by state music associations differed nationwide. For example, music educators' associations in Virginia and in Ohio adjudicated large ensemble and solo and small ensemble performances on prescribed literature classified by level of difficulty, while Connecticut annual concert festivals involved student solo auditions into regional and state large ensemble events (Connecticut Music Educators Association, 2019; Ohio Music Educators Association, n.d.; Virginia Band and Orchestra Directors Association, 2020a). In Virginia, District Assessments were recently considered as formal curriculum development endeavors, as they included in the 2020 Music SOLs (Board of Education, Commonwealth of Virginia, 2020). In addition to annual Senior Regional Orchestra, All-Virginia Jazz Band, State Honors Choir, Marching Band Assessments, District Chorus, All-Virginia Guitar Ensemble, and All-Virginia Band and Orchestra events, Virginia high school students have been selected to participate in All-National Honor Ensembles, Concert Band, Symphony Orchestra, Mixed Choir, and Guitar Ensemble (A. Hall, 2021; Virginia Band and Orchestra Directors Association, 2020b; VMEA, 2021a).

Standards, curricula, music lists, and quality program recommendations published by national and state music educators' associations influenced school districts rationale for selecting high school music program offerings (NAfME, n.d.-d). Examples of such standards are the 2011 American String Teachers Association Curriculum, the American School Band Directors Association (1997) Curriculum Guide, and the Virginia Choral Directors Association's (2020a) music lists (S. J. Benham et al., 2011; Florida School Music Association, n.d.; NAfME, 2020; National Coalition for Core Arts Standards, 2014). The 2014 version of the National Core Arts Standards were recently considered for adoption in 38 states (National Coalition for Core Arts Standards, 2018). In terms of course offerings, the National Core Arts Standards recommended

horizontal curriculum articulation from elementary to high school, and multiple levels of band, chorus, and orchestra were major recommended ensemble courses, followed by theory, composition, and various instrumental and vocal courses (Florida School Music Association, n.d.; NAFME, 2020; National Coalition for Core Arts Standards, 2014). Virginia chose not to adapt this curriculum source into the latest, 2020, Virginia Music SOLs revision, aiming for the SOLs to be more rigorous (J. Brewington, personal communication, March 26, 2020). 2006, 2013, and 2020 Virginia Music SOLs included: four levels of choral and instrumental ensembles, general music, music theory, other instrumental ensembles, and technology (Board of Education, Commonwealth of Virginia, 2006, 2013, 2020). In 2021, the VODE collected school division enrollment data for: beginning, intermediate, advanced, and artist levels of each band, chorus, and orchestra; small and chamber instrumental ensembles; piano; four levels of guitar; three levels of vocal chamber ensembles and small vocal ensemble; general music; advanced placement music theory; international baccalaureate music; four levels of music recording and production; four levels of technology and electronic music; music composition; music history; music appreciation; and workplace music experience (VDOE Office of Data Services, personal communication, May 21, 2021).

Contemporary High School Music Education Financing. Music education researchers asserted that a successful high music program must include a variety of musical experiences (Abeles et al., 1995; Elliott & Silverman, 2015; Gillespie & Hedgecoth, 2017; The Collaborative Music Education Series, 2014). However, this might not be always affordable; as such, Odden and Picus's (2019) recommendation for employing about 33% of elective teachers in schools with a student population above 600 might not always be realistic in Virginia. For example, the 2020 York County School Division (2019) budget designated \$698,678 for high school music

instruction, and \$659,178 (94%) of the allocation was used to pay for 8.2 full-time teacher positions' salaries and benefits, meaning that offering a new music course and hiring a new teacher is expensive. Plus, other programs compete for the Standards of Quality funding, as the most recent Standard Diploma high school graduation requirements included two credits of languages or arts or career and technical education, and the state law did not require to offer music in high school (Education, 2019b; VDOE, 2022f; Virginia's Legislative Information System, n.d.-b, n.d.-c).

Virginia school divisions have been financed by a combination of state, federal, and local governments; in addition, educators and administrators might consider private sector grants available (F. C. Fowler, 2013; W. R. Gordon et al., 2019; VDOE School Quality Profiles, n.d.). The VDOE (2022b, 2022e) determined a school division's ability to pay for education listed in the Standards of Quality by calculating a Local Composite Index (LCI) for every division and adjusting it to balance local (45%) and state (55%) contributions. Three sources of local revenue were involved in calculating an LCI: property value, weighed at 50%; adjusted gross income, weighed at 40%; and local sale tax, weighed at 10% (VDOE, 2022b, 2022e). This method of finance might contribute to educational disparities. For example, in 2020-2019, Williamsburg-James City County Public Schools spent \$11,699 per student, and 61.2% of this amount was covered by local funds, whereas neighboring York County School Division's per student spending was \$9,987, with 39.3% taken from local funds; the Augusta County Public Schools' per student spending was \$9,680, with 38.5% covered by local funds, whereas Bedford County Public Schools spent \$10,246, with 36.5% taken from local funds (VDOE School Quality Profiles, n.d.). As most financial allocations were applied to teacher salaries and benefits, to improve high school music education quality, school leaders might consider informal curriculum

development, such as, to apply (and encourage teachers to apply) for private, corporate, and governmental funding for proposed educational improvements (America's Promise Alliance, 2021; Costco Wholesale, 2021; National Endowment for the Arts, n.d.-a; Save the Music Foundation, 2019).

Virginia High School Music Education History—Lessons Learned

This section of the literature review demonstrated an impressive growth of Virginia public high school music education and the outcomes of various formal and informal curriculum development approaches. For its less than 100 years of existence, Virginia public high school music education has never been required by the state law. Despite the periods of economic instabilities, wars, and social injustices, Virginia public schools grew to offer a full array of music education experiences. Table 5 summarizes the key developments.

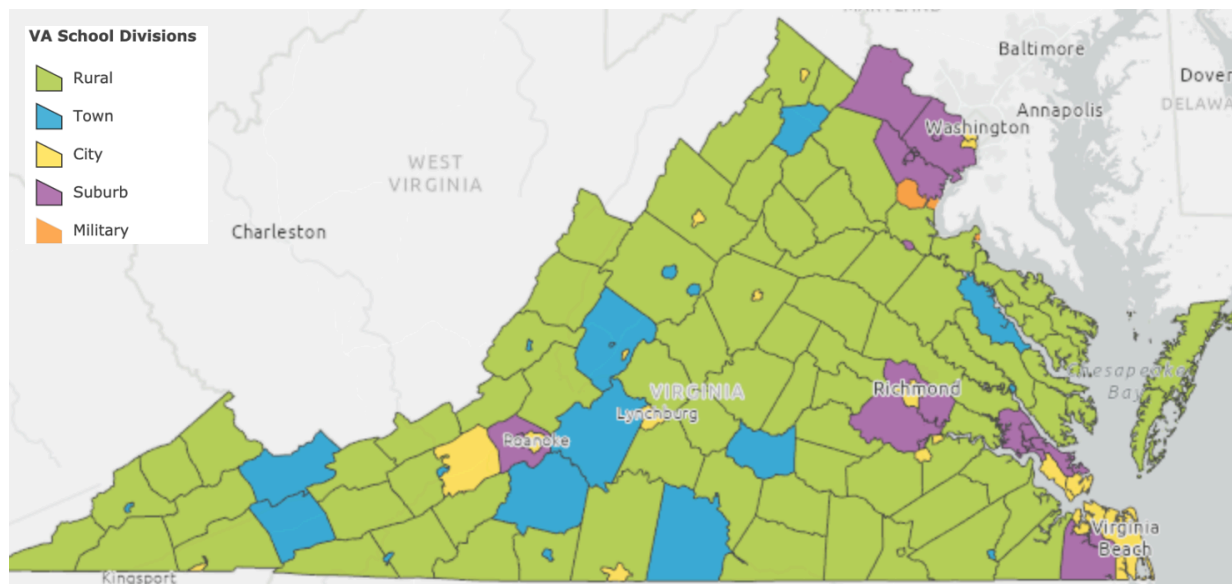
Table 5*Important Developments in the History of Virginia High School Music Education*

Dates	Pivotal Events and Contexts
17th century–second half of the 19th century	Church-based singing classes, private instrumental and vocal music education, fiddling contests, passed by rote African American and Indian American musical traditions—informal curriculum development (Boyea, 1999; Virginia Department of Historic Resources, 2018; Library of Congress, n.d.; Mark & Gary, 1992; Shear et al., 2015; Shefeland, 2021; Virginia Indian Archive, 2021; Volk, 1994; Wolfe, 2021b)
1870	First public schools in the state—formal curriculum development (Ruffner, 1872, 1873)
1873	Petersburg Public Schools hired a specialist to teach vocal music – formal curriculum development (Ruffner, 1873)
1891	Instrumental music education at the Virginia Institute for the Education of the Deaf and Dumb and of the Blind (as named at the time) and vocal and instrumental music education at the Miller Manual-Labor School of Albemarle (a school for low socio-economic status students)—formal curriculum development (Massey, 1891, 1893)
The early 1900s	Music offered in rural areas in Grades 1-5; instrumental music offered for a fee—formal and informal approaches (Buchanan, 1888; Eggleston, 1908; Stearnes, 1916)
The 1920s	507 high school existed in the state (Hart, 1921)
The 1930s	Establishment of the Virginia Music Educators Association (1937) and the Virginia Band and Orchestra Directors Association (2020a) and first high school music festivals—informal curriculum development
1932	No high school music education in rural Virginia (S. B. Hall, 1932)
1937	First instances of high school music courses reported by the first State Music Supervisor; 52% of high schools had music education (S. B. Hall, 1937, 1940)
1946	Virginia public schools adopted a 12-year school system with high school Grades 8-12; the Virginia Department of Education recommended to include vocal and instrumental music and music listening as exploratory courses (Virginia State Board of Education, 1938, 1946)
1952	Over a half of Virginia high schools offered vocal, instrumental, and general music (Howard, 1953)
1960-70	Growth of orchestra programs (Wilkerson, 1963, 1965, 1970)
1962	Over 30% of Virginia secondary school students enrolled in music
1970	The Virginia Department of Education suggested offering: chorus, band, string class, full or string orchestra, music literature, music theory, small vocal and instrumental ensembles, stage band, and dance band – the formal approach (Music Education Service, Division of Secondary Education, State Department of Education, 1970)
1974	The Virginia Department of Education (1974) school accreditation standards included music as a secondary school elective – the formal approach
1988	One fine arts credit included in Virginia high school graduation requirements (National Endowment for the Arts, 1988) – the formal approach
The 1990s	Only about 17% of Virginia school divisions offered orchestra (Smith, 1997)
2020	High school course offerings underlined in the 2020 Virginia Music Standards of Learning: beginning, intermediate, advanced, and artist levels of each band, chorus, and orchestra; small and chamber instrumental ensembles; piano; four levels of guitar; three levels of vocal chamber ensembles and small vocal ensemble; general music; advanced placement music theory; international baccalaureate music; four levels of music recording and production; four levels of technology and electronic music; music history; music appreciation; music composition; and workplace music experience (VDOE Office of Data Services, personal communication, May 21, 2021)

Virginia high school music education has significantly developed in a relatively short period of time, but challenges, such as the lack of access to music education in rural areas, might still be present. Figure 5 shows the current map of Virginia school divisions colored by the four geographic characteristics. As most of Virginia school divisions were rural, many school music education leaders in the state might still face the lack of financial support for music programs and low student interest and work on justifying the value of music education and providing best quality music experiences to all high school children.

Figure 5

Virginia School Divisions' Geographic Localities



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed July 19, 2021, from [arcgis.com ArcGIS online](https://nces.ed.gov/programs/edge/Geographic/DistrictBoundaries). Full data information found at <https://nces.ed.gov/programs/edge/Geographic/DistrictBoundaries> (Goodloe, 2021).

What Value Does Music Education Add to High School Students' Educational Experience?

Music education researchers defined many musical and non-musical positive effects of music education and consider that the real purpose of music education is the aesthetic experience: listening to and performing musical masterpieces, an amused child engages in “an enjoyable, absorbing flow” (Elliott & Silverman, 2015, p. 38). Researchers and theorists wrote that experiencing happiness while feeling musical tension and energy, a child discovered new feelings (Abeles et al., 1995; Reimer, 2003; West, 2015).

The Aesthetic Value of Music Education

The phenomenon of music enjoyment was described in the writings of Ancient Greeks as transformations into a different reality and purifying of the soul (Cook & Dibben, 2011; Juslin, 2019; Sloboda, 1985). Plato (ca. 360 B.C.E./1994, Book III) wrote:

Musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul, on which they mightily fasten, imparting grace, and making the soul of him who is rightly educated graceful, or of him who is ill-educated ungraceful; and also because he who has received this true education of the inner being will most shrewdly perceive omissions or faults in art and nature, and with a true taste, while he praises and rejoices over and receives into his soul the good, and becomes noble and good, he will justly blame and hate the bad, now in the days of his youth, even before he is able to know the reason why; and when reason comes he will recognise and salute the friend with whom his education has made him long familiar.

(para. X)

Music psychologists argued the aesthetic experience related to music was manifested through unique emotional responses not experienced in everyday life. Sloboda (1991) asked 83

participants, ages 16 to 70, 34 professional musicians, 33 amateur musicians, and 16 non-musicians, to rate physical and emotional responses evoked by three music composition listened in the past 5 years. Out of 165 compositions participants enjoyed, 67 were classical instrumental pieces, 65 included classical vocal genres, 28 were pop music, and 6 were jazz and other popular instrumental music. Shivers down the spine, laughter, lump in the throat, tears, goosebumps, fast-beating heart, yawning, and stomach sensations were experienced by over 50% of participants. Juslin and Laukka (2004) explored how ordinary people perceive music by giving a 38-item questionnaire to 141 participants ages of 18-74. 71% of the participants were musically trained. The results showed 64% of the participants listened to music while doing house chores, 46% while travelling, and 46% while socializing. All the participants agreed that music evoked emotions. When asked what emotions music can evoke, 99% of the participants said joy, 91% sadness, 90% love, 87% calm, 82% anger, 82% tenderness, and 77% longing. 47% of the participants listened to music for emotional release and expression, 33% for relaxation, and 22% for fun.

Music Education and Adolescent Cultural Identity

Starting thousands of years ago, from the early Native Americans establishments in North America, through the mass European immigration of the 1600s, and through multiple immigration waves, the cultural heritage of the United States grew to become ethnically rich and diverse (A&E Television Networks, 2019). In 2019, the country's estimated 328,239,523 population included 60.4% White, 18.3% Hispanic, 13.4% Black, 5.9% Asian, 1.3% American Indian, and 0.2% Native Hawaiian and Other Pacific Islander (US Census Bureau, n.d.). American families should treasure traditional music of every culture; "the black [*sic*] person who knows only African American [*sic*] music and the white [*sic*] person who knows only European

painting and architecture are equally deprived” (C. Fowler, 1996, p. 115). Music programs defied social stratifications and helped children to see themselves belonging to a wider world of cultures (Elliot & Silverman, 2015). Examples of culturally diverse educational experiences included listening and performing multicultural music, such as fiddling, Mariachi, jazz, Latin guitar, world drumming ensembles, and gospel choirs (Campbell, 2002; Campbell & Beegle, 2003; Dekaney & Robinson, 2014; Mixon, 2009; Oare, 2008). Conversations about offering high school music courses that open an array of cultural experiences had to be happening in school districts that struggled with addressing racial disparities.

Music Education and Adolescent Socio-Emotional Wellbeing

Research suggested that rapid hormonal changes in adolescence resulted in emotional swings, as coping with negative emotions could be overwhelming; in adolescence, rates of depression increased by 15-20% (Santrock, 2010; Siegler et al., 2003). Research on emotional self-regulation, the ability to control emotional responses to interactions and stress, found listening to music in adolescence was associated with experiencing positive emotions, clarifying thoughts, realization of feelings, imagining new ideas, and emotional comfort (Dingle et al., 2019; Saarikallio & Erkkilä, 2007). Behne (1997) conducted a longitudinal study with 1,224 students of ages 11-20 and found that children show the most love and appreciation for music after the age of 13, and that depressed students use music as a stimulus. Leipold and Loeptin (2015) studied music listening questionnaires responses of 521 adults of ages 18-86 and responses of 152 students of ages 12-17 and found that listening to music for specific elements is positively associated with coping with stress.

Research showed that the ability to empathize developed slowly in adolescence, and music positively influenced teen social interactions (Santrock, 2010; Siegler et al., 2003).

Saarikallio et al. (2014) asked 61 14-year-old students to: (a) identify five basic emotions, happiness, sadness, anger, fear, and tenderness in 15 one-minute pre-selected pop music excerpts; (b) rate these emotions in 50 15-second excerpts from movie soundtracks for intensity; and (c) rate three 30-second instrumental arrangements of child songs on volume, tempo, articulation, and timbre. Nearly all (98%) of the participants correctly identified happiness, 72% sadness, 59% anger, 73% fear, and 77% tenderness. The ability to take perspective of others was strongly correlated with recognition of tenderness in music. Empathy was correlated with understanding a slow tempo could express sadness and a loud volume happiness and with the tendency to recognize greater amount of fear in music.

Didin and Koksai Akyol (2017) administered questionnaires on humor styles and communication to 179 adolescents to examine arts education impact on interpersonal skills; 54 students studied music and 60 other arts. Participants who did not take arts were more likely to use aggressive humor had a lower self-confidence.

Parker (2014) conducted 49 interviews with 36 high school mixed choir students, followed up with three choir teachers, observed 16 high school mixed choir classrooms, and found participation in a mixed choir contributed to better friendships and greater self-acceptance and self-understanding; students were proud of accomplishments and wanted to give back to others.

Music Education and Adolescent Cognitive Development

Research established that the growth of a human brain was complex; different brain parts increased and decreased at various speeds and at different times, as impacted by heredity and outside factors (Hodges, 2015; National Institute of Neurological Disorders, 2019). A human brain consisted of neurons, which included a cell body with a nucleus controlling cell activity,

dendrites that delivered information to the cell body, an axon that carried information from the cell, and synapses, or gaps between neurons where connections between axons and dendrites occurred (National Institute of Neurological Disorders, 2019; Santrock, 2010). The ability of a human brain to make these connections was classified as neuroplasticity, crucial in child development, as connections that were not used through continual practice disappeared (Santrock, 2010).

In 1997, Foster and Jenkins (2017) interviewed 963 families on impacts of music lessons on child development and followed up in 2002 and 2003. Although this study found participation in music lessons does not influence high school grades, other researchers confirmed positive impacts of music education on cognition, as neuroplasticity of a brain of a musician is higher than of a non-musician (A. Collins, 2014; Hodges, 2015). Music education positively affected attention, memory, multi-sensory processes, language development, speech, logical processing, and the gray matter volume clusters related to motor, auditory, and visual and cognitive functions (Gaser & Schlaug, 2003). Playing a musical instrument has been linked to enhanced vital executive functions, information processing, problem solving, pursuing goals, memorization, adjustment to new tasks (Zuk et al., 2014). Table 6 summarizes select research studies that further illustrate positive effects of music education on adolescent cognitive development.

Table 6*Positive Effects of Music Education on Adolescent Cognitive Development*

Study	Focus	Participants	Results
Gaser & Schlaug (2003)	Impacts of music education on brain development in musicians and non-musicians	20 professional musicians (full-time professionals or conservatory students), 20 amateur musicians who played regularly but twice less than professional musicians, and 40 non-musicians who never played an instrument. All were 18-40 years old, of the same gender, and all musicians were keyboard performers; five also played string instruments.	Brain images of participants were analyzed with technology, and it was determined that distributions of the gray matter volume differed among the participants: volume of clusters of the gray matter in brain areas related to motor, auditory, and visual functions and cognitive skills were significantly higher in musicians.
Nutley et al. (2014)	Impacts of music education on cognitive abilities, processing speed, reasoning, mathematics, reading, and on brain structure.	The data were collected in 2007, 2009, and 2011 from Swedish participants of ages 6-25 via individual neuropsychological, working memory, non-verbal reasoning, arithmetical, reading literacy, and reading comprehension tests. Brain structures of participants were studied through 3D weighted brain images.	Positive impacts of music education on visual-spatial abilities, verbal, cognitive processing, reasoning, and mathematical abilities. Gray matter volumes of participating musicians were significantly higher.
Oechslin et al. (2013)	How brain processes music: whether brain response to music is determined by the level of expertise and what brain areas are engaged in processing	20 professional pianists, 20 amateur pianists, and 19 non-musicians of ages six to 25 listened to 30 string quartets composed the occasion in a classical style and contained occasional composition mistakes. Western music characterizes by predictable patterns similar to processing of cognitive tasks, and participants satisfaction and dissatisfaction were documented.	Participants used working memory, attention, and processing, used in other cognitive tasks. Music training had a positive impact on cognitive brain functions.
Skoe & Kraus (2012)	Impacts of childhood music training on neural processing of sound later in life	45 participants ages 18-31 were divided on three groups depending on the length of musical training: none, 1-5 years, and 6-11 years, and their brainstem responses to sound were compared.	Adults with musical training had the highest level of response; this suggests musical training positively impacts adult nervous system.
Zuk et al. (2014)	Relationships among instrumental music education and executive function skills.	30 adults ages 18-35, half musicians and half non-musicians, and 27 children ages 9-12, 15 musically educated for at least 2 years in private lessons starting at the age of 5 and 12 non-trained musically outside of general music in school. Intelligence quotient and socio-economic status of the participants were matched. Participants completed corresponding to the age groups cognitive assessments that evaluated executive functions.	Adult musicians performed significantly higher on measurements of verbal fluency, design fluency, and cognitive processing. Children with more musical training performed better on verbal fluency and cognitive processing. Radiological brain images showed that engaged brain areas of musically trained participants were larger.

Music Education and High School Academic Achievement

Experimental and longitudinal studies and governmental reports linked high school music education to academic success (A. Collins, 2014). However, not all researchers agreed. Elpus (2013) examined SAT scores of 13,530 Grade 12 students, participants in the nationwide 2002 Education Longitudinal Study of 2002, and concluded that students enrolled in high school music did not perform significantly higher on college entrance exams and on standardized math tests than non-music. In contrast, Catterall et al. (1999) summarized results of a decade-long longitudinal study followed 25,000 US Grades 8-12 students and found students who participated in fine arts performed better on standardized assessments and did better in math, regardless of SES.

Guhn et al. (2019) explored if instrumental music made more impact on student learning than vocal music, if long-term music education was linked to success in other disciplines, and if impact of music education differed across academic domains. 112,916 British Columbia, Canada, secondary school students participated in the study. Students who took music classes performed significantly higher across English and math tests than students who did not, regardless of the SES. Students who participated in instrumental ensembles had significantly higher scores across academic tests than students who took chorus. The more music courses students took, the higher academic performance they exhibited. Table 7 summarizes select research studies that demonstrated positive impacts of high school music education on student academic achievement and commitment to learning. Indisputably, offering high school music education courses in school districts with low level academic performance and low SES was a way to address societal disparities.

Table 7*Positive Effects of High School Music Education on Academic Achievement*

Study	Focus	Participants	Results
Hallam & Rogers (2016)	Playing musical instruments and academic performance	608 United Kingdom students ages 11 through 16	115 music students (19%) performed on national tests better than the rest.
Helmrich (2010)	Formal music instruction and student performance on a standardized Algebra assessment	6,026 Grade 8 and 9 students: 1,952 received instrumental music instruction throughout middle school, 1,287 had choral music instruction throughout middle school, and 2,787 did not receive music instruction in middle school	90.62% of instrumental, 81.51% of choral, and 75.03% of non-music students passed the Maryland Algebra/Data Analysis High School Assessment in Grades 8 and 9.
Miksza (2010)	High school instrumental music education and academic achievement in mathematics	A nationwide 2002 NCES Education Longitudinal study with 12,160 Grade 10 students from various geographic locations, equal proportions of male and female	Students who participated in music had significantly higher scores on mathematics tests.
Southgate & Roscigno (2009)	Characteristics of students who take music in terms of socio-economic status, racial demographics, and gender; impact of music makes on each of these groups	7,781 students sampled from the National Educational Longitudinal Survey that examined 25,000 adolescents and the Early Childhood Longitudinal Survey that followed 20,000 K-5 students	African Americans, Hispanic, and Asian children and adolescents were less involved in music. Taking music in childhood and adolescence positively associated with achievement on reading and mathematics standardized tests.
Taetle (1999)	Participation in fine arts in secondary school and school attendance	Semester attendance of 508 Grade 11 students from three high schools from a large suburban southwestern US was compared; participants were divided into three groups: those who took fine arts electives, those who took a combination of electives that included fine arts, and those who did not take fine arts as electives.	Students who did not participate in fine arts had significantly worse attendance rates than students who took fine arts.

Table 7 (continued)

Study	Focus	Participants	Results
Thomas et al. (2015)	Participation in arts and high school graduation	126,377 Texas high school students participated in the University of Texas at Dallas Educational Research Center longitudinal test.	119,271 of participants completed at least one fine arts credit. Students who took more than one high school fine arts credit had the lowest risk of dropout, followed by students who took one credit and students who did not take fine arts in high school at all.
Thornton (2013)	Whether Pennsylvania Grade 5, 8, and 11 public school students who elected to take music classes performed better on statewide assessments than students who did not take music	6,984 students from 11 PA school districts (6% from all districts in the state) were representative of various geographic locations and SES backgrounds: 2,001 students (29% of participants) participated in music and 4,001 students (71%) did not take any elective music courses. Out of 2,734 participating Grade 11 students, 587 students (21%) voluntary took music classes.	Students who took music courses performed consistently higher on Pennsylvania academic state assessments.
Trent (1996)	High school music education and nationwide test performance	Academic scores of 136 Grade 12 students in Texas: 45 students who took instrumental music classes in school, 43 students who did not take extracurricular classes, and 48 students in other than arts extracurricular activities	Students who participated in instrumental music in school had highest scores on statewide tests in mathematics, language arts, and reading.

As evident from this discussion, the benefits of high school music education were demonstrable and broad-based. Adolescents underwent turbulent physical, cognitive, and emotional development: rapid physical growth, hormonal changes, strong need for socialization and peer approval, emerging hypothetical reasoning, and formulation of moral and cultural values, and music played a very important role in every one of these development types (Santrock, 2010; Vander Zanden, 2000). Then, the question was how to develop the best possible district-level high school music education program.

Leading the Development of High School Music Courses at the District Level

Curriculum theorists suggested that the development of a district-level public high school music program of studies was a complex process that involved collaborations of a variety of stakeholders (Ornstein & Hunkins, 2013). The conceptual framework of the study outlined possible stages of this process and proposed considerations for formal and for informal curriculum development.

Formal and Informal Curriculum Development Models

Educational researchers developed multiple related to the formal and the informal curriculum development guidelines and models that could be employed in district-level music curriculum development. As explained exemplified earlier in Chapter 1, the formal and the informal approaches disagreed on the curriculum development process and on the stakeholder roles in it. The formal approach was posited on specific and orderly steps, pre-planned strategies, and desirable results. The informal approach searched for solutions to practical problems of real classrooms. The formal approach specifically distributed curriculum development responsibilities, assigning teachers only the role of unpacking given national, state, or local educational standards, whereas the informal approach suggested teacher/student collaborations

were in the heart of change. Both approaches agreed on the importance educational philosophies, general goals and specific objectives, and carefully planned instruction and assessment. Also, both approaches assumed some type of collaborative effort. The formal approach assumed negotiations among stakeholders with various authority levels is a solution, while the informal approach found deliberations was the way for determining what worked best for all.

The two approaches drastically differed on the types of decision making involved, with the formal approach being prescriptive and nondeliberative, and the informal being more inclusive and deliberative. Dillon (1994) defined nondeliberative decision making as: (a) negotiating a compatible solution; (b) declaring a consensus as a non-displeasing anyone relief; (c) debating motions for the purpose of defeating or accepting; and (d) voting for determining a winner. Dillon characterized deliberation as a democratic process in which nobody was a loser, right solutions were arrived to through honest opinion changes, unified, and appealing to everyone. Dillon asserted everyone is a leader in deliberative processes, and the role of an official leader was only to gather people, to explain how the process was structured, to regulate discussions, and to help the group to arrive to a solution.

An Overview of Select Formal Curriculum Development Models. Multiple nondeliberative curriculum development approaches developed by curriculum theorists could be used in development of program of studies at the school district level. Some of these models were more specific and prescriptive in terms of processes and stakeholders involved in curriculum development, while others were more prescriptive and specific in terms of ways for identifying curriculum goals, content, and evaluation methods.

W. R. Gordon et al.'s (2019) Gordon Taylor Model of Curriculum System Development, Glatthorn et al.'s (2019) Goal-Based Curriculum Planning Model, Oliva's (2009) Hierarchical

Model of Levels and Sectors of Curriculum Planning, Saylor et al.'s (1981) Curriculum Planning Process, Ornstein and Hunkins's (2013) Curriculum Development Model, and Odegaard's (2009) Curriculum Writing 101 Model recommended identifying stakeholders involved in curriculum development and assigning certain curriculum development roles to each level of educational hierarchy. These models suggested that general curricular goals and objectives were created on the highest levels of educational hierarchy (international, national, state, or district) and were further developed and implemented on the classroom level; then, classroom instruction was implemented, evaluated, and revised with feedback gathered from evaluation.

Taba's (1962) Order of Development of a Dynamic Curriculum, Tyler's (2013) Curriculum Development Model, Oliva's (2009) Model for Curriculum Development, Wiggins and McTighe's (2005) Backward Design Model, and Brown and Green's (2015) Instructional Design Model were more focused on prescribing specific suggestions for establishing what students could learn, developing and organizing content and instruction, and designing evaluation methods.

However, all the select formal curriculum development models agreed that a curriculum development process had to include: definition of stakeholders involved, definition of needs and instructional goals based on such needs, development of learning objectives and evaluation means, curriculum implementation with pre-selected instructional strategies, continual evaluation, and modifications based on evaluation results.

Select formal curriculum development models are summarized in Table 8.

Table 8*Select Formal Curriculum Development Models*

Models and Authors	Descriptions
The Gordon Taylor Model of Curriculum System Development (W. R. Gordon et al., 2019)	Devise objectives, standards, evaluation parameters, student assessments, and curriculum guides on a state, a local, or a school level. Conduct teacher professional development, implement, evaluate, gather feedback, and revise based on feedback.
The Goal-Based Curriculum Planning Model (Glatthorn et al., 2019)	<ol style="list-style-type: none"> 1. Identify agencies involved in planning and analyze relationships among them. 2. Delineate data-driven goals and establish timelines. 3. Assess student needs, establish curriculum task forces, evaluate curriculum development, provide implementation supports, secure funds and resources, and implement professional development.
Ralph Tyler's Curriculum Development Model (Tyler, 2013)	<ol style="list-style-type: none"> 1. Create tentative objectives from every possible source for curriculum development, including: <ol style="list-style-type: none"> a. Needs of students obtained from observations, student and family interviews and questionnaires, assessments, and public records b. Needs of society from examining public opinion and the society itself c. How a subject matter functions as itself and how it impacts student learning 2. Create more precise and attainable objectives in terms of behavior and content, by questioning: <ol style="list-style-type: none"> a. Philosophical/democratic values, such as racial equality and equal access to education b. Psychology of learning, such as time and conditions required of students to master a subject, cognitive demands of a subject, and learning outcomes 3. Specify learning experiences that enable students to: <ol style="list-style-type: none"> a. Practice and apply content. b. Enjoy subject matter. c. Master the demands. d. Learn through a wide range of activities. e. Engage in a verity of experiences while working on grasping one objective. 4. Continually evaluate mastery of each desired behavior in each objective with every possible evaluation instrument.

Table 8 (continued)

Models and Authors	Descriptions
Hilda Taba's Order for Development of a Dynamic Curriculum (Taba, 1962)	<ol style="list-style-type: none"> 1. Diagnose student needs in terms of: <ol style="list-style-type: none"> a. What students can learn b. The ways students learn c. Current curriculum challenges 2. Create learning objectives that define content, behavior, and learning experiences, imply continuity, can be used in a classroom, and represent all desired learning outcomes. Utilize: <ol style="list-style-type: none"> a. Classroom observations and interviews b. Student reflections and stories on given themes c. Discussions d. Student performance e. Tests and assessments of out-of-school student life 3. Select content and learning experiences that: <ol style="list-style-type: none"> a. Represent contemporary developments in the field b. Of a great value to the field c. Enable to develop sufficient knowledge d. Allow application to other aspects of life e. Involve social and cultural education f. Balanced in terms of breadth and depth g. Enable to achieve multiple objectives, behaviors, and skills h. Developmentally appropriate i. Engaging 4. Organize content and learning experiences: <ol style="list-style-type: none"> a. Sequentially, whole to part, chronologically b. Consider continuity and reinforcement c. Cross-subject unification d. Focus on important knowledge e. Design a variety of experiences 5. Collaboratively conduct comprehensive evaluations that are: <ol style="list-style-type: none"> a. Consistent with program goals b. Broad c. Accurately measures student learning d. Utilizes valid instruments that measure what is intended to measure e. Continual

Table 8 (continued)

Models and Authors	Descriptions
The Hierarchical Model of Levels and Sectors of Curriculum Planning (Oliva, 2009)	<ol style="list-style-type: none"> 1. Classroom - curriculum implementation and evaluation 2. Teams, grade levels, and departments: <ol style="list-style-type: none"> a. Select and sequence content b. Structure differentiation c. Create department goals d. Select and/or create materials and assessments e. Coordinate team progress f. Make curricular decisions within authority g. Evaluate curriculum 3. School curriculum committees: <ol style="list-style-type: none"> a. Make decisions on program existence and content b. Evaluate curricula within school c. Survey teachers and families d. Plan school improvement 4. District-wide curriculum committees: <ol style="list-style-type: none"> a. Decide on what district-level programs to offer b. Make recommendations for program improvement 5. State educational agencies: <ol style="list-style-type: none"> a. The highest hierarchy in curriculum development b. Monitor, audit, and allocate for school district programs 6. Regional collaborations of curriculum developers 7. National level: <ol style="list-style-type: none"> a. The US Congress laws associated with major educational needs and interests b. The US Department of Education funds educational grants and developments and provides consulting c. Federal government grants that address national scale educational needs d. Professional educator associations guidelines and research contributions e. Private foundations sponsored research f. Professional coalitions advocacy g. Public opinion 8. International level: <ol style="list-style-type: none"> a. Field contributions of international professional associations b. International-scale student assessments c. Global direction

Table 8 (continued)

Models and Authors	Descriptions
Saylor et al.'s (1981) Curriculum Planning Process	<p>Curriculum developers (teachers and staff), with contribution from students, family, and community create goals and objectives considering student development in terms of communication, general education, values, health, exploratory activities, and areas of student interest:</p> <ol style="list-style-type: none"> 1. Design the curriculum. <ol style="list-style-type: none"> a. Consider questions related to major curricular goals b. Identify more specific goals c. Analyze learning experiences d. Select a design (such as student grouping, courses, subjects, etc.). Curriculum design foci examples: <ol style="list-style-type: none"> i. Subject matter/discipline ii. Competence/technology iii. Human traits/processes iv. Social functions/activities v. Individual student needs and interests/activities e. Further specify a design f. Determine implementation means 2. Implement the curriculum – design and implement instruction. <ol style="list-style-type: none"> a. Select effective teaching models, applicable to curriculum designs b. Individualize and differentiate 3. Evaluate the entire educational program, curriculum, with its specific areas, goals, objectives, and the entire program; use evaluation models. <ol style="list-style-type: none"> a. Behavioral objectives – student achievement; use tests b. Decision making – whether consensus was reached in program development; use surveys, observations, interviews c. Goal-free – not influenced by program goals; use logical analyses with any data types d. Accreditation – panel reviews; use state accreditation standards e. Responsive – evaluate program activities, requirements, values; use case studies, interviews, observations
The Oliva Model for Curriculum Development (Oliva, 2009)	<ol style="list-style-type: none"> 1. Define physical, social, psychological, educational, and developmental needs of students in general (every 1-3 years). <ol style="list-style-type: none"> a. Basic human b. As American citizens c. Specific to a state or a region

Table 8 (continued)

Models and Authors	Descriptions
The Oliva Model for Curriculum Development (Oliva, 2009), continued	<ol style="list-style-type: none"> 2. Define needs of human, world, national, state, community, and neighborhood society (every 1-3 years) <ol style="list-style-type: none"> a. "Political b. Social c. Economic d. Educational e. Environmental f. Defense g. Health h. Moral and spiritual" (Oliva, 2009, p. 197) 3. Craft an underlined educational philosophy statement (every 5-10 years). <ol style="list-style-type: none"> a. A brief and honest statement on organizational beliefs "about the purposes of education, society, the learner, and the role of the teacher" (Oliva, 2009, p. 172) 4. Enumerate the physical, social, psychological, educational, and developmental needs of students in a particular school (every 1-3 years). <ol style="list-style-type: none"> a. Consider how school population and general performance impact student learning and development 5. Enumerate the physical, social, psychological, educational, and developmental needs of students in a particular community (every 1-3 years). <ol style="list-style-type: none"> a. Consider how a community type influence student learning and development 6. Define needs derived from a subject matter. <ol style="list-style-type: none"> a. Figure out what, when, and to what extent must be taught to a learner to achieve a subject mastery b. Consider latest development in the field and published standards 7. Devise curriculum goals for a particular school – end results without specific achievement criteria (every 1-2 years). <ol style="list-style-type: none"> a. Derived from an educational philosophy b. Applicable across programs offered at a school c. Related to the entire school population d. Broad 8. Devise curriculum objectives for a particular school – specific, measurable, derived from curriculum goals (every 1-2 years). <ol style="list-style-type: none"> a. Define results in terms of behaviors, specific degrees of mastery, and learning conditions 9. Organize and implement curriculum within each instructional program to meet goals and objectives (every 1-10 years).

Table 8 (continued)

Models and Authors	Descriptions
The Oliva Model for Curriculum Development (Oliva, 2009), continued	<ol style="list-style-type: none"> 10. Define instructional goals, expected student learning and performance (continually) <ol style="list-style-type: none"> a. Align with curriculum goals and objectives b. Cognitive, affective, and psychomotor c. Establish demands 11. Define instructional objectives – expected behavior, conditions, and mastery level in measurable terms (continually). <ol style="list-style-type: none"> a. Align with curriculum goals and objectives b. Cognitive, affective, and psychomotor c. Establish demands 12. Choose and implement instructional strategies, such as teaching and learning styles, teaching models and skills, unit organization and presentation, and instructional modes (continually) considering: <ol style="list-style-type: none"> a. Student needs and interests b. Individual teachers c. Subject matter demands d. Time allotted e. Resources f. Facilities g. The extend of fulfilling objectives 13. Start determining evaluation means, conduct pre-assessments (continually). 14. Apply instructional strategies and conduct formative evaluation (continually). 15. Finalize evaluation means (continually). 16. Evaluate instruction and modify as needed (continually). 17. Evaluate curriculum and modify as needed (continually). <ol style="list-style-type: none"> a. Scope – breadth, topics, variety, and types b. Relevance – content representation and use c. Balance – proportionally methodical and logical scope and sequence of content that results in mastery of objectives: <ol style="list-style-type: none"> i. Learner-centered vs. subject-centered ii. Addresses needs of learners vs. society needs iii. Curriculum accessibility to all types of learners iv. Bread and depth v. Addresses cognitive, affective, and psychomotor vi. Geared toward population vs. individuals

Table 8 (continued)

Models and Authors	Descriptions
The Oliva Model for Curriculum Development (Oliva, 2009), continued	<ul style="list-style-type: none"> vii. Innovative vs. traditional viii. Logical vs. psychological ix. Use of multiple means of instruction x. Work vs. play xi. Community explorations xii. Strong across all disciplines and programs d. Integration across disciplines e. Sequence of elements <ul style="list-style-type: none"> i. From simple to complex ii. Chronological iii. Reverse chronological iv. Geographically near to far and vice versa v. Concrete to abstract vi. General to specific and vice versa f. Program and content continuity across grade levels g. Articulation - flow across levels h. Learning transfer – applicability outside the school
Backward Design (Wiggins & McTighe, 2005)	<ul style="list-style-type: none"> 1. “Identify desired results. 2. Determine acceptable evidence. 3. Plan learning experiences and instruction” (Wiggins & McTighe, 2005, p. 18) <p>First stage involves examining learning standards and curriculum goals; the second stage is deciding what assessment(s) could serve best as evidence of student learning; the third stage is planning what key knowledge and skills students will need to learn to successfully perform on planned in the stage two assessment(s).</p>
Brown and Green’s (2015) Instructional Design Model	<ul style="list-style-type: none"> 1. Analyze needs: <ul style="list-style-type: none"> a. Identify what needs to be changed b. Analyze who request the change c. Determine change location d. Implement solutions e. Evaluate

Table 8 (continued)

Models and Authors	Descriptions
Brown and Green's Instructional Design (2015) Model, continued	<ol style="list-style-type: none"> 2. Analyze tasks: <ol style="list-style-type: none"> a. Determine what needs to be changed b. Define tasks to be changed c. Prioritize d. Sequence the process e. Analyze tasks and content levels 3. Analyze learners using widely recognized approaches: <ol style="list-style-type: none"> a. As humans – the Maslow's Hierarchy of Needs b. Learning styles – various inventories c. Consider performance and development levels of different types of learners – special needs, general population, and gifted 4. Plan and implement interventions: <ol style="list-style-type: none"> a. Define goals as general statements of educational outcomes and objectives as specific knowledge and skills in terms of student learning outcomes/behaviors 5. Design instruction considering: <ol style="list-style-type: none"> a. Scope and sequence b. Instructional delivery methods c. Learning environments 6. Evaluate with a variety of methods (formative, summative, and as applicable): <ol style="list-style-type: none"> a. Student learning b. Curriculum/instruction as a product 7. Design the product (curriculum/instruction)
Ornstein and Hunkins' (2013) Curriculum Development Model	<ol style="list-style-type: none"> 1. Organize curriculum development teams on the federal, state, and local levels: <ol style="list-style-type: none"> a. Motivate all teachers b. Invite school administrators to participate c. Hire outside consultants

Table 8 (continued)

Models and Authors	Descriptions
Ornstein and Hunkins' (2013) Curriculum Development Model, continued	<ol style="list-style-type: none"> 2. Engage stakeholders in data analysis on needs to develop educational aims, goals, and objectives: <ol style="list-style-type: none"> a. Aims – based on values, provide directions: <ol style="list-style-type: none"> i. Intellectual – knowledge and skills ii. Social-personal – relationships and self-perception iii. Productive as citizens, at home, and on the job iv. Physical – health v. Aesthetic – arts appreciation vi. Moral – values vii. Spiritual b. Goals – student content knowledge and performance expectations written in general language c. Objectives – short-term, specific, non-trivial <ol style="list-style-type: none"> i. Behavioral – in terms of desired behavior, learning conditions/situations, and proficiency level ii. Non-behavioral – in terms of higher-order thinking; use words appreciate, understand, etc. iii. Cognitive – in terms of cognitive demands and processes iv. Multipurpose – combine different types of knowledge and skills v. Affective vi. Psychomotor 3. Select curriculum content – knowledge and skills that correspond to aims, goals, and objectives: <ol style="list-style-type: none"> a. Maximize student learning. b. Organize content: <ol style="list-style-type: none"> i. Logically – by concept development ii. Psychologically – address the ways students learn iii. Politically – by topics of most importance to political powers iv. For practicality – cost-efficiency c. Content selection criteria: <ol style="list-style-type: none"> i. Depth ii. Significance to the field of study iii. Authenticity iv. Interest in terms of student engagement v. Usefulness in terms of application vi. Learnability in terms of student accessibility vii. Feasibility in terms of time needed to master

Table 8 (continued)

Models and Authors	Descriptions
Ornstein and Hunkins' (2013) Curriculum Development Model, continued	<ol style="list-style-type: none"> 4. Select experiences: <ol style="list-style-type: none"> a. Instructional strategies b. Learning activities 5. Select learning environments: <ol style="list-style-type: none"> a. Adequate spaces b. Suitable activities c. Efficient operations d. Cost-effective 6. Review and synthesize all previous stages.
The Curriculum Writing 101 Model (Odegard, 2009)	<p>Involve the entire staff of music teachers in a proposed district-level curriculum development process:</p> <ol style="list-style-type: none"> 7. Study how the National Music Standards are reflected in state standards. 8. Write school district-level curriculum by grade levels for: <ol style="list-style-type: none"> a. Band b. Chorus c. Orchestra d. General music e. Consider jazz band, students with special needs, music composition, and other subjects offered in a school district 9. Include in the curriculum: <ol style="list-style-type: none"> a. Learning standards, as goals stated in general language b. Benchmarks, as learning objectives defining desired behaviors and learning conditions c. Specific knowledge and skills, as evidence of student learning in terms of the Bloom's taxonomy d. Learning activities that support standards, benchmarks, and specific knowledge and skills 10. Create a document with base knowledge and skills desirable to teach in each grade level. 11. Identify the most important standards and create summative assessments. 12. Logically organize content throughout the entire process. 13. Communicate results of student assessments to families and to the community.

An Overview of Select Informal Curriculum Development Models. Informal curriculum development theorists suggested that while curriculum development occurred simultaneously and on multiple levels, in continual stakeholder collaborations, the classroom level was where most curricular decisions were made, through continual searches for practical solutions to real problems (Elliott & Silverman, 2015; Eisner, 2002; Sowell, 2005; Walker, 2003). Eisner's (2002) Curriculum Diffusion Concept, Sowell's (2005) Experiences Approach to Curriculum Development, Elliott and Silverman's (2015) Practical Curriculum Development, and Reimer's (2003) Total Model for Integrated Curriculum models proposed that curricular innovations happened organically, with consideration for unique needs and priorities of classrooms and schools. Elliott and Silverman and Eisner suggested that the role of the teacher was central to curricular decision making; teachers were the ones who applied their unique educational philosophies, qualifications, and interests to their unique classroom situations, and teacher/student interactions through daily instruction, evaluation, and adjustments were major contributors to curricular changes.

Elliott and Silverman's (2015) Practical Curriculum Development, Walker's (1971) Naturalistic Model for Curriculum Development, Macdonald's (1971) Responsible Curriculum Development, and Noyé's (1994) Phases of Deliberation models suggested that informal curriculum deliberations occurred continually, through holistic evaluations of realistic classroom problems and through deliberations that involve presenting problems, negotiating, and finding consensus. Dillon-Krass and Staub (1991) proposed particular steps for teacher-led curricular changes.

Select informal curriculum development models are summarized in Table 9.

Table 9*Select Informal Curriculum Development Models*

Models and Authors	Descriptions
The Curriculum Diffusion Concept (Eisner, 2002)	<ul style="list-style-type: none"> Teachers, schools, and school districts have unique priorities; curriculum development happens on all levels. Innovations organically enter school programs and are adapted and changed as needed. State, national, and district standards and frameworks and research and commercial developments serve as illustrative and inspirational to anyone who is planning to make a curricular change, and the role of the teacher is central – curriculum planning must take place on the classroom level. The sequence of development and organization of general educational aims, curricular goals, specific objectives, learning environments, knowledge and skills taught, etc. is arbitrary. Developing of new course offerings must be done in the most practical way, with considerations of all existing options, such as, teacher certifications, resources available, etc. Organization of content areas should be interdisciplinary. Evaluation of instructional programs is continual, from the process of selecting educational experiences to pilot-testing, implementing, and determining program benefits.
The Practical Reason Approach to Curriculum Improvement (Walker, 2003)	<p>Approaches curriculum development as a practical problem and purports it can be solved through deliberations that is based on practical reasoning:</p> <ol style="list-style-type: none"> Present the problem: <ol style="list-style-type: none"> In a relevant way Define causes and project consequences Do not try to find immediate solutions; rather, collectively redefine the problem Project potential solutions; analyze discussions: Collaboratively select the best solution: <ol style="list-style-type: none"> Consider real time, resources, and knowledge needed Conduct classroom field tests Balance conflicting opinions

Table 9 (continued)

Models and Authors	Descriptions
The Experiences Approach to Curriculum development (Sowell, 2005)	<p>Teachers are the main source of curriculum; teacher/student approach to curriculum development:</p> <ol style="list-style-type: none"> 1. Decide on purpose of education and content needed to fulfill the purpose. 2. Delineate key topics to build learning experiences from. 3. Engage students in creating learning experiences or choosing from related to content experiences. 4. Deliver instruction. 5. Evaluate student progress toward main purpose of education.
The Naturalistic Model for Curriculum Development (Walker, 1971)	<p>Educational platforms, or experiences and values of curriculum developers, clash in deliberation processes that lead to developing curricular policies and designs.</p> <ol style="list-style-type: none"> 1. Discuss the problem. 2. Come up with alternatives. 3. Debate pros and cons. 4. Choose the best justifiable alternative.
The Practical Curriculum Development (Elliott & Silverman, 2015)	<p>“Practical curriculum making holds that the best curricula arise when teachers focus on their own circumstances, rather than the generic scripts of theorists and publishers who tend to see similarities across teaching situations that cannot be grouped together defensibly in reality” (Elliott & Silverman, 2015, p. 406).</p> <p>Continually recurring stages (individual teachers or teams):</p> <ul style="list-style-type: none"> ○ Orientation on common denominators in curriculum making: <ul style="list-style-type: none"> ○ Aims of music education ○ Musical knowledge: <ol style="list-style-type: none"> i. Actional – performing, listening, feeling, etc. ii. Verbal – musical concepts, facts, etc. iii. Experiential – critical reflection iv. Situated in individual and societal contexts v. Intuitive – developed through musical experiences vi. Appreciative – creative application of current musical situations to future experiences vii. Ethical – as ethical situations students and teachers engage in daily viii. Supervisory – self-monitoring, adjustment, and musical imagery

Table 9 (continued)

Models and Authors	Descriptions
The Practical Curriculum Development (Elliott & Silverman, 2015), continued	<ul style="list-style-type: none"> ○ Students – curriculum that serves all students ○ Learning processes ○ Teacher – musicianship, educational expertise, ethics, philosophy, etc. ○ Assessment of gradual development of student musicianship ○ Learning contexts ○ Preparation and planning of: <ul style="list-style-type: none"> ○ Activities – performing, composing, improvising, etc. ○ Scope and sequence ○ Key musical knowledge and skills ○ Specific learning goals geared for attaining key musical knowledge and skills ○ Instructional practices modified in the delivery process ○ Alternative instructional delivery methods ○ Projected assessments for musicianship development ○ Teaching and learning – daily instruction, assessments, and adjustments ○ Curriculum evaluation: <ul style="list-style-type: none"> ○ Descriptive – facts and feelings presented verbally or via media ○ Interpretive – underlining pluses and minuses ○ Evaluative – make decisions based on prior descriptions and interpretations
The Total Model for Integrated Curriculum (Reimer, 2003)	<p>A valid curriculum is comprehensive in terms of student inclusivity in multiple musical roles, sequential in terms of effective content and skill organization, and balanced in terms of culture representation and musical proficiency levels, from aficionado to professional. Reimer does not specify curriculum developers and sequence of steps and proposes seven phases for integrating six music intelligences: composing, performing, improvising, listening, music theory, music teaching.</p> <ul style="list-style-type: none"> ● Describe values of music education in terms of society and culture. ● Conceptualize musical activities, such as performance, for active musicianship development. ● In a program of studies, systematize major knowledge, skills, and literature over time. ● Interpret the roles of courses on their own and how they impact other courses. ● Operational – classroom practices ● Experienced – learning opportunities provided to students ● Expectational – what is expected from music education

Table 9 (continued)

Models and Authors	Descriptions
Tips for Establishing a String and Orchestra Program (Dillon-Krass & Straub, 1991)	<p>Suggestions for orchestra teacher on how to advocate for establishing a string orchestra program, no order:</p> <ul style="list-style-type: none"> • Develop a strong, data-supported, rationale. • Establish program goals. • Consult with state educational agency music administrators on string programs in school districts with similar characteristics. • Observe a successful program. • Consult with leadership of national and state music educator associations. • Contact university professors. • Ask for help from administrators, community, orchestra conductors, music businesses, private teachers, art organizations, parents, etc. • Influence school district decision making – establish family/community interest, communicate program rationale for a program to school administrators, propose at a school board meeting.
Macdonald's (1971) Responsible Curriculum Development Model	<p>The model is names responsible because it is designed for providing to all involved in curriculum development opportunities to respond to the process. The model is built on:</p> <ul style="list-style-type: none"> • Stakeholders who contribute to curriculum development, researchers, professionals, educators, administrators, parents, students, etc., play equal roles and have access to curriculum planning. Curriculum is shaped by interactions of these stakeholders. • Behavioral goals and objectives • Continual development • Curriculum content organized in relation to students, society, and other subjects • Holistic evaluation focused not on grading but on fulfilling student potential
Noyé's (1994) Phases of Deliberation	<ol style="list-style-type: none"> 1. Publicly share the problem and projected options for solutions. 2. Identify agreements and disagreements. 3. Explain points of views and discuss opposing ones in a collaborative way. Clarify as needed: restate questions, ask open-ended questions, and express reactions. 4. By this time, some people may change opinions, during the previous phase. Reveal these changes to the group. 5. Discuss and negotiate to fulfill real and not theoretical needs. 6. Come up with a decision that includes all opinions.

Formal and Informal Curriculum Development in Practice. The formal curriculum development models shown in Table 8 could be frequently traced in practice of state educational agencies that provided pre-programmed supports for curriculum development and gathered panels of music educators and administrators to compile instructional guidelines based on research, needs, and public opinion (F. C. Fowler, 2013; Maryland State Department of Education, n.d.; Montana Office of Public Instruction, 2017; South Dakota State Board of Education, n.d.; Montana Office of Public Instruction, 2017; South Dakota State Board of Education, 2015). For example, the Washington Office of Superintendent of Public Instruction (n.d.) pre-developed 8 high school music assessments that embodied composition, performance, and music literacy and were applicable across a variety of high school music courses. The West Virginia Board of Education (2012) required high school chorus, band, and orchestra to be offered daily and defined budget, instructional and scheduling logistics, and teacher competencies for these courses; piano and guitar courses were provided with the same type of guidelines but were not required to offer daily. The West Virginia Department of Education (n.d.) even published recommended band and orchestra repertoire.

State standards and guidelines were further individualized at the school district level, and this was where the informal curriculum development approach came into play. For example, Missouri Department of Elementary and Secondary Education (2019a; 2019b) listed four strands for secondary music education, Traditional and Emerging Ensembles, Music Technology, Composition and Music Theory, and Harmonizing Instruments; however, the School District of the City of St. Charles (n.d., 2017) offered high school vocal, band, and orchestra ensembles, whereas the Park Hill School District (2020) offered high school vocal and instrumental ensembles, music theory, music appreciation, and adaptive music. In formal curriculum development, school district music administrators functioned as system players who could go

outside their districts to seek resources and collaborations and to build coalitions with colleagues and stakeholders to advocate in the state legislature for quality sequential music education (J. L. Benham, 2016; Fullan, 2001, 2014; Virginia Coalition for Fine Arts Education, n.d.). With informal approach, the assumption was that music teachers could do so. According to Dillon-Krass and Straub's (1991) suggestions described in Table 9, through advocacy and careful planning, teachers served as major influencers in creating new music courses.

In Virginia, when came to high school music curriculum development, school leaders were not constrained by the state law. The VDOE (2022c) only provided high school music resources, sample unit and lesson plans (Board of Education, Commonwealth of Virginia, 2020). Virginia school divisions' music education leaders had regular opportunities to contribute to the development of state-wide suggestions for music course offerings; administrators responsible for fine arts programs participated in the monthly VDOE Fine Arts Steering Committee, which invited a representative from each school division to provide feedback (K. Bisogno, personal communication, June 10, 2020). In Virginia school divisions that utilized site-based management, such as in Prince William County Schools (2018), building administrators were responsible for developing and funding school-based programs; in these cases, administrators had a freedom to offer courses that work for particular schools and could use more informal approaches to developing more localized programs of studies. In school divisions that practiced a more centralized approach, central offices might oversee development and funding of instructional programs (Give a Note Foundation, 2017).

As the study's conceptual framework suggested, curricular changes could emerge from any social system part. Therefore, music education administrators might need to continually monitor the curriculum development game on all levels and might select decision-making

approaches creatively, disrupting appropriate parts of social systems to initiate positive changes, and moving organizations through changes by first of all working with and changing people (Cowden & Klotman, 1991; Ornstein & Hunkins, 2013). I exemplified creative and successful curriculum development approaches and decision-making strategies that use both formal and informal curriculum development.

Decision Making. In formal curriculum development approach, when deciding on who, when, and how to involve in developing high school music offerings, local leaders carefully considered roles, commitment levels, and competencies of stakeholders (Hoy & Tarter, 2008). Hoy and Tarter (2008) built several applicable to the formal curriculum development approach shared decision-making models and decision-making trees that could aid administrators in determining levels of irrationality in planning, the extent of stakeholder involvement, and the administrative roles and steps. According to the informal curriculum development approach, teachers realistically determined student needs and deliberated on curricular decisions and outcomes. In educational practice, music education administrators had to skillfully blend formal and informal curriculum development. School leaders had to analyze how stakeholder visions, goals, and formal interactions played in the curriculum development game and to purposefully involve stakeholders to develop programs in which mandates and innovations coherently aligned to maximize student learning (Ornstein & Hunkins, 2013; Ylimaki, 2014). I explained how both curriculum development approaches could be successfully combined.

Deliberations in Shared Decision Making. Hoy and Tarter's (2008) simplified shared decision making model, applicable to the formal approach to curriculum development, consisted of the following interdependent steps: (a) determine the levels of expertise and commitment of stakeholders; (b) decide whether stakeholders could make decisions that needed to be made; (c)

determine the level of stakeholder involvement on the scale from democratic to non-collaborative; (d) structure the group work outcome, such as, consensus, majority rules, consulting with the entire group, consulting individuals, or making a unilateral decision; and (e) decide on what role administration should take, an integrator of opinions to reach consensus, a parliamentarian who promote discussions, an educator who explains and ensures acceptance, a solicitor who asks for advice, or a director who alone makes decisions for efficiency. In the following example, the Noyé's (1994) Phases of Deliberation shown in Table 9 were effectively used in conjunction with the Hoy and Tarter's model.

When Clinton (2015) was a music supervisor at a large suburban school district in Oklahoma, a teacher-led (informal) curriculum development opportunity emerged. His music teachers asked if all (over 1,000) Grade 5 students in the district could participate in an All-City Fifth Grade Choral Concert. This event would require a lot of planning on the part of teachers and principals and could interfere with a current curriculum, as students would need to rehearse selected music in class in lieu of pre-planned curricular tasks. The deliberations models and Hoy and Tarter's (2008) simplified shared decision-making model could be traced in the following Clinton's thoughtful actions. First, Clinton gathered all music teachers to deliberate on how the event would interfere with the curriculum and asked for solutions. The teachers decided to hold the event and came up with a solution: to apply curricular objectives to the All-City music students would learn. According to the Hoy and Tarter's model, the situation was democratic, as teachers had an expertise and it was relevant to them; therefore, Clinton needed to extensively involve them and himself serve as an integrator of diverse opinions to help reach consensus among teachers.

Clinton's (2015) second step was to present curricular adjustments and the event organizational logistics to the elementary school principals to whom the change was relevant, but, although they had curricular expertise as evaluators and needed to ensure orderly environment, Clinton could not trust their expertise in preparing and conducting the event. According to Hoy and Tarter (2008), the situation was conflictual—the principals prioritized teaching curriculum and orderly comfortable environment, and their involvement in the event planning and preparation needed to be limited to the group advisory type of involvement. During this deliberation cycle, the principals gave recommendations, whereas Clinton educated them on curricular changes and the event organization, and the principals accepted the change.

Third, Clinton (2015) and all elementary school music teachers met with Grade 5 general education teachers to whom the even was relevant, but they did not have an expertise. According to Hoy and Tarter (2008), the general education teachers' level of involvement was limited to occasional, and he educated them about the event and asked for help to supervise the event and to encourage students to learn new music. The inaugurating event was successful and continued running for decades because Clinton effectively approached stakeholder analysis and involvement. Thus, applicable to formal curriculum development the Hoy and Tarter's model of decision-making and applicable to informal curriculum development deliberations concept could certainly be useful in developing high school programs of studies.

Leading Practical Solutions. Another example from educational practice showed the effectiveness of considering the two types of curriculum development within an educational leadership framework. Explained in Table 8 Oliva's (2009) and Brown and Green (2015) formal curriculum development models exemplified hierarchically pre-defined roles of stakeholders and responsibilities assigned to each stakeholder type. Walker's (1971, 2003) and Elliott and

Silverman's (2015) informal curriculum development models explained in Table 9 are built on practical reasoning in solving burning issues and on the importance of involving teachers in curricular decisions. Bolman and Deal (2017) designed the four-frame model to help leaders navigate through intricate relationships among parts of social systems by considering situations from multiple perspectives in decision-making. Bolman and Deal suggested leaders to consider four frames when moving organizations through change: (a) the structural frame – focus on official roles and responsibilities of employees, policies, and environment to make optimal and structurally sound decisions; (b) the human resource frame – put people and relationships first, empower and show compassion; (c) the political frame – articulate common interests when negotiating and fighting for scarce resources; and (d) the symbolic frame – instill traditions and pride by developing mission and vision. Senge's (2006) Limit to Growth archetype was explained in Chapter 1. I traced the two curriculum development approaches, the Bolman and Deal's frames, and the Senge's archetype in administrative actions that resulted in saving district-level music programs.

Major (2013) conducted a single case study to examine decision making processes of Michigan's Lekberry School District administrators who kept music programs from cuts during the early 2000s economic recession. Major administered focus group interview with eight music teachers and 13 individual interviews with teachers and administrators. Overall, the administrators determined that the lack of financing was the limiting factor, capitalized on highly successful teaching and advocacy, and explored every financial opportunity. The district's mission and vision included well-rounded education and the value of music education was openly communicated indicated the administrators' considerations of the symbolic frame leadership. Strong classroom practices, collaborations among administration, family, community

were suggested the human resource frame leadership and considerations for stakeholder roles. Offered in all grades, high quality successful music programs and curriculum, organized both spirally and sequentially, implied the structural frame leadership and teacher involvement in curriculum development. The district administrators generated funds for music programs by renting out school facilities on weekends, expanding student membership count through sending their teachers to private schools to teach elective courses, partnering with other school districts in offering specialized programs, consolidating programs, eliminating pension and health care for substitute teachers, consolidating administrative positions, decreasing teacher benefits, and discontinuing unsuccessful programs. These actions exemplified school leaders' considerations for the political frame leadership, effective stakeholder involvement, and successful deliberations. Thus, appropriate use of leadership frameworks was important in the formal and in the informal curriculum development approaches.

Analytical Planning Strategies in Curriculum Development. To engage stakeholders in curriculum planning in most effective ways, in addition to knowledge on how to lead deliberation processes, instructional leaders might work on acquiring knowledge of multiple analytical procedures that would allow to effectively determine pros and cons both individually and collaboratively. One collaborative process that could be used in program development would be the recurring cycle of action research, in which teachers and leaders might collaboratively (a) define problems and develop interventions; (b) implement interventions; (c) gather and analyze the results, and (d) share results and posit new challenges (Fullan et al., 2018; Mertler, 2013). Other examples included: the analysis of organizational strengths, weaknesses, opportunities, threats (SWOT) and the analysis of technological, economic, ecological, political, legislative,

ethical, and demographic factors (STEEPLED) within and outside organizations (Bryson, 2011; Buller, 2015).

But no matter how carefully one might plan, any initiative could fail due to a lack of motivation, excessive projects, poor implementation, cultural resistance from stakeholders, wrong leaders, bureaucracy, and exclusion of important people from participation (Bryson, 2011). Multiple leadership types and frameworks for leading change could help educational leaders to understand how to work with complexity and uncertainty. Between Northouse (2016) and Goleman (2000), there were 19 leadership types: adaptive, affiliative, authentic, authoritative, behavioral, coaching, coercive, democratic, ethical, leader-member, cultural, path-goal, psychodynamic, servant, situational, skills, team, trait, and transformational; research suggested that effective leaders were proficient in many leadership styles and were capable of skillfully selecting and combining appropriate styles as needed (except for using the coercive style extremely rarely, only in dangerous situations, when something must be immediately stopped).

Leading Change. Many change leadership frameworks posited that leaders might adapt themselves to serve more as collaborators rather than managers. Taylor and Machado (2006) suggested making incremental changes and considering four elements when engaging in planning processes: “leadership, vision, environmental scanning, communication, participation, and flexibility and simplicity” (p. 151). Lewin’s change management model was based on three steps: motivate to change ineffective practices, provide support and resources in the process, and compromise between old and new to fit the entire organization (Mind Tools 2020a, 2020b). Fullan (2001) argued these actions and qualities of leaders led to good results: acting with a high moral purpose, understanding the complexity and unpredictability of change, building

collaborative environments, promoting day-to-day knowledge sharing, and establishing grounds for innovative practices by welcoming everyone's inputs and visions.

Fullan (2014) and DiPaola and Wagner (2018) proposed the concept of a learning leader, one who learnt and grew together with the entire organization and invited collaborations rather than focused strictly on top-to-down managerial tasks. This concept of learning leadership might be particularly important in curriculum leadership, no matter whether processes leaders engaged in were formal or informal, and one of the reasons was that the field of curriculum development has started making a shift. The latest influential educational initiatives, the current Profile of a Virginia Graduate, the state's model of a high school graduate, and deep learning, a global construct, called for teaching the whole child (Fullan et al., 2018; VDOE, 2022d). The Profile of a Virginia Graduate was built from student expectations to learn content, possess workplace skills, contribute to community, and engage in career explorations (VDOE, 2022d). The deep learning initiative focused not only on cognitive, but also socio-emotional and authentic real-life experiences which would enable students and teachers to co-create and collaborate on educational journeys (Fullan et al., 2018). These pathways could certainly apply to the field of music education. With proliferation of technology and the latest Virginia SOLs focus on creativity, school leaders had to be ready to structure collaborative curriculum development innovatively (Board of Education, Commonwealth of Virginia, 2020). Clearly, one person or even a select team could not design and impose such experiences. Innovative practices could only be born in the culture of openness, collaborative learning, and nonjudgmental trials and errors (Fullan, 2001).

Therefore, music education school leaders might consider leading formal and informal curriculum development initiative as learning leaders, by determining and addressing limits to

growth through instilling the “we all are in this together” environment, by encouraging individualized organizational visions and leadership on any workplace hierarchy, and by skillfully fusing these visions into a shared organizational vision in ways that would allow every stakeholder to feel like he or she could be a valuable member who would take a feasible part in the process (Bryson, 2011; Buller, 2015; Hoy & Tarter, 2008; Senge, 2006; Sinek, 2009).

Summary

Through over 180 years of history, technological, research, and industry advances, American public school music education became a world leading power, and administrative and teacher leadership have played a key role in these successes: seeing the value of music education, educational leaders have advocated for quality music programs and persistently worked together on overcoming racial and socio-economic barriers and on finding resources for non-funded by educational laws high school music education (Mark, 2002; McCarthy, 2007). This literature review showed how pivotal the role of the school district level music education leader was program development. Whether it was opening a new instructional program, improving an existing one, or addressing needs of underserved student populations, a district-level music administrator was in the center of change as a politician, a motivator, an initiator, a planner, and an organizer of formal and informal curriculum development.

As systems players and political and structural leaders, music administrators effectively used the skills leadership style, functioned within all four of the Bolman and Deal’s (2017) frames, and studied the social system with Senge’s (2006) archetypes, problem solving while isolating and working to change factors that impede organizational growth, like generations of music administrators and educators who have demonstrated through their advocacy efforts (Mark, 2002; Northouse, 2016; Senge, 2006).

As systems players and human resource leaders, music administrators demonstrated effective human and conflict resolution skills, situational leadership, and behavioral competencies by effectively organizing appropriate stakeholders in making shared decisions, like Lekbery School District administrators who saved music programs in economic hardship (Bolman & Deal, 2017; DiPaola, 2003; Hoy & Tarter, 2008; Major, 2013; Northouse, 2016).

As transformational learning leaders, human resource leaders, and masters of leader-member exchange leadership theory, music administrators were the ones who set the pace, inspired everyone to lead, and developed high-quality interactions with all stakeholders, encouraging continual collaboration, learning, and growth, as a music coordinator Clinton (2015) who wisely and smoothly moved his organization through changes (Northouse, 2016).

As true educational leaders, learning and servant leaders who had a high moral purpose of doing good things to other people, and as adaptive leaders who differentiated managerial and leadership tasks, music administrators successfully moved their organizations through changes to a better future, as generations of music educators and administrators, starting with Lowell Mason whose example have inspired generations (Fullan, 2001, 2014; Northouse, 2015).

Even most recently, music education in Virginia faced racial, socio-economic, and geographical locations disparities, and it was the job of district-level music education leaders to mobilize stakeholders in overcoming the barriers. As music was not a required subject in Virginia, school administrators and teachers had to make every effort to make music education available to every student. No high school child should be deprived from quality music education. With this study, I hoped to present an accurate perspective on the status of high school music education in Virginia public schools and to discover effective practices for building successful high school music programs.

CHAPTER 3

METHODS

This study examined extant public high school music course offerings in Virginia school divisions with the explanatory sequential mixed methods research design, a design that sequentially incorporated quantitative methods, notated in methodological literature as QUAN, and qualitative methods, notated as QUAL (Creswell & Plano Clark, 2018; Leavy, 2017; Morse, 2015; Teddlie & Tashakkori, 2009). The quantitative investigation opened and dominated this study, and the notation for the study was QUAN → qual, as methodological literature on the explanatory sequential mixed methods suggested representing a sequential approach with an arrow and notating a less dominant stage in the lower-case (Creswell, 2014; Creswell & Plano Clark, 2018; Leavy, 2017; Morse, 2015; Teddlie & Tashakkori, 2009).

With the QUAN analysis, I determined what high school music courses were offered in each Virginia school division and on what difficulty levels, such as beginning, intermediate, advanced, artist, I, II, as underlined in the current Music SOLs, how frequently each course type was offered statewide, and whether presence of particular course offering in a school division was correlated to the four selected demographic characteristics of that school division: enrollment, geographic location, SES, and race/ethnicity (Board of Education, Commonwealth of Virginia, 2020).

With the qualitative analysis, through qualitative interviews with representatives from select 14 school divisions, I further examined the quantitative findings by investigating how

formal and informal curriculum development processes used in these select divisions influenced development of high school music courses in these school divisions.

The explanatory sequential mixed methods design was appropriate in this study because the complex phenomenon of high school music education in Virginia called for both qualitative and quantitative explorations, and, whereas a quantitative exploration was needed for a big picture, an in-depth qualitative follow up allowed to highlight unique situations of school divisions across the state (Creswell & Plano Clark, 2018; DeCuir-Gunby & Schutz, 2017; Tashakkori & Teddlie, 1998). The Research Questions posed in the study reflected the procedures of the explanatory sequential mixed methods design:

Research Questions

1. What types and levels of high school music courses (for example, band, chorus, orchestra, piano, guitar, vocal ensemble, instrumental ensemble) were offered in each Virginia public school division in a given school year?
2. How did offering of each high school music course type in a given Virginia public school division correlate with this school division's select demographic characteristics: enrollment, geographic location, socio-economic status, and race/ethnicity?
3. What formal and/or informal curriculum development approaches were associated with offering of particular types of high school music courses in a representative sample of Virginia public school divisions?

Paradigm

Social studies research defined paradigms are philosophical beliefs about the nature of reality; paradigms might guide how reality could be investigated and explained and would

underpin decisions on conceptual frameworks, methods, tools, and procedures for scientific investigations (Biesta, 2015; Creswell & Plano Clark, 2018; Guba & Lincoln, 1994; Maxwell, 2009; Morgan, 2007, 2014; Ponterotto, 2005; Tashakkori & Teddlie, 1998). The paradigm adapted in the study was originated in the 1870s philosophy of pragmatism, which ontology, or a perception of reality, suggested that truth was relative, discovered and modified in never-ending logical and practical investigations, and shaped by and reflected in human behavior (Biesta, 2015; Cherryholmes, 1992; Creswell & Plano Clark, 2018; Crotty, 2015; Guba & Lincoln, 1994; Hare, 2005; Legg & Hookway, 2020; Maarouf, 2019; Morgan, 2007, 2014; Ponterotto, 2005; Rosenthal, 1996). This assumption fitted the study, as each school division in Virginia possibly had a unique high school music program and possibly a unique approach to secondary music curriculum development process that worked to some acceptable degree to serve the population of a division. Since the perfectly rich and robust high school music program and the most effective high school music curriculum development process could not be theoretically defined, pragmatist ontology was an appropriate view to adapt in this study.

Pragmatist epistemology, a set of beliefs about the nature of knowledge, viewed knowledge as practical solutions acquired through experience and with applicable research methods (Creswell & Plano Clark, 2018; Guba & Lincoln, 1994; Legg & Hookway, 2020; Maarouf, 2019; Ponterotto, 2005). While it was impossible to design one perfectly rich and robust high school music program of studies for all Virginia school divisions, it was possible to use applicable research methods, the explanatory sequential mixed methods design in this case, to study what was available and how it was developed. Axiology of pragmatism, or values researchers had to adhere to during investigations, posited that while researchers had to generally remain unbiased, potential bias could be attached to the process of planning investigations and

needed to be acknowledged (Creswell & Plano Clark, 2018; Guba & Lincoln, 1994; Legg & Hookway, 2020; Maarouf, 2019; Ponterotto, 2005). I acknowledged that Research Question 2 might contain some bias, because geographic location, SES, and racial/ethnic characteristics might not be the only factors that relate to patterns of prevalence of specific high school course offerings. However, I selected these based on trustworthy preliminary research, chose the study to be descriptive, and controlled for bias through my continual reflections (Fraenkel et al., 2015).

Pragmatist methodology, or scientific investigation processes, purported that there could be a convergence of theory and practice and a convergence of quantitative and qualitative methods (Creswell & Plano Clark, 2018; Guba & Lincoln, 1994; Ponterotto, 2005). In this study, the QUAN analysis attempted to determine what music courses were offered in Virginia public high schools, find if there were courses that are offered more frequently, and theorize whether there were certain demographic characteristics that could explain these findings. The qual analysis inquired why particular courses were offered more frequently in select school divisions and what formal and informal curriculum development processes could have influenced division-level decisions on what courses to offer.

Pragmatist rhetoric, a type of language a paradigm would view as appropriate to use in a scientific investigation, welcomed both formal and informal language (Creswell & Plano Clark, 2018; Guba & Lincoln, 1994; Ponterotto, 2005). I used neutral language in reporting the QUAN analysis data and used objective descriptions in the qual analysis descriptions. Pragmatist assumptions on relativity of truth influenced my exploration, and I studied what was possible to study through a convergence of practical and readily available information.

Design of the Study

There were two QUAN analysis phases in the study. The first phase included descriptive statistics, computing procedures designated for summarizing and characterizing gathered information with a single number: mean, median, mode, range, variance, and standard deviation (Creswell & Poth, 2018; Fraenkel et al., 2015; Hesse-Biber, 2017; Savin-Baden & Major, 2013). I summarized what high school music courses were offered within school divisions in Virginia in the most recent school year and on what difficulty levels.

The first phase also included inferential statistics, a type of statistics that make predictions to the entire population under study from parameters obtained from a population sample (Kiess & Green, 2010). I used Kiess and Green's (2010) and Warner's (2013) recommendations for administering and interpreting the following statistical analyses in SPSS.

Nonparametric chi-square goodness of fit tests examined whether there were courses offered at significantly high or at significantly low rates. At the alpha level was set to 0.05.

Phi product-moment correlations determined how offering of one course is correlated with offering another course. Association strength was evaluated using the following parameters: less than 0.1 as negligible, 0.1-0.29 as weak, 0.3-0.49 as moderate, 0.50-0.69 as strong, and 0.70 and beyond as very strong (Effect Size, 2015; Warner, 2013).

Nonparametric independent-samples Kruskal-Wallis tests examined whether multi-level courses were offered significantly disproportionally among Virginia localities. The alpha level was set to 0.05. The effect size was calculated by hand as $\epsilon^2 = H / ((n_I - 1) / (n_I + 1))$ and interpreted with the following guidelines: $\epsilon^2 < 0.04$ -0.24 as small, $\epsilon^2 = 0.25$ -0.63 as medium, and ϵ^2 of 0.64 and above as large (Cohen, 1992; Warner, 2013). Post hoc analyses included follow-up Dunn's pairwise comparisons administered with the Bonferroni correction.

Chi-square tests of association showed whether there were statistically significant relationships among offering courses and locality categories. Cramer's V indices were used to determine the strength of association. The effect size was interpreted by the following IBM's (2022) guidelines: 0.2 and below as weak, 0.3-0.6 as moderate, and above 0.6 as strong.

Pearson product-moment biserial correlations explored how offering each course type and level was influenced by low student SES, a school divisions' enrollments, student race/ethnicity percentages, and LCIs. Association strength was determined using the following Warner's (2013) guidelines: $r^2 < 0.01$ -0.08 as small, $r^2 < 0.09$ -0.24 as moderate, and r^2 of 0.25 and above as large.

The second phase of the QUAN analysis included only inferential statistics. I attempted to establish whether a presence of specific course offerings in a Virginia school division was correlated to four selected demographic characteristics: enrollment, low student SES, geographic location, and race/ethnicity (VDOE School Quality Profiles, n.d.). Using the descriptive statistics obtained during the first phase of the QUAN analysis, I performed 10 binary logistic regressions, one for each course type, to predict probability of how the dependent variable, offering a course type, was simultaneously correlated with the four independent/predictor variables, school division's enrollment, low student SES (as the percentage of students on free and reduced-price lunch and the LCI), student race/ethnicity, and a locality category (Gravetter & Wallnau, 2013; IBM, 2020; Johnson & Christensen, 2014; Kiess & Green, 2010; Warner, 2013).

The qual analysis stage of the study, which purpose was to further explain the QUAN analysis, included qualitative semi-structured interviews that combined specific and free-response questions (Edwards & Holland, 2013). This allowed to in-depth explore high school music course offerings in select school divisions, to further investigate correlations discovered

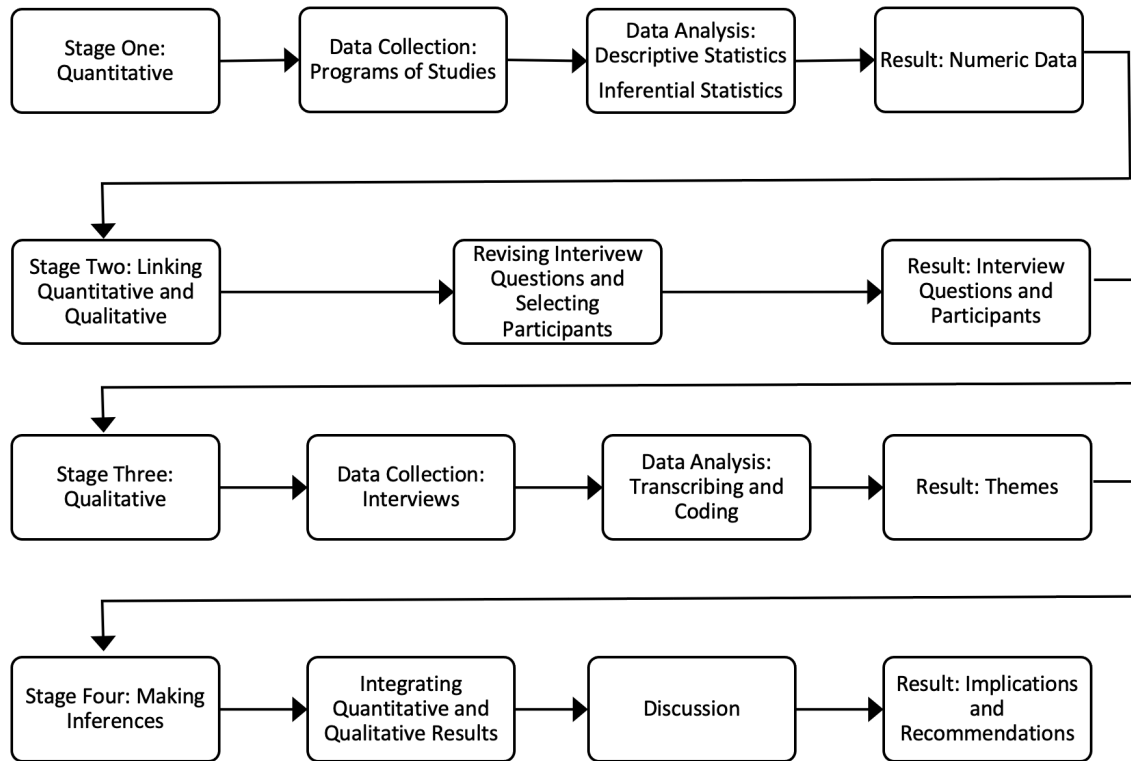
during the QUAN analysis, to clarify possible contradicting results of the quantitative analyses, and to elicit specific information on unique school divisions formal and informal approaches to secondary program of studies development (Creswell, 2015; Creswell & Plano Clark, 2018; DeCuir-Gunby & Schutz, 2017; Savin-Baden & Major, 2013; Teddlie & Tashakkori, 2009).

Procedures

The study approached answering the research questions sequentially. As the results of the QUAN analysis unfolded, they were integrated with the qual analysis: I used the QUAN analysis results to select participants and to revise the interview questions (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). In the final stage of the study, the QUAN analysis and the qual analysis results were summarized, integrated, interpreted, and used to make final conclusions and recommendations (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). Figure 6 depicts the sequence of stages of the study, the sources of data collection, the data collection procedures, and the types of results expected to be obtained.

Figure 6

A Map of the Study Procedures



Participants

Distinct approaches to identifying and recruiting participants were applied to the QUAN analysis and to the qual analysis. As demanded by the explanatory sequential mixed methods design, the QUAN analysis results influenced sampling decisions for the qual analysis (K. Collins, 2015; Teddlie & Tashakkori, 2009).

Quantitative Stage. Data on all 132 Virginia school divisions' high school music course offerings was publicly available at the VDOE by request; however, an examination of the latest (May 2021) VDOE data on high school music course offerings showed inconsistencies with what was included in programs of studies published on school divisions' websites (VDOE Office

of Data Services, personal communication, May 21, 2021). For example, the VDOE data stated that in the recent years, the York County School Division (2020) course offerings had included three levels of orchestra and the enrollment in these classes surpassed the band enrollment; however, this division's recent secondary school program of studies showed that orchestra courses were not offered.

To obtain accurate data and answer Research Question 1, I examined the high school programs of studies of each Virginia school division. This study took place during the COVID-19 pandemic, at the time of student return to school in person after 1.5 years of school closure and online learning. The effects of the pandemic on division-level music programs were yet unknown and were not intended to be the focus of my study. Therefore, to collect the most accurate data, I examined the programs of studies for the 2019-2020 school year, the school year in the middle of which the pandemic occurred and for which programs of studies were created ahead of school closures. If a school division did not publish its 2019-2020 program of studies on the Internet, I examined the most current programs of studies available, including the school year 2021-2022. If there were school divisions that did not publish program of studies on the Internet, I emailed and if needed called these school divisions and asked for the 2019-2020 or the most recent course offerings.

The VDOE School Quality Profiles (n.d.) available on the Internet included racial and demographic characteristics, the closest pre-pandemic school year LCI tables were published on the VDOE (2022b, 2022e) website, and the adjusted NCES (n.d.) geographic locale classifications that I used were defined earlier in Chapter 1.

Qualitative Stage. The qual analysis sampling procedures were determined by the QUAN analysis findings (Miles et al., 2020; Teddlie & Tashakkori, 2009). After I established

what high school music courses were offered in Virginia and whether the selected demographic characteristics correlated to presence of particular course offerings in particular school divisions, I attempted to provide explanation to these findings by examining division-level decision-making processes on high school music course offerings.

I used the stratified sampling strategy. 14 division-level public school administrators were selected for interviews: Coordinators of Music Education, Assistant Superintendents for Instruction, or other administrators responsible for division-level music curriculum development (Fraenkel et al., 2015). This sample represented typical cases of high school music programs across the state (Fraenkel et al., 2015; Miles et al., 2020). Using the results of the QUAN analysis, I sought and found: (a) four administrators divisions that offered the greatest variety of high school music courses, (b) four administrators from divisions which high school music course offerings variety reflected the state average, and (c) four administrators from divisions that lacked variety in high school music course offerings but had demonstrated recent improvement (K. Collins, 2015; Cowden & Klotman, 1991; Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). In cases of non-respondents, invitations to interview were sent to administrators in other divisions, and I attempted as much as possible to preserve the sampling approaches defined above, until all the participants were recruited. I initially intended on interviewing 12 participants, but 14 administrators volunteered and were included in the study.

Data Sources

To enhance the validity and the reliability of the study, I used the triangulation of data sources strategy, obtaining evidence from multiple data sources for the purpose of developing multiple perspectives (Creswell & Poth, 2018; Creswell & Plano Clark, 2018; Fraenkel et al., 2015). The data sources included the data on the high school music course types offered in each

division, the four select demographic characteristics, and the qualitative interviews with division-level administrators.

Document Analysis. The first data source for the QUAN analysis involved an unobtrusive measure, analyzing documents and categorizing factual data they contained, without interfering with the participants (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). High school music course offerings were categorized by courses included in secondary programs of studies published on school division's websites (Williamsburg-James City County Public Schools, 2019a; York County School Division, 2019). The second data source for the QUAN analysis were the school divisions' demographic characteristics: enrollment, SES as percentages of students on free and reduced-price lunch and the LCIs, geographic location, and race/ethnicity; these were obtained from the official and thus trustworthy websites, the VDOE (2022b, 2022e), the VDOE School Quality Profiles (n.d.) and the NCES (n.d.) geographic types.

The validity of quantitative measures, or confidence that conclusions derived from analyses accurately defined what was intended to define, was established by (a) examining only the latest and the most accurate information; (b) categorizing course offerings by a uniform type; and (c) using the latest official information on demographic characteristics of Virginia school divisions, as available on the School Quality Profiles (n.d.), the VDOE (2022b, 2022e), and the NCES (n.d.) websites (Creswell, 2012, 2014; Creswell & Plano Clark, 2018).

Accurate tabulations enabled me to draw relevant inferences and to obtain legitimate explanations for collected data during the qual analysis; thus, the validity of QUAN analysis enhanced the validity of the qual analysis and of the entire study (Creswell, 2014; Tashakkori & Teddlie, 1998). For example, when I established correlations among presences of particular high school music course offerings and certain geographical areas, I redesigned the interview

questions to inquire how school divisions approach curriculum development to address particular tendencies and limitations. In this way, I collected relevant data that helped me to answer Research Question 3. However, there were limitations that impacted my findings, such as, overly focusing on a topic emerged in the process of interaction between researcher and participants, my biased professional opinion based on my experiences as a high school orchestra teacher, and unrelated to the topic data obtained from the interviews; I mitigated possible limitations by regularly reflecting on my biases and on the process in my reflexive journal (Galletta, 2013).

The quantitative measures' reliability, or consistency and accuracy, was established through clearly defined procedures of measuring variety of course offerings and through effective procedures for incorporating categorical and numeric data when measuring impacts of demographic characteristics on music course offerings (Creswell, 2012; Creswell & Plano Clark, 2018; DeCuir-Gunby & Schutz, 2017; Fraenkel et al., 2015; Teddlie & Tashakkori, 2009; Tuckman, 1999). These procedures were discussed in subsequent parts of this chapter.

Semi-Structured Interviews. During the qualitative stage of the study, approximately 45-minute-long semi-structured interviews were administered by Google Meet, a Web-based videoconferencing tool (Creswell & Plano Clark, 2018; Creswell & Poth, 2018; Edwards & Holland, 2013). I attempted to elicit in-depth responses that further explained the quantitative Research Questions 1 and 2, and, at the same time, I attempted to uncover unique school division level curriculum development practices investigated through the qualitative Research Question 3 (Creswell & Poth, 2018; Teddlie & Tashakkori, 2009). For example, if my quantitative data analyses identified that Virginia rural school divisions offered less variety of high school music courses compared to urban or suburban school divisions, I attempted to explore such tendencies in interviews with curriculum leaders.

The validity of a qualitative interview instrument, or certainty that gathered data were accurate and dependable, was first of all be established by pilot-testing: interview questions were be sent for review to at least two experts in the field, and conducted pilot interviews with three division-level administrators from school divisions that I did not plan to include in the qualitative portion of the study (Creswell, 2014; Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 1998). Second, I used an interview protocol, a communication guide between a researcher and a participant, sent it for an expert review to three experts in the field, and followed this protocol in all interviews; the interview protocol is included in Appendix A, and the consent form with additional information is included in Appendix B (Creswell, 2012, 2014). Third, as shown in Appendix C, I associated each interview question with the study research questions and with formal and informal curriculum development approaches (J. Stronge, personal communication, September 4, 2021). Fourth, member checking, participants' confirmations of summaries of collected responses, contributed to the validity of the study: I asked each participant to read the interview summary for accuracy of my transcription and to provide comments in writing and use only information approved by the participants (Creswell, 2012; Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009). Fifth, my prolonged experience in the field strengthened my ability to interpret an array of participants' perspectives and proves validity of a study; I as a public high school music teacher of 15 years and a music teacher for 22 years, have had experience with and understanding of the issues related to the investigated topic (Creswell, 2014; Tashakkori & Teddlie, 1998). Sixth, to control for potential biased personal interpretations of the collected data, I continually read on the topic and reflected on the findings and the research process in detail in my reflexive journal (Tashakkori & Teddlie, 1998; Teddlie & Tashakkori, 2009; Creswell, 2014).

The reliability of a qualitative interview instrument, or assurance that data collected were accurate and contained information needed to answer research questions, was dependent on data collection and analysis processes, such as, on using good quality technology to conduct interviews, on effective organization of data, and on selecting coding methodology that allowed to accurately categorize collected responses and to synthesize these categories (Creswell & Poth, 2018; Creswell & Plano Clark, 2018; Miles et al., 2020; Saldaña, 2016). I used high quality technology to videotape semi-structured interviews, ensured that the interview transcripts were accurate by several re-readings, devised a clearly organized qualitative codebook, continually compared analyzed data with the codebook, and made changes to the codebook in the process of transcribing interviews as needed (Creswell, 2014; Creswell & Plano Clark, 2018; Creswell & Poth, 2018; Savin-Baden & Major, 2013; Teddlie & Tashakkori, 2009). Approaches to developing division-wide high school music courses differed across the state, and tracing and coding the formal and the informal curriculum development processes in interview responses allowed me to accurately categorize the data.

Data Collection

The QUAN analysis data was collected first, influenced the qual analysis data collection, and was eventually integrated with the qual analysis (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009).

Quantitative Data Collection. To produce quantifiable data for division-level identification of high school music course offerings, nominal or categorical data was collected: course offerings will be defined by type, and an identification number will be assigned to each category (Fraenkel et al., 2015; Russell, 2018). As evident from Table 10, the initial examination of select high school music instructional programs of studies revealed that there were drastic

differences in types and levels of course offerings between the Accomack County Public Schools (2018) and the Alexandria City Public Schools (2020).

Table 10

Results of the Initial Examination of Two High School Music Programs of Studies

School Divisions	2019-2020 Programs of Studies Content
Accomack County	Beginning, Intermediate, and Advanced Band; Beginning, Intermediate, and Advanced Chorus; Music Appreciation
Alexandria City	Advanced Placement Music Theory, Concert Band, Marching Band, Wind Ensemble, Jazz Ensemble, Advanced Orchestra, String Orchestra I and II, Chamber Orchestra, Music Theory I, Music Laboratory/Guitar, Mixed Choir, Advanced Choir, Performance Ensemble/Show Choir, Concert Choir, Gospel Choir, Chamber Music, Percussion Ensemble, Symphonic Band

Such differences required modifications and transformations, and I started with organizing high school music course offerings in Excel categorically, by course type and level of difficulty. This prepared the data set was used for subsequent quantitative descriptive statistical analyses in Excel, for the quantitative analyses in the Statistical Program for the Social Sciences (SPSS), and eventually for integrating qualitative and quantitative data in Excel and Word (Bazeley, 2015; Creswell & Plano Clark, 2018; IBM, n.d.; Microsoft Office, n.d.).

Figure 7 shows a hypothetical example of an Excel spread sheet with the categorical data organization by course types.

Figure 7

A Data Tabulation Sample for Research Question 1

	A	B	C	D	E	F
1	ID	Band	Chorus	Orchestra	Guitar	Music Theory
2	1	1	1	1	1	0
3	2	1	1	0	1	0
4	3	1	0	1	0	1
5	4	0	1	1	1	1

Note. The columns Band, Chorus, Orchestra, Guitar, and Music Theory represent course offerings. The column ID represents categories assigned to each of the 132 Virginia school divisions, from 001 to 132, from A to Z (Fraenkel et al., 2015). For the data in the columns, digits 1 stands for yes, as the course type is offered, and digits 0 stands for no, as the course type is not offered.

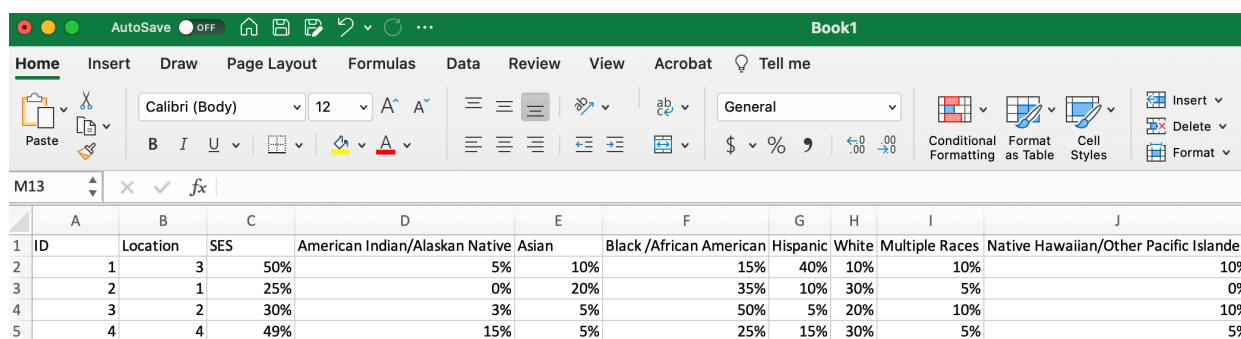
I also created a separate Excel spreadsheet to keep notes on the levels of difficulty of courses offered in each division, such as two levels of band or three levels of chorus. I notated the levels of difficulty by the how they were listed in the programs of studies; for example, beginning, intermediate, advanced, artist, I, II, and so forth. This method of data collection helped me to appropriately categorize levels of course offerings, calculate frequencies for specific course offerings across the state and, thus, to answer Research Question 1 (Bazeley, 2015; Fraenkel et al., 2015; Gay et al., 2009).

To collect data to answer the Research Question 2, whether presence of a particular high school music course in a given school division correlated with the four demographic characteristics, enrollment, geographic location, SES, and race/ethnicity, I collected nominal

(categorical, as course types and geographic locations) and interval/ratio (as the school divisions racial/ethnic composition and LCI; Fraenkel et al., 2015). I categorized and tabulated all 132 Virginia school divisions by these characteristics in an Excel spreadsheet, as shown in Figure 8.

Figure 8

A Data Tabulation Sample for Research Question 2



The screenshot shows an Excel spreadsheet titled 'Book1'. The ribbon is set to 'Home'. The data table is as follows:

	A	B	C	D	E	F	G	H	I	J
	ID	Location	SES	American Indian/Alaskan Native	Asian	Black /African American	Hispanic	White	Multiple Races	Native Hawaiian/Other Pacific Islander
1	1	3	50%	5%	10%	15%	40%	10%	10%	10%
2	2	1	25%	0%	20%	35%	10%	30%	5%	0%
3	3	2	30%	3%	5%	50%	5%	20%	10%	10%
4	4	4	49%	15%	5%	25%	15%	30%	5%	5%

Note. The ID column represented an ID for each school division as described earlier. The Location column represented the four geographic location categories developed from the NCES (n.d.) classifications: digit 1 represented city, digit 2 represented town, digit 3 represented suburban, and digit 4 represented rural. The data in the SES column represented percentages of economically disadvantaged students in each division as defined in the VDOE School Quality Profiles (n.d.). The rest of the columns represented percentages of a school division enrollment by race/ethnicity.

After all demographical data on school divisions were collected, I merged the demographical data represented in Figure 7 with the course offerings data represented in the Figure 8. The method of tabulation shown in Figure 9 allowed to me to effectively analyze data, to make decisions on descriptive statistics choices, to select visual representations, and to successfully perform computer-based statistical analyses (Gay et al., 2009; Kirk, 2019).

Figure 9

A Data Tabulation Sample for Research Question 1 and Research Question 2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	ID	Band	Chorus	Orchestra	Guitar	Music Theory	SES	American Indian/Alaskan Native	Asian	Black/African American	Hispanic	White	Multiple Races	Native Hawaiian/Other Pacific Islander
2	1	1	1	1	1	0	50%	5%	10%	15%	40%	10%	10%	10%
3	2	1	1	0	1	0	25%	0%	20%	35%	10%	30%	5%	0%
4	3	1	0	1	0	1	30%	3%	5%	50%	5%	20%	10%	10%
5	4	0	1	1	1	1	49%	15%	5%	25%	15%	30%	5%	5%

Then, using the SPSS, I performed 10 binary logistic regressions to establish correlations between the four demographic variables and offering of each course type in a given school division (Gravetter & Wallnau, 2013; IBM, 2020; Johnson & Christensen, 2014; Kiess & Green, 2010; Warner, 2013).

Qualitative Data Collection. The qual analysis phase of the study was administered using the following multi-step process. First, immediately after the dissertation proposal was defended, I submitted a proposal to The College of William and Mary Institutional Review Board to seek a permission to work with human subjects, as it took take a significant time to recruit participants for the qualitative stage (Teddlie & Tashakkori, 2009). After such permission was secured, I sent invitations to interview with this text to work email addresses of 12 division-level music administrators:

I am a Ph.D. candidate at the William & Mary School of Education. I am undertaking a study that explores high school music programs of studies in Virginia school divisions. I would like to invite you to share processes that your school division follows when making administrative decisions regarding high school music education. Please respond

to Natalia Goodloe, npgoodloe@wm.edu if you would like to participate in a 45-minute audio or video interview (your choice). Please let me know if your school division has requirements for me to complete any permission paperwork, and I will do so immediately. Thank you very much for your consideration.

After participants confirmed their willingness to be interviewed, written consents were obtained from all 14 participants via the Research Participation Consent Form enclosed in Appendix B. This form explained the purpose of the investigation, the participants' role, how the results of the interview could be used in the future, protection of the participants' anonymity, and voluntary withdrawal (Creswell & Poth, 2018; Edwards & Holland, 2013). The Research Participation Consent Form included in Appendix B was be sent to the participants via email as an attachment, with the options of return via email as electronically or signed by hand and scanned.

The following preliminary interview themes were based on the conceptual framework for the study guided the development of the interview questions: the formal and the informal curriculum development approaches, assessment of students' needs, sources of curriculum, curricular goals, and the policy process for a division-wide program of studies as related to high school music course offerings (Creswell & Plano Clark, 2018). The preliminary interview questions and the interview protocol are available in Appendix A (Creswell & Plano Clark, 2018; Creswell & Poth, 2018). These preliminary interview questions were revised after the quantitative stage of the study was completed and then pilot tested by a panel of experts; after the pilot-testing, the interview protocol went through final revisions, and the interview questions were be sent to the participants ahead of scheduled interviews (Bhattacharjee, 2012; Creswell, 2012; Creswell & Poth, 2018; Maxwell, 2009; Teddlie & Tashakkori, 2009).

The main purpose of interviews was to further explain quantitative findings on prevalence of certain music programs across Virginia's different demographic populations in terms of decision-making on creating and administering such programs (Creswell & Plano Clark, 2018). In case if a school division did not have a defined music curriculum development process and/or was affected by financial and/or other demographic constraints, the interview questions were designed to elicit explanations for both formal and informal curriculum development processes, as well as for extreme findings and outliers uncovered in the QUAN analysis (Creswell & Plano Clark, 2018). Data gathered from the interviews were recorded with a digital recording device, transcribed verbatim in Microsoft Word, and stored electronically, for security and easy access (Creswell & Plano Clark, 2018; Creswell & Poth, 2018). Verbatim interview transcripts were prepared for analysis: reduced to pertinent information and usable quotes, member checked, and formatted with extra space for margins to document coding and my reflections (Creswell & Plano Clark, 2018).

Accurate tabulation and interviewing a representative sample of knowledgeable administrators with questions that covered a variety of approaches to high school music curriculum development enabled me to gather accurate and relevant data. This pre-selected sampling instrumentation was connected to all the research questions, and the interview questions were rooted in the conceptual framework of the study; thus, data collected during the QUAN analysis and the qual analysis enabled me to develop relevant themes and create meaningful conclusions (Creswell & Plano Clark, 2018; Miles et al., 2020).

Data Analysis

Social studies researchers suggested that in the explanatory sequential mixed methods design, connections among the QUAN analysis and the qual analysis data had to be built

throughout a study (Creswell & Plano Clark, 2019; Maxwell et al., 2015). The following multi-step data analysis process was used: (a) the QUAN data analysis, (b) creating and discussing visual representations of the QUAN data analysis and integrating them into the qual analysis, and (c) interpretation of the qual analysis and integration of the QUAN analysis and the qual analysis results (Creswell & Plano Clark, 2018; Gay et al., 2009; Kiess & Green, 2010).

Quantitative Data Analysis. Applicable visual representations were used to represent, report, and discuss the findings for Research Questions 1 and 2: bar charts, pies charts with possible disproportionalities of course offerings among geographic locations, maps showing course offerings by each of the three demographic characteristics on the map of Virginia, tables, and figures (Creswell & Plano Clark, 2018; Dickinson, 2015; Gay et al., 2009; Kirk, 2019). A synthesis of data analysis and explanations of findings that needed to be further corroborated in the subsequent qualitative inquiry concluded the QUAN analysis phase of the study (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009).

Qualitative Data Analysis. The qual analysis consisted of four steps: (a) categorizing data into codes; (b) connecting similar codes into themes; (c) grouping common themes into categories and categories into concepts; and (d) summarizing, visually representing, and discussing the results in terms of applicable literature and integrating the results the qual analysis with the QUAN analysis (Creswell & Plano Clark, 2018; Gay et al., 2009; Miles et al., 2020; Saldaña, 2016; Teddlie & Tashakkori, 2009). I coded interview transcripts utilizing numerous coding methods adapted from Saldaña's (2016) and Miles et al.'s (2020) and used as dictated by my ongoing analyses. This first step of data analysis began early, in the data collection stage; as I transcribed, summarized, and prepared recorded interviews for member-checks, I used the Initial Coding, assigning preliminary codes to excerpts from the interview responses, and the Holistic

Coding. In the data analysis stage, as I coded and summarized member-checked interview transcripts, I created the qualitative code book for the study, organizing codes with analytic descriptions, quotations, and examples in a Microsoft Word document (Bazeley, 2015; Creswell & Plano Clark, 2018). After I finished coding with the selected code methods, I reviewed major findings. The coding methods used in the qual analysis stage are defined and illustrated with sample applications in Table 11.

Table 11*Coding Methodology Used in the Study*

Method	Description and Purpose	Potential Application
Attribute	Obtaining characteristics of the participants, keeping data on interview organizational features	Job titles, geographic locations, socio-economic status and demographics of a school division, interview timing and length, course offered, and so forth.
Magnitude	Defining frequency and intensity of a particular event	Frequency of high school music course offerings revisions; levels of involvement of particular stakeholders
Subcoding	Assigning additional codes to an existing code to elaborate	Categorizing stakeholders
Simultaneous	Applying more than one code to a complex qualitative datum	Analyzing obstacles to adding new high school music courses in terms of stakeholders and resources; examining formal and informal processes
Structural	Applying the content of the research question to data	Examining division-level decision-making processes regarding high school music course offerings
Descriptive	Summarizing excerpts from qualitative data to analyze content	Assigning formal and informal descriptions to high school curriculum development processes in the school divisions under review
In Vivo	Labeling unique terms used by the participants to adhere to individual interpretations	Labeling unique to a school division approaches to curriculum development, organizations involved, standards used, and stakeholder roles
Process	Using gerunds, formulating processes defined by participants	Coding stages of a decision-making process unique to a school division
Concept	Manifesting large concepts contained in qualitative data	Labeling decision-making models used by participants
Values	Examining participant values, attitudes, and beliefs	Illustrating values that guide preferences to certain high school music offerings in a participant's school division; highlighting preferences in decision making
Versus	Identifying conflicting goals, perspectives, norms, and values	Examining differences among participants' decision-making processes regarding high school music course offerings
Evaluation	Assessing effectiveness of a program, a policy, and so forth.	Making conclusions regarding involvement of stakeholders in curriculum development in a school division
Holistic	Labeling macro-impressions from chunks of qualitative data	Documenting overall impressions on various parts of each interview or on an entire interview
Provisional	Using conceptual framework and literature review to pre-generate a list of codes that could be changed in the process	Preliminary codes: needs of students, formal and informal approaches, roles of stakeholders, music standards, music advocacy, decision-making process, and so forth.
Causation	Determining ways and reasons for certain events and issues	Examining impacts of historical traditions, roles of stakeholders, and music advocacy efforts on a division current high school music curriculum
Themeing	Assigning theme-level codes to big concepts	Underlining big concepts emerging in interviews

I further analyzed the interview transcripts with the Eclectic Coding methodology that involved combining multiple coding methods; for example, I merged the Magnitude Coding and the Values Coding to analyze how frequently high school music programs were updated and what courses were valued more and offered continually (Saldaña, 2016). I also used the Pattern Coding method to condense codes by type into categories, such as causes, explanations, and relationships, merge types of categories into themes, and establish concepts derived from themes (Miles et al., 2020; Saldaña, 2016). During my analyses, I visually represented my findings with tables, matrices, figures, graphics of causation, and network displays, until I developed the final synthesis of concepts (Miles et al., 2020).

Finally, the results of the QUAN analysis and the qual analysis were integrated and explained in detail in statement summaries and a follow-up joint display, a table that presented quantitative results, qualitative results, and ways of integration of quantitative and qualitative data in attempts to make inferences transferrable to other contexts (Creswell, 2015; Creswell & Plano Clark, 2018). The following techniques for integration of quantitative and qualitative findings were considered: confirmation of quantitative results through qualitative analyses, exemplifying quantitative findings in qualitative analyses, juxtaposing qualitative and quantitative findings for generating new results and for finding differences (Brannen & O'Connell, 2015). Table 12 summarizes the data collection and analysis plan for the study.

Table 12*Table of Specifications for Research Questions*

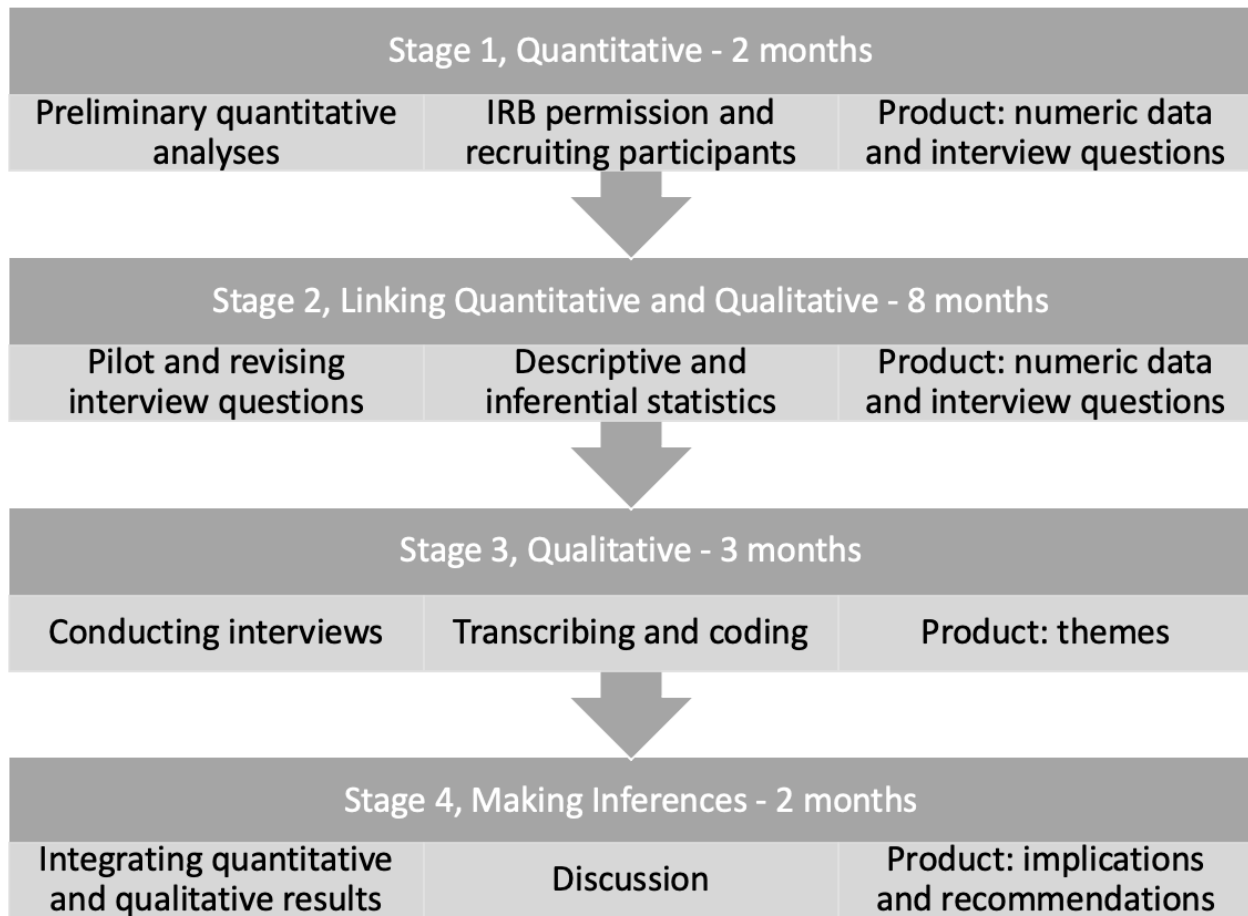
Research Question	Data Sources	Data Analysis
1. What types of high school music courses (for example, band, chorus, orchestra, piano, guitar, vocal ensemble, instrumental ensemble) were offered in each Virginia public school division in a given school year?	Programs of studies and emails/calls to school divisions	Calculating frequencies of offerings across the state for each course type and for levels of difficulty for each course type
2. How did offering of each high school music course type in a given Virginia public school division correlate with this school division's select demographic characteristics: enrollment, geographic location, socio-economic status, and race/ethnicity?	Programs of studies, school quality profiles, 2020-2021 local composite index table, adjusted National Center for Education Statistics geographic classifications	Binary logistic regression
3. What formal and/or informal curriculum development approaches associated with offering of particular types of high school music courses in a representative sample of Virginia public school divisions?	Semi-structured interviews with division level administrators responsible for developing and administering high school music programs	Coding and thematic analysis Integrating data from quantitative and qualitative stages

Timeline

A timeline for the study was developed earlier in the process of planning the study and was a subject to change, pending on the participants' availability and response times. As a full-time public-school orchestra teacher, I could work on the study only part-time; this is reflected in the timeline. The overall duration of the study was 15 months. Figure 10 illustrates the timeline for the study.

Figure 10

Timeline for the Study



Delimitations, Limitations, Assumptions

Educational researchers defined delimitations, limitations, and assumptions as potential obstacles that could decrease validity and reliability of a study; I discussed them in subsequent parts of this chapter and throughout the study, expressing how and why the study results should be interpreted with caution (Creswell, 2012).

Delimitations

Delimitations were adjustments intentionally created for convenience and feasibility; in this study, these adjustments included limiting the scope of the study and selecting particular instrumentation methods (Creswell, 2012; DeCuir-Gunby & Schutz, 2017).

Data Sources for the QUAN Analysis. As discussed earlier, the data obtained from the VDOE Data Services (personal communication, May 21, 2021) contradicted with some of school divisions' programs of studies. I used the data obtained from the programs of studies in lieu of the VDOE data. However, this caused another delimitation. Programs of studies included courses that were offered in a given school year to students to register for but did not specify courses that make sufficient enrollment and were offered in a given school year. These factors affected the validity of the study, or accuracy of instrumentation (Fraenkel et al., 2015).

Adjusted Geographic Locations Classifications. To gather quantifiable data that make quantitative analyses for Research Question 2 possible, I condensed the NCES (n.d.) classifications of geographical locations for Virginia school divisions, from 12 to four, rural, city, town, and suburban, eliminating large, middle, and small, distant, fringe, and remote sub-distinctions (VDOE School Quality Profiles, n.d.). This also affected the validity of the study (Fraenkel et al., 2015).

Narrow Focus. The study focused on quantity and variety of music course offerings in terms of the three demographic characteristics, and not on quality of extant music programs. This adversely affected the internal validity of the study, or a capacity to accurately examine a phenomenon (Fraenkel et al., 2015). Additionally, the scope of interviews with music supervisors was limited to discussion of administrative matters in terms of decision-making, which were very important from the leadership perspective but did not provide a closer look into

music programs in a school division. Future studies on qualities of successful music programs in Virginia were recommended.

Limitations

The study had a potential for limitations, uncontrollable drawbacks that resulted due to such factors as instrument errors or biases in interpretations, and cautions were recommended when applying the study results to other contexts (Creswell, 2012).

Fragmentary Interpretations. Administrators in small school divisions were often responsible for multiple educational programs and could have divergent perspectives that were difficult to make inferences from. These differences among participants unfavorably affected the internal validity of the study (Fraenkel et al., 2015).

Participants Attitudes and Beliefs. Some of the participants chose not to answer certain interview questions in detail; this affected the internal validity of the study (Fraenkel et al., 2015).

Researcher's Bias. I work in Virginia, in a large school division with a rich high school music program, and I inadvertently showed my biased attitudes during the interviews; this affected the internal validity of the study, but I controlled for that by continually reflecting in my reflexive journal (Fraenkel et al., 2015).

Communication with the Participants. One factor potentially dangerous to the internal validity was the time allotted for one interview; however, I was able to build a rapport with every participant in about 45 minutes (Teddlie & Tashakkori, 2015).

Assumptions

Assumptions, hidden uncontrollable effects of qualitative and quantitative parameters used in the study, affected credibility of this study (J. Stronge, personal communication, October 16, 2019; Teddlie & Tashakkori, 2009).

Inconsistent Demographic Characteristics Across High Schools in One School

Division. Schools in one same school division could differ in terms of SES and race/ethnicity and even offered different music courses. Since I was not studying high school course offerings and the impact of the selected demographic characteristics by schools, such unaccounted differences might have affected the credibility of the study.

Course Offerings Categorizations. Levels of difficulty of course offerings were not always clearly defined in programs of studies; this could have affected the study credibility.

These and other possible delimitations, limitations, assumptions, and recommendations for future research investigations on similar problems were discussed in the final sections of the study (Creswell, 2012).

Ethical Considerations

From the planning stages to the final revision, the study followed ethical guidelines for conducting research studies; these included and were not limited to: (a) honest reports of the study results by including all positive and negative findings; (b) fairly cited readings; (c) treating interview participants with respect and allowing them to freely express their opinions and continue being a part of the study as they choose to; (d) respecting my readers by examining pertinent information from high quality sources; (e) immediately offering potential participants to file permission to conduct research as required by their respective school divisions; (f) including the guidelines for fair treatment of human subjects in the Research Participation

Consent Form; (g) collecting and discussing quantitative data objectively, without unnecessary criticisms or flattery; (h) protecting anonymity of the qualitative stage participants by specifying what general parameters about interviews will be published and by honestly including everything that will be used from the interview transcript in the summary designated for member-checking; (i) not publishing off the record information; (j) treating participants without bias and judgment of their music programs and being considerate and ethical when sharing my personal experiences in efforts to elicit certain information; (k) keeping a reflective journal throughout the study; (l) avoiding biased language, such as gender biased statements; (m) providing copies of research studies to the participants upon request; (n) avoiding my personal conflict of interest—I am a music teacher and will not publish data intentionally to criticize or flatter certain school divisions; and (o) honestly reporting all possible issues in a proposal submitted to seek an approval for the study (Creswell, 2012; Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2009).

A proposal to gain a permission from the College of William and Mary's Institutional Review Board, a committee that reviews research proposals of studies that involve working with human subjects and grants permissions to conduct such studies, was submitted immediately after the dissertation proposal was defended (Creswell, 2012). The proposal contained brief and necessary information about focus of the study, research questions, methodological procedures, detailed information on the involvement of participants, guidelines for protecting participants' privacy and confidentiality, and the Research Participation Consent Form (Creswell, 2012; Teddlie & Tashakkori, 2009). The QUAN analysis started after my dissertation proposal was defended, and all qualitative and quantitative investigations that involve human subjects started only after the permission of the Institutional Review Board was granted.

CHAPTER 4

RESULTS

In this section, I analyze the findings and answer the three Research Questions.

Research Question 1

The first research question was, “What types and levels of high school music courses (for example, band, chorus, orchestra, piano, guitar, vocal ensemble, instrumental ensemble) were offered in each Virginia public school division in a given school year?”

To answer this question, I examined the programs of studies, the VDOE School Quality Profiles (n.d.), and the VDOE (2022b, 2022e) Local Composite Index (LCI) tables for 131 out of 132 school divisions. The school division Lexington City Schools (n.d.) is comprised from one elementary and one middle school, and I excluded this division from the study. I calculated enrollment, LCI, and race/ethnicity averages in SPSS for 131 school divisions and will refer to these as to statewide averages throughout the study.

Appendix D references the surveyed programs of studies, dated between the 2019-2020 and the 2021-2022 school years. For school divisions that did not publish their division-level programs of studies on the Internet, I examined all high school programs of studies available on these divisions’ websites. Division-level or high school programs of studies were published on the Internet by 122 school divisions, and I obtained course offerings records from nine school divisions by phone or email. One school division requested from me to undergo its permission paperwork process to disclose the current course offerings, and this was successfully completed.

High School Music Courses Offered Statewide

Analyses revealed that 29 high school music courses of ten types were offered in various combinations among Virginia school divisions. Twenty courses were performance courses. Four of them were instrumental performance courses (including, Band, Guitar, Orchestra, and Piano) and one was a vocal performance course (Chorus). All performance courses were offered on four levels each (i.e., Beginning, Intermediate, Advanced, and Artist or I, II, III, and IV). Nine courses were nonperformance, or music theory/creativity oriented: single-level Composition and Music Appreciation, offered on two levels each (I and II) International Baccalaureate (IB) Music and Music Technology, and offered on three levels (I, II, and Advanced Placement [AP]) Music Theory. Table 13 depicts frequencies and percentages of Virginia school divisions offering each course type and each course level.

Table 13*High School Music Courses Offered Among Virginia School Divisions (N = 131)*

Category	Course	Offering (f)	Offering Divisions (%)
Performance	Band	129	98.5%
	Beginning	53	40.5%
	Intermediate	97	74%
	Advanced	111	84.7%
	Artist	35	26.7%
	Chorus	117	89.3%
	Beginning	80	61.1%
	Intermediate	95	72.5%
	Advanced	85	64.9%
	Artist	27	20.6%
	Guitar	48	36.6%
	I	48	36.6%
	II	31	23.7%
	III	7	5.3%
	IV	4	3.1%
	Orchestra	39	29.8%
	Beginning	18	13.7%
	Intermediate	33	25.2%
	Advanced	33	25.2%
	Artist	10	7.6%
	Piano	34	26%
	I	34	26%
	II	14	10.7%
	III	6	4.6%
	IV	3	2.3%
Nonperformance	Composition	7	5.3%
	International	17	13%
	Baccalaureate Music		
	I	17	13%
	II	8	6.1%
	Music Appreciation	57	43.5%
	Music Technology	14	10.7%
	I	14	10.7%
	II	6	4.6%
	Music Theory	74	56.5%
	I	50	38.2%
	II	5	3.8%
	Advanced Placement	47	35.9%

Patterns of Prevalence Among Course Types. On average, performance courses were 2.17 times as frequently offered in Virginia as nonperformance courses: 56% of school divisions

offered at least one level of a performance course, while only 25.8% of school divisions offered at least one level of a nonperformance type.

Disproportionalities. To determine if there are high school music course types offered in Virginia at significantly high or at significantly low rates, ten chi-square goodness of fit tests were conducted in SPSS, one for each course type. Seven tests were significant. Two performance course types were offered at significantly high rates: Band and Chorus. Three performance course types were offered at significantly low rates: Guitar, Orchestra, and Piano. Three nonperformance courses are offered at significantly low rates: Composition, IB Music, and Music Technology. Tests for Music Theory and Music Appreciation were nonsignificant. Therefore, 6 out of 10 high school music course types offered among Virginia school divisions were offered at significantly low rates (see Table 14 and Figure 11).

Table 14

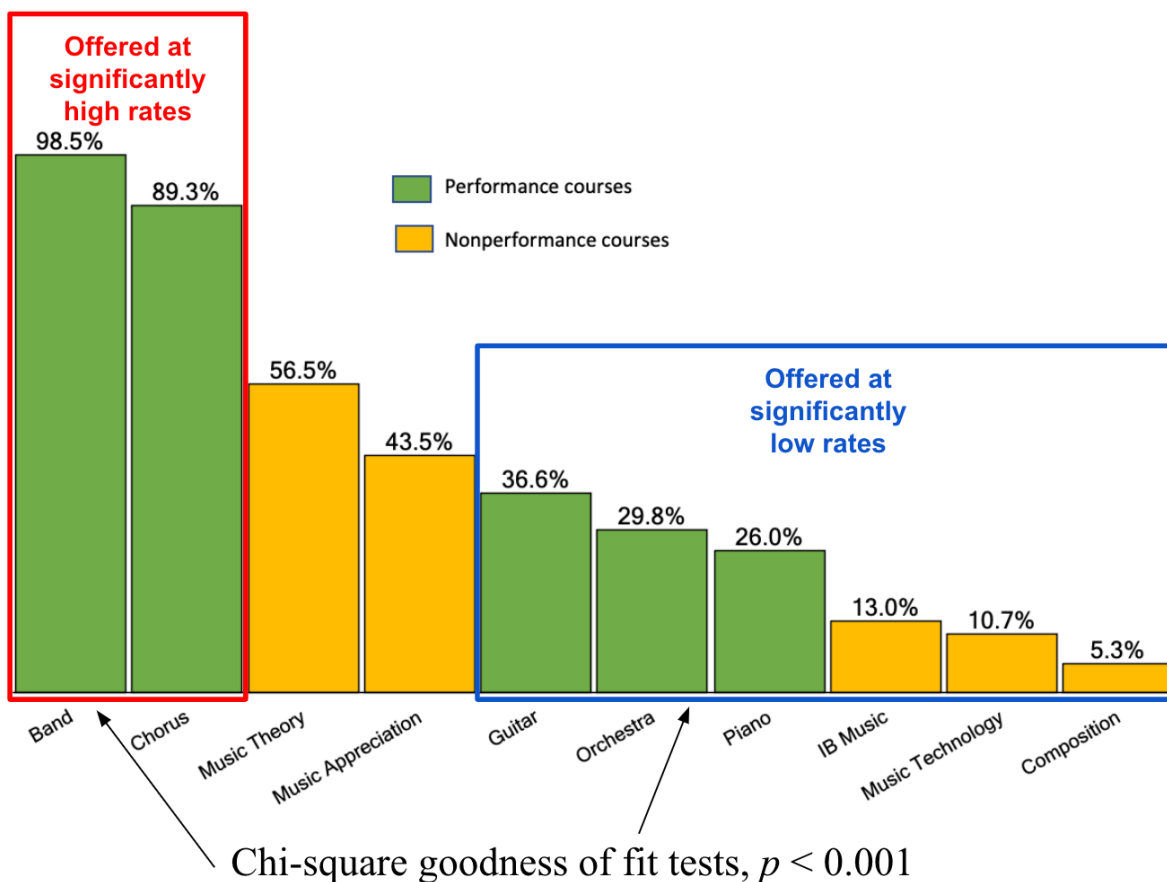
High School Music Course Types Offered Among Virginia School Divisions (N = 131)

Results	Course	Offering		Not Offering		$\chi^2(1)$
		<i>n</i>	%	<i>n</i>	%	
Offered at High Rates	Band	129	98.5	2	1.5	123.12**
	Chorus	117	89.3	14	10.7	80.99**
Offered at Low Rates	Guitar	48	36.6	83	63.4	9.35*
	Orchestra	39	29.8	92	70.2	21.44**
	Piano	34	26	97	74	30.3**
	Composition	7	5.3	124	94.7	104.5**
	International	17	13	114	87	71.82**
	Baccalaureate Music					
Nonsignificant	Music Technology	14	10.7	117	89.3	80.99**
	Music Appreciation	57	43.5	74	66.5	2.21
	Music Theory	74	56.5	57	43.5	2.21

* $p < 0.05$. ** $p < 0.01$.

Figure 11

Percentages of School Divisions Offering Each Course Type and the Results of the Chi-Square Goodness of Fit Tests (N = 131)



Note. IB Music refers to International Baccalaureate Music.

Correlations. To assess whether offering a course type is associated with offering another course type, 45 phi (Φ) product-moment correlation coefficients, one for each pair of course types, were calculated in SPSS. Eighteen correlations were significant at the $\alpha \leq 0.05$; all of them were positive. 27 correlations were nonsignificant. Five associations were moderate, and 13 associations were weak. No significant associations were found for Composition and Music Appreciation. Nine of the 18 significant correlations, 3 of the 5 moderate, and 6 of the 13 weak,

involved five course types offered at significantly low rates: Guitar, Orchestra, Piano, IB Music, and Music Technology. Table 15 lists the results of all 45 correlations that were performed.

Table 15

Correlations for High School Music Course Types Offered Among Virginia School Divisions (N = 131)

Course Offered	1	2	3	4	5	6	7	8	9	10
1. Band	-									
2. Chorus	.36**	-								
3. Guitar	.01	.26*	-							
4. Orchestra	.08	.23*	.23*	-						
5. Piano	.07	.21*	.42**	.22*	-					
6. Composition	.03	.08	.03	-.01	.09	-				
7. International Baccalaureate Music	.05	.13	.23*	.44**	.19*	.21	-			
8. Music Appreciation	-.02	.15	.10	.07	.25*	-.003	-.02	-		
9. Music Technology	.04	.12	.10	.21*	.25*	.03	.31**	.10	-	
10. Music Theory	.02	.05	.22*	.34**	.17	-.07	.21*	-.01	.20*	-

* $p < 0.05$. ** $p < 0.01$.

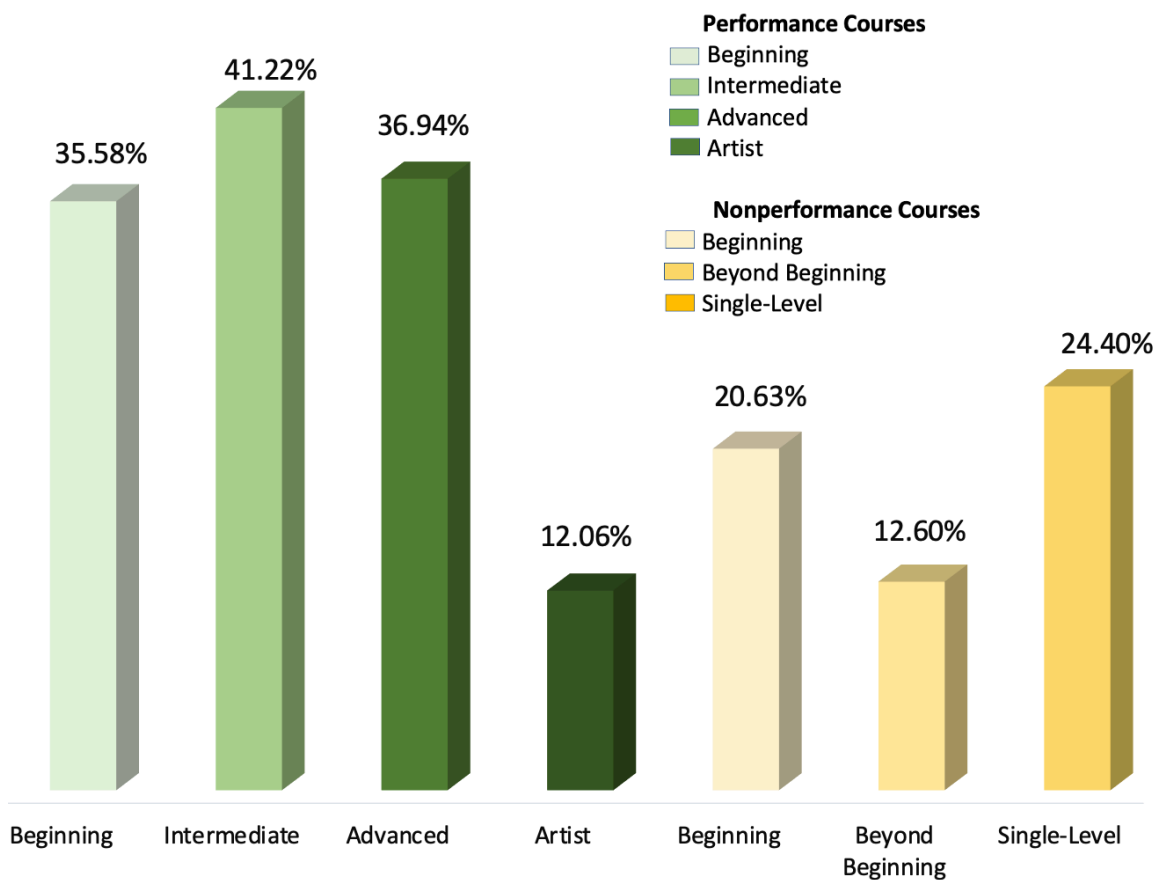
Therefore, 6 out of 10 course types offered among Virginia school divisions were offered at significantly low rates, and five of these course types were likely offered in same school divisions. These findings suggest that rich-in-variety high school music programs were less likely to be common among Virginia school divisions.

Patterns of Prevalence Among Course Levels. Analyses of frequencies revealed that intermediate-level performance courses were more prevalent among Virginia school divisions. 41.22% of Virginia school divisions offered an intermediate-level performance course, 5.64% more than the percentage of school divisions offering a beginning-level performance course (35.58%) and 4.28% more than the percentage of school divisions offering an advanced-level

performance course (36.94%). Artist-level performance courses, offered by 12.06% of Virginia school divisions, were offered three times less frequently than beginning (35.58%), intermediate (41.22%), or advanced (36.94%) performance course levels. Beginning, beyond beginning, and single-level nonperformance courses, offered by 20.63%, 12.6%, and 24.4% of school divisions respectively, were offered 1.5-3 times less frequently than beginning, intermediate, and advanced level performance courses (see Figure 12).

Figure 12

Percentages of Virginia School Divisions Offering High School Music Performance and Nonperformance Course Levels (N = 131)



Three nonperformance courses, Music Appreciation, Music Theory I, and AP Music Theory, were more prevalent than 13 performance courses: Artist Band, Artist Chorus, Piano I-IV, Guitar II-IV, and all levels of Orchestra. Music Appreciation, offered in 43.5% of school divisions, was offered 2, 1.2, and 2 times more frequently than Piano I (26%), Guitar I (36.6%), and Beginning Orchestra (22.1%), respectively. Music Appreciation was offered 9.5, 8.2, and 1.7 times more frequently than Piano III (4.6%), Guitar III (5.3%), and Advanced Orchestra (25.2%), respectively. Music Appreciation was offered 18.9, 14, 5.7, 2.1, and 1.6 times more frequently than Piano IV (2.3%), Guitar IV (3.1%), Artist Orchestra (7.6%), Artist Chorus (20.6%), Artist Band (26.7%), respectively.

Music Theory I, offered in 38.2% of school divisions, was offered by 12.2%, 1.6%, 16.1% more school divisions than Piano I (26%), Guitar I (36.6%), and Beginning Orchestra (22.1%), respectively. Music Theory was offered 9.5, 8.2, and 1.7 times more frequently than Piano III (4.6%), Guitar III (5.3%), and Advanced Orchestra (25.2%), respectively. Music Appreciation was offered 16.6, 12.3, 5, 1.9, and 1.4 times more frequently than Piano IV (2.3%), Guitar IV (3.1%), Artist Orchestra (7.6%), Artist Chorus (20.6%), Artist Band (26.7%), respectively.

AP Music Theory, offered in 35.9% of school divisions, was offered by 9.9% and 13.8% more school divisions than Piano I (26%) and Beginning Orchestra (22.1%), respectively. AP Music Theory was offered 7.8, 6.8, and 1.4 times more frequently than Piano III (4.6%), Guitar III (5.3%), and Advanced Orchestra (25.2%), respectively. AP Music Theory was offered 15.6, 11.6, 4.7, 1.7, and 1.3 times more frequently than Piano IV (2.3%), Guitar IV (3.1%), Artist Orchestra (7.6%), Artist Chorus (20.6%), Artist Band (26.7%), respectively.

Disproportionalities. To determine if any courses were offered at disproportionately high or low rates, 29 chi-square goodness of fit tests were conducted in SPSS; 28 tests were significant. Five performance courses were offered at significantly high rates: Intermediate Band, Advanced Band, Beginning Chorus, Intermediate Chorus, and Advanced Chorus.

Twenty-three performance courses were offered at significantly low rates; 15 of them were performance courses: Beginning Band, Artist Band, Artist Chorus, Beginning Orchestra, Intermediate Orchestra, Advanced Orchestra, Artist Orchestra, Guitar I, Guitar II, Guitar III, Guitar IV, Piano I, Piano II, Piano III, and Piano IV.

Eight nonperformance courses were offered at significantly low rates: Composition, IB Music I, IB Music II, Music Theory I, Music Theory II, AP Music Theory, Music Technology I, and Music Technology II. The test for Music Appreciation was nonsignificant. The frequencies of offering and of not offering and the results of the chi-square goodness of fit tests are presented in Table 16.

Table 16

Frequencies and Chi-Square Goodness of Fit Test Results for High School Music Courses

Offered Among Virginia School Divisions (N = 131)

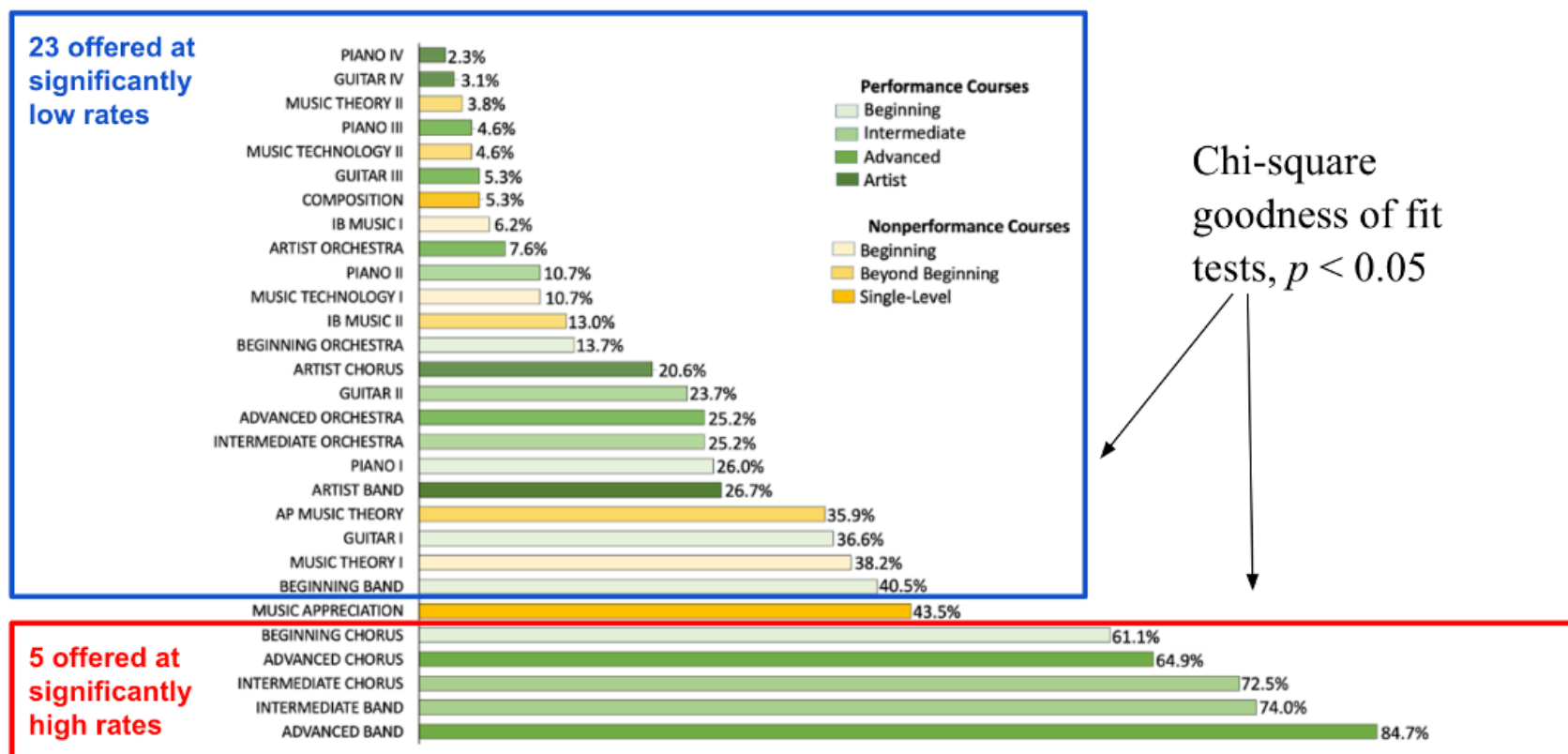
Results	Courses	Offering (f)		Not Offering (f)		$\chi^2(1)$
		n	%	n	%	
Offered at High Rates	Intermediate Band	97	74	34	26	30.3**
	Advanced Band	111	84.7	20	15.3	63.21**
	Beginning Chorus	80	61.1	51	38.9	6.42*
	Intermediate Chorus	95	72.5	36	27.5	26.57**
	Advanced Chorus	85	64.9	46	35.1	11.61**
Offered at Low Rates	Beginning Band	53	40.5	78	59.5	4.77*
	Artist Band	35	26.7	96	73.3	28.41**
	Artist Chorus	27	20.6	104	79.4	45.26**
	Beginning Orchestra	18	13.7	113	86.3	68.89**
	Intermediate Orchestra	33	25.2	98	74.8	32.25**
	Advanced Orchestra	33	25.2	98	74.8	32.25**
	Artist Orchestra	10	7.6	121	92.4	94.05**
	Guitar I	48	36.6	83	63.4	9.35*
	Guitar II	31	23.7	100	76.3	36.34**
	Guitar III	7	5.3	124	94.7	104.5**
	Guitar IV	4	3.1	127	96.9	115.49**
	Piano I	34	26	97	74	30.3**
	Piano II	14	10.7	117	89.3	80.99**
	Piano III	6	4.6	125	95.4	108.1**
	Piano IV	3	2.3	128	97.7	119.28**
	Composition	7	5.3	124	94.7	104.5**
	International	17	13	114	87	71.82**
	Baccalaureate Music I					
	International	8	6.1	123	93.9	100.95**
	Baccalaureate Music II					
	Music Theory I	50	38.2	81	61.8	7.33*
	Music Theory II	5	3.8	126	96.2	111.76**
	Advanced Placement	47	35.9	84	64.1	10.45*
	Music Theory					
	Music Technology I	14	10.7	117	89.3	80.99**
	Music Technology II	6	4.6	125	95.4	108.1**
Nonsignificant	Music Appreciation	57	43.5	74	56.5	2.20

* $p < 0.05$. ** $p < 0.01$.

Figure 13 depicts percentages of school divisions offering each course and shows courses offered at significantly low rates and courses offered at significantly high rates.

Figure 13

High School Music Courses Offered at Significantly High Rates and at Significantly Low Rates



Correlations. To assess whether offering a course was associated with offering another course, 406 phi (Φ) product-moment correlations, one for each pair of courses, were calculated in SPSS. At the $\alpha \leq 0.05$, 201 tests were significant and positive. 4 significant very strong correlations, 9 strong correlations, 52 out of 63 significant moderate correlations, and 78 out of 128 significant weak correlations involved courses offered at significantly low rates. These findings suggested that 23 out of 29 courses offered among Virginia school divisions were offered at significantly low rates and likely in the same school divisions (see Table 17).

Table 17

Correlations Among High School Music Courses Offered in Virginia School Divisions (N = 131)

Course Offered	1	2	3	4	5	6	7	8	9	10
1. Beginning Band	-									
2. Intermediate Band	.13	-								
3. Advanced Band	.13	-.01	-							
4. Artist Band	.13	.12	.02	-						
5. Beginning Chorus	.28*	.28*	.18*	.20*	-					
6. Intermediate Chorus	.23*	.34**	.07	.22*	.25*	-				
7. Advanced Chorus	.18*	.40**	.31**	.26*	.43**	.44**	-			
8. Artist Chorus	.16	.22*	.16	.55**	.25*	.19*	.34**	-		
9. Composition	.01	.06	.10	-.07	.05	-.08	.03	-.12	-	
10. Guitar I	.21*	.13	.10	.04	.15	.26*	.23*	.04	.03	-
11. Guitar II	.20*	.21*	.04	.03	.15	.22*	.26*	.07	.11	.73**
12. Guitar III	.01	.14	.01	.16	.05	.15	.10	.22*	-.06	.31**
13. Guitar IV	-.06	.11	-.05	.19*	-.04	.11	.04	.24*	-.04	.23*
14. IB Music I	.14	.23*	.10	.13	.22*	.14	.19*	.20*	.21*	.23*
15. IB Music II	.12	.15	.02	-.01	.14	.16	.05	.03	-.06	.20*
16. Music Appreciation	.09	-.01	-.06	.03	.13	.13	.13	-.07	-.003	.10
17. Music Technology I	.02	.21*	.08	.13	.23*	.16	.25*	.25*	.03	.10
18. Music Technology II	.04	.13	.09	.20*	.18*	.05	.16	.43**	-.05	.14
19. Music Theory I	.03	.21*	.07	-.01	.11	.10	.15	.14	-.05	.25*
20. Music Theory II	.16	.12	.09	-.03	.08	.03	.15	-.003	.13	.18*
21. AP Music Theory	.10	.30**	.14	.30**	.27*	.25*	.35**	.37**	.04	.29**
22. Beginning Orchestra	.26*	.24*	.17	.21*	.27*	.15*	.25*	.40**	.004	.25*
23. Intermediate Orchestra	.10	.30**	.15*	.17	.28*	.24*	.32**	.36**	.02	.29**
24. Advanced Orchestra	.13	.26*	.15	.21*	.39**	.20*	.39**	.36**	.02	.29*
25. Artist Orchestra	.11	.17	.12	.35**	.23*	.18*	.21*	.42**	.06	.20*
26. Piano I	-.03	.11	-.04	-.08	.12	.17	.18*	-.04	.09	.42**
27. Piano II	.02	.09	.01	-.04	.02	-.01	.10	.07	.14	.25*
28. Piano III	.04	.13	-.01	.12	.10	-.03	.09	.07	-.05	.29**
29. Piano IV	-.02	.09	.07	.25*	.12	-.02	.11	.17*	-.04	.20*

* $p < 0.05$. ** $p < 0.01$.

Table 17 (continued)

Course Offered	11	12	13	14	15	16	17	18	19	20
11. Guitar II	-									
12. Guitar III	.43**	-								
13. Guitar IV	.32**	.75**	-							
14. IB Music I	.37**	.31**	.06	-						
15. IB Music II	.31**	.37**	.14	.66**	-					
16. Music Appreciation	.02	.07	-.07	-.02	.10	-				
17. Music Technology I	.21*	.25*	-.06	.31**	.22*	.10	-			
18. Music Technology II	.22*	.11	-.04	.35**	.10	-.05	.63**	-		
19. Music Theory I	.27*	.16	.04	.26*	.13	.07	.19*	.28*	-	
20. Music Theory II	.17	-.05	-.04	.28*	.28*	.07	.06	.15	.25*	-
21. AP Music Theory	.37**	.18*	.05	.28*	.14	.05	.31**	.29**	.17	.18*
22. Beginning Orchestra	.30**	.30**	.19*	.37**	.27*	.10	.29**	.34**	.28*	.15
23. Intermediate Orchestra	.38**	.25*	.10	.51**	.29**	.06	.31**	.38**	.41**	.25*
24. Advanced Orchestra	.34**	.25*	.10	.51**	.29**	.06	.26*	.38**	.49**	.34**
25. Artist Orchestra	.18*	.19*	.28*	.23*	.05	.04	.09	.21*	.19*	.09
26. Piano I	.29*	.09	-.11	.19*	.14	.25*	.25*	.20*	.32**	.16
27. Piano II	.33**	.25*	-.06	.23*	.12	.05	.36**	.28*	.29**	-.07
28. Piano III	.39**	.44**	-.04	.35**	.25*	.03	.40**	.30**	.28*	-.04
29. Piano IV	.28*	.19*	-.03	.25*	-.04	-.03	.28*	.46**	.20*	-.03

* $p < 0.05$. ** $p < 0.01$.

Table 17 (continued)

Course Offered	21	22	23	24	25	26	27	28	29
21. AP Music Theory	-								
22. Beginning Orchestra	.35**	-							
23. Intermediate Orchestra	.41**	.64**	-						
24. Advanced Orchestra	.37**	.59**	.80**	-					
25. Artist Orchestra	.32**	.39**	.43**	.43**	-				
26. Piano I	.14	.07	.22*	.26*	-.04	-			
27. Piano II	.21*	.08	.26*	.20*	-.01	.58**	-		
28. Piano III	.22*	.23*	.29**	.29**	-.06	.37**	.63**	-	
29. Piano IV	.21*	.24*	.26*	.26*	-.04	.26*	.44**	.70**	-

* $p < 0.05$. ** $p < 0.01$.

Thus, the analyses of frequencies, the chi-square goodness of fit tests, and the correlation analyses discussed above revealed that while 29 high school music courses of 10 types were offered on various levels among Virginia school divisions, rich-in-variety high school music programs were likely to be offered in the same school divisions and at significantly low rates.

All Virginia school divisions offered at least one high school music course, except for the King and Queen County Public Schools, a smaller and more diverse rural school division. All King and Queen County Public Schools’ demographics were comparable to rural averages, with two exceptions. The enrollment in the King and Queen County Public Schools (875) was more than five times below the average rural enrollment (4,456). The Multiple Race student population percentage in the King and Queen County Public Schools (9.1%) was 1.7 times the average of Multiple Races students (5.3%) for rural school divisions. Table 18 compares demographics of the King and Queen County Public Schools with an average Virginia rural school division (VDOE, 2022b, 2022e; VDOE School Quality Profiles, n.d.).

Table 18

A Demographic Comparison of the Rural Virginia School Division Not Offering High School Music Courses and an Average Virginia Rural School Division

Division	Locality	Demographic Averages									
		Enrollment	Low SES %	LCI	Asian %	American Indian %	Black %	Hispanic %	Multiple Races %	Native Hawaiian %	White %
King and Queen County	Rural	875	51.2	.4139	1.4	0.3	25	7.4	9.1	0.1	56.6
Average	Rural	4,456	48.26	.3960	.83	0.29	18.7	7.41	5.3	0.09	67.47

Note. 77 out of 131 school divisions in Virginia were rural. SES refers to socio-economic status. LCI refers to local composite index.

Next, I will discuss how four Virginia school divisions’ demographic characteristics investigated in the study, enrollment, student race/ethnicity, LCI, and locality category (i.e., city, rural, suburb, and town), impact offering each high school music course type and level.

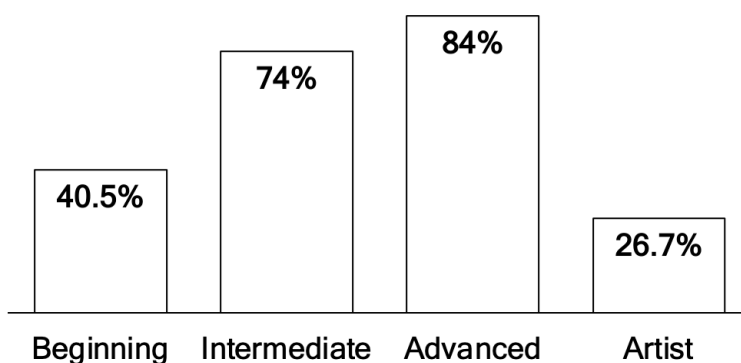
Band

Band was the most offered course type in Virginia. 129 of 131 school divisions (98.5%), offered at least one level of Band. Advanced Band and Intermediate Band were the most

prevalent Band courses, offered by 84% and 74% of the school divisions, respectively. This could be because students take Band in middle school. Beginning Band, offered in 40.5% of the school divisions, was about twice less offered than Advanced Band (84%). Artist Band, offered in 26.7% of the school divisions, was 3.14 times less offered than Advanced Band (84%), 2.77 times less offered than Intermediate Band (74%), and 1.51 times less offered than Beginning Band (40.5%) (see Figure 14).

Figure 14

Percentages of Virginia School Divisions Offering Band Courses (N = 131)



Locality. At least one level of Band was offered across each locality, except for one town school division (the Colonial Beach School District) and one rural school division (the King and Queen County Public Schools). At least one level of Band was offered in all cities and suburbs, and all cities offered Intermediate and Advanced Band (see Table 19).

Table 19

Frequencies of Offering Band Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

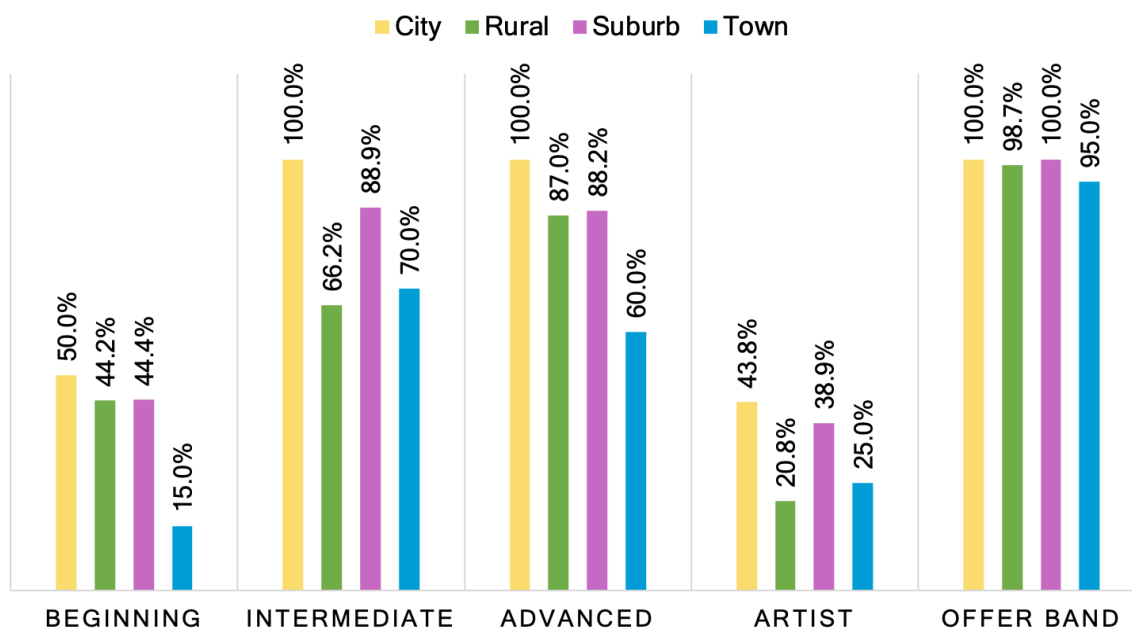
Course Type	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer Band	0	16	1	76	0	18	1	19	2	129
Beginning	8	8	43	34	10	8	17	3	78	53
Intermediate	0	16	26	51	2	16	6	14	34	97
Advanced	0	16	10	67	2	16	8	12	20	111
Artist	9	7	61	16	11	7	15	5	96	35

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Advanced Band was the most offered Band course statewide, followed by Intermediate Band, Beginning Band, and Artist Band. This pattern of prevalence applied only to rural school divisions, where Advanced Band was the most offered Band course (87%), followed by Intermediate Band (66.2%), Beginning Band (44.2%), and Artist Band (20.8%). Among city school divisions, Advanced Band and Intermediate Band were the most offered Band courses (100%), followed by Beginning Band (50%), and Artist Band (43.8%). Among suburban school divisions, Advanced and Intermediate Band were the most offered Band courses (88.9%), followed by Beginning Band (44.4%) and Artist Band (38.9%). Among town school divisions, Intermediate Band was the most offered Band course (70%), followed by Advanced Band (60%), Artist Band (25%), and Beginning Band (15%) (see Table 19 and Figure 15).

Figure 15

Percentages of Virginia School Divisions Offering Band Courses Statewide and by Locality (N = 131)



Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Band courses were not offered in equal measure across Virginia localities. Figures 16-19 illustrate percentages of Virginia school divisions' localities offering each Band course. For every Band course, these percentages were different from the statewide distribution of school divisions' localities, 12% city, 59% rural, 14% suburban, and 15% town. Two disproportionalities were particularly notable. First, among school divisions offering Beginning Band, only 6% were town, twice less than the statewide percentage of towns (see Figure 16).

Figure 16

Localities of Virginia School Divisions Offering Beginning Band (n = 53)

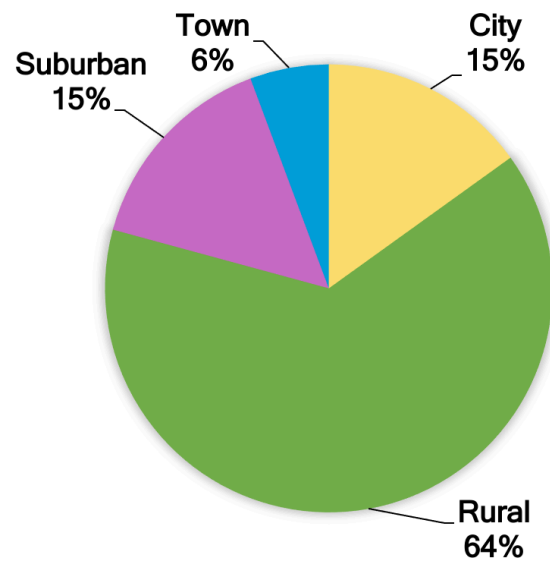


Figure 17

Localities of Virginia School Divisions Offering Intermediate Band (n = 97)

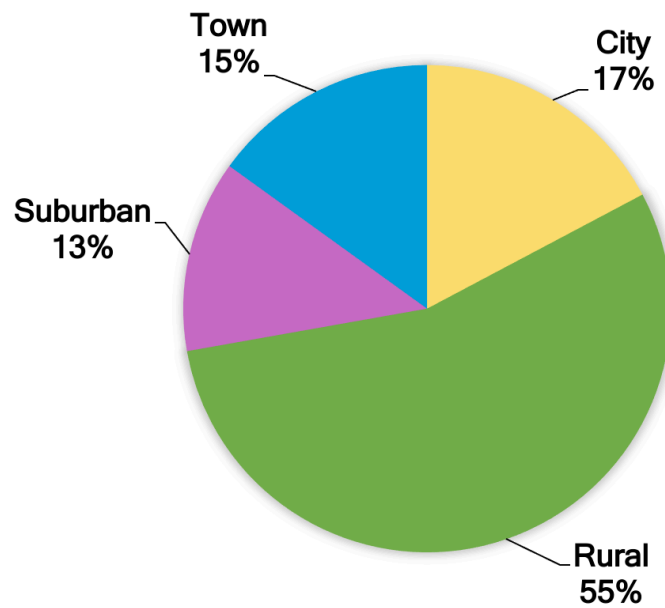
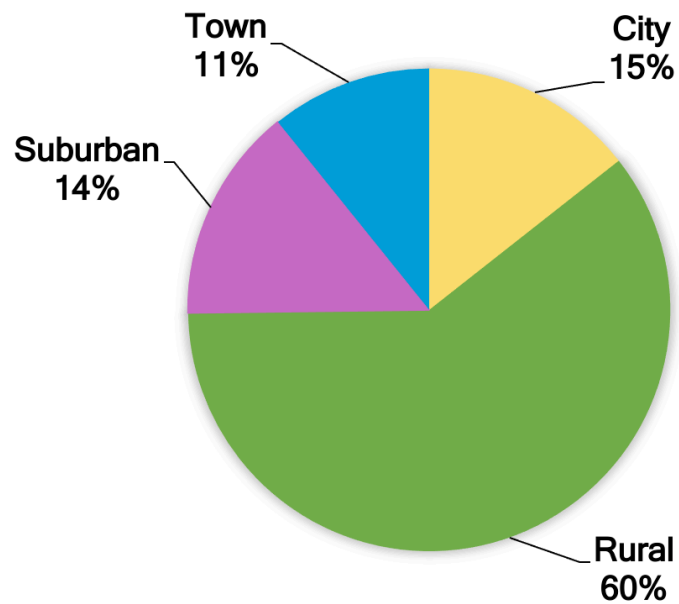


Figure 18

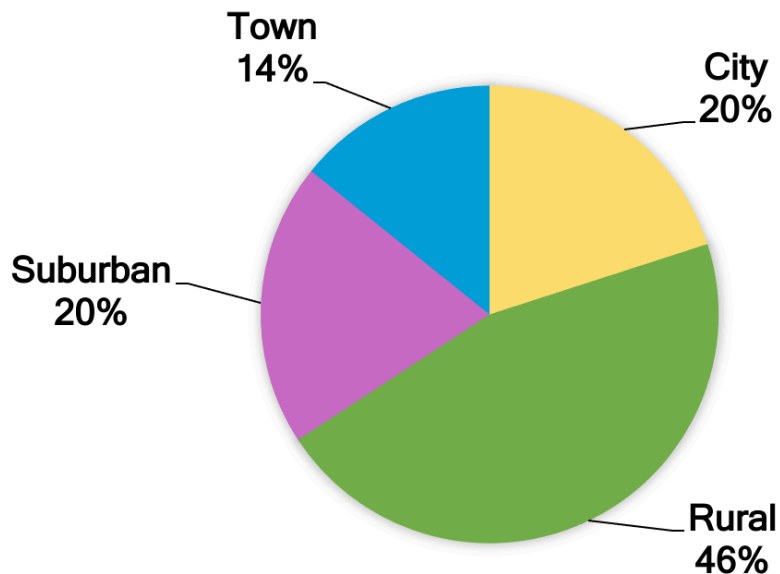
Localities of Virginia School Divisions Offering Advanced Band (n = 111)



Second, only 12% of Virginia school divisions were city and only 14% are suburban, but 20% of the school divisions offering Artist Band were suburban and 20% were city school divisions (see Figure 19).

Figure 19

Localities of Virginia School Divisions Offering Artist Band (n = 35)

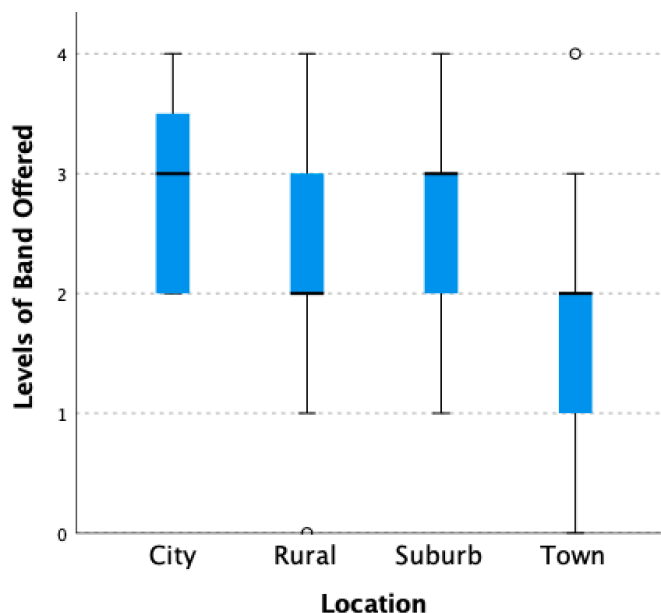


A nonparametric independent-samples Kruskal-Wallis test was performed to examine whether Band courses were offered significantly disproportionally among Virginia localities. With an alpha level of 0.05, the test was significant. Band courses were offered significantly disproportionally, $H_{(3)} = 17.61$, $N = 131$, $p < 0.001$, and the effect size was small, $\varepsilon^2 = .1355$. Post hoc follow-up Dunn's pairwise comparisons administered with the Bonferroni correction revealed that suburban school divisions offered significantly more levels of Band than town school divisions ($r = 2.98$, $MD = 35.11$, $p = 0.017$), city school divisions offered significantly more levels of Band than town school divisions ($r = 3.83$, $MD = 46.49$, $p < .0.001$), and city school divisions offered significantly more levels of Band than rural school divisions ($r = 2.78$, $MD = 27.69$, $p < 0.033$). Figure 20 illustrates the test results.

Figure 20

Independent-Samples Kruskal-Wallis Test for Levels of Band Offered in Virginia School

Divisions (N = 131)



To explore whether there was a statistically significant relationship between offering a particular Band course and a school division's locality, chi-square tests of association were calculated in SPSS. Cramer's V indices were used to determine the strength of association; follow-up analyses included frequency tables examination. Two tests were significant. A moderate association was found for Intermediate Band, $\chi^2(3) = 10.29, p < 0.05, V = 0.28$. The follow-up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for city and rural localities: Virginia city and rural school divisions offered Intermediate Band more frequently than expected. A moderate association was found for Advanced Band, $\chi^2(3) = 12.89, p = 0.05, V = 0.31$. The follow-up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for towns: Virginia towns offered Advanced Band significantly less than expected.

Therefore, Virginia city, rural, and suburban school divisions tended to offer a wider range of Band courses, while town school divisions were likely to offer less variety of Band courses.

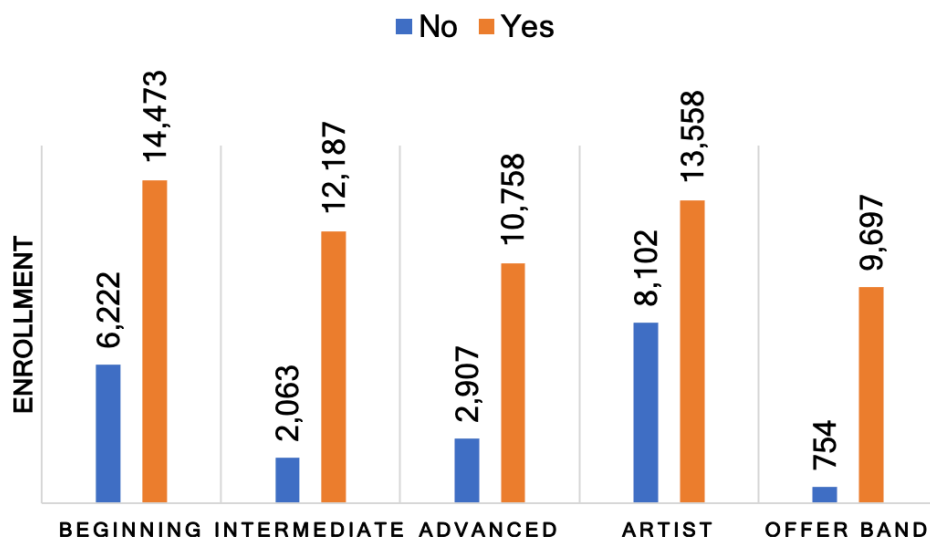
Enrollment. Larger Virginia school divisions were likely to offer Band courses.

Enrollment averages for school divisions offering Beginning Band (14,473), Intermediate Band (12,187), Advanced Band (10,758), Artist Band (13,558), and at least one level of Band (9,697) exceeded the statewide enrollment average (9,560) by 4,913, 2,627, 1,198, 3,998, and 137, respectively. The enrollment averages for school divisions not offering Beginning Band (6,222), Intermediate Band (2,063), Advanced Band (2,907), Artist Band (8,102), and at least one level of Band (754) were 1.5, 4.6, 3.3, 1.2, and 12.7 times lower than the statewide enrollment average (9,560). The enrollment average for school divisions offering Beginning Band (14,473) was 2.3 times the enrollment average for school divisions not offering the course (6,222). The enrollment average for school divisions offering Intermediate Band (12,187) was 5.9 times the enrollment average for school divisions not offering the course (2,063). The enrollment average for school divisions offering Advanced Band (10,758) was 3.7 times the enrollment average for school divisions not offering the course (2,907). The enrollment average for school divisions offering Artist Band (13,558) was 1.7 times the enrollment average for school divisions not offering the course (8,102). The enrollment average for school divisions offering at least one level of Band (9,697) was 12.8 times the enrollment average for school divisions not offering Band (754).

Figure 21 depicts these differences.

Figure 21

Enrollment Averages for Virginia School Divisions Offering and Not Offering Band Courses (N = 131)



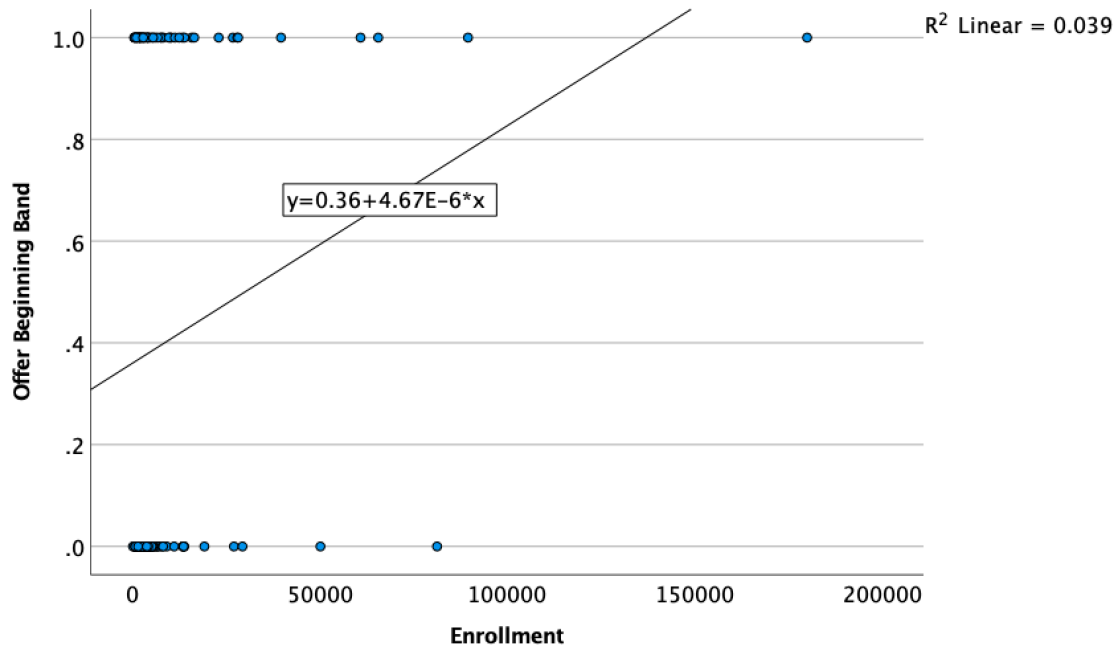
Note. The average enrollment for Virginia school divisions was 9,560.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering Band courses. Two tests were significant. There was a significant positive correlation between offering Beginning Band and enrollment, $r_{pb}(131) = 0.20$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 22).

Figure 22

Point Biserial Correlation for Offering Beginning Band and Enrollment in Virginia School

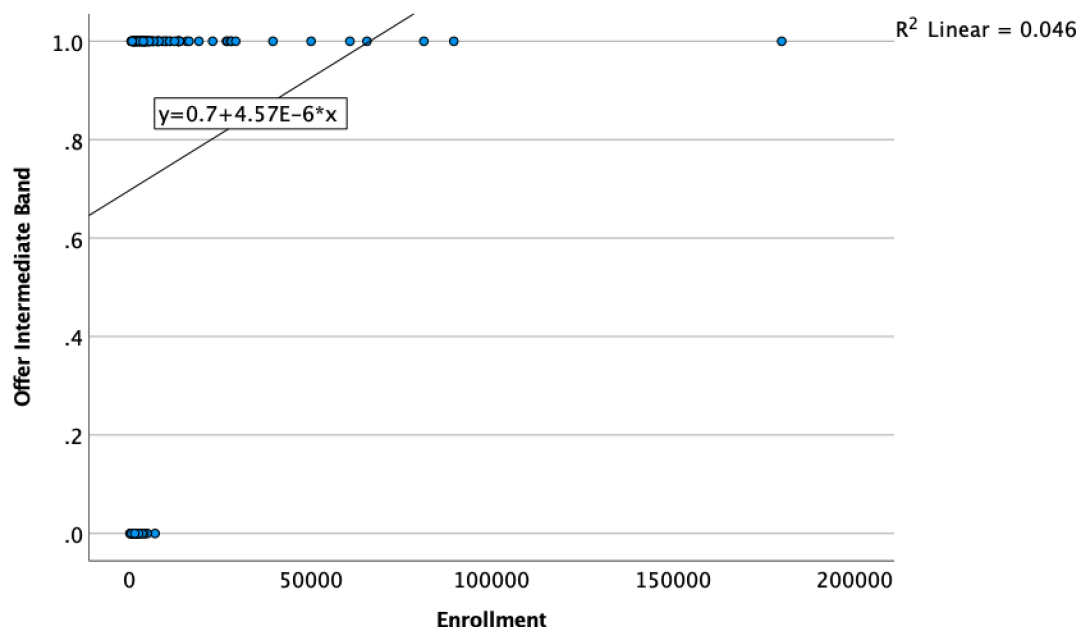
Divisions (N = 131)



There was a significant positive correlation between offering Intermediate Band and enrollment, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 23).

Figure 23

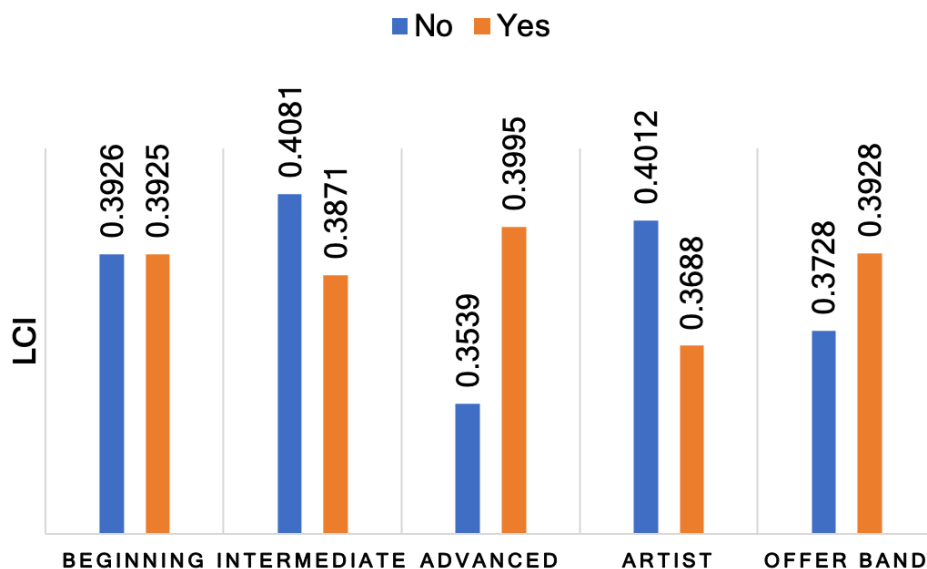
Point Biserial Correlation for Offering Intermediate Band and Enrollment in Virginia School Divisions (N = 131)



LCI. LCI, measured on the scale of 1.0 to demonstrate a Virginia school division's ability to provide for public education, did not influence what Band courses were offered in the state. The average LCIs for school divisions offering Band courses did not exceed the statewide average of .3925 by more than .007. The LCI averages for school divisions offering at least one level of Band (.3928) and offering Advanced Band (.3995) did not exceed the LCI averages for school divisions not offering Band (.3728) and not offering Advanced Band (.3539) by more than .0456. While the average LCIs for school divisions offering Beginning Band (.3925), Intermediate Band (.3871), and Artist Band (.3688) were lower as compared to the corresponding averages for not offering divisions (.3926, .4081, and .4012), the largest difference was only .0324, with Artist Band (see Figure 24).

Figure 24

Local Composite Index Averages for Virginia School Divisions Offering and Not Offering Band Courses (N = 131)



Note. The average LCI for Virginia school divisions was .3925.

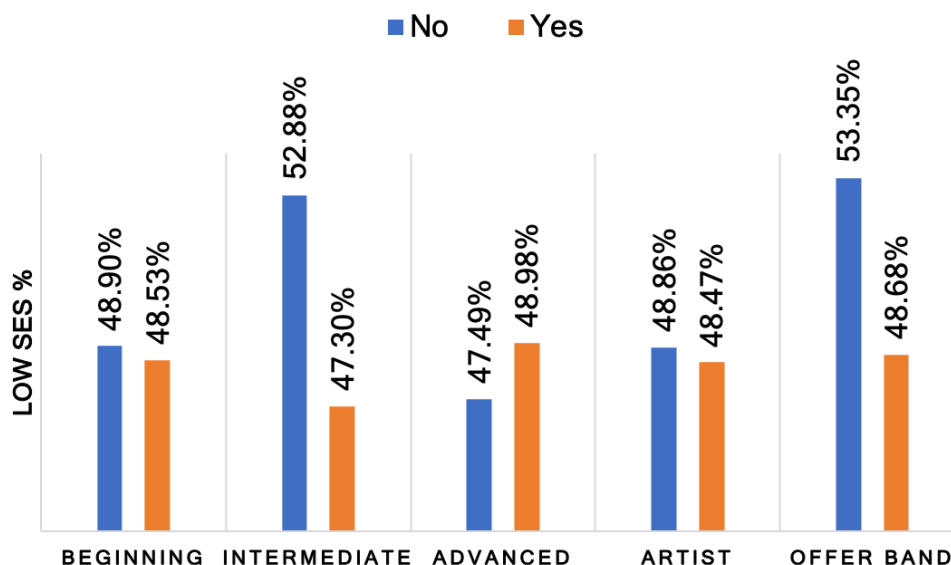
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between Virginia school divisions' LCIs and offering Band courses were nonsignificant.

Low Student SES. Virginia school divisions offered Band courses regardless of student SES. The low student SES average for school divisions offering at least one level of Band (48.68%) was comparable to the statewide low student SES average (48.75%). The low student SES averages for school divisions offering each level of Band (47.3-48.98%) were comparable to the statewide average (48.75%). Although the low student SES averages for school divisions not offering Band (53.35%) and for school divisions not offering Intermediate Band (52.88%) were above the statewide average (48.75%), these differences did not exceed 5%. Differences

among low student SES percentages for school divisions offering and not offering Band courses ranged between 0.37-5.58% (see Figure 25).

Figure 25

Low Student Socio-Economic Status Averages for Virginia School Divisions Offering and Not Offering Band Courses (N = 131)



Note. The average low student SES for Virginia school divisions was 48.75%.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between low student SES and offering Band courses were nonsignificant. Low student SES did not associate with offering Band.

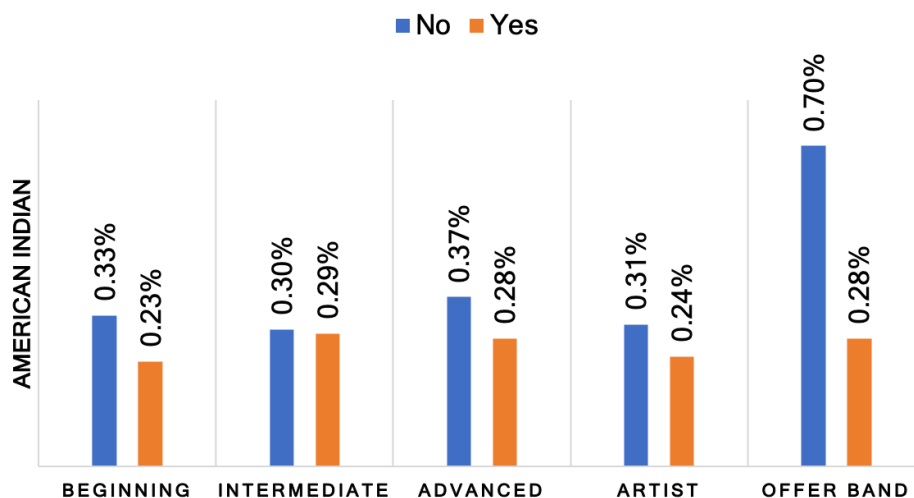
Race/Ethnicity. Analyses of student race/ethnicity in school divisions offering and not offering Band courses revealed multiple disproportionalities.

American Indian. Percentages American Indian students in Virginia school divisions did not associate with offering Band courses. American Indian student averages for school divisions

offering Beginning Band (0.23%), Intermediate Band (0.29%), Advanced Band (0.28%), Artist Band (0.24%), and at least one level of Band (0.28%) were below the statewide average of American Indian students (0.29%) by only 0-0.06%. The averages of American Indian students for school divisions not offering Beginning Band (0.33%), Intermediate Band (0.30%), Advanced Band (0.37%), and Artist Band (0.31%) were 0.04%, 0.01%, 0.08%, and .02% above the statewide average of American Indian students (0.29%), respectively. The average of American Indian students for two school divisions not offering Band courses (0.7%) is 2.4 times the statewide average of American Indian students (0.29%). However, this difference was influenced by the percentage of American Indian students in only one school division, the Colonial Beach School District which enrolls 0.9% of American Indian students (VDOE School Quality Profiles, n.d.). The averages of American Indian students for school divisions offering not offering Beginning Band (0.33%), Intermediate Band (0.30%), Advanced Band (0.31%), Artist Band (0.31%), and at least one level of Band (0.70%) were 0.10%, 0.01%, 0.05%, 0.07%, and 0.4% above the averages of American Indian students for school divisions offering these courses, respectively (see Figure 26).

Figure 26

Averages of American Indian Students in Virginia School Divisions Offering and Not Offering Band Courses (N = 131)



Note. 0.29% of students in Virginia school divisions were American Indian.

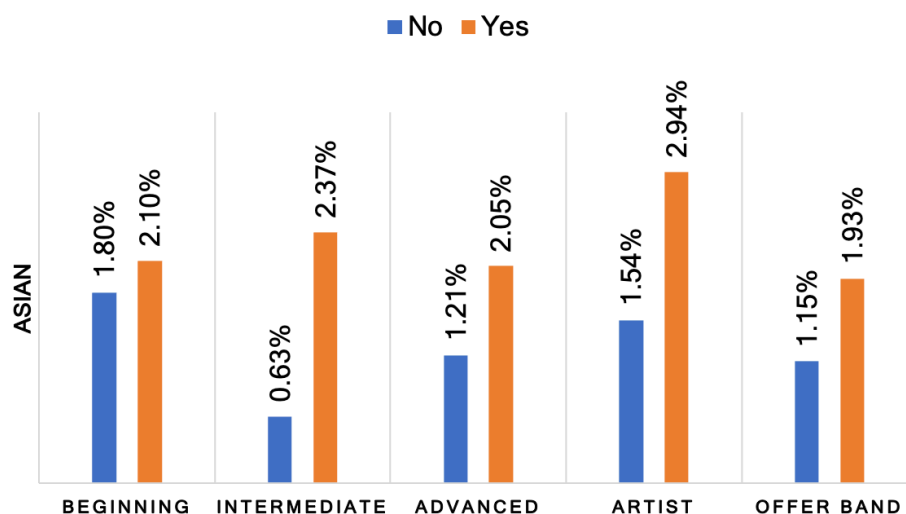
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of American Indian students and offering Band courses were nonsignificant.

Asian. Virginia school divisions offering Band courses were likely to have a greater percentage of Asian students enrolled. The averages of Asian students for school divisions offering Beginning Band (2.01%), Intermediate Band (2.37%), Advanced Band (2.05%), Artist Band (2.94%), and at least one level of Band (1.93%) were 0.2%, 0.5%, 0.1%, 1.02%, and 0.01% (up to 1.5 times) above the statewide average of Asian students (1.917%), respectively. The averages of Asian students for school divisions not offering Beginning Band (1.8%), Intermediate Band (0.63%), Advanced Band (1.21%), Artist Band (1.54%), and at least one level of Band (1.15%) were 0.12%, 1.29%, 0.71%, 0.38%, and 0.77% below the statewide average of

Asian students (1.917%), respectively. The Asian student averages for school divisions offering Beginning Band (2.10%) was 0.3% below the corresponding average for school divisions not offering the course (1.8%). The Asian student averages for school divisions offering Intermediate Band (2.37%) was 3.8 times the corresponding average for school divisions not offering the course (0.63%). The Asian student averages for school divisions offering Advanced Band (2.05%) was 1.7 times the corresponding average for school divisions not offering the course (1.21%). The Asian student average for school divisions offering Artist Band (2.94%) was 1.9 times the corresponding average for school divisions not offering the course (1.54%). The Asian student average for school divisions offering at least one level of Band (1.93%) was 1.7 times the corresponding average for school divisions not offering Band (1.15%; see Figure 27).

Figure 27

Averages of Asian Students in Virginia School Divisions Offering and Not Offering Band Courses (N = 131)

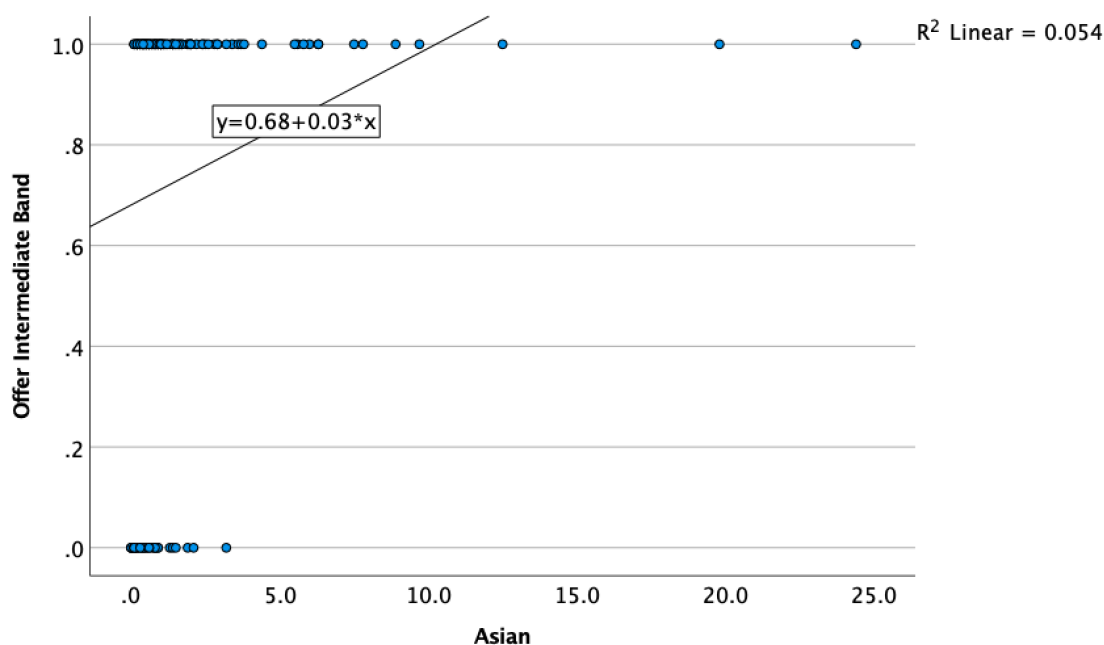


Note. 1.917% of students in Virginia school divisions were Asian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Asian student population and offering Band courses. Two tests were significant. There was a significant positive correlation between offering Intermediate Band and Asian student enrollment, $r_{pb}(131) = 0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 28).

Figure 28

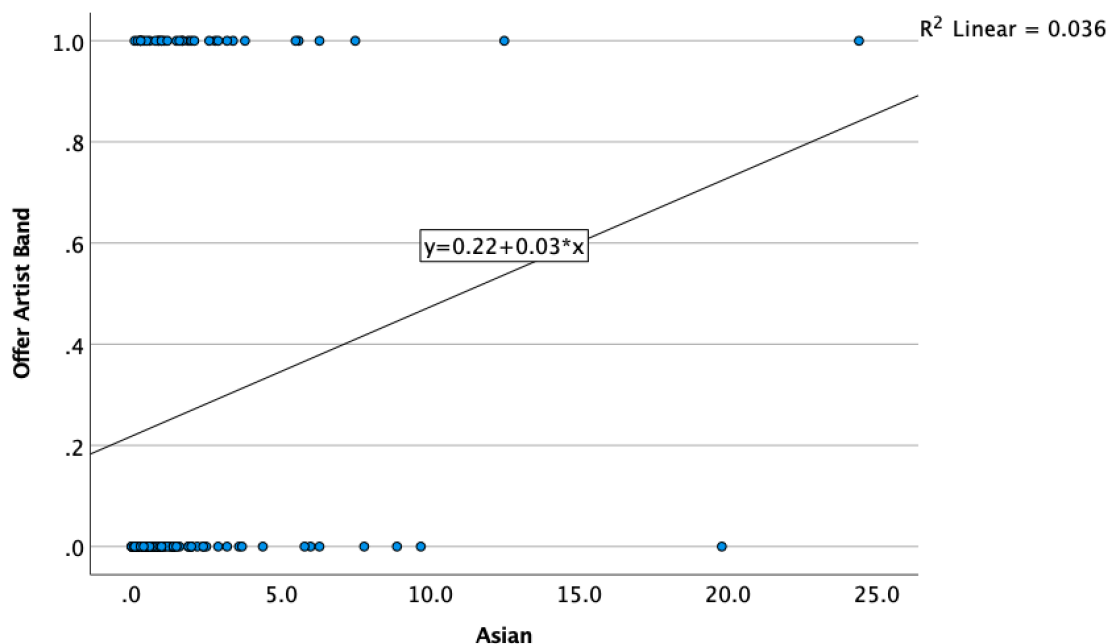
Point Biserial Correlation for Offering Intermediate Band and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Artist Band and Asian student enrollment, $r_{pb}(131) = 0.19$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 29).

Figure 29

Point Biserial Correlation for Offering Artist Band and Percentages of Asian Students in Virginia School Divisions (N = 131)

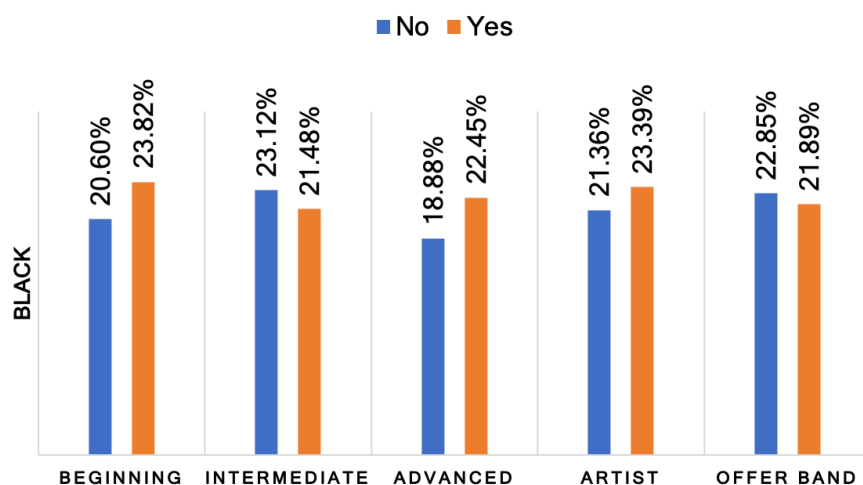


Black. Percentages of Black students in Virginia school divisions did not associate with offering Band courses. The averages of Black students for school divisions offering Beginning Band (23.82%), Advanced Band (22.45%), or Artist Band (23.39%) were 1.92%, 0.55%, and 1.49% above the statewide average of Black students (21.902%), respectively. The averages of Black students for school divisions offering Intermediate Band (21.48%) and at least one level of Band (21.89%) were 0.42% and 0.01% below the statewide average of Black students (21.902%), respectively. The average of Black students for school divisions not offering Beginning Band (20.6%), Advanced Band (18.88%), and Artist Band (21.36%) were 1.3%, 3.02%, and 0.5% below the statewide average of Black students (21.902%), respectively. The averages of Black students for school divisions not offering Intermediate Band (23.12%) and at least one level of Band (22.85%) were 1.22% and 0.95% above the statewide average of Black

students (21.902%), respectively. The average of Black students for school divisions offering Beginning Band (23.82%) was 3.22% above the corresponding average for school divisions not offering the course (20.60%). The average of Black students for school divisions offering Intermediate Band (21.48%) was 1.64% below the corresponding average for school divisions not offering the course (23.12%). The average of Black students for school divisions offering Advanced Band (22.45%) was 3.57% above the corresponding average for school divisions not offering the course (18.88%). The average of Black students for school divisions offering Artist Band (23.39%) was 2.03% above the corresponding average for school divisions not offering the course (21.36%). The average of Black students for school divisions offering at least one level of Band (21.89%) was 0.96% below the corresponding average for school divisions not offering Band (22.85%). These differences did not appear substantial (see Figure 30).

Figure 30

Averages of Black Students in Virginia School Divisions Offering and Not Offering Band Courses (N = 131)



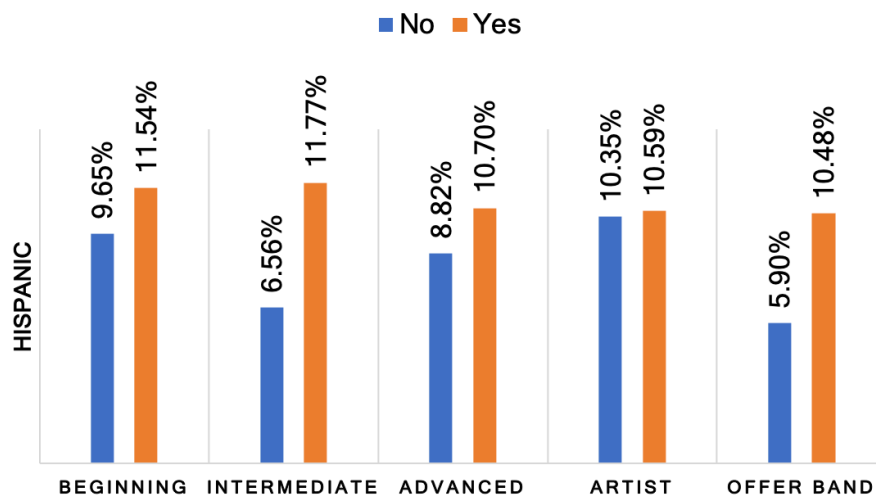
Note. 21.902% of students in Virginia school divisions were Black.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Black students and offering Band courses were nonsignificant.

Hispanic. Virginia school divisions with larger Hispanic student populations were likely to offer Intermediate Band. The averages of Hispanic students for school divisions offering Band courses (10.59-11.77%) did not exceed the statewide average of Hispanic students (10.415%) by more than 1.355%. The Hispanic student average for school divisions not offering Band (5.9%) was 1.77 times the statewide average of Hispanic students (10.415%); however, as only two school divisions do not offer Band, this difference was not generalizable. School divisions that offered Beginning, Advanced, or Artist Band on average enrolled 1.89% and less Hispanic students than school divisions that did not offer either of these courses. The most notable gap was with Intermediate Band: school divisions offering Intermediate Band enrolled 11.77% of Hispanic students, 1.79 times the average of Hispanic students for school divisions not offering the course (5.9%) (see Figure 31).

Figure 31

Averages of Hispanic Students in Virginia School Divisions Offering and Not Offering Band Courses (N = 131)

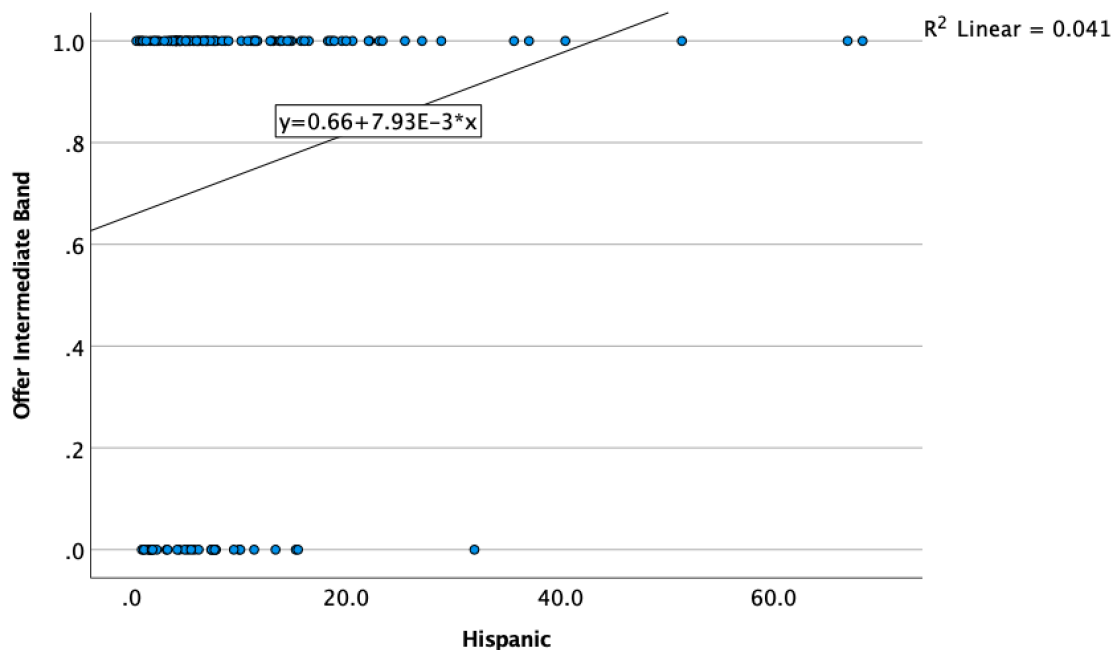


Note. 10.415% of students in Virginia school divisions were Hispanic.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Hispanic student population and offering Band courses. One test was significant. There was a significant positive correlation between offering Intermediate Band and Hispanic student enrollment, $r_{pb}(131) = 0.20, p < 0.05, r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 32).

Figure 32

Point Biserial Correlation for Offering Intermediate Band and Percentages of Hispanic Students in Virginia School Divisions (N = 131)

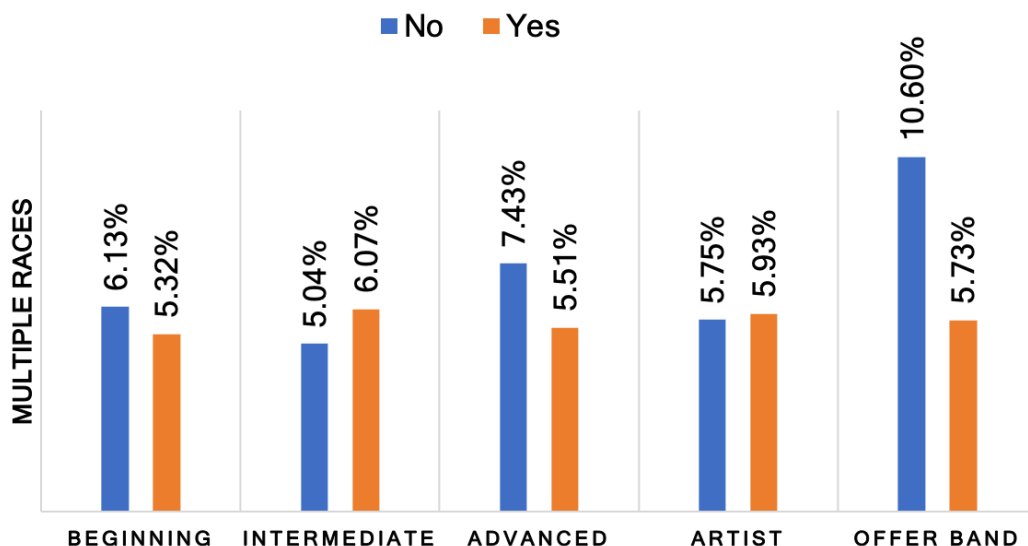


Multiple Races. Virginia school divisions with fewer Multiple Races students were likely to offer Advanced Band and at least one level of Band. The averages of Multiple Races students for school divisions offering Beginning Band (5.32%), Advanced Band (5.51%), and at least one level of Band (5.73%) were 0.48%, 0.29%, and 0.07% below the statewide average of Multiple Races students (5.801%), respectively. The averages of Multiple Races students for school divisions offering Intermediate Band (6.07%) and Artist Band (5.93%) were 0.27% and 0.13% above the statewide average of Multiple Races students (5.801), respectively. The average of Multiple Races students for school divisions not offering Beginning Band (6.13%), Advanced Band (7.43%), and at least one level of Band (10.6%) were 0.33%, 1.63%, and 4.8% above the statewide average of Multiple Races students (5.801%), respectively. The averages of Multiple

Races students for school divisions not offering Intermediate Band (5.04%) and Artist Band (5.75%) were 0.76% and 0.05% below the statewide average of Multiple Races students (5.801), respectively. The average of Multiple Races students for school divisions offering Beginning Band (5.32%) was 0.81% below the corresponding average for school divisions not offering the course (6.13%). The average of Multiple Races students for school divisions offering Intermediate Band (6.07%) was 1.03% above the corresponding average for school divisions not offering the course (5.04%). The average of Multiple Races students for school divisions offering Advanced Band (5.51%) was 1.92% below the corresponding average for school divisions not offering the course (7.43%). The average of Multiple Races students for school divisions offering Artist Band (5.93%) was 0.18% above the corresponding average for school divisions not offering the course (5.75%). The average of Multiple Races students for school divisions not offering Band (10.6%) was 1.8 times the average of Multiple Races students for school divisions offering at least one level of Band (5.73%) (see Figure 33).

Figure 33

Averages of Multiple Races Students in Virginia School Divisions Offering and Not Offering Band (N = 131)



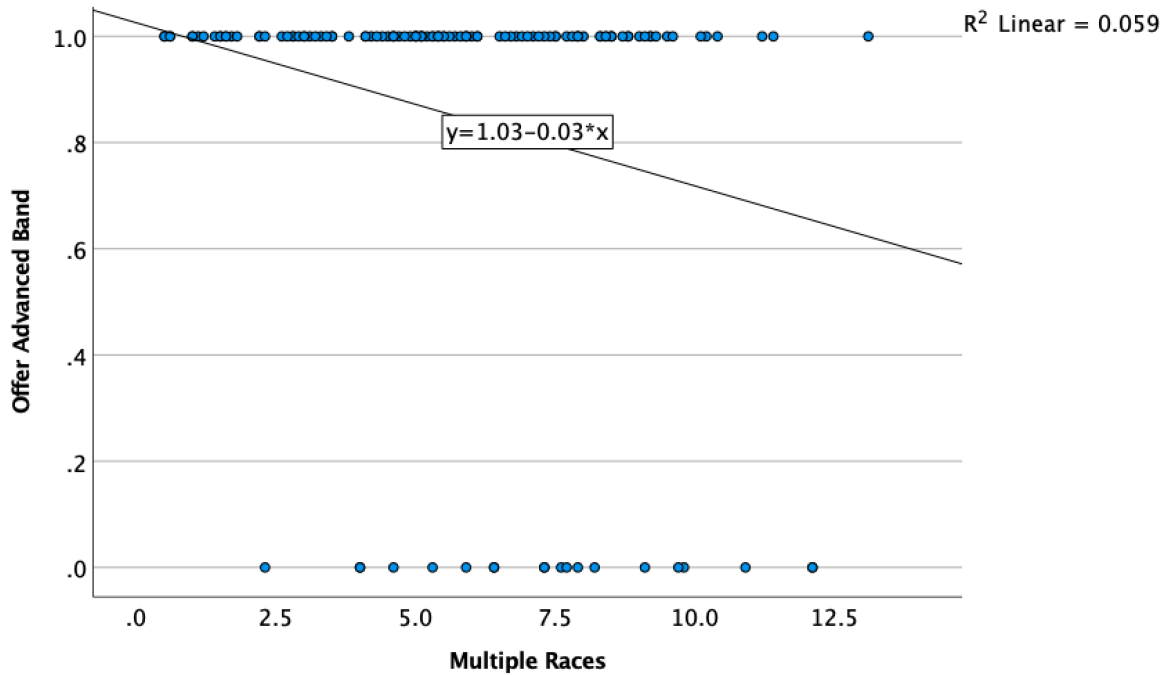
Note. 5.801% of students in Virginia school divisions were Multiple Races.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Multiple Races students and offering Band courses. Two tests were significant. There was a significant negative correlation between offering Advanced Band and Multiple Races student enrollment, $r_{pb}(131) = -0.24$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 34).

Figure 34

Point Biserial Correlation for Offering Advanced Band and Percentages of Multiple Races

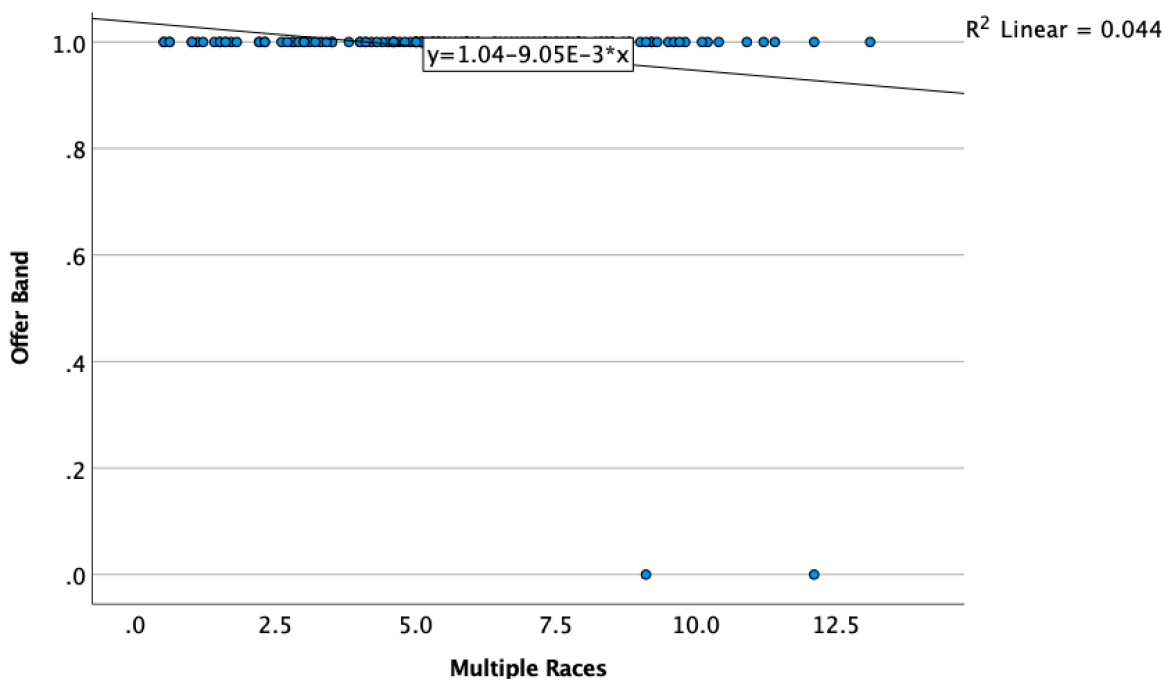
Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of Band and Multiple Races student enrollment, $r_{pb}(131) = -0.21$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 35).

Figure 35

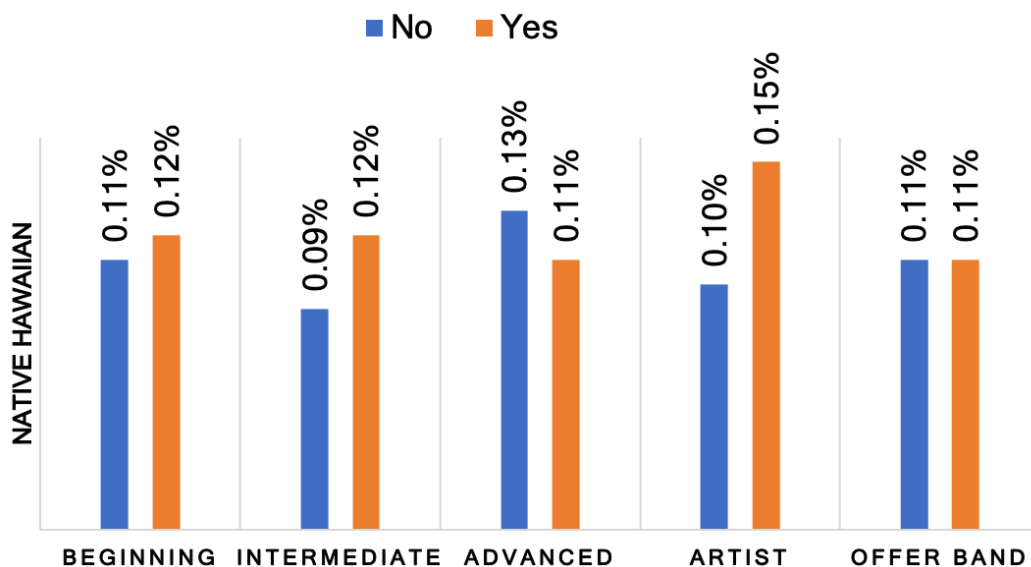
Point Biserial Correlation for Offering at Least One Level of Band and Percentages of Multiple Races Students in Virginia School Divisions (N = 131)



Native Hawaiian. Virginia school divisions with fewer Native Hawaiian students were likely to offer Band. The averages of Native Hawaiian students for school divisions offering Band courses (0.11-0.15%) and for school divisions that not offering Band courses (0.09-0.11%) did not deviate from the statewide average of Native Hawaiian students (0.113%) by more than 0.04%. The differences in Native Hawaiian student averages among school divisions offering and not offering each level of Band varied from 0.010-.05% (see Figure 36).

Figure 36

Averages of Native Hawaiian Students in Virginia School Divisions Offering and Not Offering Band Courses (N = 131)

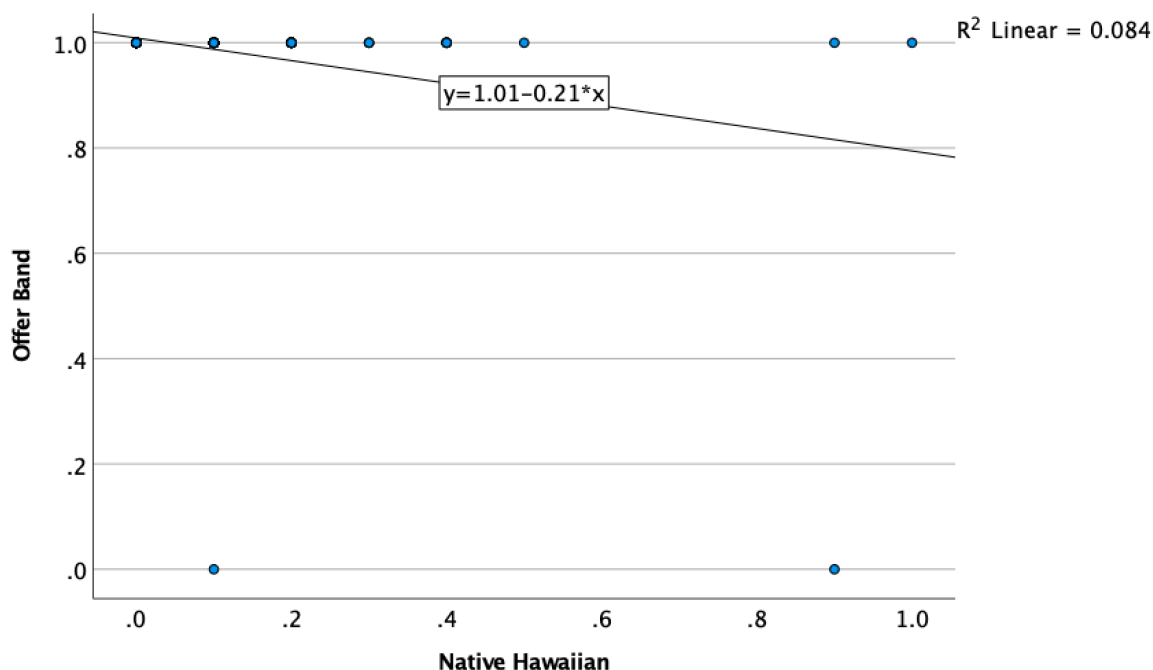


Note. 0.113% of students in Virginia school divisions were Native Hawaiian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Native Hawaiian students and offering Band courses. One test was significant. There was a significant negative correlation between offering at least one level of Band and Native Hawaiian student enrollment, $r_{pb}(131) = -0.29$, $p < 0.01$, $r^2 = 0.08$; 8% shared variance indicated a weak relationship between the variables (see Figure 37).

Figure 37

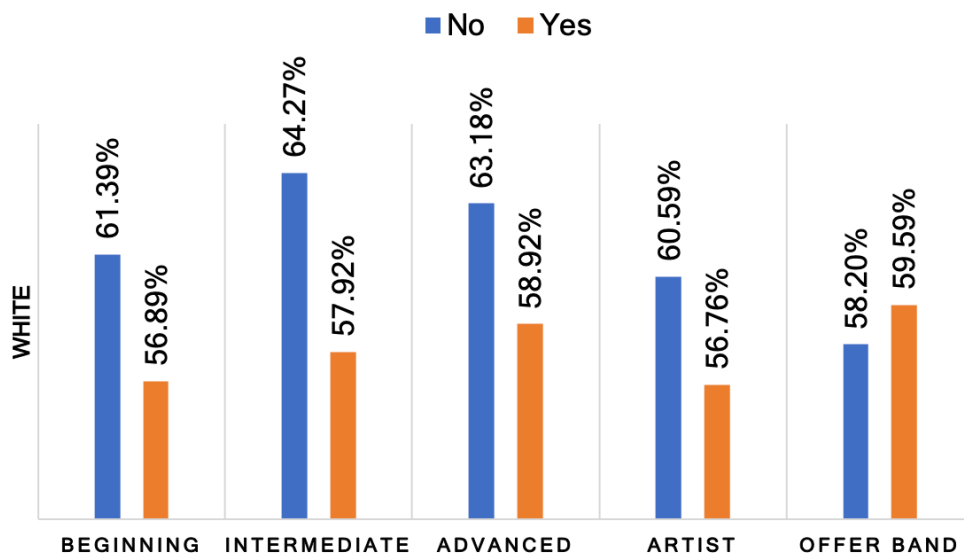
Point Biserial Correlation for Offering at Least One Level of Band and Percentages of Native Hawaiian Students in Virginia School Divisions (N = 131)



White. Percentages of White students in Virginia school divisions did not associate with offering Band courses. The Colonial Beach School District and the King and Queen County Public Schools, the two school divisions not offering Band, on average enrolled 58.2% of White students, 1.367% less than the statewide average of White students (59.567%). Across Band courses, the average percentages of White students for offering school divisions were 1.8-4.7% greater than the statewide average (59.567%). The most substantial difference in the percentages of White students among offering and not offering school divisions was with Intermediate Band (6.35%), and the least substantial was with Artist Band (3.83%; see Figure 38).

Figure 38

Averages of White Students in Virginia School Divisions Offering and Not Offering Band Courses (N = 131)



Note. 59.567% of students in Virginia school divisions were White.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of White students and offering Band courses were nonsignificant.

Virginia School Divisions Not Offering Band. Two Virginia school divisions with lower enrollment, more diverse student population, and more low SES students than on average in the state did not offer Band (see Table 20).

Table 20

A Demographic Comparison of the Two Virginia School Division Not Offering Band and an Average Virginia School Division

Division	Locality	Demographic Averages									
		Enrollment	Low SES %	LCI	Asian %	American Indian %	Black %	Hispanic %	Multiple Races %	Native Hawaiian %	White %
Colonial Beach	Town	634	55.5	.3317	0.9	1.1	20.7	4.4	12.1	0.9	59.8
King and Queen County Average	Rural	875	51.2	.4139	1.4	0.3	25	7.4	9.1	0.1	56.6
	State	9,559	48.75	.3925	1.917	0.29	21.9	10.42	5.8	0.11	59.57

Band Summary. Band, offered in 98.5% of Virginia school divisions, was the most frequently offered course statewide. Only two school divisions that were more diverse and enrolled more socioeconomically disadvantaged students and less students than in an average Virginia school divisions did not offer Band courses.

While enrollment averages for school divisions offering Band courses almost doubled the statewide enrollment average and were up to 6 times enrollment averages for school divisions not offering either of Band courses, only offering Beginning Band and Intermediate Band weakly positively associated with higher enrollment.

Low student SES and LCI averages did not associate with offering Band courses among Virginia school divisions.

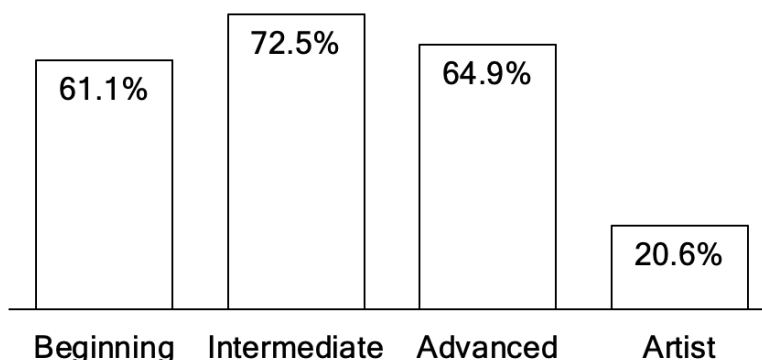
Student race/ethnicity was associated with offering Band among Virginia school divisions. Significant correlations for offering Band courses and five race/ethnicity categories were found, and all correlations were weak. School divisions with more Asian students were likely to offer Intermediate Band and Artist Band. School divisions with more Hispanic students were likely to offer Intermediate Band. School divisions with fewer Multiple Races students were less likely to offer Advanced Band and at least one level of Band. School divisions with fewer Native Hawaiian students were likely to offer at least one level of Band.

Chorus

Chorus was the second offered course in Virginia, 117 school divisions (89.3% of all) offered at least one level of Chorus. Beginning, Intermediate, and Advanced Chorus (offered by 61%, 72.5%, and 64.9% of school divisions, respectively) were on average about three times more frequently offered than Artist Chorus (offered by 20.6% of school divisions; see Figure 39).

Figure 39

Percentages of Virginia School Divisions Offering Chorus Courses (N = 131)



Locality. Chorus courses were more frequently offered in Virginia cities and suburbs as compared to rural areas and towns. All city, all suburban, 90% of town, 84.4% of the rural school divisions offered Chorus. The statewide pattern of prevalence of Chorus courses (i.e., Intermediate Advanced, Beginning, and Artist) did not apply to every Virginia locality. In suburban school divisions, Intermediate Chorus was the second most offered, as Beginning Chorus is offered more frequently. Advanced Chorus was the second most offered among city (87.5%), rural (61%), and town (55%) school divisions. Beginning Chorus was the third most offered Chorus course among city (68.8%), rural (55.8%), and town (45%) school divisions. Among suburban school divisions, Advanced Chorus was the third most offered (72.2%; see Table 21 and Figure 40).

Table 21

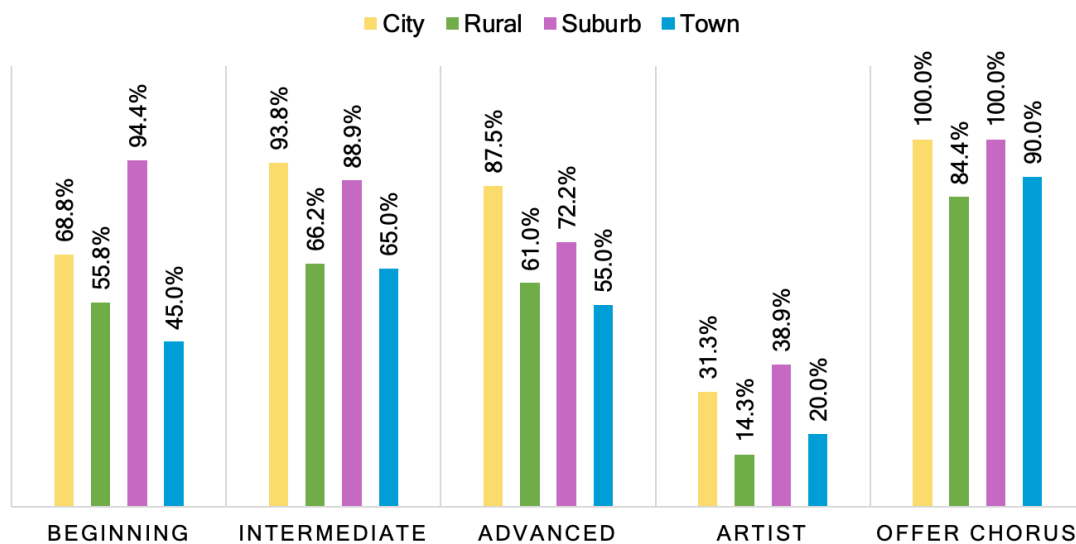
Frequencies of Offering Chorus Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

Course Type	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer Chorus	0	16	12	65	0	18	2	18	14	117
Beginning	5	11	34	43	1	17	11	9	51	80
Intermediate	1	15	26	51	2	16	7	13	36	95
Advanced	2	14	30	47	5	13	9	11	46	85
Artist	11	5	66	11	11	7	16	4	104	27

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 40

Percentages of Virginia School Divisions Offering Chorus Courses Statewide and by Locality (N = 131)

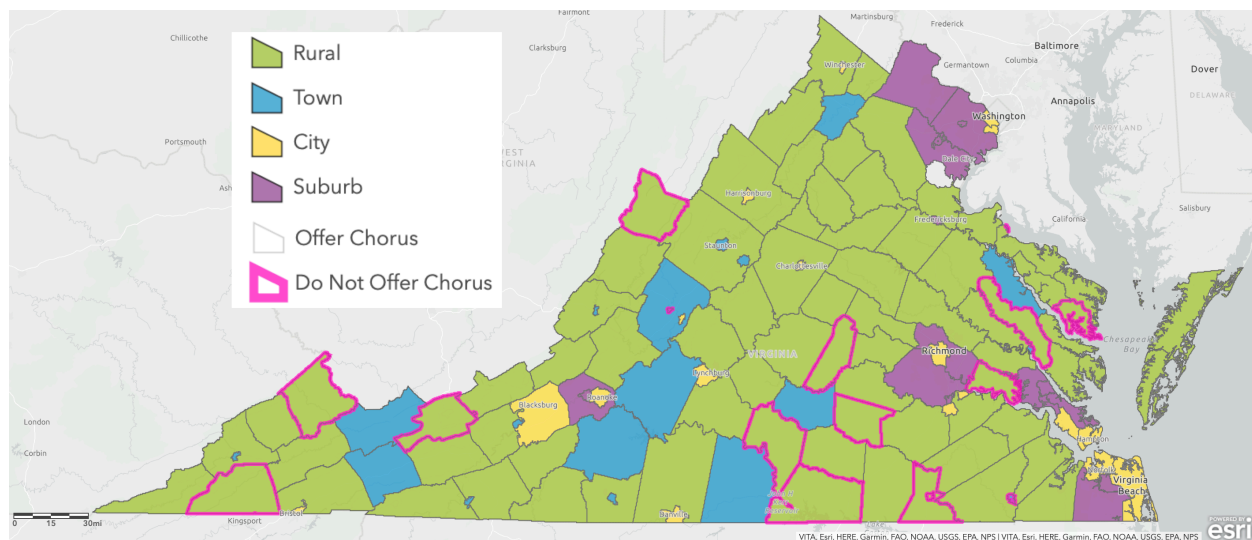


Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 41 depicts localities of Virginia school divisions that did not offer Chorus. Two of these school divisions, Colonial Beach School District and Franklin City Public Schools, were in towns. The remaining 12 were rural, located in: Bland County, Buchanan County, Charles City County, Charlotte County, Cumberland County, Greensville County, Highland County, King and Queen County, Lancaster County, Mecklenburg County, Nottoway County, and Scott County. These school divisions were somewhat clustered on the map, with three largest clusters observed: in the Southwest, in the South, and in the rural Central and Eastern Virginia. All school divisions in the Northern Virginia, in the Tidewater Area, the largest clusters of the cities and the suburbs in the state, offered at least one level of Chorus.

Figure 41

Virginia School Divisions Not Offering Chorus in High School (n = 14)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com ArcGIS online](https://nces.ed.gov/programs/edge/Geographic/DistrictBoundaries). Full data information found at <https://nces.ed.gov/programs/edge/Geographic/DistrictBoundaries>.

Figures 42-45 illustrate distributions of localities of school divisions offering each level of Chorus. For every Chorus course, these percentages were not in agreement with the statewide locality distribution of the school divisions (i.e., 12% city, 59% rural, 14% suburban, and 15% of town). Two disproportionalities were particularly substantial. First, among school divisions offering Beginning Chorus, 34% were town and 40% were rural school divisions, whereas only 15% of Virginia school divisions were town and 59% were rural (see Figure 42).

Figure 42

Localities of Virginia School Divisions Offering Beginning Chorus (n = 80)

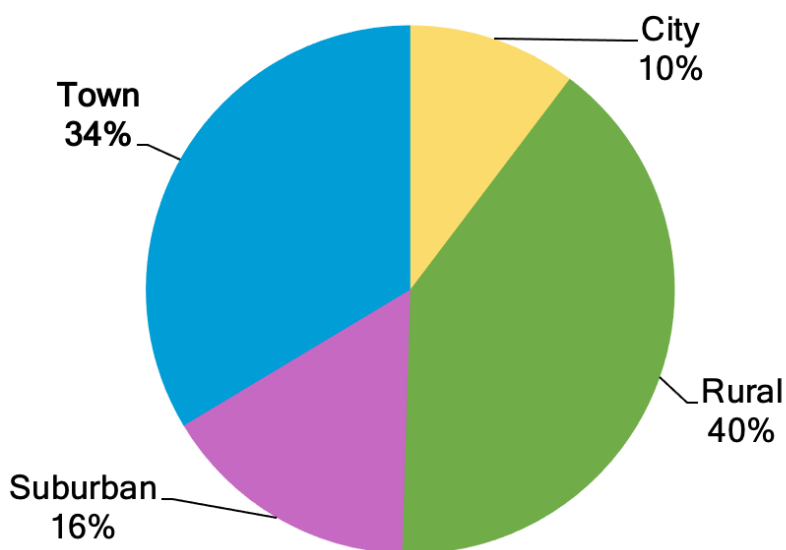


Figure 43

Localities of Virginia School Divisions Offering Intermediate Chorus (n = 95)

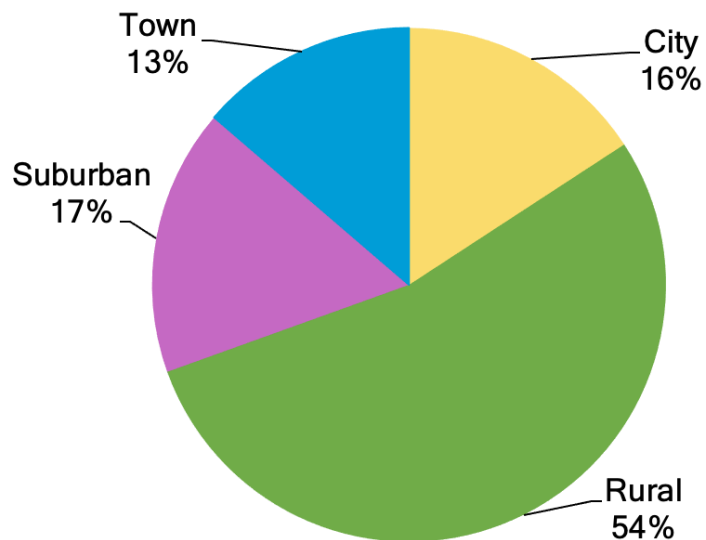
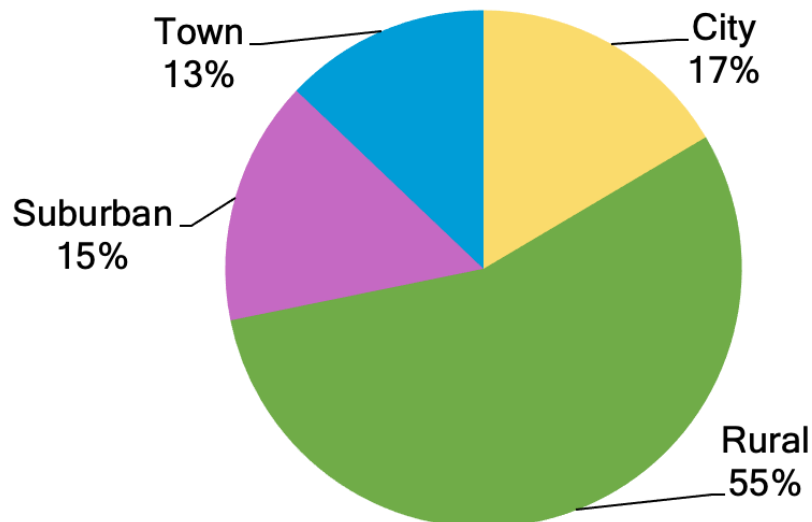


Figure 44

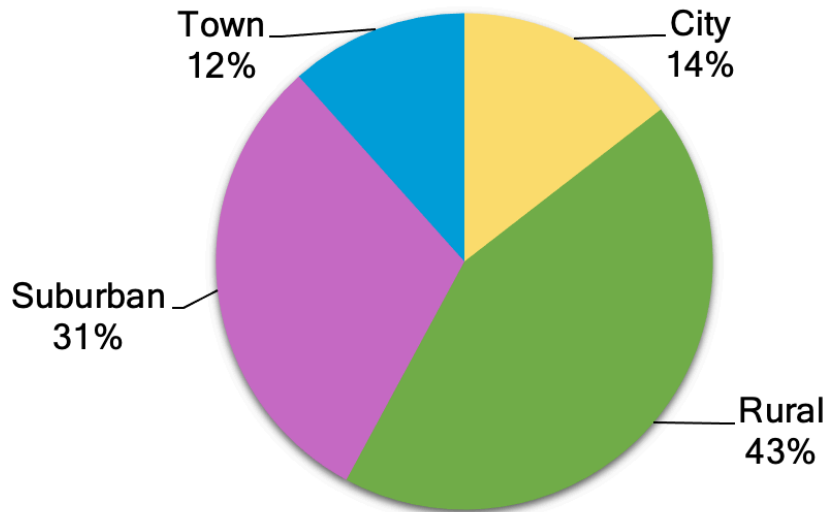
Localities of Virginia School Divisions Offering Advanced Chorus (n = 85)



Second notable disproportionality was that 31% of the school divisions offering Artist Chorus were suburban, whereas only 14% of Virginia public schools were suburban (see Figure 45).

Figure 45

Localities of Virginia School Divisions Offering Artist Chorus (n = 27)

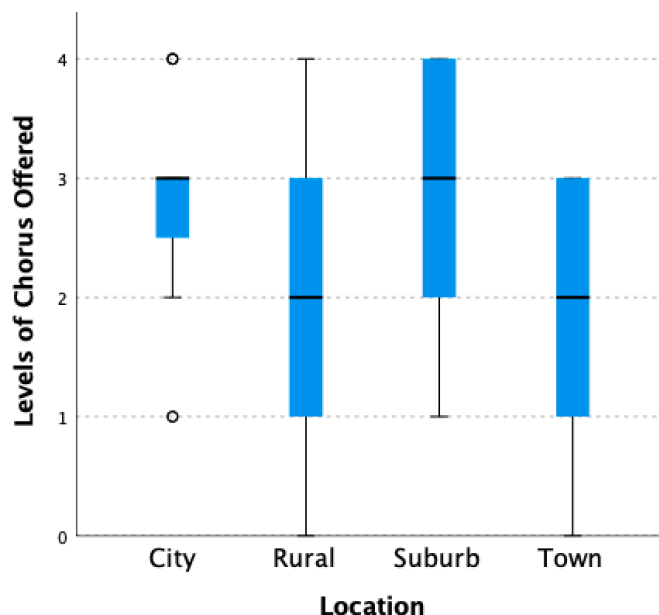


To examine whether Chorus courses offered significantly disproportionately among Virginia localities, a nonparametric independent-samples Kruskal-Wallis test was performed. With the alpha level of 0.05, the test was significant. Chorus courses were offered significantly disproportionately, $H_{(3)} = 13.45$, $N = 131$, $p = 0.004$, and the effect size was small, $\varepsilon^2 = .1035$. Post hoc Dunn's pairwise comparisons administered with the Bonferroni correction revealed that suburban school divisions offered significantly more levels of Chorus than town school divisions ($r = 2.66$, $MD = 31.71$, $p = 0.048$), and rural school divisions offered significantly less levels of Chorus than suburban school divisions ($r = -2.88$, $MD = -27.71$, $p < 0.024$). Figure 46 illustrates the test results.

Figure 46

Independent-Samples Kruskal-Wallis Test for Levels of Chorus Offered in Virginia School

Divisions (N = 131)



To explore whether there was a statistically significant relationship between offering a particular Chorus course and a school division's locality, chi-square tests of associations were performed in SPSS. Cramer's V indices were used to determine association strength; follow-up analyses included examination of frequency tables. Two tests were significant. A moderate association was found for Beginning Chorus, $\chi^2(3) = 11.89, p < 0.05, V = 0.30$. The follow-up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for suburbs: Virginia suburban school divisions offered Beginning Chorus significantly more frequently than expected. A moderate association was found for Intermediate Chorus, $\chi^2(3) = 8.13, p < 0.05, V = 0.25$. The follow-up analyses showed statistically significant differences in the proportions of offering and not offering school

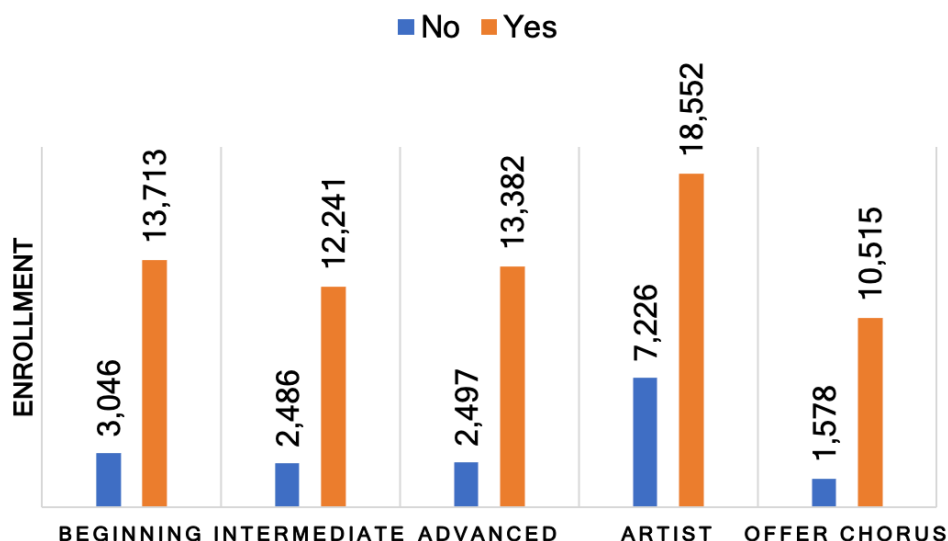
divisions for cities: Virginia city school divisions offered Intermediate Chorus significantly more frequently than expected.

Enrollment. Larger school divisions were more likely to offer Chorus. The enrollment average for school divisions offering at least one level of Chorus (10,515) exceeded the statewide enrollment average (9,560) by 955, while the enrollment average for school divisions not offering Chorus (1,578) was more than 6 times less than the statewide enrollment average. The enrollment averages for school divisions offering Beginning Chorus (13,713), Intermediate Chorus (12,241), Advanced Chorus (13,382), Artist Chorus (18,552), and at least one level of Chorus (10,515) exceeded the statewide enrollment average (9,560) by 4,153, 2,681, 3,822, 1.9 times, and 955, respectively. The enrollment averages for school divisions not offering Beginning Chorus (3,046), Intermediate Chorus (2,486), Advanced Chorus (2,497), Artist Chorus (7,226), and at least one level of Chorus (1,578) were 3.1, 3.8, 3.8, 1.3, and 6.1 times below the statewide enrollment average (9,559), respectively. The enrollment average for school divisions offering Beginning Chorus (13,713) was 4.5 times the enrollment average for school divisions not offering the course (3,046). The enrollment average for school divisions offering Intermediate Chorus (12,241) was 4.9 times enrollment average for school divisions not offering the course (2,486). The enrollment average for school divisions offering Advanced Chorus (13,382) was 5.4 times the enrollment average for school divisions not offering the course (2,497). The enrollment average for school divisions offering Artist Chorus (18,552) was 2.6 times the enrollment average for school divisions not offering the course (7,226). The enrollment average for school divisions offering at least one level of Chorus (10,515) was 6.7 times the enrollment average school divisions not offering Chorus (1,578; see Figure 47).

Figure 47

Enrollment Averages for Virginia School Divisions Offering and Not Offering Chorus Courses

(N = 131)



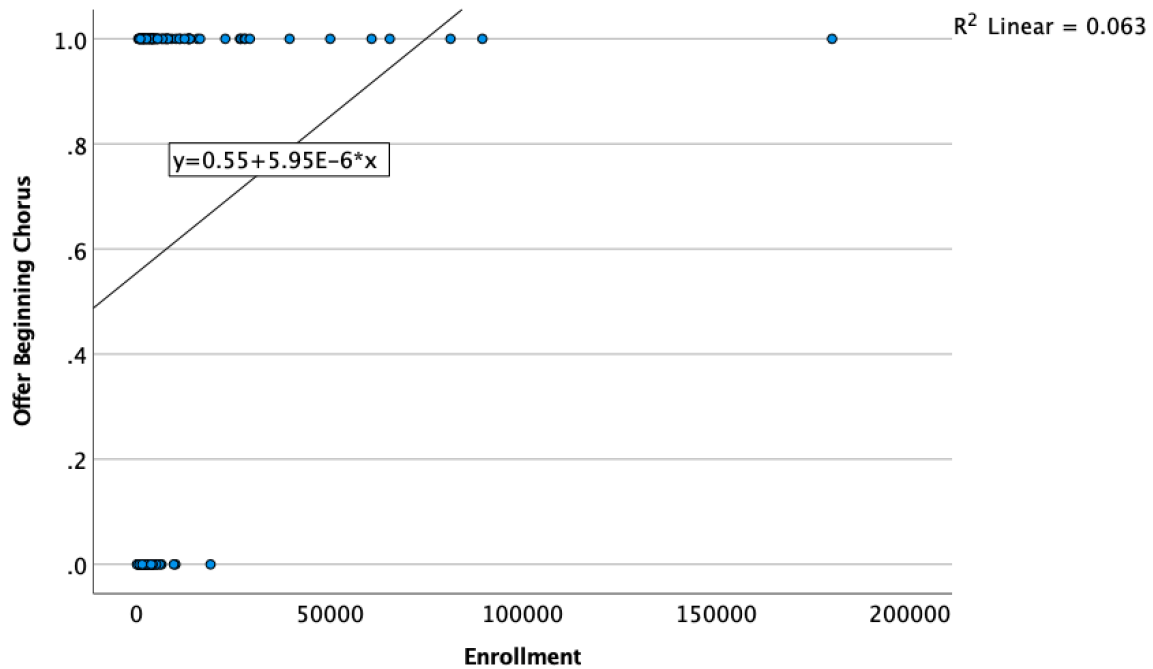
Note. The average enrollment for Virginia school divisions was 9,560.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering Chorus courses. Four tests were significant, positive, and weak. There was a significant positive correlation between offering Beginning Chorus and enrollment, $r_{pb}(131) = 0.25$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicates a weak relationship between the two variables (see Figure 48).

Figure 48

Point Biserial Correlation for Offering Beginning Chorus and Enrollment in Virginia School

Divisions (N = 131)

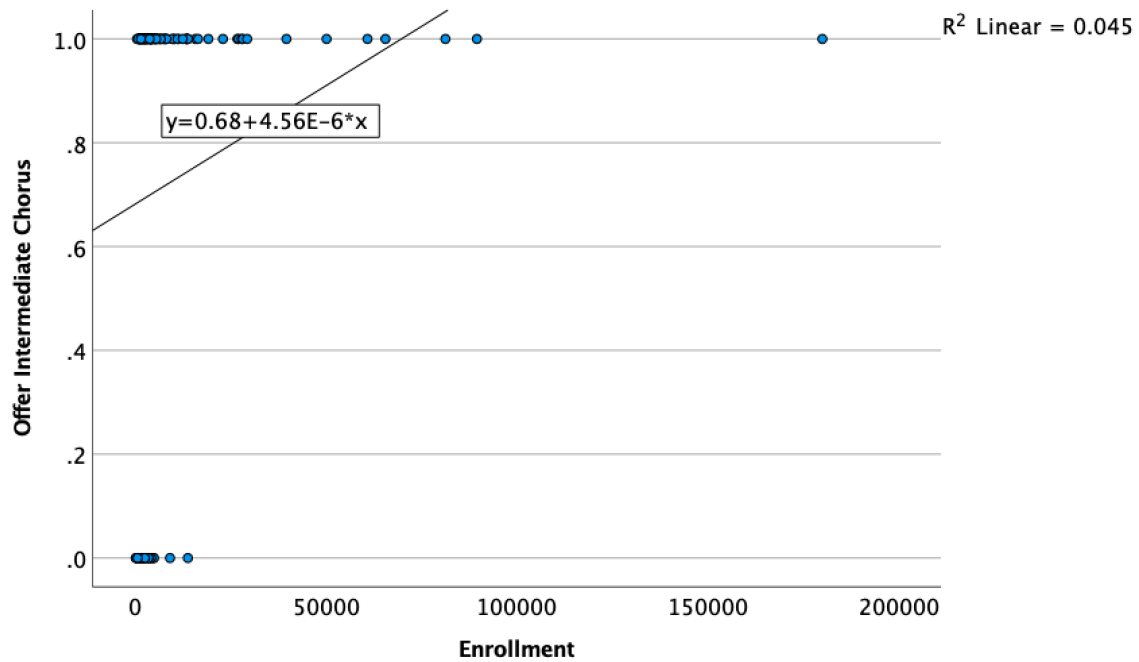


There was a significant positive correlation between offering Intermediate Chorus and enrollment, $r_{pb}(131) = 0.21$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicates a weak relationship between the two variables (see Figure 49).

Figure 49

Point Biserial Correlation for Offering Intermediate Chorus and Enrollment in Virginia School

Divisions (N = 131)

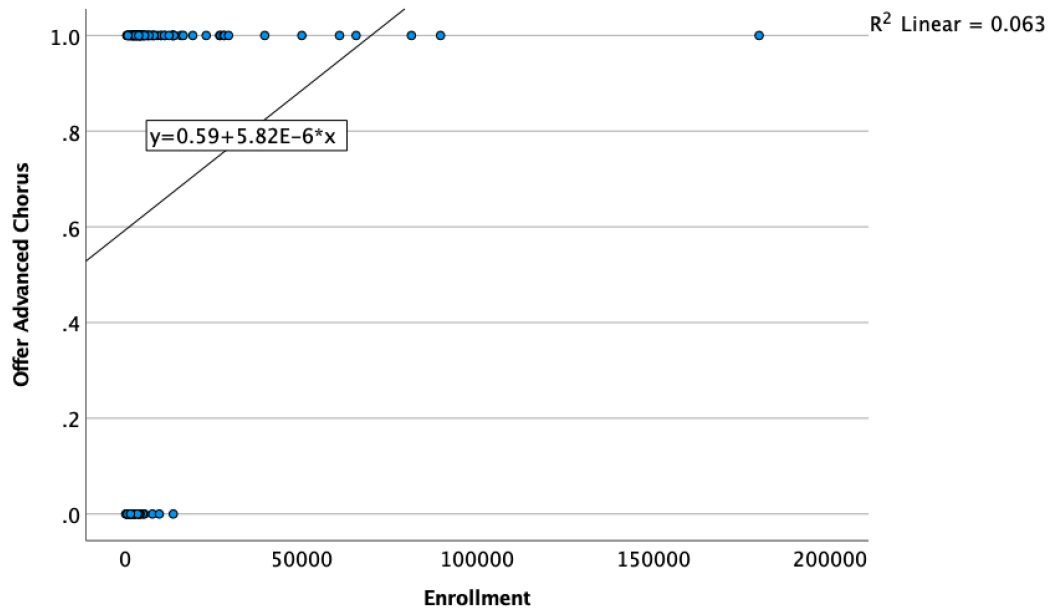


There was a significant positive correlation between offering Advanced Chorus and enrollment, $r_{pb}(131) = 0.25$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 50).

Figure 50

Point Biserial Correlation for Offering Advanced Chorus and Enrollment in Virginia School

Divisions (N = 131)

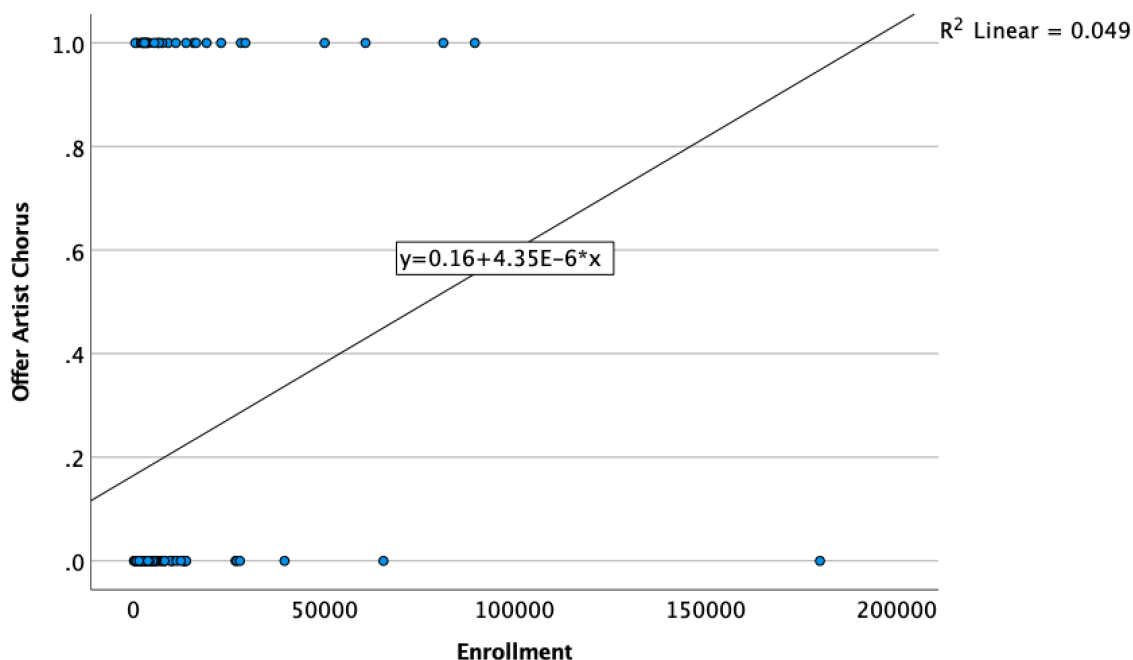


There was a significant positive correlation between offering Artist Chorus and enrollment, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 51).

Figure 51

Point Biserial Correlation for Offering Artist Chorus and Enrollment in Virginia School

Divisions (N = 131)

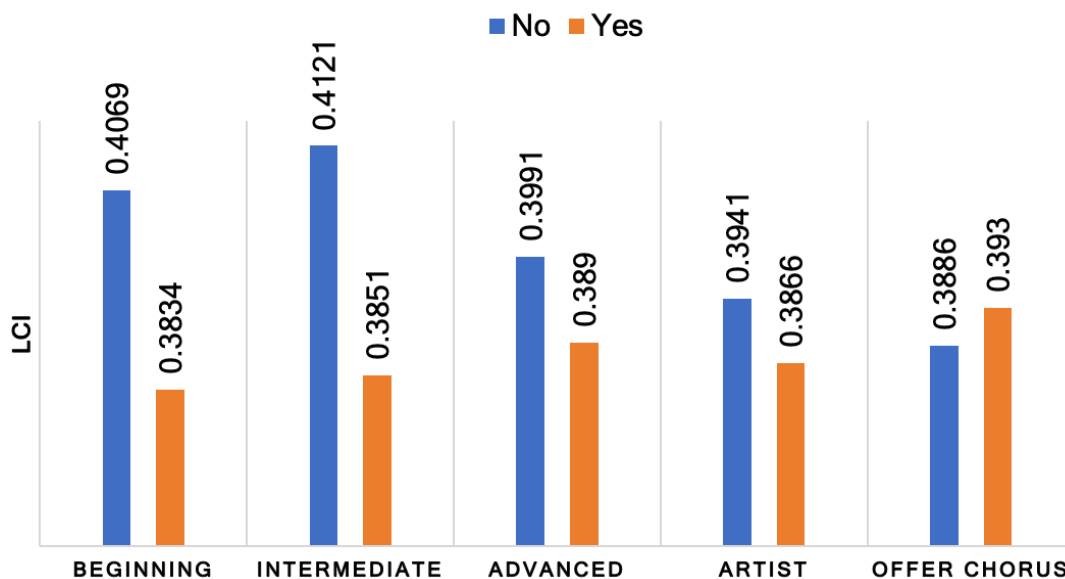


LCI. Virginia school divisions were likely to offer Chorus courses regardless of ability to fund K-12 public education. The LCI averages for school divisions not offering Beginning Chorus (.4069), Intermediate Chorus (.4121), Advanced Chorus (.3991), or Artist Chorus (.3941) were .0016-.0196 above the average statewide LCI (.3925). The LCI averages for school divisions offering Beginning Chorus (.3834), Intermediate Chorus (.3851), Advanced Chorus (.3890), or Artist Chorus (.3866) were .0035-.0091 below the average statewide LCI (.3925). The average LCI for school divisions not offering Chorus (.3866) was .0059 below the statewide average LCI (.3925). The average LCI for school divisions offering at least one level of Chorus (.3930) was .0005 above the average statewide LCI (.3925). The average LCI for school divisions offering at least one level of Chorus (.3930) was .0044 above the average LCI for

school divisions not offering Chorus (.3866). The differences between LCI averages for school divisions offering and not offering Beginning Chorus (.0235), Intermediate Chorus (.0270), Advanced Chorus (.0101), Artist Chorus (.0075), and at least one level of Chorus (0.44) were not large (see Figure 52).

Figure 52

Local Composite Index Averages for Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)



Note. The average LCI for Virginia school divisions was .3925.

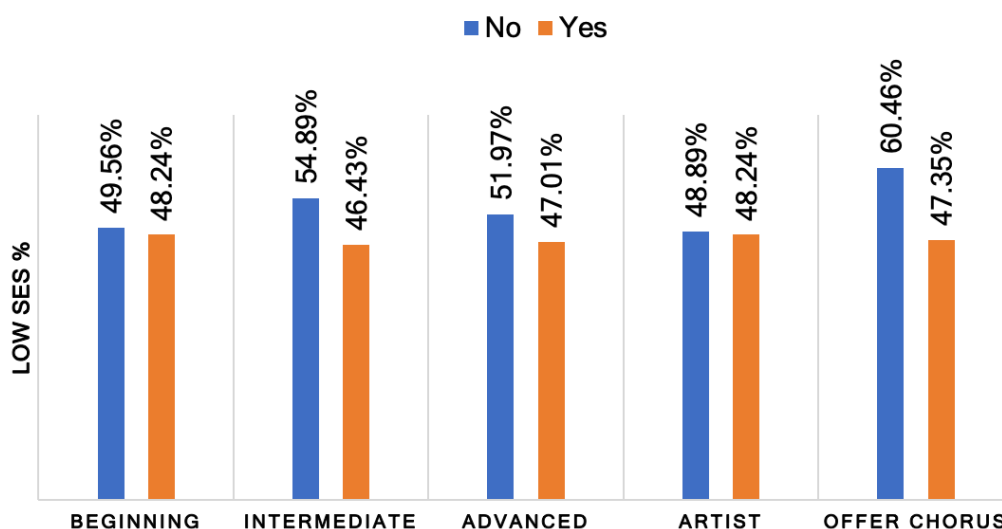
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between Virginia school divisions' LCIs and offering Chorus courses were nonsignificant.

Low Student SES. Virginia school divisions with higher percentages of low SES students were less likely to offer Intermediate Chorus and at least one level of Chorus. The average low student SES for school divisions not offering Chorus (60.46%) was 11.71% above

the statewide average (48.75%). The low student SES average for school divisions offering Chorus (47.35%) was only 1.5% above the statewide average (48.75%). The low student SES average for school divisions not offering Beginning Chorus (49.56%), Intermediate Chorus (54.89%), Advanced Chorus (51.97%), or Artist Chorus (48.89%) were 0.14-6.14% above the statewide average (48.75%). The average of low SES students for school divisions not offering Chorus (60.46%) was 13.11% above the low student SES average for school divisions offering Chorus (47.35). The low student SES averages for school divisions not offering Beginning Chorus (49.56%), Intermediate Chorus (54.89%), Advanced Chorus (51.97%), or Artist Chorus (48.89%) were 0.65-8.46% above the corresponding averages for school divisions offering these courses. The low student SES averages for school divisions offering either of Chorus courses were only 0.51-2.32% below the statewide average (48.75%; see Figure 53).

Figure 53

Low Student Socio-Economic Status Averages for Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)

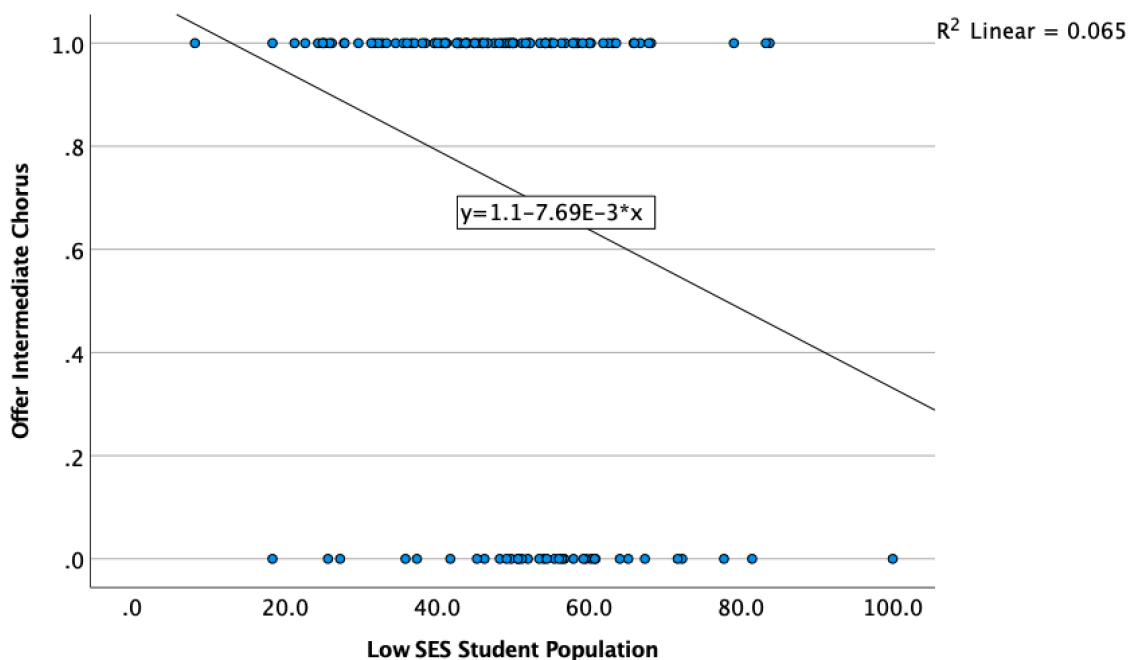


Note. The average low student SES for Virginia school divisions was 48.75%.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between low student SES and offering Chorus courses. Two tests were significant, negative, and weak. There is a significant negative correlation between offering Intermediate Chorus and low student SES, $r_{pb}(131) = -0.26, p < 0.01, r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 54).

Figure 54

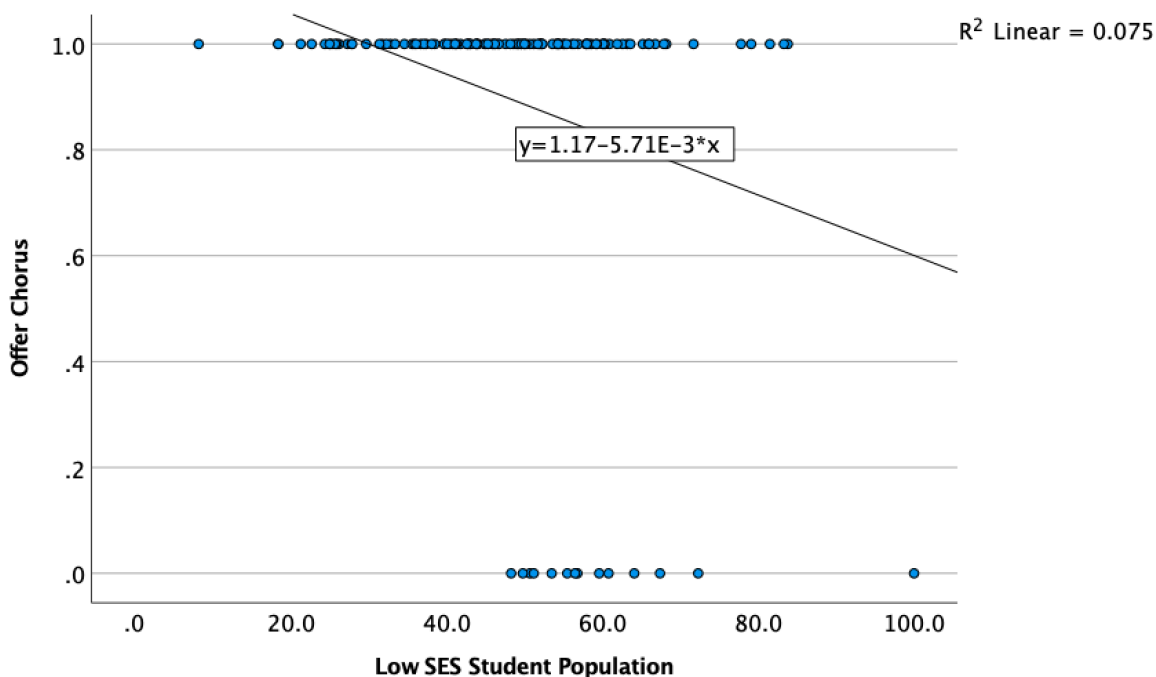
Point Biserial Correlation for Offering Intermediate Chorus and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of Chorus and low student SES, $r_{pb}(131) = -0.27, p < 0.01, r^2 = 0.07$; 7% shared variance indicates a weak relationship between the two variables (see Figure 55).

Figure 55

Point Biserial Correlation for Offering at Least One Level of Chorus and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



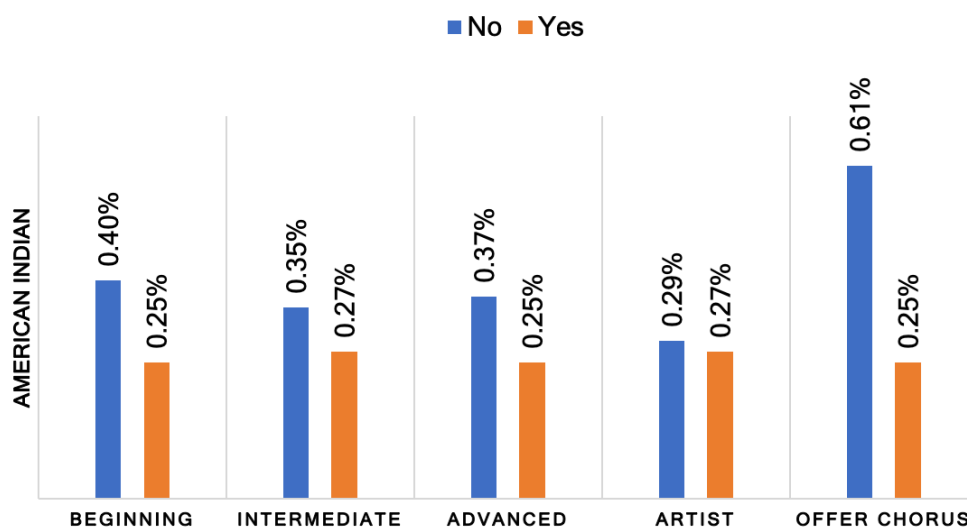
Race/Ethnicity. Analyses of student race/ethnicity averages for school divisions offering and not offering Chorus courses revealed multiple disproportionalities.

American Indian. Virginia school divisions offering Chorus were likely to enroll fewer American Indian students. The average of American Indian students for school divisions not offering Chorus (0.61%) was 2.1 times the statewide average of American Indian students (0.29%). The averages of American Indian students for school divisions not offering Beginning Chorus (0.40%), Intermediate Chorus (0.35%), and Advanced Chorus (0.37%) exceeded the statewide average of American Indian students (0.29%) by 0.06-0.11%. The averages of American Indian students for school divisions offering Beginning Chorus (0.25%), Intermediate Chorus (0.27%), Advanced Chorus (0.25%), and Artist Chorus (0.27%) were 0.02-0.04% below

the statewide average of American Indian students (0.29%). There were 2.4 times more American Indian students in school divisions not offering Chorus (0.61%) than in school divisions offering Chorus (0.25%). The average of American Indian students for school divisions not offering Beginning Chorus (0.40%) was 1.6 times the corresponding average for school divisions offering the course (0.25%). The average of American Indian students for school divisions not offering Intermediate Chorus (0.35%) was 0.08% above the corresponding average for school divisions offering the course. The average of American Indian students for school divisions not offering Advanced Chorus (0.37%) was 0.12% above the corresponding average for school divisions offering the course (0.25%). The average of American Indian students for school divisions not offering Artist Chorus (0.29%) was 0.02 above the corresponding average for school divisions offering the course (0.27%) (see Figure 56).

Figure 56

Averages of American Indian Students in Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)

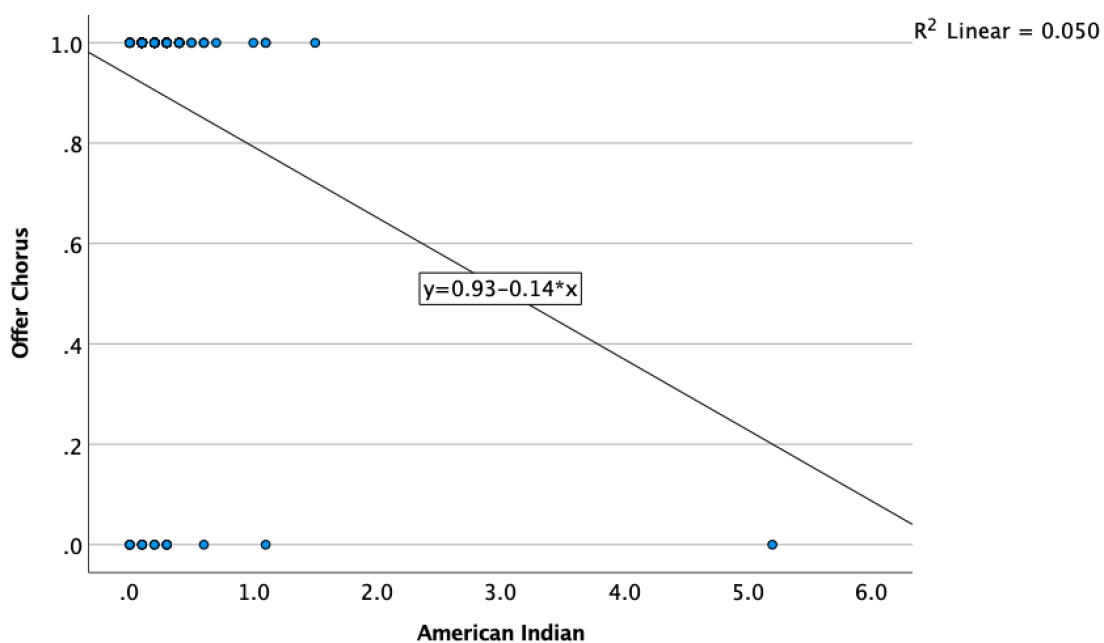


Note. 0.29% of students in Virginia school divisions were American Indian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of American Indian students and offering Chorus courses. One test was significant. There was a significant negative correlation between offering at least one level of Chorus and American Indian student enrollment, $r_{pb}(131) = -0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 57).

Figure 57

Point Biserial Correlation for Offering at Least One Level of Chorus and Percentages of American Indian Students in Virginia School Divisions (N = 131)

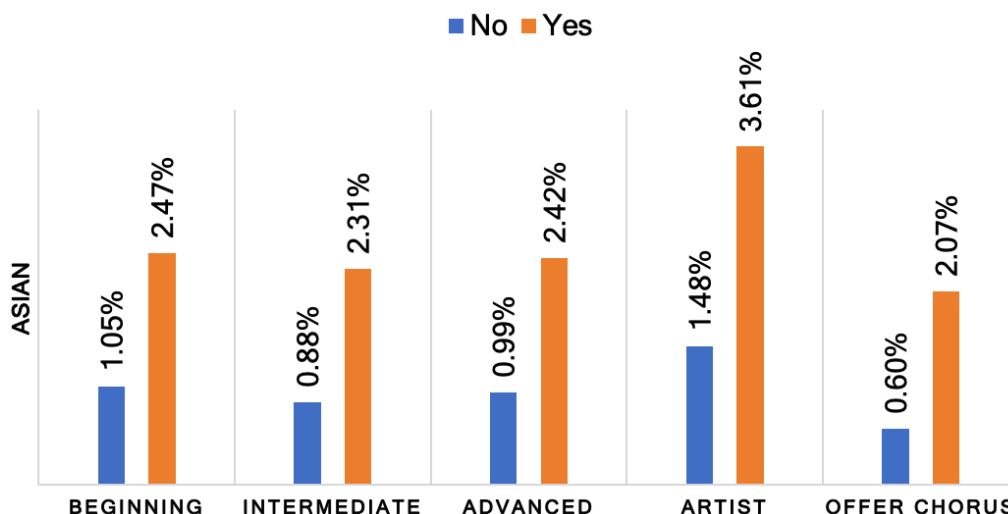


Asian. Virginia school divisions with larger Asian student enrollment were likely to offer Chorus courses. The averages of Asian students for school divisions offering Beginning Chorus (2.47%), Intermediate Chorus (2.31%), Advanced Chorus (2.42%), Artist Chorus (3.61%), and at

least one level of Chorus (2.07%) exceeded the statewide average of Asian students (1.917%) by 0.6%, 0.4%, 0.5%, 1.9 times, and 0.2%, respectively. The average percentages of Asian students for school divisions not offering Beginning Chorus (1.05%), Intermediate Chorus (0.88%), Advanced Chorus (0.99%), Artist Chorus (1.48%), and at least one level of Chorus (0.6%) were 1.8, 2.2, 1.9, 1.3, and 3.2 times lower the statewide average of Asian students (1.917%), respectively. The Asian student average for school divisions offering Beginning Chorus (2.47%) was 2.4 times the corresponding average for school divisions not offering the course (1.05%). The Asian student average for school divisions offering Intermediate Chorus (2.31%) was 2.6 times the corresponding average for school divisions not offering the course (0.88%) The Asian student average for school divisions offering Advanced Chorus (2.42%) was 2.4 times the corresponding average for school divisions not offering the course (0.99%) The Asian student average for school divisions offering Artist Chorus (3.61%) was 2.4 times the corresponding average for school divisions not offering the course (1.48%) The Asian student average for school divisions offering at least one level of Chorus (2.07%) was 3.5 times the corresponding average for school divisions not offering the course (0.60%) (see Figure 58).

Figure 58

Averages of Asian Students in Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)

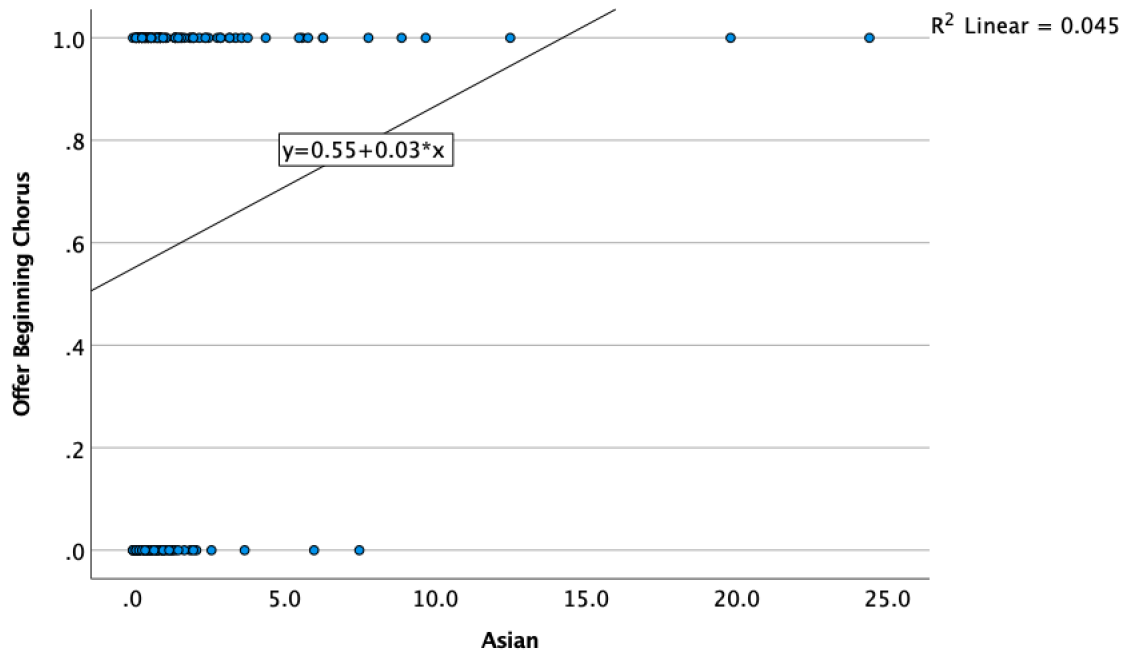


Note. 1.917% of students in Virginia school divisions were Asian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Asian student population and offering Chorus courses. Four tests were significant, positive, and weak. Association strength was determined using the following Warner's (2013) guidelines: $r^2 < 0.01$ as small, $r^2 < 0.09-0.24$ as medium, and $r^2 > 0.24$ as large. There was a significant positive correlation between offering Beginning Chorus and Asian student enrollment, $r_{pb}(131) = 0.21$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 59).

Figure 59

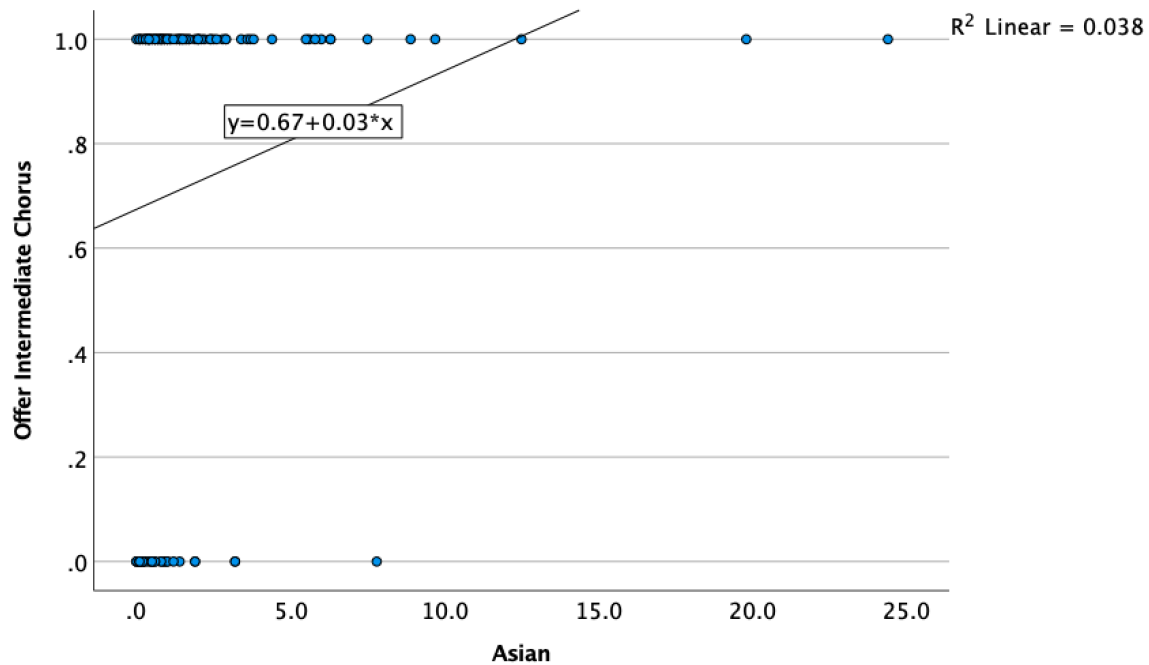
Point Biserial Correlation for Offering Beginning Chorus and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Intermediate Chorus and Asian student enrollment, $r_{pb}(131) = 0.19$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 60).

Figure 60

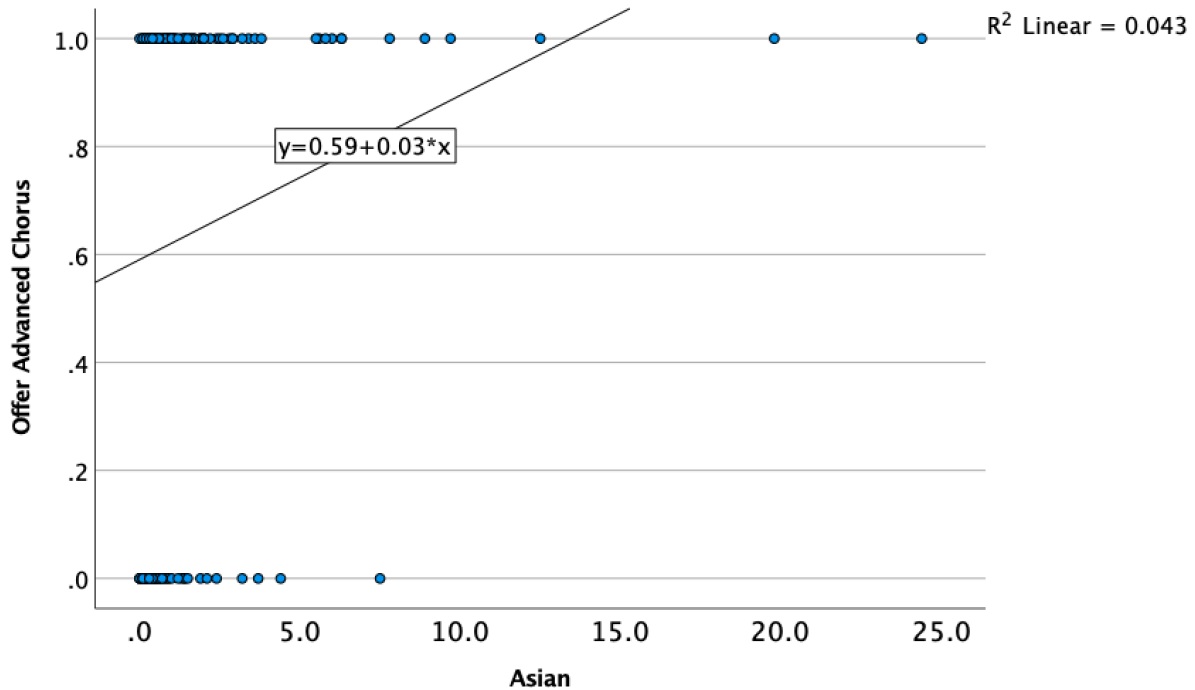
Point Biserial Correlation for Offering Intermediate Chorus and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Advanced Chorus and Asian student enrollment, $r_{pb}(131) = 0.21$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 61).

Figure 61

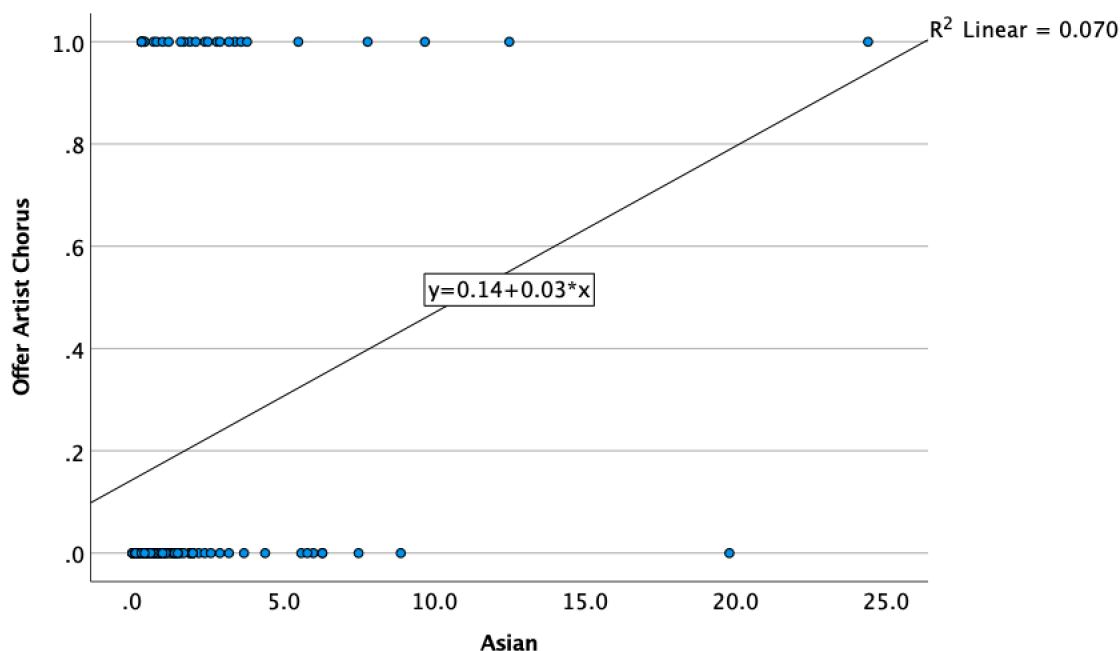
Point Biserial Correlation for Offering Advanced Chorus and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Artist Chorus and Asian student enrollment, $r_{pb}(131) = 0.26$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 62).

Figure 62

Point Biserial Correlation for Offering Artist Chorus and Percentages of Asian Students in Virginia School Divisions (N = 131)

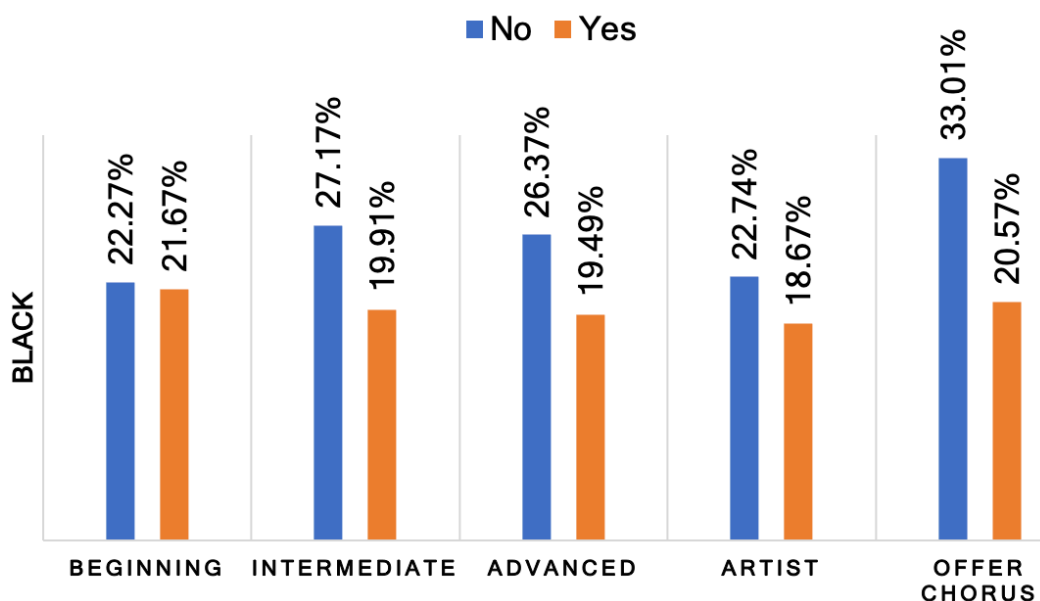


Black. Virginia school divisions with larger Black student populations were less likely to offer Chorus. The averages of Black students for school divisions offering Beginning Chorus (21.67%), Intermediate Chorus (19.91%), Advanced Chorus (19.49%), Artist Chorus (18.67%), and at least one level of Chorus (20.57%) were 0.2%, 2%, 2.4%, 3.2%, and 1.3% below the statewide average of Black students (21.902%), respectively. The averages of Black students for school divisions not offering Beginning Chorus (22.27%), Intermediate Chorus (27.17%), Advanced Chorus (26.37%), Artist Chorus (22.74%), and at least one level of Chorus (33.01%) were 0.4%, 5.3%, 4.5, 0.8%, and 1.5 times above the statewide Black student population average (21.902%). and 1.6 times the Black student population average for school divisions offering Chorus (20.57%). The average of Black students for school divisions offering Beginning Chorus

(21.67%) was 0.6% below the average of Black students for school divisions not offering the course (22.27%). The average of Black students for school divisions offering Intermediate Chorus (19.91%) was 7.3% below the average of Black students for school divisions not offering the course (27.17%). The average of Black students for school divisions offering Advanced Chorus (19.49%) was 6.9% below the average of Black students for school divisions not offering the course (26.37%). The average of Black students for school divisions offering Artist Chorus (18.67%) was 4.1% below the average of Black students for school divisions not offering the course (22.74%). The average of Black students for school divisions offering at least one level of Chorus (33.01%) was 1.6 times the average of Black students for school divisions not offering Chorus (20.57%; see Figure 63).

Figure 63

Averages of Black Students in Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)

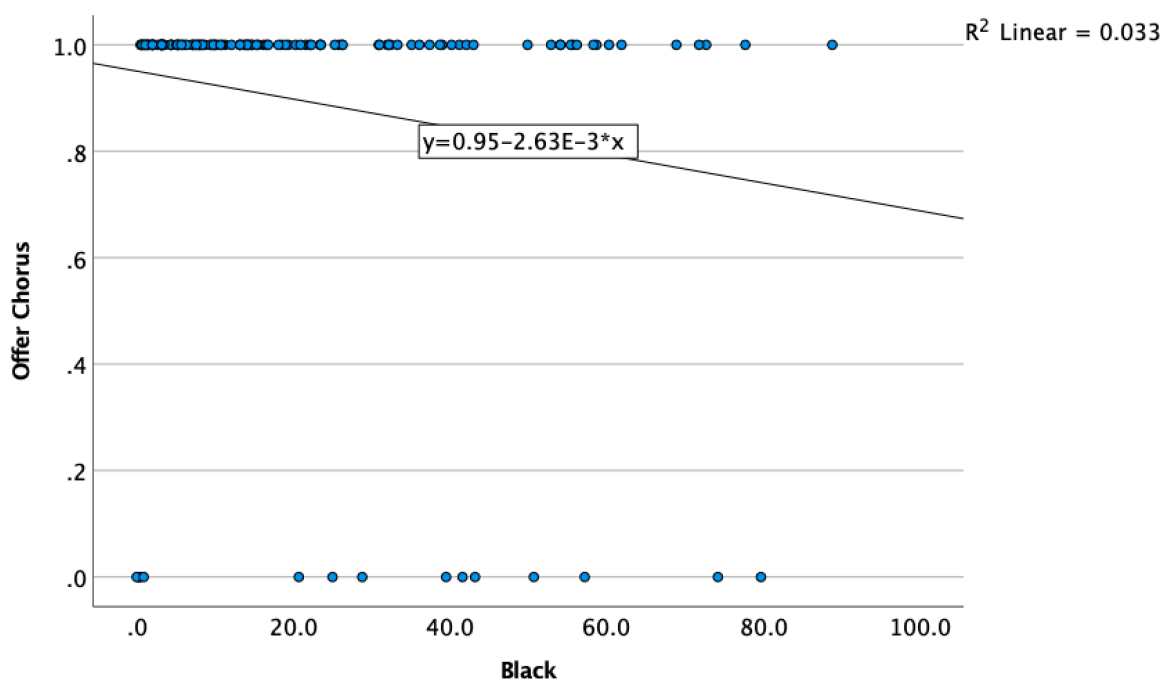


Note. 21.902% of students in Virginia school divisions were Black.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Black students and offering Chorus courses. One test was significant. There was a significant negative correlation between offering at least one level of Chorus and Black student enrollment, $r_{pb}(131) = -0.18$, $p < 0.05$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 64).

Figure 64

Point Biserial Correlation for Offering at Least One Level of Chorus and Percentages of Black Students in Virginia School Divisions (N = 131)

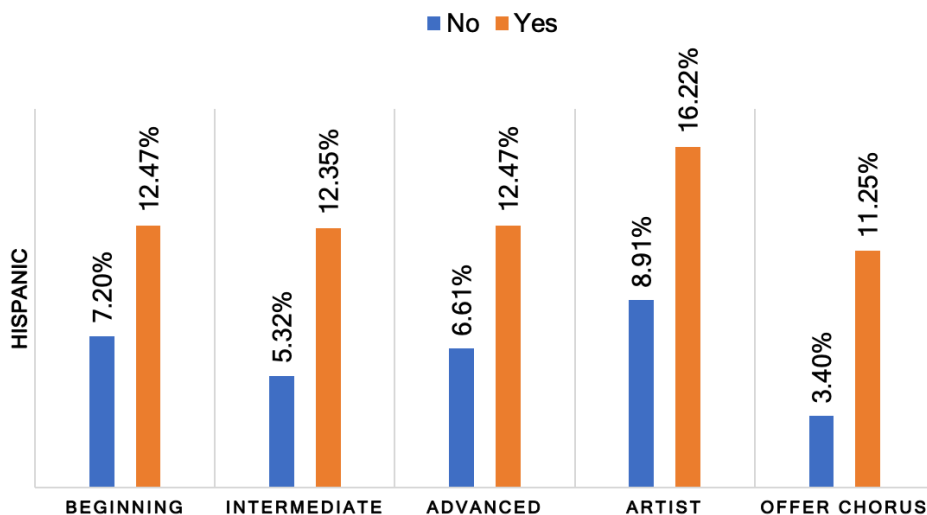


Hispanic. Virginia school divisions offering Chorus were likely to enroll more Hispanic students than an average school division in the state. School divisions offering Chorus courses enrolled 1.94-5.81% more Hispanic students than an average Virginia school division (10.415%). The average of Hispanic students in school divisions offering at least one level of

Chorus (11.25%) exceeded the statewide average of Hispanic students (10.415%) by 0.8% and was 3.3 times the average of Hispanic students for school divisions not offering Chorus (3.4%). The averages of Hispanic students for school divisions not offering Beginning Chorus (7.2%), Intermediate Chorus (5.32%), Advanced Chorus (6.61%), Artist Chorus (8.91%), and at least one level of Chorus (3.4%) were 3.2%, 2 times, 1.6 times, 1.5%, and 3.1 times below the statewide average of Hispanic students (10.415%), respectively. The average of Hispanic students for school divisions offering Beginning Chorus (12.47%) was 1.7 times the corresponding average for school divisions not offering the course (7.2%). The average of Hispanic student population for school divisions offering Intermediate Chorus (12.35%) was 2.3 times of the average of Hispanic students for school divisions not offering the course (5.32%). The average of Hispanic students for school divisions offering Advanced Chorus (12.74%) was 1.9 times the corresponding average for school divisions not offering the course (6.61%). The average of Hispanic students for school divisions offering Artist Chorus (16.22%) was 1.8 times the corresponding average for school divisions not offering the course (8.91%) (see Figure 65).

Figure 65

Averages of Hispanic Students in Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)

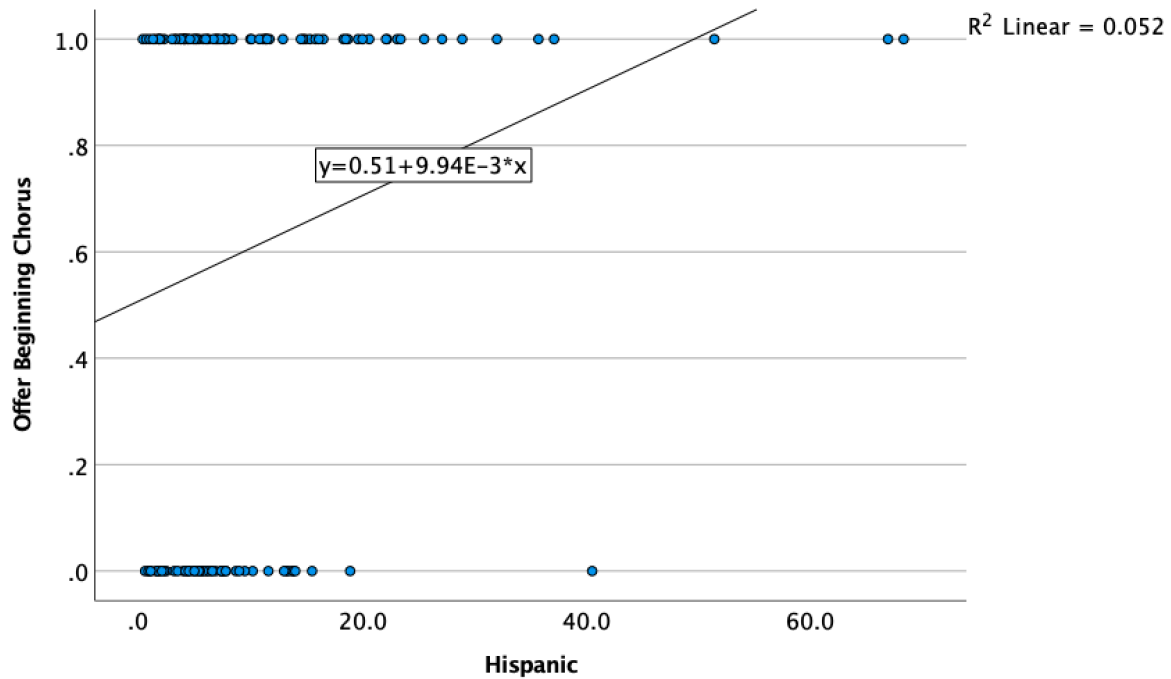


Note. 10.415% of students in Virginia school divisions were Hispanic.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Hispanic students in Virginia school divisions and offering Chorus courses. Five tests were significant, positive, and weak. There was a significant positive correlation between offering Beginning Chorus and Hispanic student enrollment, $r_{pb}(131) = 0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 66).

Figure 66

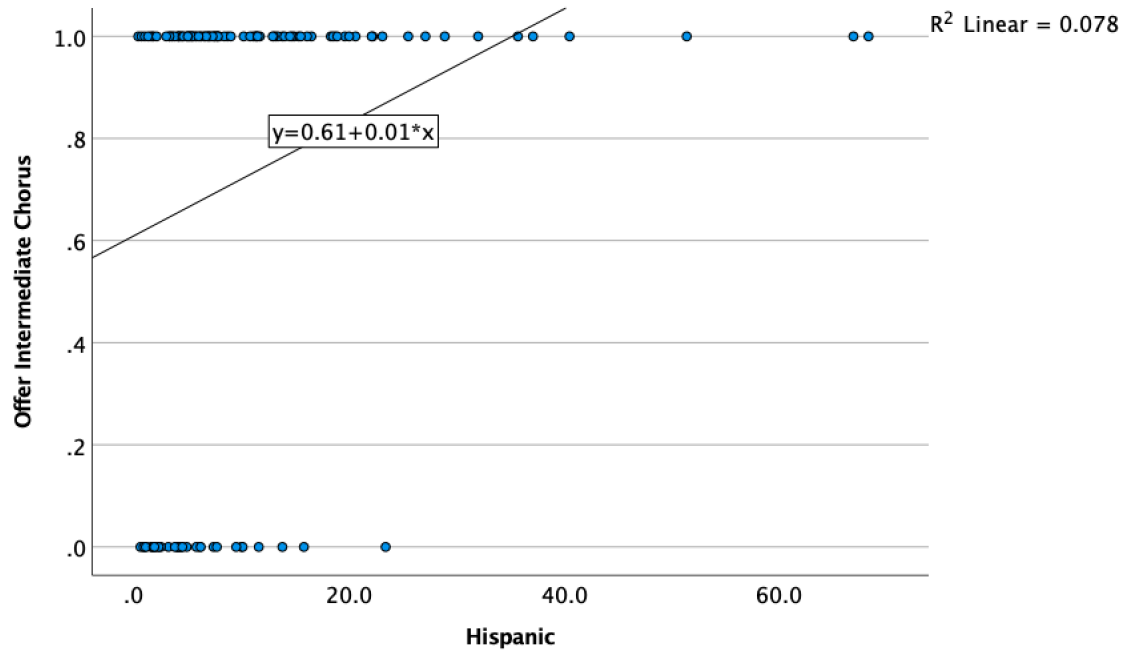
Point Biserial Correlation for Offering Beginning Chorus and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Intermediate Chorus and Hispanic student enrollment, $r_{pb}(131) = 0.28$, $p < 0.01$, $r^2 = 0.08$; 8% shared variance indicated a weak relationship between the two variables (see Figure 67).

Figure 67

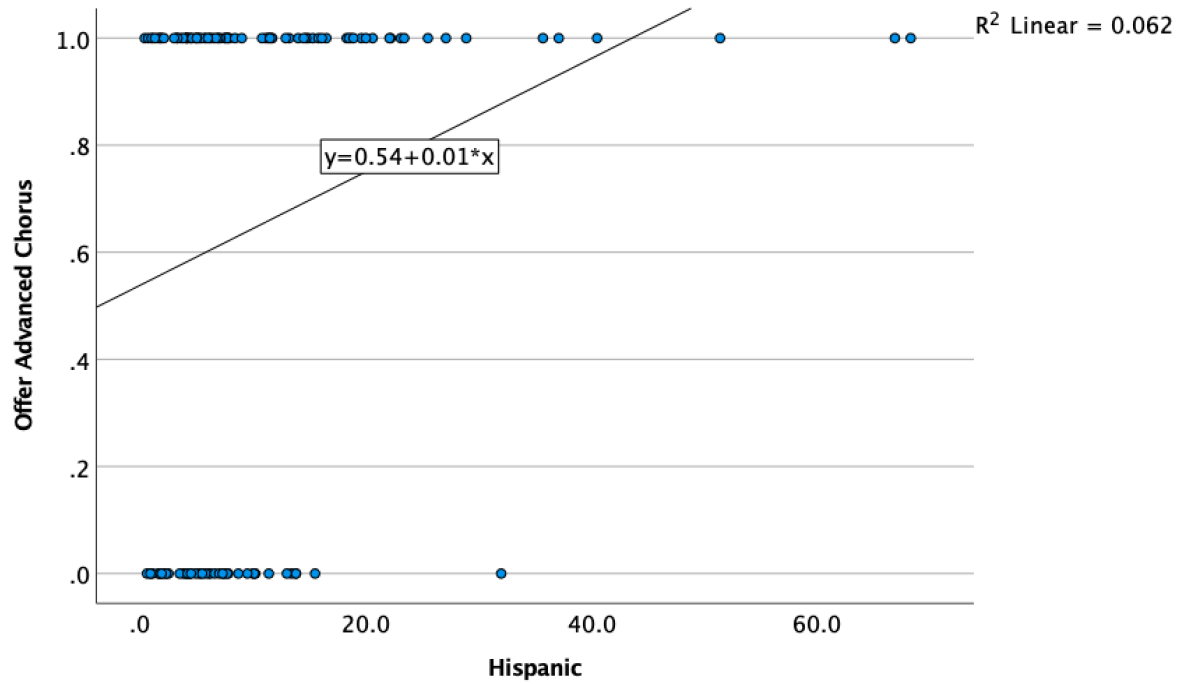
Point Biserial Correlation for Offering Intermediate Chorus and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Advanced Chorus and Hispanic student enrollment, $r_{pb}(131) = 0.25$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 68).

Figure 68

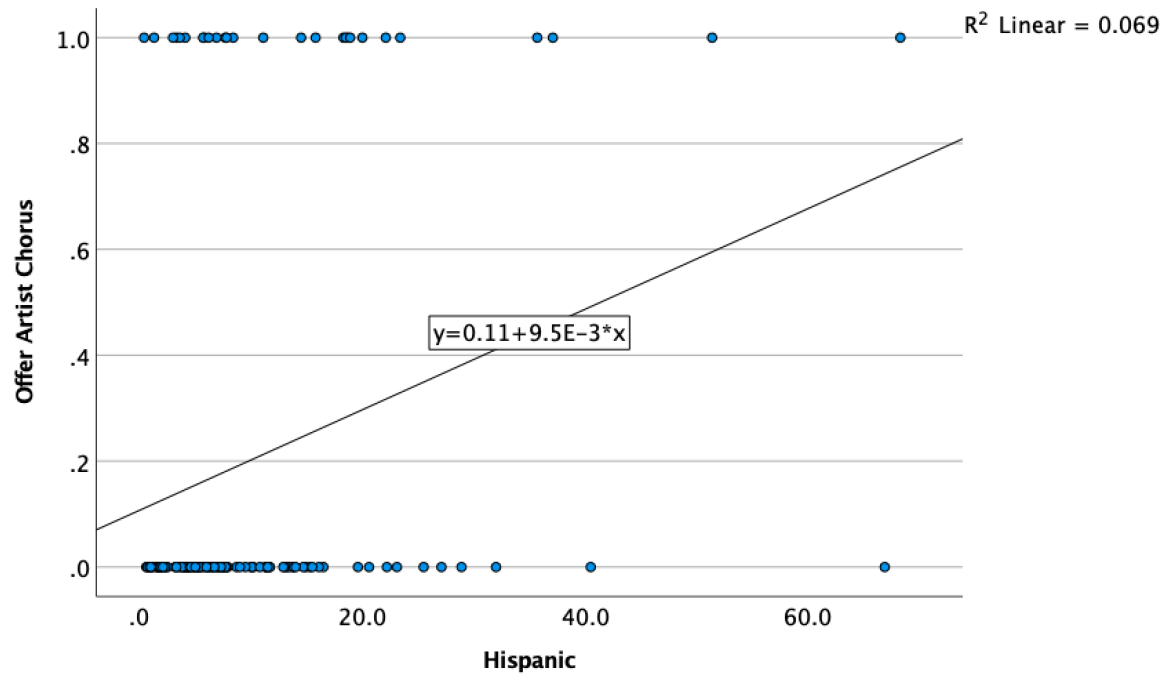
Point Biserial Correlation for Offering Advanced Chorus and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Artist Chorus and Hispanic student enrollment, $r_{pb}(131) = 0.26$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 69).

Figure 69

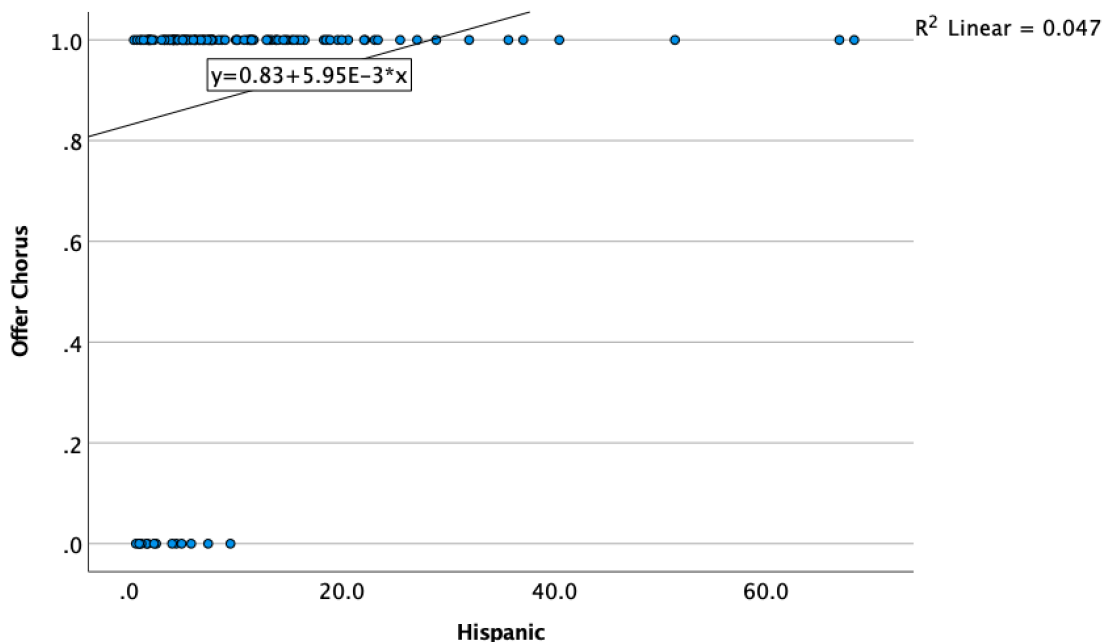
Point Biserial Correlation for Offering Artist Chorus and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Chorus and Hispanic student enrollment, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 70).

Figure 70

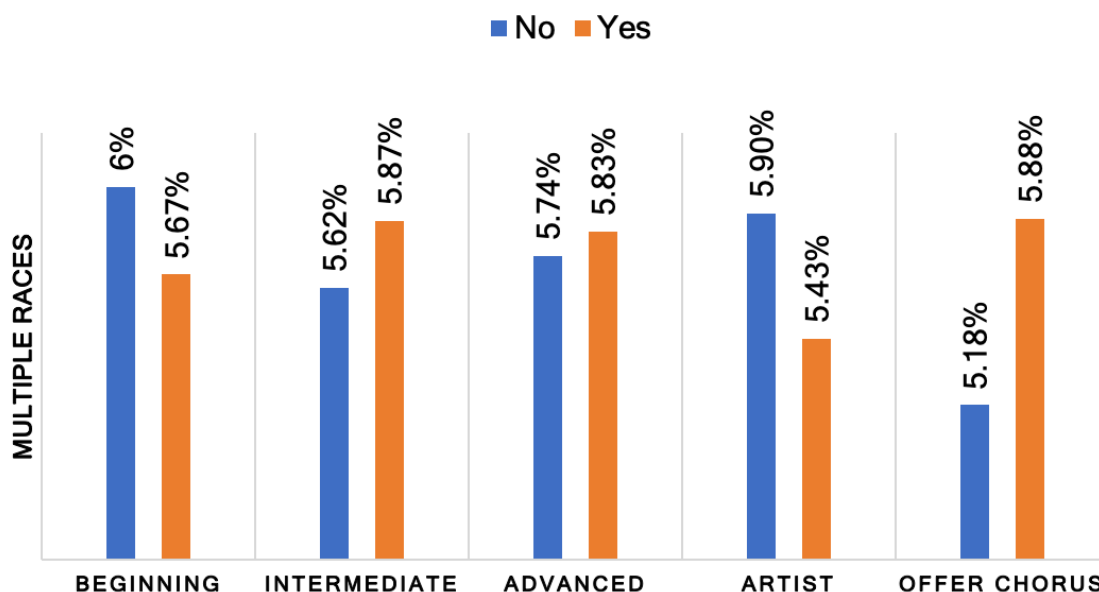
Point Biserial Correlation for Offering at Least One Level of Chorus and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



Multiple Races. Multiple Races student population percentages in Virginia school divisions did not associate with offering Chorus courses. The averages of Multiple Races students for school divisions offering Chorus courses (ranging 5.43-5.87%) and the averages of Multiple Races students for school divisions not offering either of Chorus courses (ranging 5.62-6%) range did not deviate from the statewide Multiple Races student enrollment average (5.801%) by more than 0.01-0.37% (see Figure 71).

Figure 71

Averages of Multiple Races Students in Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)



Note. 5.801% of students in Virginia school divisions were Multiple Races.

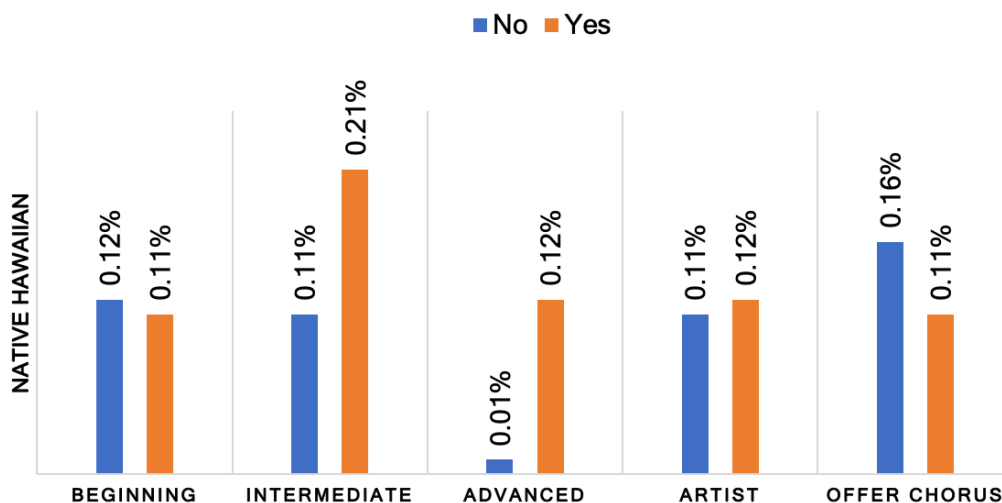
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Multiple Races students and offering Chorus courses were nonsignificant.

Native Hawaiian. Native Hawaiian student population averages in Virginia school divisions did not associate with offering Chorus courses. The averages of Native Hawaiian students for school divisions offering Beginning Chorus (0.11%), not offering Beginning Chorus (0.12%), not offering Intermediate Chorus (0.11%), not offering Chorus (0.11%), offering Advanced Chorus (0.12%), offering Artist Chorus (0.11%), not offering Artist Chorus (0.12%), and offering at least one level of Chorus (0.11%) approximated the statewide average of Native Hawaiian students (0.113%). The averages of Native Hawaiian students for school divisions

offering Intermediate Chorus (0.21%) and offering at least one level of Chorus (0.16%) were 1.9 and 1.4 times the statewide average of Native Hawaiian students (0.113%), respectively. The average of Native Hawaiian students for school divisions not offering Advanced Chorus (0.01%) was 11.3 times lower than the statewide average of Native Hawaiian students (0.113%). The average of Native Hawaiian students for school divisions offering Intermediate Chorus (0.21%) was 1.9 times the corresponding average for school divisions not offering the course (0.11%). The average of Native Hawaiian students for school divisions offering Advanced Chorus (0.12%) was 12 times the corresponding average for school divisions not offering the course (0.01%). The average of Native Hawaiian students for school divisions not offering Chorus (0.16%) was 1.5 times the corresponding average for school divisions offering at least one level of Chorus (0.11%; see Figure 72).

Figure 72

Averages of Native Hawaiian Students in Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)



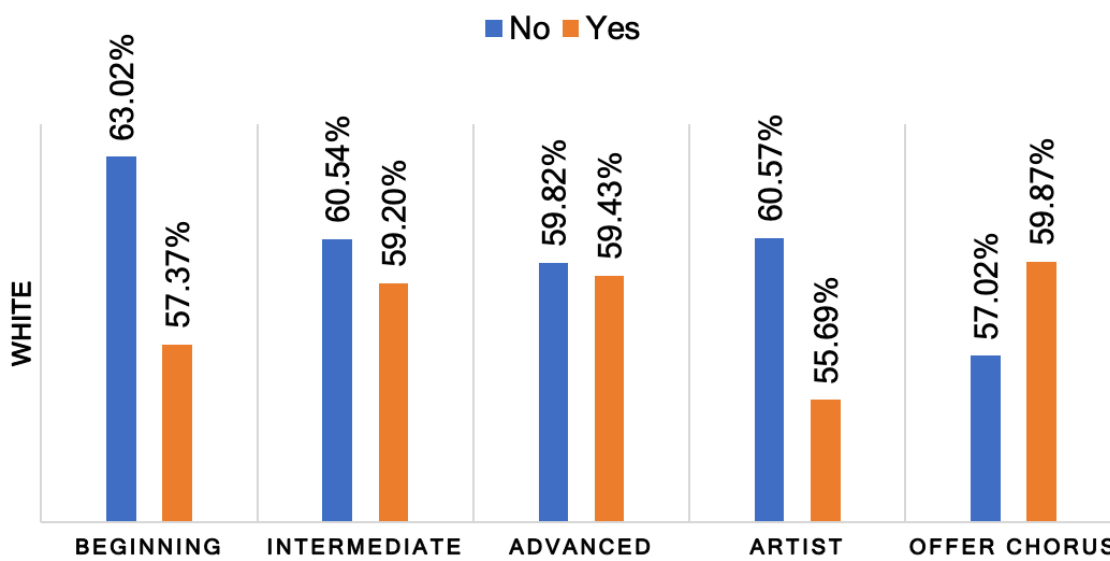
Note. 0.113% of students in Virginia school divisions were Native Hawaiian.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Native Hawaiian students in Virginia school divisions and offering Chorus courses were nonsignificant.

White. White student population averages in Virginia school divisions did not associate with offering Chorus. The averages of White students for school divisions offering Beginning Chorus (57.37%), Intermediate Chorus (59.2%), Advanced Chorus (59.43%), and Artist Chorus (55.69%) were 2.2%, 0.4%, 0.1%, and 3.9% below the statewide average of White students (59.567%), respectively. The averages of White students for school divisions not offering Beginning Chorus (63.02%), Intermediate Chorus (60.54%), Advanced Chorus (59.82%), and Artist Chorus (60.57%) exceeded the statewide average of White students (59.567%) by 3.5%, 1%, 0.3%, and 1%, respectively. The White student average for school divisions offering Beginning Chorus (57.37%) was 5.7% below the corresponding average for school divisions not offering the course (63.02%). The White student average for school divisions offering Intermediate Chorus (59.20%) was 1.3% below the corresponding average for school divisions not offering the course (60.54%). The White student average for school divisions offering Advanced Chorus (59.43%) was 0.4% below the corresponding average for school divisions not offering the course (59.82%). The White student average for school divisions offering Artist Chorus (55.69%) was 4.9% below the corresponding average for school divisions not offering the course (60.57%). The difference between the averages of White students for school divisions offering at least one level of Chorus (59.87%) and for school divisions not offering Chorus (57.02%) was 2.85%; both averages differed from the statewide average (59.567%) by 2.5% and 0.3%, respectively (see Figure 73).

Figure 73

Averages of White Students in Virginia School Divisions Offering and Not Offering Chorus Courses (N = 131)



Note. 59.567% of students in Virginia school divisions were White.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of White students and offering Chorus courses were nonsignificant.

Chorus Summary. Chorus, offered by 89.3% of the school divisions, was the second offered course in Virginia. Beginning Chorus, Intermediate Chorus, and Advanced Chorus were the most prevalent Chorus courses, offered at least three times more frequently than the Artist level.

Chorus courses were offered significantly disproportionally across Virginia localities, with suburban school divisions offering significantly more levels of Chorus as compared to town

and rural school divisions. Suburban school divisions offered Beginning Chorus significantly more frequently, and cities offered Intermediate Chorus significantly more frequently. Two town and 12 rural school divisions did not offer Chorus classes; these school divisions were clustered around the Southwestern, the Southern, and the rural Eastern parts of Virginia.

While smaller school divisions were less likely to offer Chorus courses, the associations between offering each level of Chorus and enrollment were weak. Virginia school divisions' LCIs did not associate with offering Chorus courses. School divisions with low student SES were significantly less likely to offer at least one level of Chorus and Intermediate Chorus, but these correlations were weak.

Student race/ethnicity percentages in Virginia school divisions were only weakly associated with offering Chorus courses. Asian and Hispanic student population averages for school divisions that offer Chorus courses were substantially higher than the statewide average and the corresponding averages of school divisions not offering either of the Chorus courses; however, the correlations were positive weak. School divisions with larger American Indian and Black population averages were significantly less likely to offer at least one level of Chorus, but the correlations were weak. School divisions with larger Asian and Hispanic student populations were significantly more likely to offer Chorus courses, but the correlations are weak. Black, Multiple Races, Native Hawaiian and White student populations' averages were not associated with offering Chorus courses.

Composition

Composition was the least offered course in Virginia, seven school divisions (5.3% of all) offered the course.

Locality. 12.5% of cities, 5.2% of rural, and 5.6% of suburban Virginia school divisions offer Composition. Towns did not offer the course. Table 22 presents frequencies of offering Composition statewide and by each locality.

Table 22

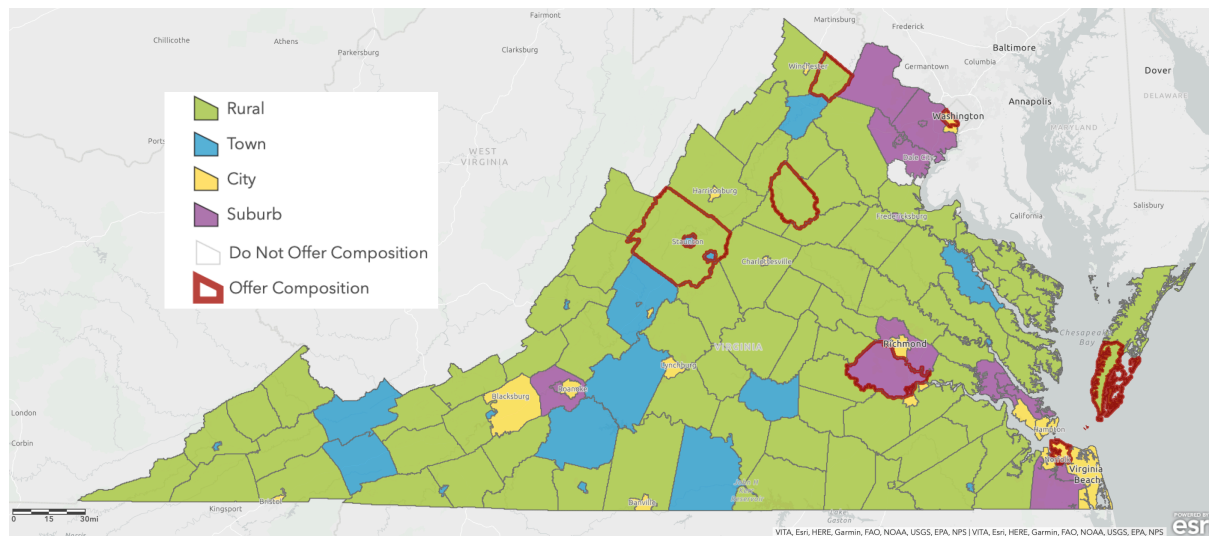
Frequencies of Offering Composition Among Virginia School Divisions by Locality (N = 131)

Locality	Offer	Do Not Offer
City	2	14
Rural	4	73
Suburban	1	16
Town	0	10
Statewide	7	124

Overall, 57% of school divisions offering Composition were rural, 29% were city, and 14% were suburban. Virginia towns did not offer Composition. These percentages differed from the statewide distribution of localities: 12% city, 59% rural, 14% suburban, and 15% town school divisions. Figure 74 depicts localities of Virginia school divisions offering Composition. These school divisions were dispersed around the state, and none of them was either in the Southern or in the Southwestern part of the state.

Figure 74

Virginia School Divisions Offering Composition in High School (n = 7)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com ArcGIS online](https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries). Full data information found at <https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries>.

A chi-square test of association calculated in SPSS to explore whether there was a statistically significant relationship between offering Composition and a school division's locality was nonsignificant.

Enrollment, LCI, and Student SES. Enrollment, LCI, and low student SES did not associate with offering Composition in Virginia. Enrollments in Arlington Public Schools (26,833) and Norfolk Public Schools (27,969) were respectively 2.8 and 2.9 times the statewide enrollment average (9,560). Enrollment in Augusta County Public Schools (10,150) was 590 above the statewide enrollment average (9,560). While enrollments in the rest school divisions offering Composition ranged 3.4-6.8 times lower the statewide enrollment average (9,560). However, the Pearson product moment point biserial correlation test calculated in SPSS to assess significance of relationships between enrollment and offering Composition was nonsignificant.

LCIs of school divisions offering Composition averaged from .0967 below to two times above the statewide average LCI (.3925), with 5 out of 7 school divisions LCIs being above the statewide average. However, Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between LCI and offering Composition were nonsignificant.

Of seven school divisions offering Composition, three enrolled 14.15-26.05% less low SES students than an average Virginia school division (48.75%) and four enrolled 0.45-30.35% more. However, Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between low student SES and offering Composition were nonsignificant. Enrollment, LCI, and low student SES demographics for Virginia school divisions offering Composition are presented in Table 23.

Table 23

Select Demographic Characteristics of Virginia School Divisions Offering Composition (n = 7)

Division	Locale	Average Enrollment	Average Local Composite Index	Average Low Student Socio Economic Status
Arlington County	City	26,833	.8	22.7%
Augusta County	Rural	10,150	.3769	34.6%
Clarke County	Rural	1,745	.5729	27.3%
Colonial Heights City	Suburb	2,784	.4156	60.9%
Madison County	Rural	1,669	.4608	49.2%
Norfolk City	City	27,969	.2958	67.9%
Northampton County	Rural	1,410	.4746	79.1%

Note. The enrollment average for Virginia school divisions was 9,560, the average LCI was .3925, and the average low student SES was 48.75%.

Race/Ethnicity. Student race/ethnicity percentages in Virginia school divisions did not associate with offering Composition. Student race/ethnicity percentages varied among seven Virginia school divisions offering Composition. Percentages of Asian students (*Mdn* = 1%)

ranged from 19 times below to 4.6 times above the statewide average of 1.92%. Percentages of American Indian students ($Mdn = 0.2\%$) ranged from three times below to 0.01 above the statewide average of 0.29%. Percentages of Black students ($Mdn = 10.3\%$) ranged from 2.74 times below to 2.66 times above the statewide average of 21.9%. Percentages of Hispanic students, ($Mdn = 11.6\%$) ranged from 2.74 times below to 2.49 times above the statewide average of 21.9%. Percentages of Multiple Races students ($Mdn = 7.7\%$) ranged from 2% below to 3% above the statewide average of 5.8%. Percentages of Native Hawaiian students ($Mdn = 0\%$) ranged from 0.1% below to 2.73 times above the statewide average of 0.11%. Percentages of White students, ($Mdn = 54.3\%$) ranged from 2.88 times below to 20.63% above the statewide average of 59.57% (see Table 24).

Table 24

Student Race/Ethnicity Averages for Virginia School Divisions Offering Composition ($n = 7$)

Division	Average Race/Ethnicity %						
	Asian	American Indian	Black	Hispanic	Multiple Races	Native Hawaiian	White
Arlington County	8.9%	.2%	10.3%	28.9%	7.7%	0%	44%
Norfolk City	2%	0.3%	58.3%	11.7%	6.6%	0.3%	20.7%
Augusta County	1%	0.3%	3.2%	6.5%	4.5%	0.1%	84.5%
Clarke County	1%	0.1%	3.2%	11.6%	8.5%	0%	75.6%
Madison County	0.1%	0%	8%	3.8%	7.8%	0%	80.2%
Northampton County	0.9%	0.2%	42.1%	22.2%	3.8%	0%	30.8%
Colonial Heights City	3.2%	0.1%	23.5%	10%	8.8%	0.1%	54.3%
Statewide Average	1.92%	0.29%	21.9%	10.42%	5.8%	0.11%	59.57%

However, Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between offering Composition and race/ethnicity averages in Virginia school divisions were nonsignificant.

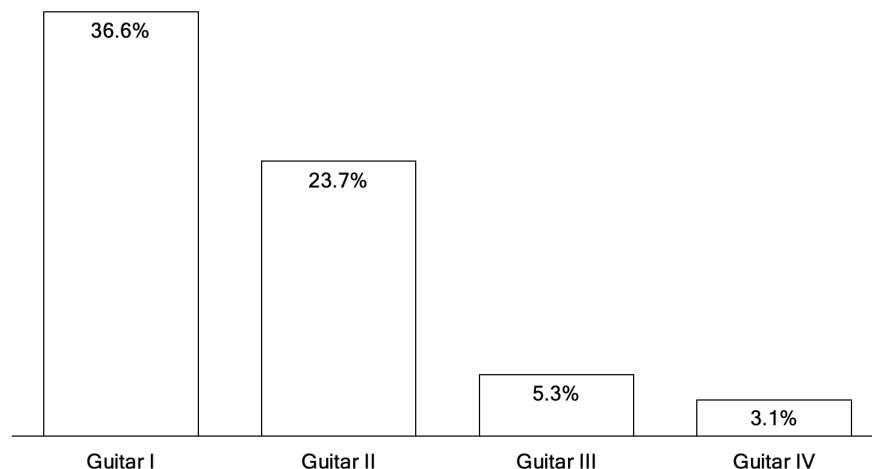
Composition Summary. Composition was the least offered course in Virginia, only 5.3% of school divisions offered the course. Composition was offered among Virginia school divisions at a significantly low rate. None of seven school divisions offering Composition fitted the profile of an average Virginia school division. While no towns and no school divisions located in the Southern or the Southwestern parts of the state offered Composition, a school division's locality, enrollment, LCI, low student SES percentage, and student race/ethnicity were not associated significantly with offering the course.

Guitar

Guitar was the fifth offered high school music course in Virginia, 48 school divisions (36.6% of all) offered at least one level of Guitar. Guitar I and Guitar II were more frequently offered as compared to Guitar III and Guitar IV. 48 school divisions offered Guitar I, 31 offered Guitar II, seven offered Guitar III, and four offered Guitar IV. Guitar I was offered 6.9 times more frequently than Guitar III and 11.8 times more frequently than Guitar IV. Guitar II was offered 4.5 times more frequently than Guitar III and 7.6 times more frequently than Guitar IV (see Figure 75).

Figure 75

Percentages of Virginia School Divisions Offering Guitar Courses (N = 131)



Locality. Guitar courses were more frequently offered among Virginia cities and suburbs as compared to rural areas and towns. All levels of Guitar were offered among city and suburban school divisions, whereas Guitar III and Guitar IV were not offered in rural and town school divisions. The order of prevalence for Guitar courses remained the same across all localities: Guitar I, Guitar II, Guitar III, and Guitar IV (see Table 25 and Figure 76).

Table 25

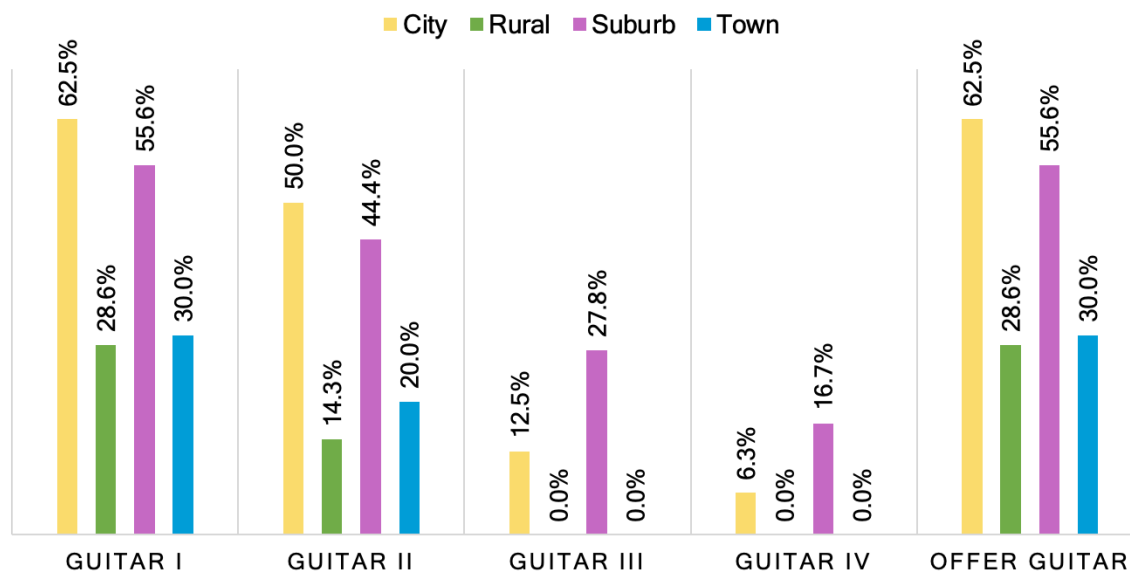
Frequencies of Offering Guitar Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

Course Type	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer Guitar	6	10	55	22	8	10	14	6	83	48
Guitar I	6	10	55	22	8	10	14	6	83	48
Guitar II	8	8	66	11	10	8	16	4	100	31
Guitar III	14	2	77	0	13	5	20	0	124	7
Guitar IV	15	1	77	0	15	3	20	0	127	4

Note. Virginia school division localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 76

Percentages of Virginia School Divisions Offering Guitar Courses Statewide and by Locality (N = 131)

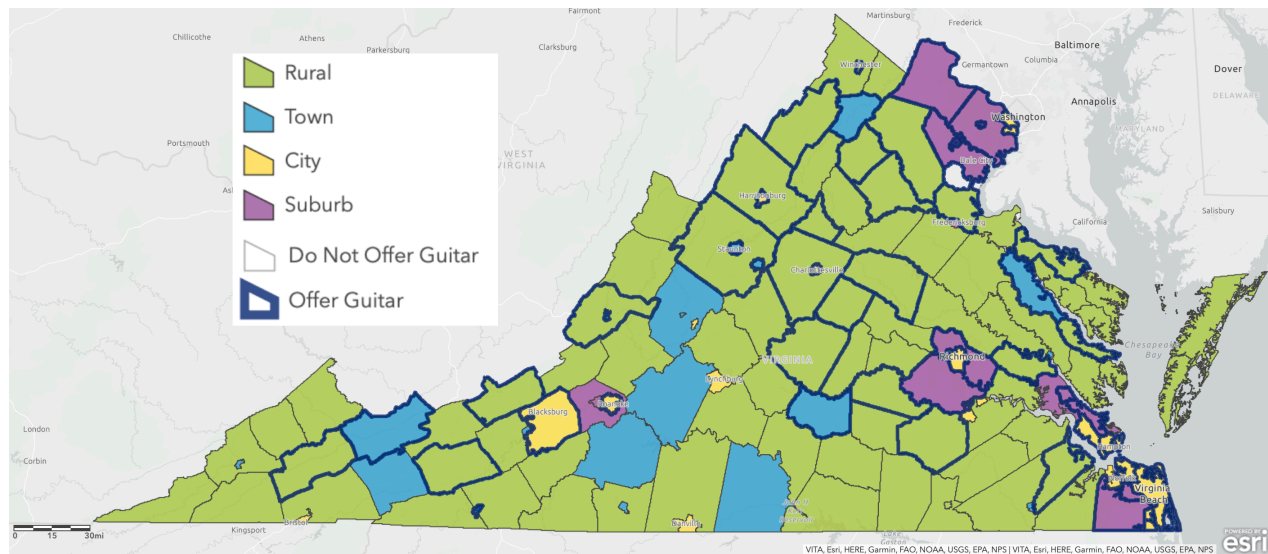


Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 77 shows that the largest clusters of school divisions offering Guitar were in the Northern, the Central, and the Southeastern parts of Virginia. All Virginia large metropolitan areas, Richmond, Blacksburg, Charlottesville, the Washington D.C. area, and the Tidewater area, offered Guitar courses.

Figure 77

Virginia School Divisions Offering Guitar in High School (n = 48)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com ArcGIS online](https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries). Full data information found at <https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries>.

Guitar courses were offered disproportionately across Virginia localities. Figures 78-81 illustrate localities of school divisions offering Guitar courses. With every course, these percentages were not in agreement with the statewide distribution of localities: 12% city, 59% rural, 14% suburban, and 15% town.

Figure 78

Localities of Virginia School Divisions Offering Guitar I (n = 48)

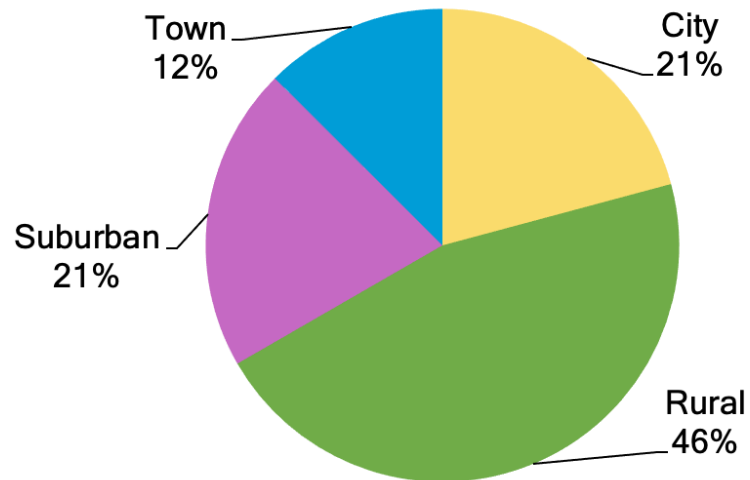


Figure 79

Localities of Virginia School Divisions Offering Guitar II (n = 31)

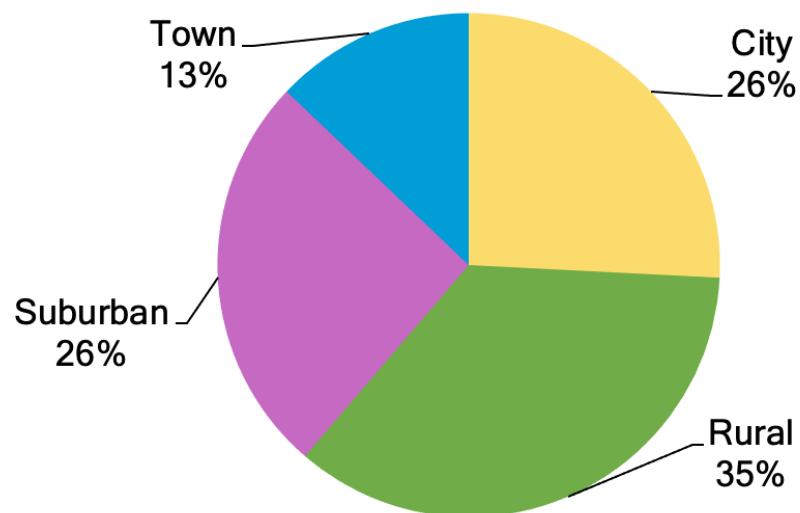


Figure 80

Localities of Virginia School Divisions Offering Guitar III (n = 7)

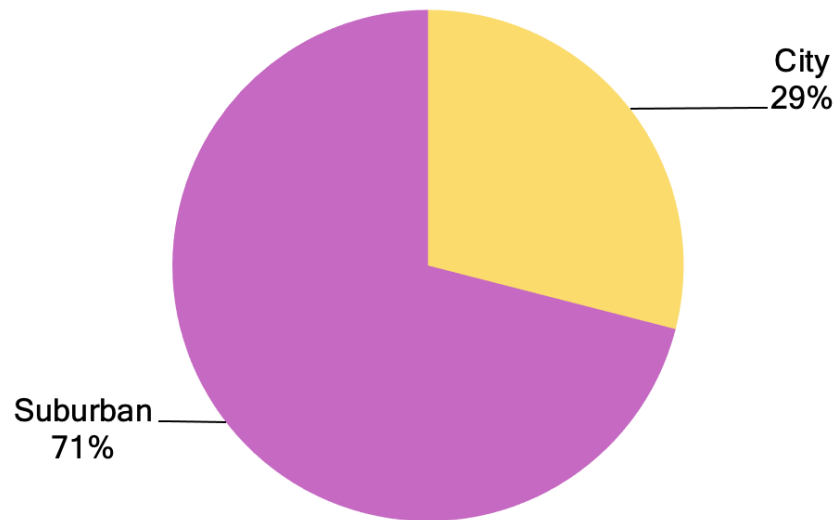
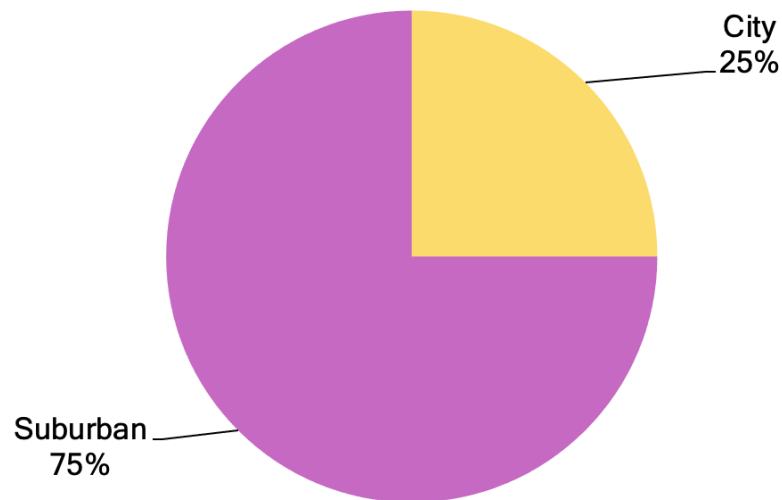


Figure 81

Localities of Virginia School Divisions Offering Guitar IV (n = 4)

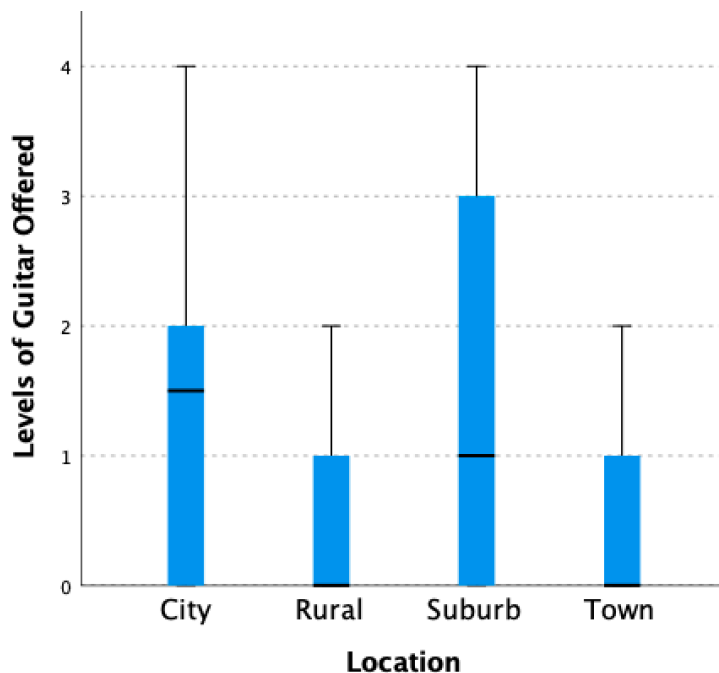


To examine whether Guitar courses were offered significantly disproportionately among Virginia localities, a nonparametric independent-samples Kruskal-Wallis test was performed.

With an alpha level of 0.05, the test was significant. Guitar courses were offered significantly disproportionally, $H_{(3)} = 15.13$, $N = 131$, $p = 0.002$, and the effect size was small, $\varepsilon^2 = .1164$. Post hoc Dunn's pairwise comparisons administered with the Bonferroni correction revealed that rural school divisions offered less levels of Guitar than suburban school divisions ($r = -2.89$, $MD = -24.51$, $p = 0.023$), and city school divisions offered more levels of Guitar than rural school divisions ($r = 3.89$, $MD = 26.66$, $p = 0.016$). Figure 82 illustrates the test results.

Figure 82

Independent-Samples Kruskal-Wallis Test for Levels of Guitar Offered in Virginia School Divisions ($N = 131$)

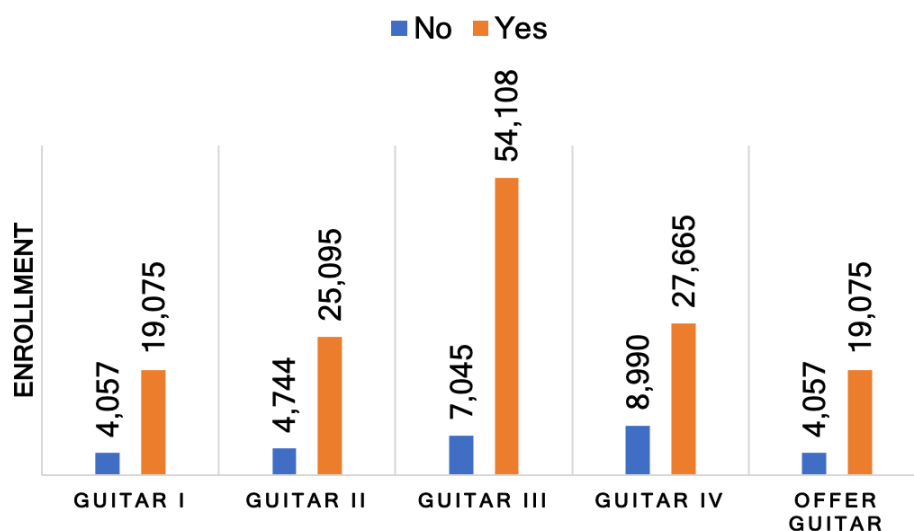


Enrollment. Larger Virginia school divisions were likely to offer Guitar courses. The enrollment averages for school divisions offering Guitar I (19,075), Guitar II (25,095), Guitar III (54,108), Guitar IV (27,665), and at least one level of Guitar (19,075) were 2.0, 2.6, 5.7, 2.9, and 2.0 times the statewide enrollment average (9,560), respectively. The enrollment averages for

school divisions not offering Guitar I (4,057), Guitar II (4,744), Guitar III (7,045), Guitar IV (8,990), and at least one level of Guitar (4,057) were 2.3 times, 2 times, 1.4 times, 570, and 2.3 times below the statewide enrollment average (9,560), respectively. The enrollment average for school divisions offering Guitar I (19,075) was 4.7 times the enrollment average for school divisions not offering the course (4,057). The enrollment average for school divisions offering Guitar II (25,095) was 5.3 times the enrollment average for school divisions not offering the course (4,744). The enrollment average for school divisions offering Guitar III (54,108) was 7.7 times the enrollment average for school divisions not offering the course (7,045). The enrollment average for school divisions offering Guitar IV (27,665) was 3.1 times the enrollment average for school divisions not offering the course (8,990). The enrollment average for school divisions offering at least one level of Guitar (19,075) was 4.7 times the enrollment average for school divisions not offering Guitar (4,057; see Figure 83).

Figure 83

Enrollment Averages for Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)

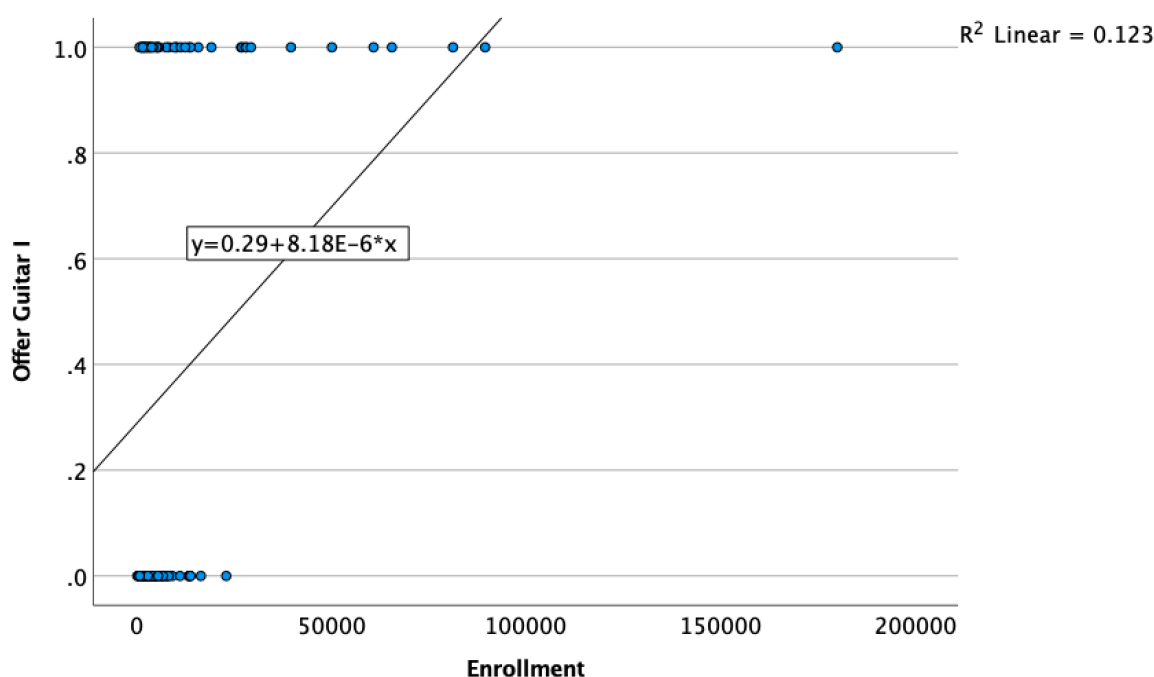


Note: The average enrollment for Virginia school divisions was 9,560.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering Guitar courses. Four tests were significant and positive. There was a significant positive correlation between offering Guitar I and enrollment, $r_{pb}(131) = 0.35$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 84).

Figure 84

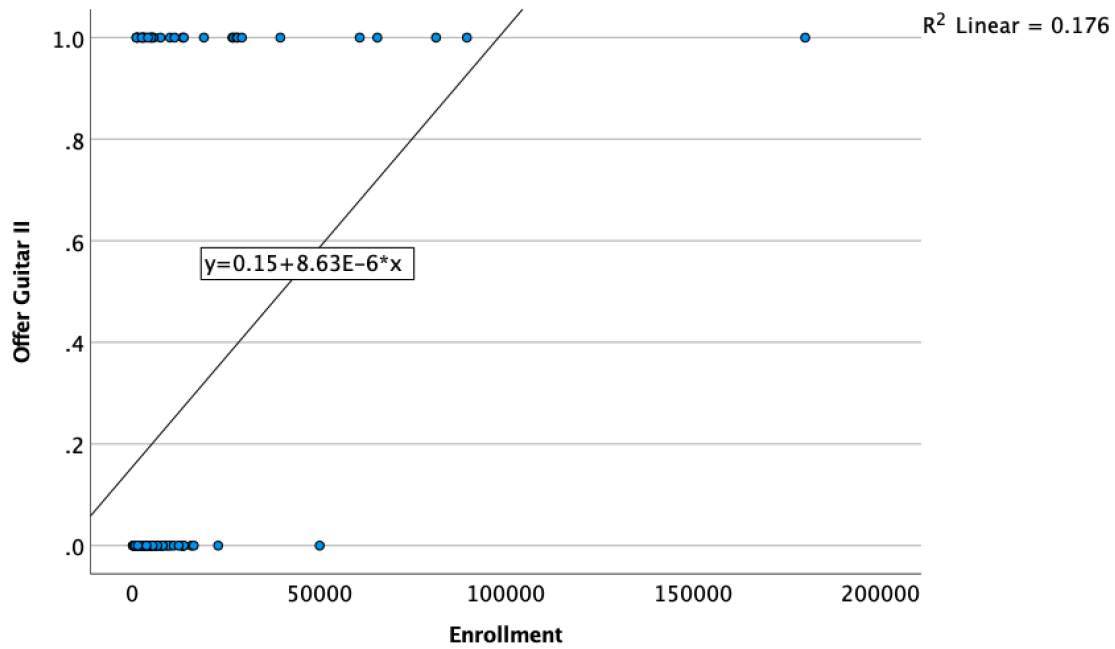
Point Biserial Correlation for Offering Guitar I and Enrollment in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Guitar II and enrollment, $r_{pb}(131) = 0.42$, $p < 0.01$, $r^2 = 0.18$; 18% shared variance indicated a moderate relationship between the two variables (see Figure 85).

Figure 85

Point Biserial Correlation for Offering Guitar II and Enrollment in Virginia School Divisions (N = 131)

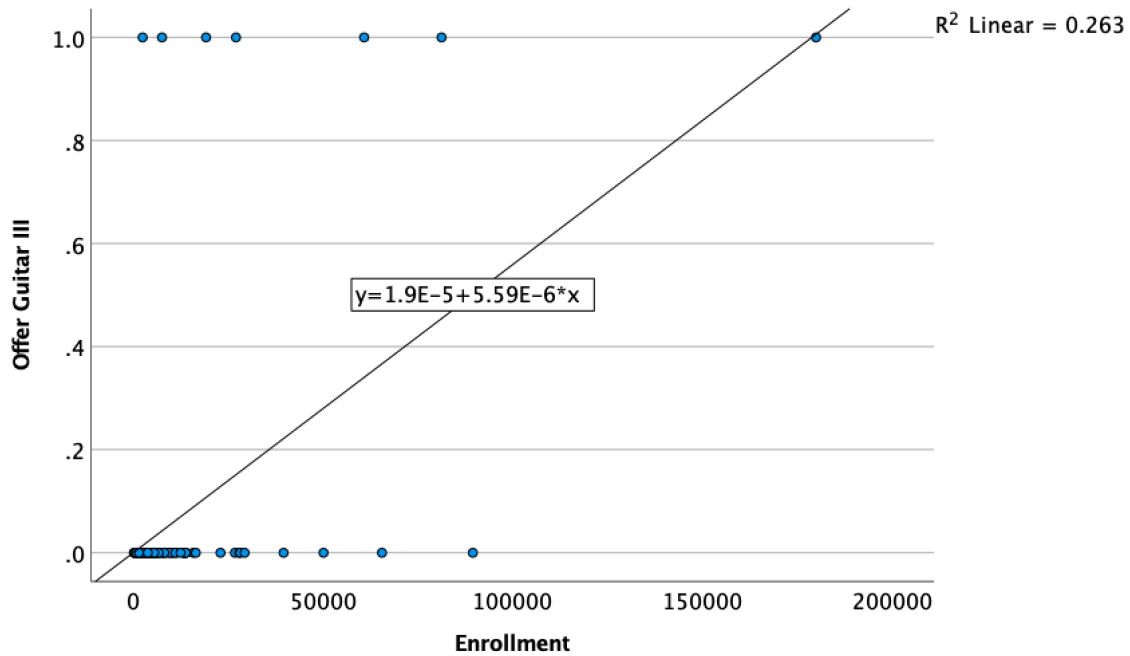


There was a significant positive correlation between offering Guitar III and enrollment, $r_{pb}(131) = 0.51, p < 0.01, r^2 = 0.26$; 26% shared variance indicated a strong relationship between the two variables (see Figure 86).

Figure 86

Point Biserial Correlation for Offering Guitar III and Enrollment in Virginia School Divisions

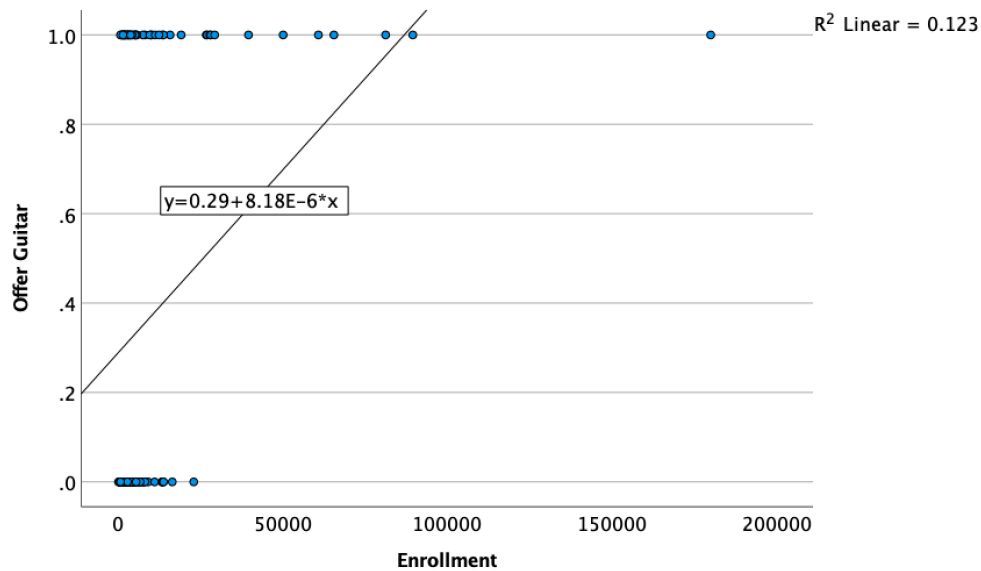
(N = 131)



There was a significant positive correlation between offering at least one level of Guitar and enrollment, $r_{pb}(131) = 0.35$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 87).

Figure 87

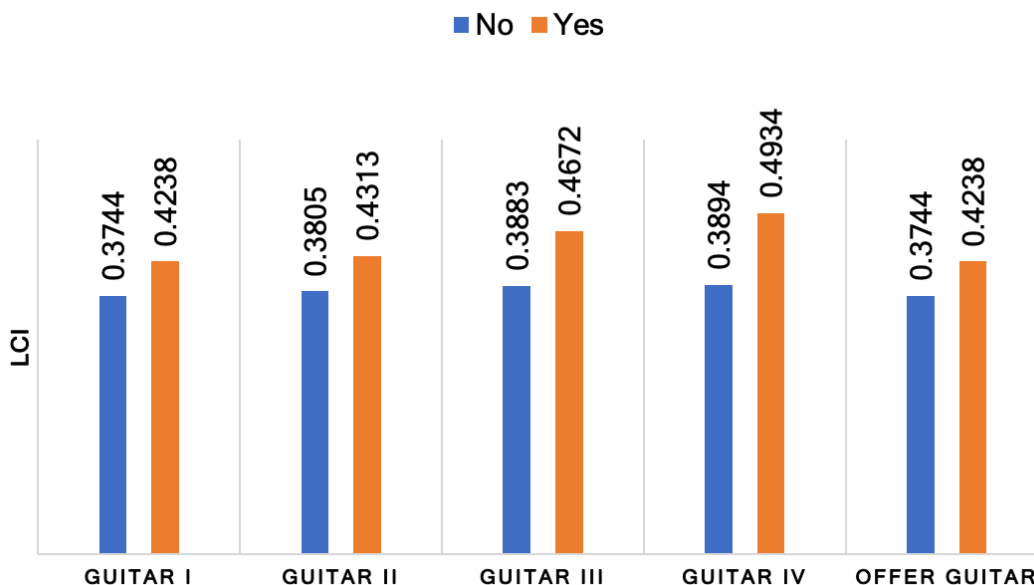
Point Biserial Correlation for Offering Guitar and Enrollment in Virginia School Divisions (N = 131)



LCI. Virginia school divisions' LCIs did not associate with offering Guitar courses. Average LCIs for school divisions offering Guitar courses were .0313-.1009 above the average statewide LCI (.3925) and were .0494-.1040 above average LCIs for Virginia school divisions not offering Guitar courses. Average LCI's for Virginia school divisions not offering Guitar courses were .0031-.0181 below the statewide average LCI (.3925) (see Figure 88).

Figure 88

Local Composite Averages for Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)



Note. The average LCI for Virginia school divisions was .3925.

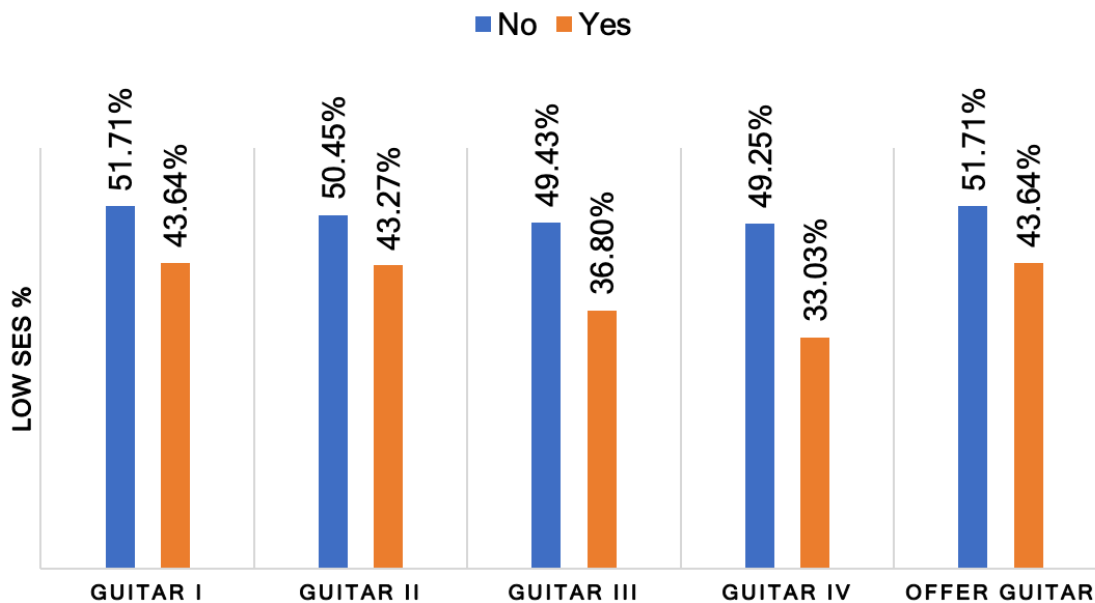
However, Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between LCI and offering Guitar courses were nonsignificant.

Low Student SES. Virginia school divisions offering Guitar courses were likely to enroll less low SES students. The low student SES averages for school divisions offering Guitar I (43.64%), Guitar II (43.27%), Guitar III (36.8%), Guitar IV (33.03%), and at least one level of Guitar (43.64) were 5.1%, 5.5%, 12%, 13.7%, and 5.1% below the statewide enrollment average (48.75%), respectively. Low student SES averages for school divisions not offering Guitar courses were 0.5-2.96% above the statewide low student SES average (48.75%). The low student SES average for school divisions offering Guitar I (43.64%) was 8.1% below the low student SES average for school divisions not offering the course (51.71%). The low student SES average

for school divisions offering Guitar II (43.27%) was 7.2% below the corresponding average for school divisions not offering the course (50.45%). The low student SES average for school divisions offering Guitar III (36.8%) was 12.6% below the corresponding average for school divisions not offering the course (49.43%). The low student SES average for school divisions offering Guitar IV (33.03%) was 16.2% below the corresponding average for school divisions not offering the course (49.25%). The low student SES average for school divisions offering at least one level of Guitar (43.64%) was 8.1% below the corresponding average for school divisions not offering Guitar (51.71%; see Figure 89).

Figure 89

Low Student Socio-Economic Status Averages for Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)

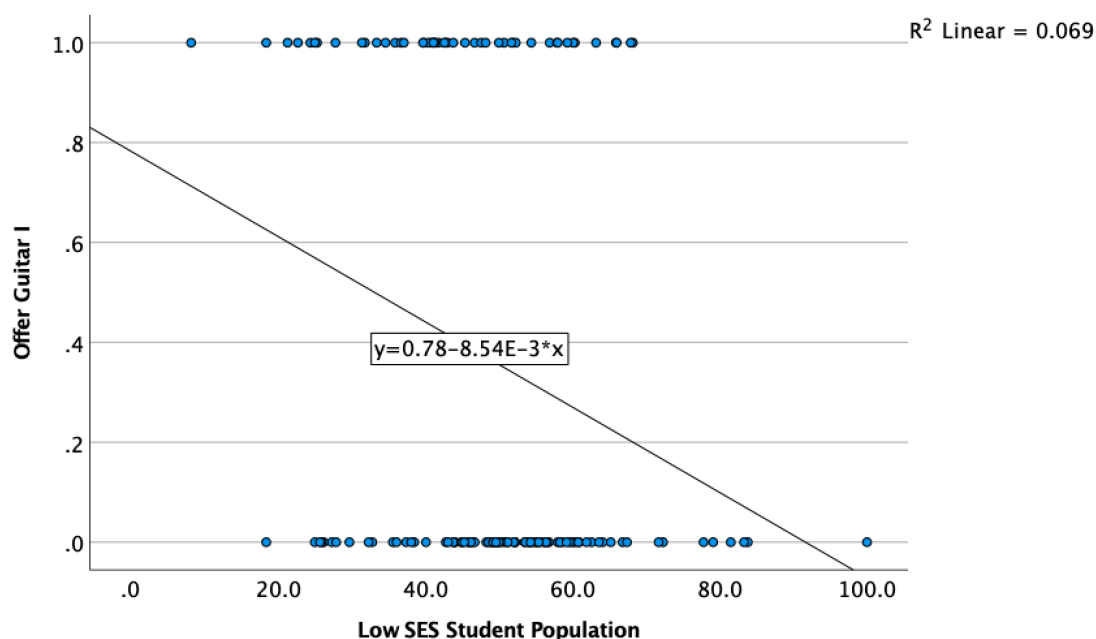


Note. The average low student SES for Virginia school divisions was 48.75%.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between low student SES and offering Guitar courses. Five tests were significant and negative. There was a significant negative correlation between offering Guitar I and low student SES, $r_{pb}(131) = -0.26, p < 0.01, r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 90).

Figure 90

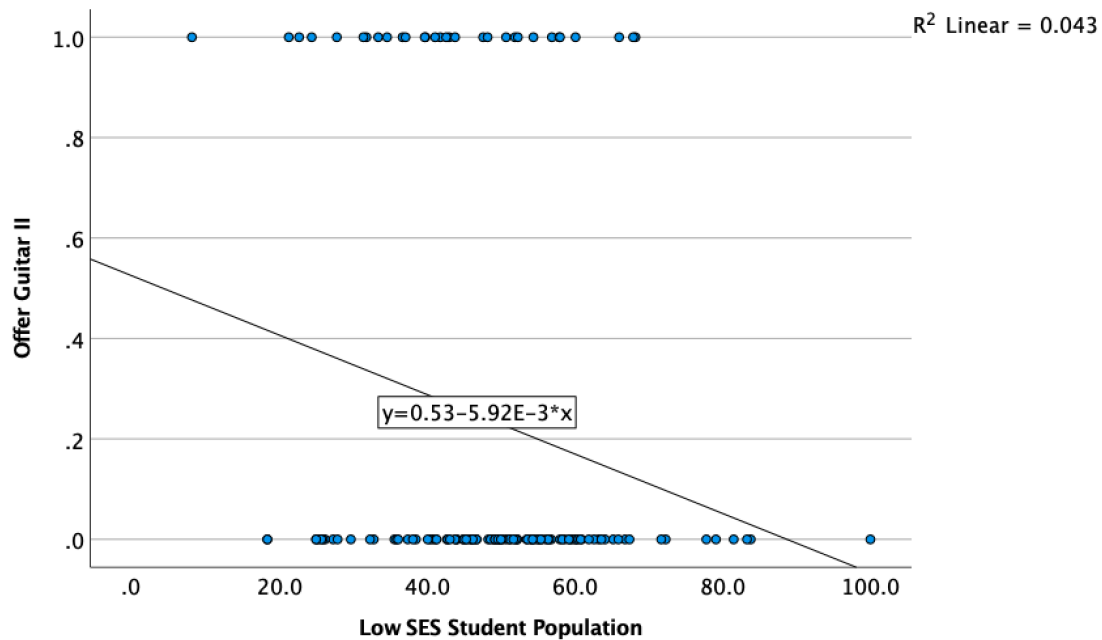
Point Biserial Correlation for Offering Guitar I Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Guitar II and low student SES, $r_{pb}(131) = -0.21, p < 0.05, r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 91).

Figure 91

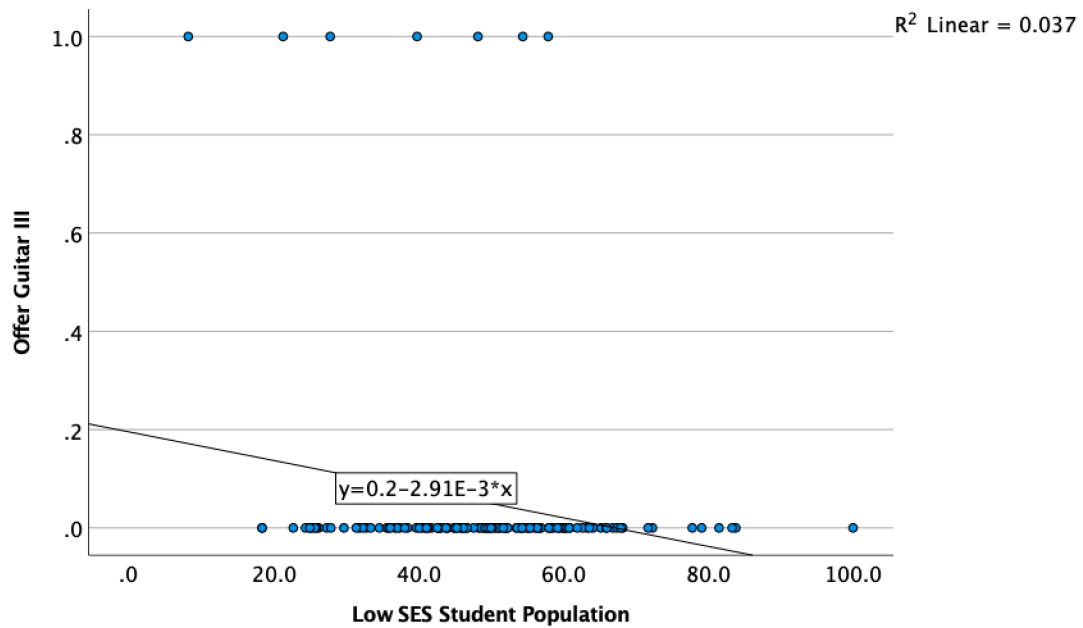
Point Biserial Correlation for Offering Guitar II and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (n = 31)



There was a significant negative correlation between offering Guitar III and low student SES, $r_{pb}(131) = -0.19$, $p < 0.05$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 92).

Figure 92

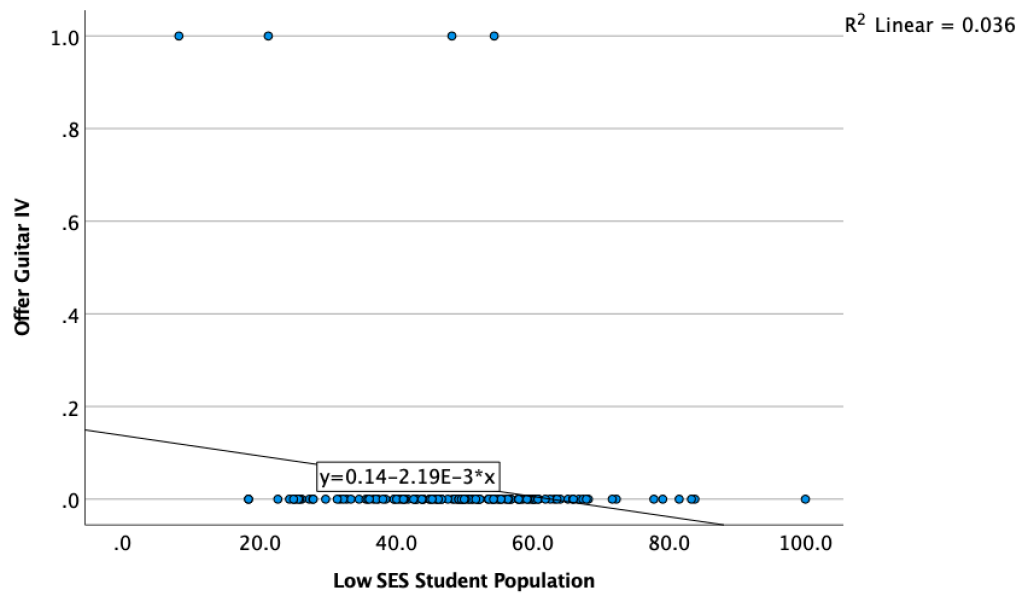
Point Biserial Correlation for Offering Guitar III and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Guitar IV and low student SES, $r_{pb}(131) = -0.19, p < 0.05, r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 93).

Figure 93

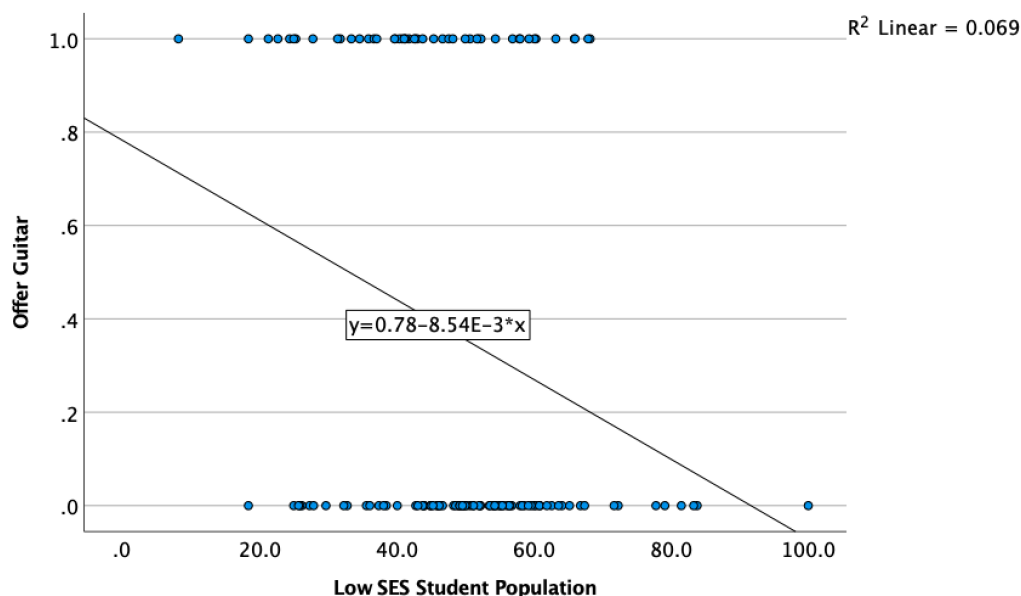
Point Biserial Correlation for Offering Guitar IV and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of Guitar and low student SES, $r_{pb}(131) = -0.26$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 94).

Figure 94

Point Biserial Correlation for Offering at Least One Level of Guitar and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)

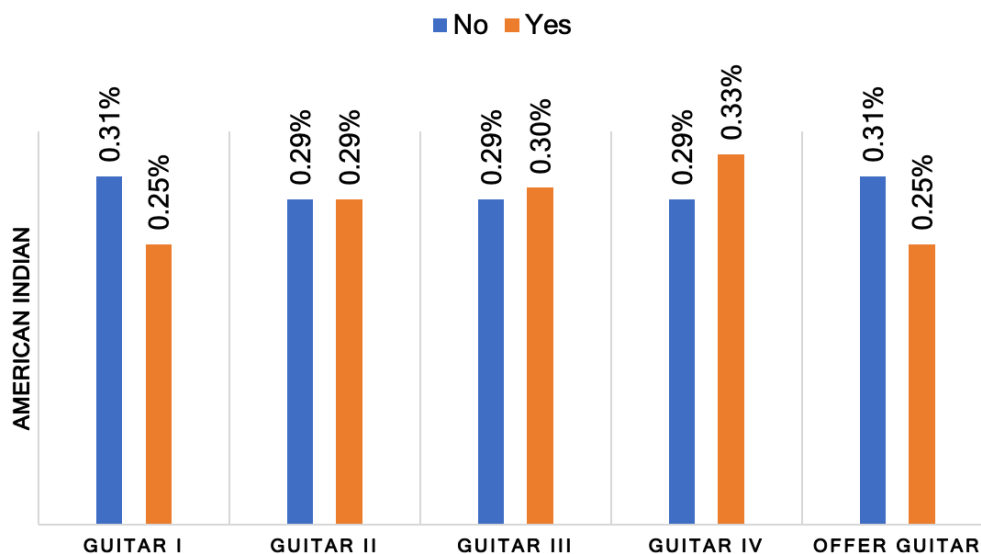


Race/Ethnicity. Analyses of race/ethnicity in school divisions offering and not offering Guitar courses revealed multiple disproportionalities.

American Indian. Percentages of American Indian student enrollment did not associate with offering Guitar courses. Averages of American Indian students for school divisions offering and for not offering Guitar courses did not differ from the statewide average (0.29%) by more than 0.04% (see Figure 95).

Figure 95

Averages of American Indian Students in Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)



Note. 0.29% of students in Virginia school divisions were American Indian.

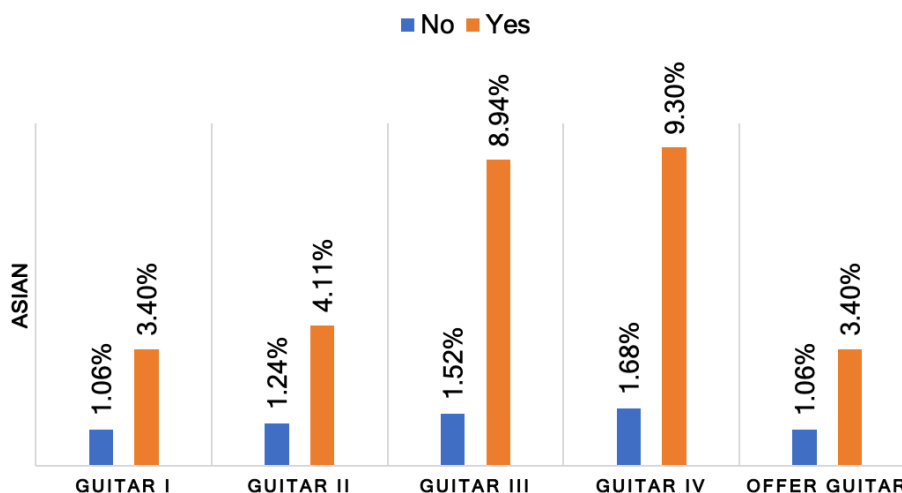
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between American Indian student enrollment and offering Guitar courses were nonsignificant.

Asian. Virginia school divisions with larger Asian student populations were likely to offer Guitar courses. The averages of Asian students for school divisions for school divisions offering Guitar I (3.4%), Guitar II (4.11%), Guitar III (8.94%), Guitar IV (9.3%), and at least one level of guitar (3.4%) were 1.8, 2.1, 4.7, 4.9, and 1.8 times the statewide average of Asian students (1.917%), respectively. The Asian student averages for school divisions not offering Guitar I (1.06%), Guitar II (1.24%), Guitar III (1.52%), Guitar IV (1.68%), and at least one level of Guitar (1.06%) were 0.9%, 0.7%, 0.4%, 0.2%, and 0.9% below the statewide average of Asian

students (1.917%), respectively. The Asian student average for school divisions offering Guitar I (3.4%) was 3.2 times the corresponding average for school divisions not offering the course (1.06%). The Asian student average for school divisions offering Guitar II (4.11%) was 3.3 times the corresponding average for school divisions not offering the course (1.24%). The Asian student average for school divisions offering Guitar III (8.94%) was 5.3 times the corresponding average for school divisions not offering the course (1.68%). The Asian student average for school divisions offering Guitar IV (9.30%) was 5.5 times the corresponding average for school divisions not offering the course (1.68%). The Asian student average for school divisions offering at least one level of Guitar (3.4%) was 3.2 times the corresponding average for school divisions not offering Guitar (1.06%; see Figure 96).

Figure 96

Averages of Asian Students in Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)

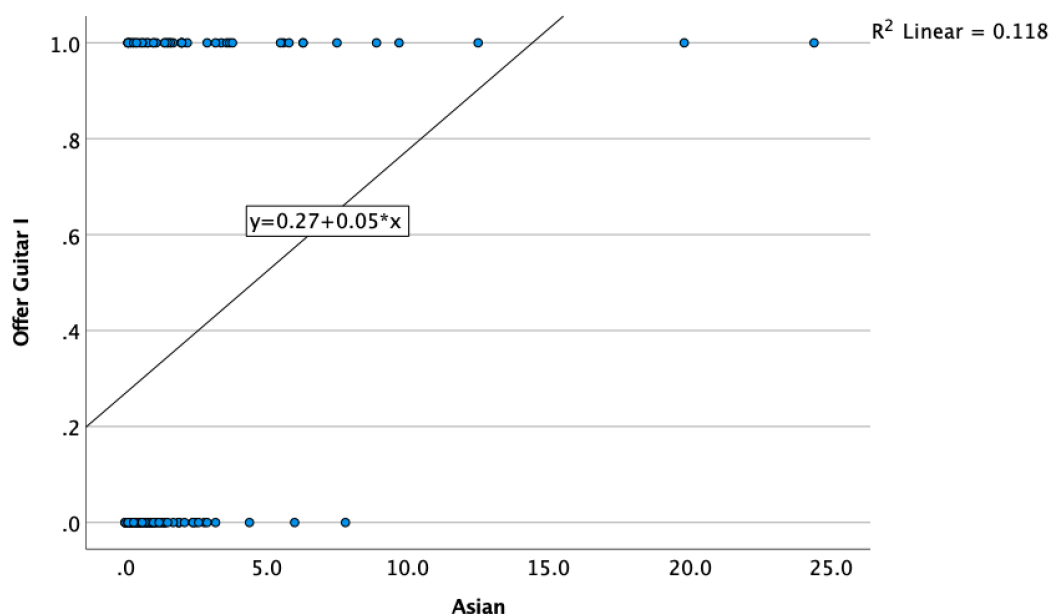


Note. 1.917% of students in Virginia school divisions were Asian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between Asian student enrollment and offering Guitar courses. Five tests were significant and positive. There is a significant positive correlation between Guitar I and Asian student enrollment, $r_{pb}(131) = 0.34$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 97).

Figure 97

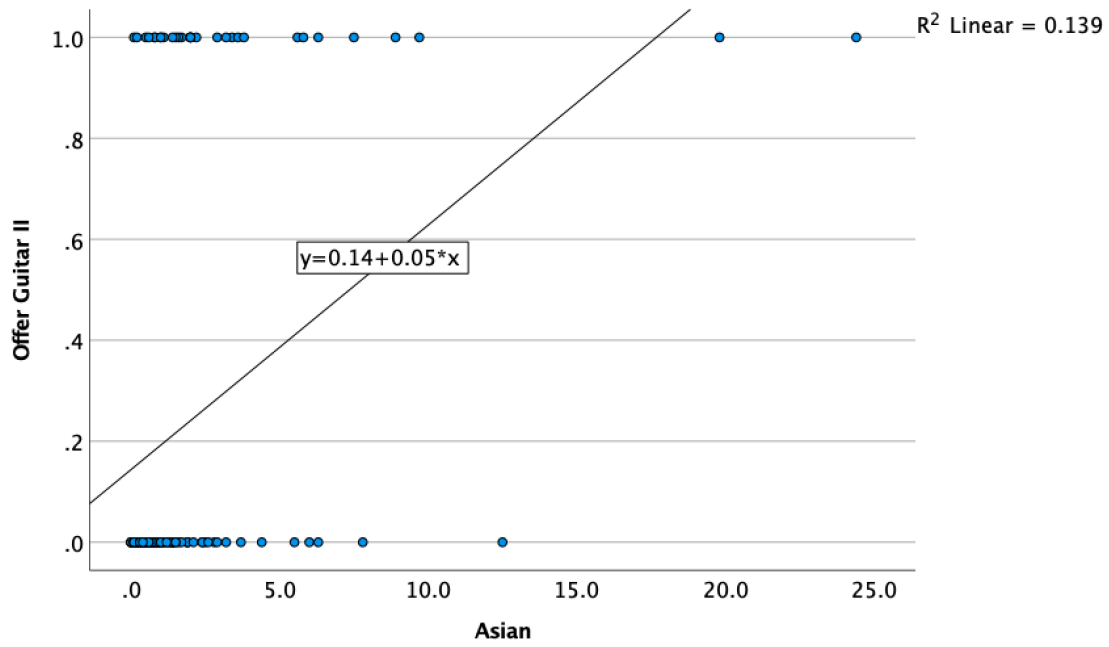
Point Biserial Correlation for Offering Guitar I and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between Guitar II and Asian student enrollment, $r_{pb}(131) = 0.37$, $p < 0.01$, $r^2 = 0.14$; 14% shared variance indicated a moderate relationship between the two variables (see Figure 98).

Figure 98

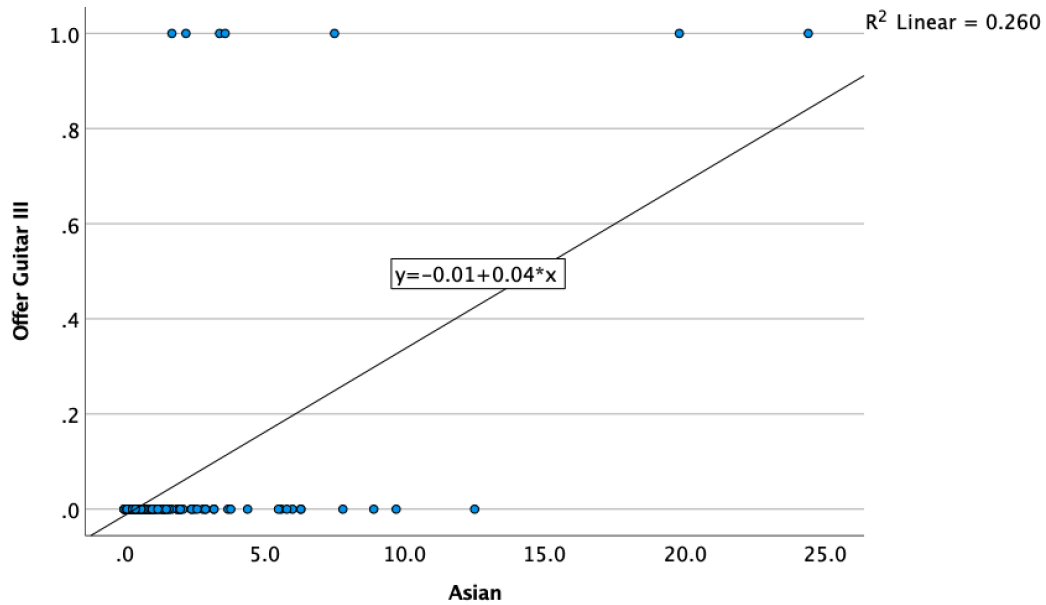
Point Biserial Correlation for Offering Guitar II and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between Guitar III and Asian student enrollment, $r_{pb}(131) = 0.51, p < 0.01, r^2 = 0.26$; 26% shared variance indicated a strong relationship between the two variables (see Figure 99).

Figure 99

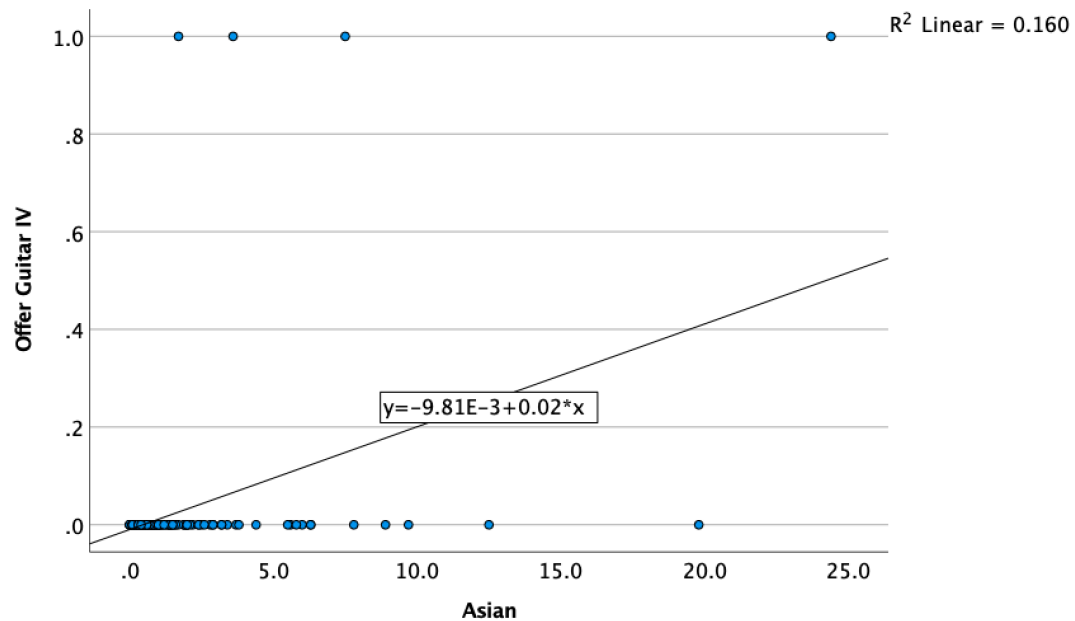
Point Biserial Correlation for Offering at Guitar III and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between Guitar IV and Asian student enrollment, $r_{pb}(131) = 0.40$, $p < 0.01$, $r^2 = 0.16$; 16% shared variance indicated a moderate relationship between the two variables (see Figure 100).

Figure 100

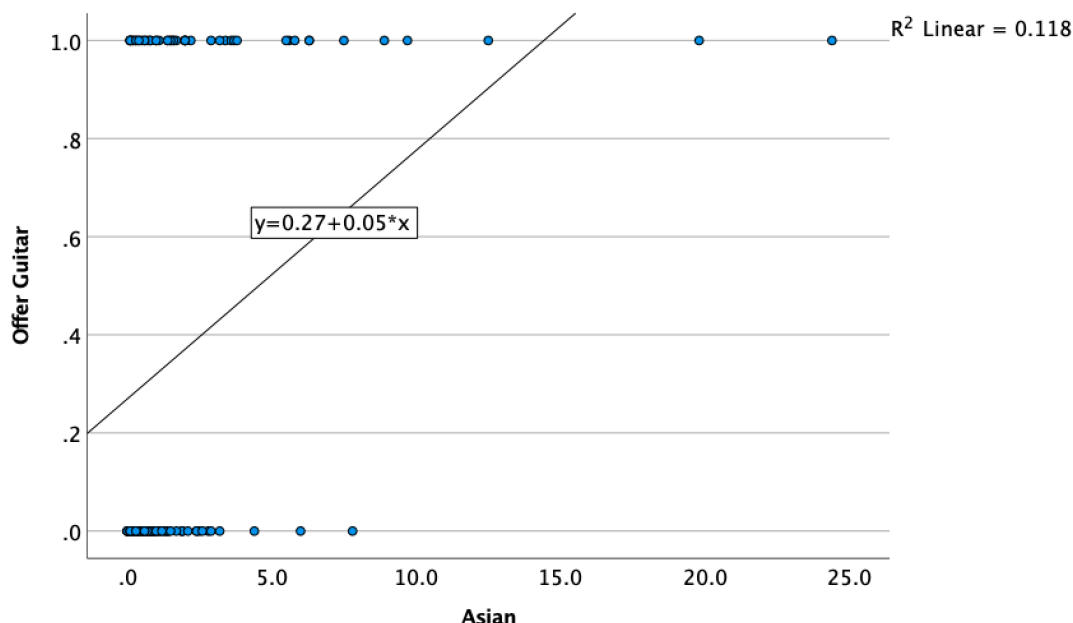
Point Biserial Correlation for Offering Guitar IV and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Guitar and Asian student enrollment, $r_{pb}(131) = 0.34$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 101).

Figure 101

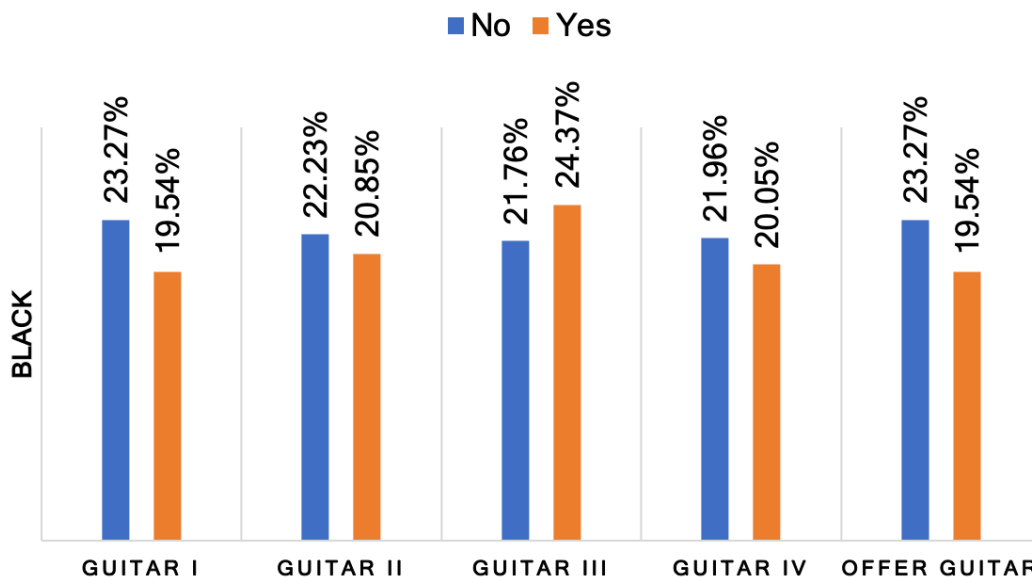
Point Biserial Correlation for Offering Guitar and Percentages of Asian Students in Virginia School Divisions (N = 131)



Black. Percentages of Black students in Virginia school divisions did not associate with offering Guitar courses. The averages of Black students for school divisions offering Guitar I (19.54%), Guitar II (20.85%), Guitar IV (20.05%), and at least one level of Guitar (19.54%) were 1.1-2.4% below the statewide average of Black students (21.902%). The average of Black students for school divisions offering Guitar III (24.73%) was 2.8% above the statewide average of Black students (21.902%). The averages of Black students for school divisions not offering Guitar I (23.27%), Guitar II (22.23%), Guitar IV (21.96%), and at least one level of Guitar (23.27%) were 0.06-1.4% above the statewide average of Black students (21.902%). Differences in Black student population averages among school divisions offering and not offering Guitar courses did not exceed 3.7% (see Figure 102).

Figure 102

Averages of Black Students in Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)



Note. 21.902% of students in Virginia school divisions were Black.

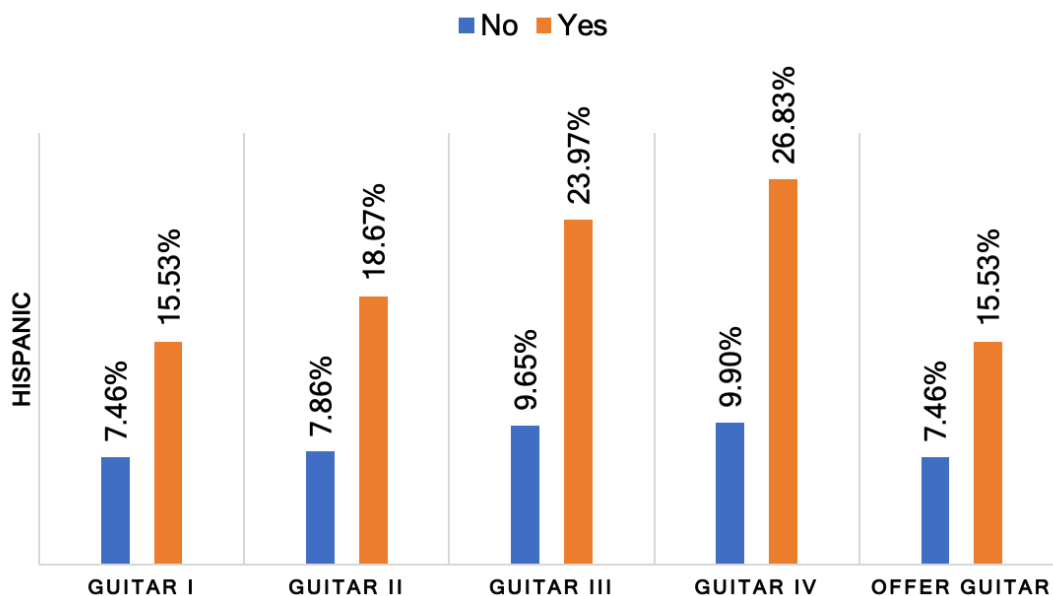
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between Black student enrollment and offering Guitar courses were nonsignificant.

Hispanic. Virginia school divisions with larger Hispanic student populations were likely to offer Guitar. The averages of Hispanic students for school divisions offering Guitar I (15.53%), Guitar II (18.67%), Guitar III (23.97%), Guitar IV (26.83%), and at least one level of Guitar (15.53%) were 1.5, 1.8, 2.3, 2.6, and 1.5 times the statewide average of Hispanic students (10.415%), respectively. The averages of Hispanic students for school divisions not offering Guitar I (7.46%), Guitar II (7.86%), Guitar III (9.65%), Guitar IV (9.9%), and at least one level of Guitar (7.46%) were 3%, 2.6%, 0.8%, 0.6%, and 3% below the statewide average of Hispanic students (10.415%), respectively. The average of Hispanic students for school divisions offering

Guitar I (15.53%) was 2.1 times the corresponding average for school divisions not offering the course (7.46%). The average of Hispanic students for school divisions offering Guitar II (18.67%) was 2.4 times the corresponding average for school divisions not offering the course (7.86%) The average of Hispanic students for school divisions offering Guitar III (23.97%) was 2.5 times the corresponding average for school divisions not offering the course (9.65%) The average of Hispanic students for school divisions offering Guitar IV (26.83%) was 2.7 times the corresponding average for school divisions not offering the course 9.90%) The average of Hispanic students for school divisions offering at least one level of Guitar (15.53%) was 2.1 times the corresponding average for school divisions not offering Guitar (7.46%; see Figure 103).

Figure 103

Averages of Hispanic Students in Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)

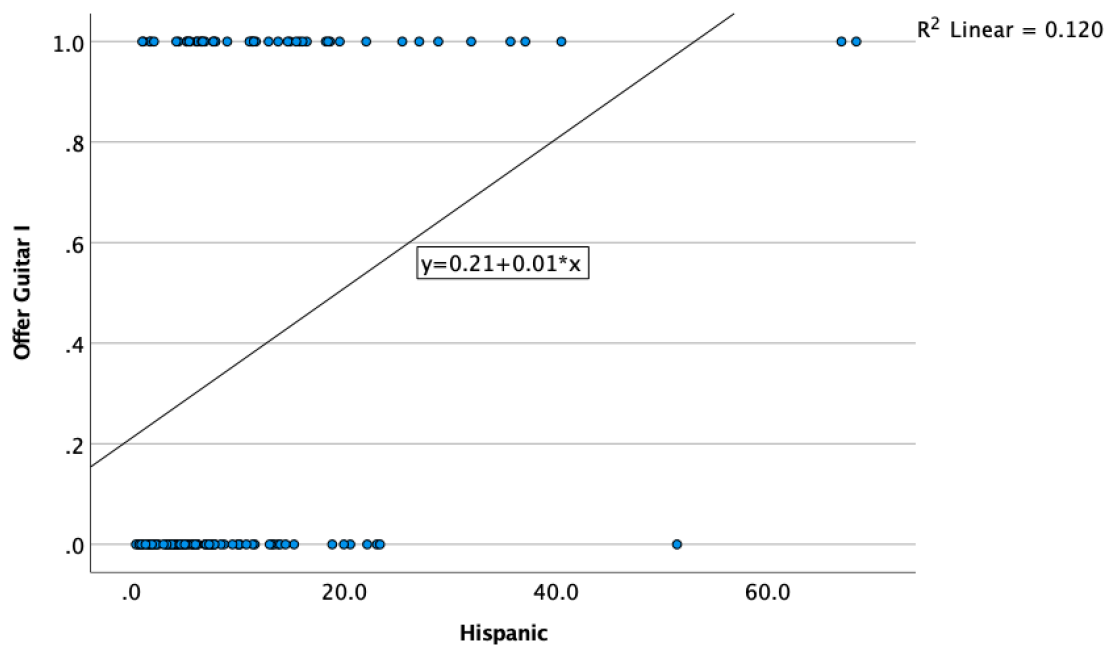


Note. 10.415% of students in Virginia school divisions were Hispanic.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Hispanic student population and offering Guitar courses. Five tests were significant and positive. There was a significant positive correlation between offering Guitar I and Hispanic student enrollment, $r_{pb}(131) = 0.35$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 104).

Figure 104

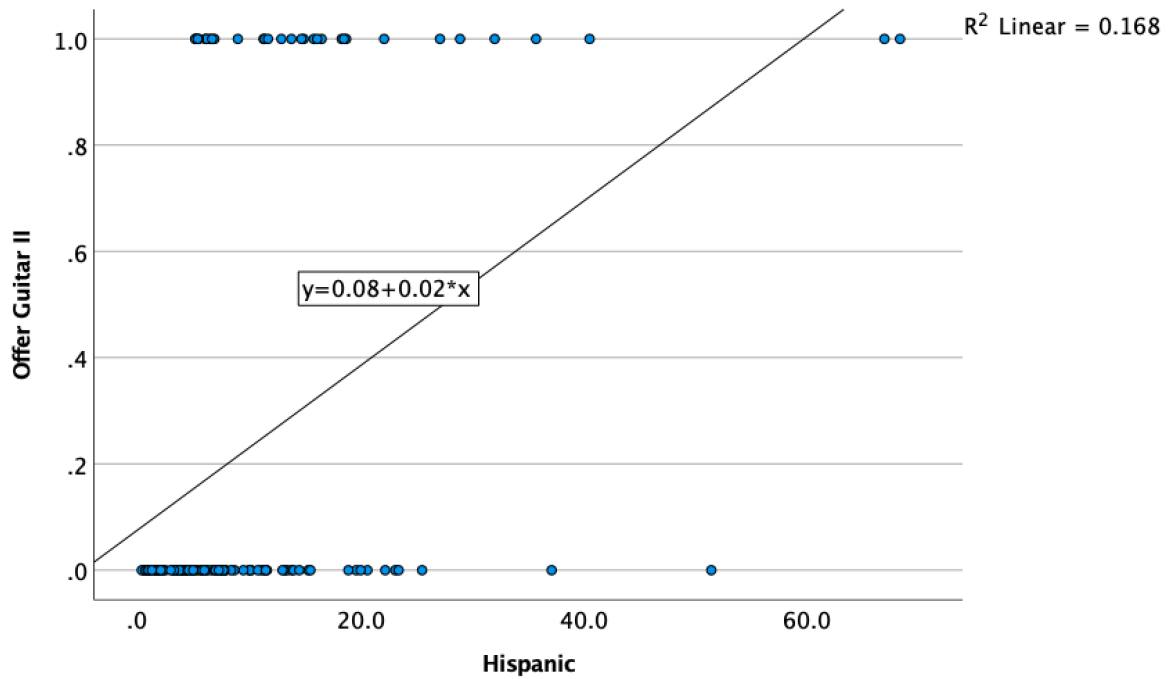
Point Biserial Correlation for Offering Guitar I and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Guitar II and Hispanic student enrollment, $r_{pb}(131) = 0.41$, $p < 0.01$, $r^2 = 0.17$; 17% shared variance indicated a moderate relationship between the two variables (see Figure 105).

Figure 105

Point Biserial Correlation for Offering at Guitar II and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Guitar III and Hispanic student enrollment, $r_{pb}(131) = 0.29$, $p < 0.01$, $r^2 = 0.08$; 8% shared variance indicated a weak relationship between the two variables (see Figure 106).

Point Biserial Correlation for Offering Guitar III and Percentages of Hispanic Students in Virginia School Divisions (N = 131)

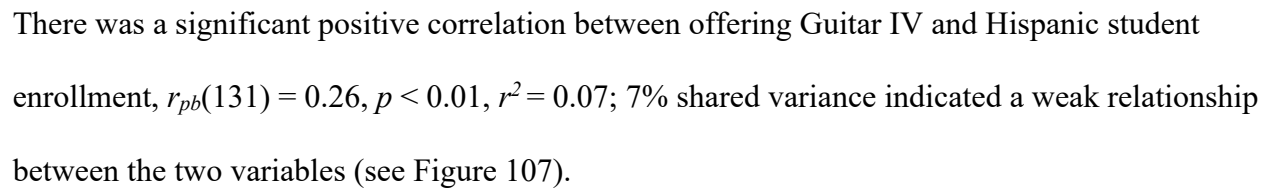
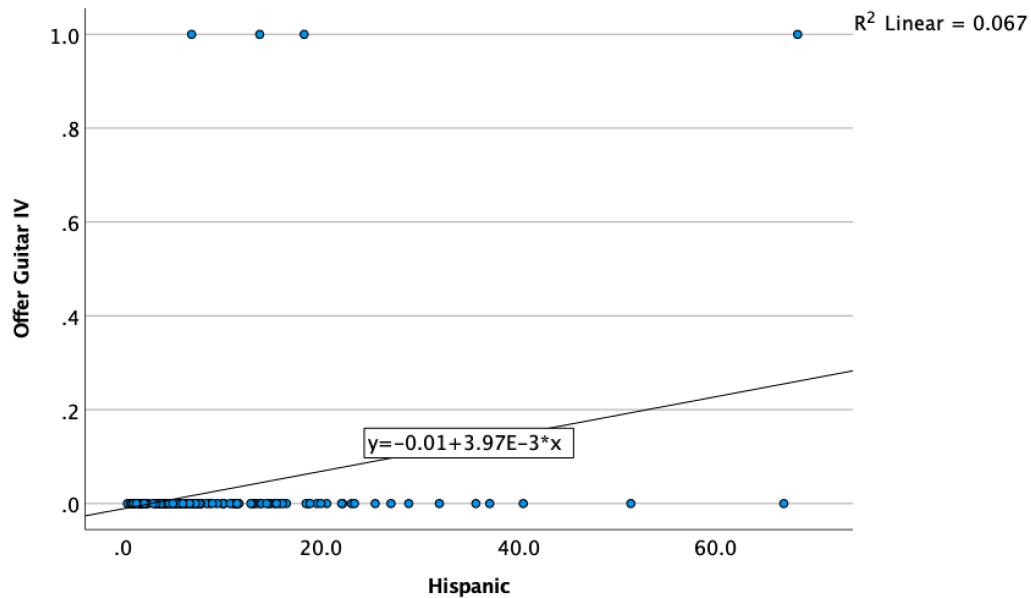


Figure 107

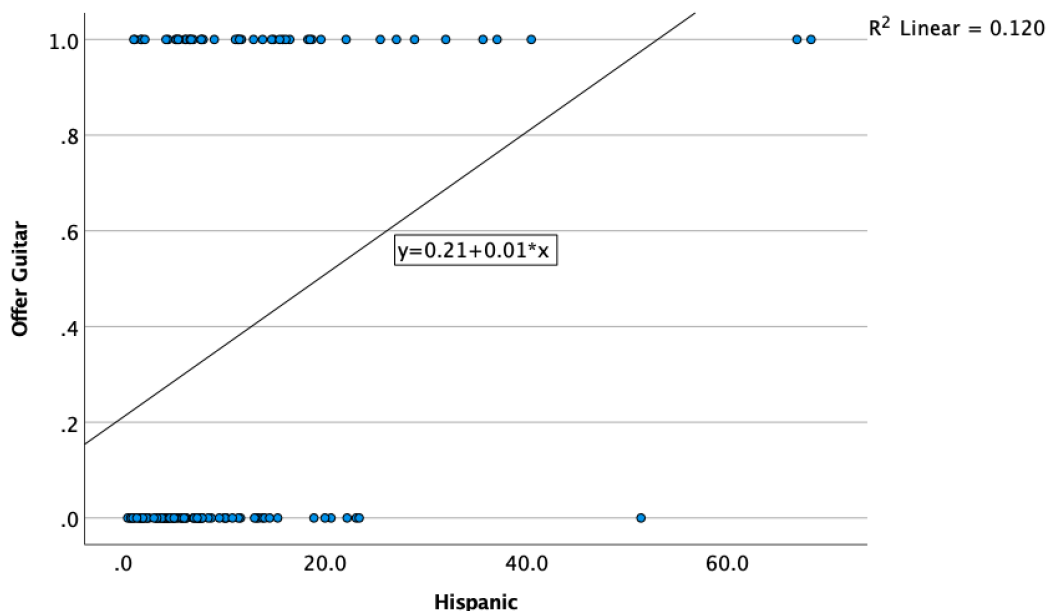
Point Biserial Correlation for Offering Guitar IV and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Guitar and Hispanic student enrollment, $r_{pb}(131) = 0.35$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 108).

Figure 108

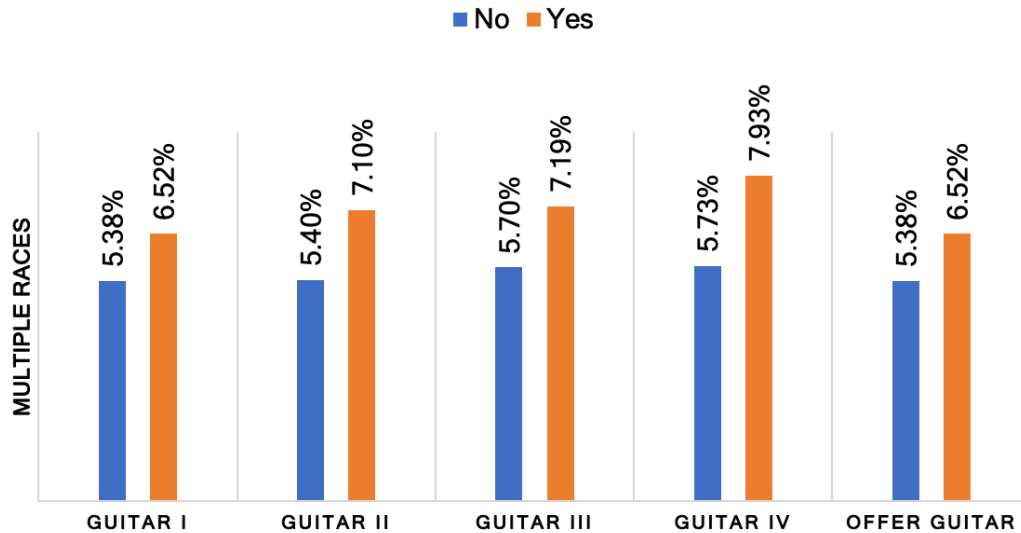
Point Biserial Correlation for Offering at Least One Level of Guitar and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



Multiple Races. Virginia school divisions enrolling more Multiple Races students were likely to offer Guitar I, Guitar II, and at least one level of Guitar. Averages of Multiple Races students for school divisions offering Guitar courses (6.52-7.93%) exceeded the statewide average of Multiple Races students (5.801%) by 0.7-2% and exceeded averages of Multiple Races students for school divisions not offering Guitar courses (5.38-5.73%) by 1.1-2.2%. Averages of Multiple Races students for school divisions not offering Guitar courses (5.38-5.73%) were 0.07-0.4% below the statewide average of Multiple Races students (5.801%; see Figure 109).

Figure 109

Averages of Multiple Races Students in Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)

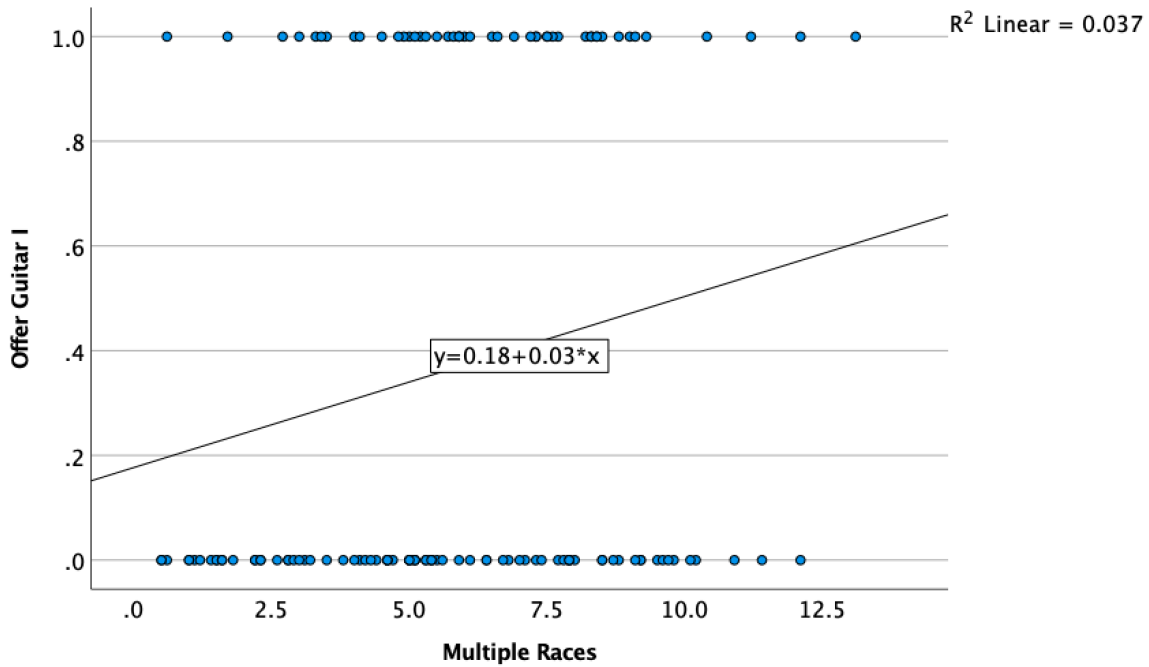


Note. 5.801% of students in Virginia school divisions were Multiple Races.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Multiple student population and offering Guitar courses. Three tests were significant. There was a significant positive correlation between offering Guitar I and Multiple Races student enrollment, $r_{pb}(131) = 0.19$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 110).

Figure 110

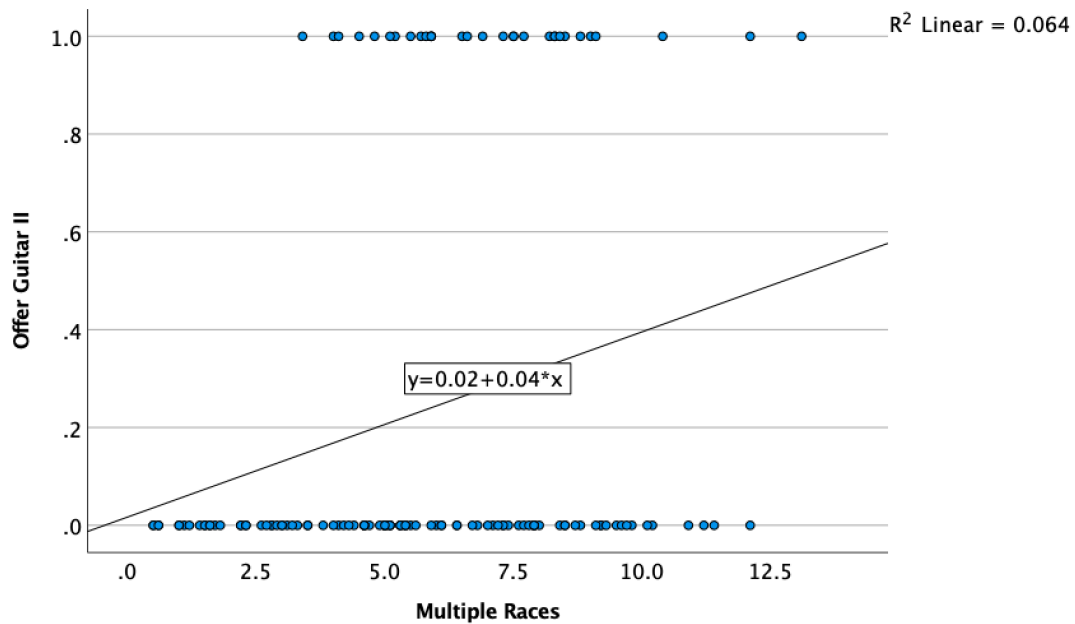
Point Biserial Correlation for Offering Guitar I and Percentages of Multiple Races Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Guitar II and Multiple Races student enrollment, $r_{pb}(131) = 0.25$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 111).

Figure 111

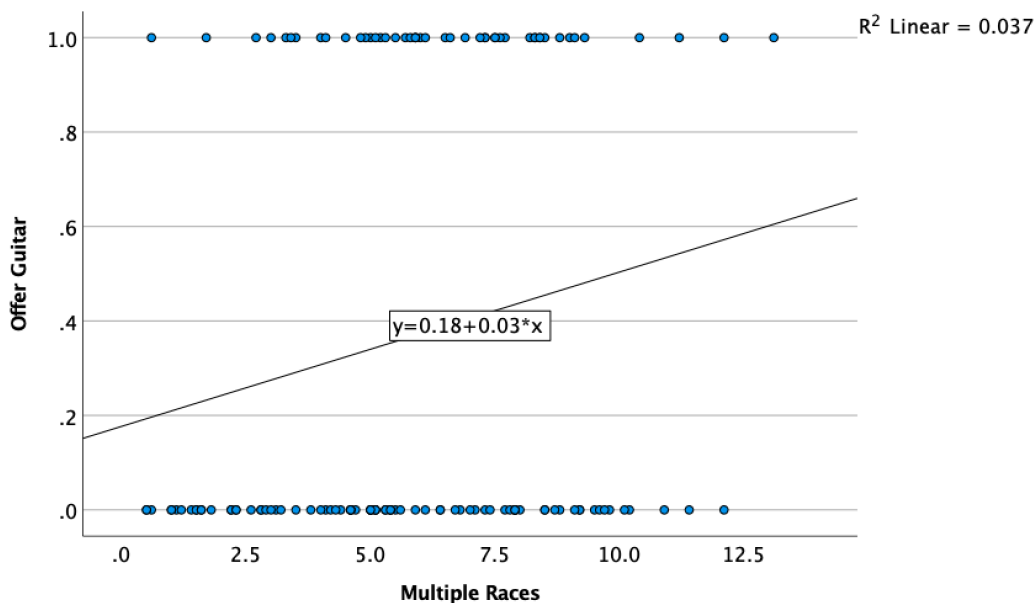
Point Biserial Correlation for Offering Guitar II and Percentages of Multiple Races Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Guitar and Multiple Races student enrollment, $r_{pb}(131) = 0.19$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 112).

Figure 112

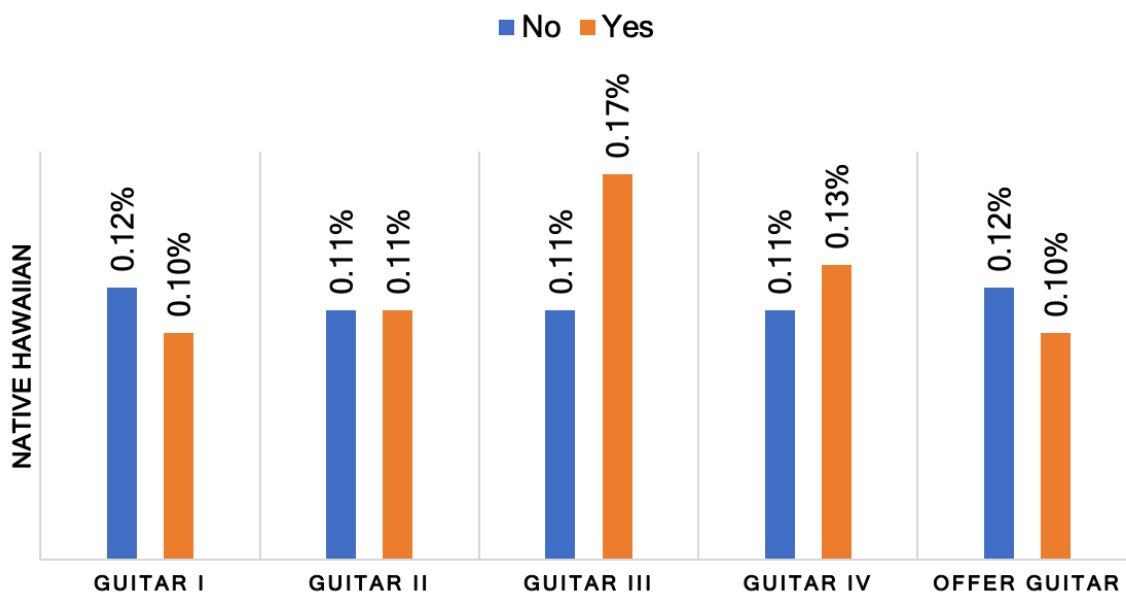
Point Biserial Correlation for Offering at Least One Level of Guitar and Percentages of Multiple Races Students in Virginia School Divisions (N = 131)



Native Hawaiian. Percentages of Native Hawaiian students in Virginia school divisions did not associate with offering Guitar courses. Average percentages of Native Hawaiian students for Virginia school divisions offering and for school divisions not offering Guitar did not deviate from the statewide average of Native Hawaiian students (0.113%) by more than 0.01%. The average of Native Hawaiian students for school divisions offering Guitar III (0.17%) was 0.7% below the statewide average of Native Hawaiian students (0.113%; see Figure 113).

Figure 113

Averages of Native Hawaiian Students in Virginia School Divisions Offering and Not Offering Guitar Courses (N = 131)



Note. 0.113% of students in Virginia school divisions were Native Hawaiian.

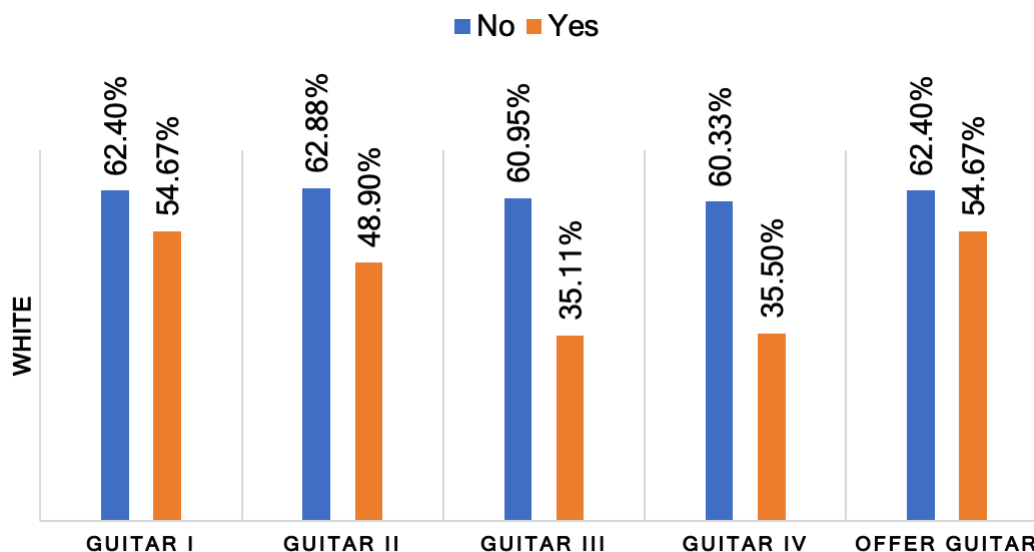
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Native Hawaiian student population and offering Guitar courses were nonsignificant.

White. Virginia school divisions with less White students were likely to offer Guitar courses. The averages of White students for school divisions offering Guitar I (54.67%), Guitar II (48.90%), Guitar III (35.11%), Guitar IV (35.50%), and at least one level of Guitar (54.67%) were 4.9%, 10.7%, 24.46%, 24.07%, and 4.9% below the statewide average of White students (59.567%), respectively. School divisions not offering Guitar courses enrolled 0.8-3.3% more White students than an average Virginia school division (59.567%). The average of White students for school divisions offering Guitar I (54.67%) was 7.7% above the corresponding

average for school divisions not offering the course (62.4%). The average of White students for school divisions offering Guitar II (48.90%) was 14% above the corresponding average for school divisions not offering the course (62.88%). The average of White students for school divisions offering Guitar III (35.11%) was 1.7 times the corresponding average for school divisions not offering the course (60.95%). The average of White students for school divisions offering Guitar IV (35.50%) was 1.7 times the corresponding average for school divisions not offering the course (60.33%). The average of White students for school divisions offering at least one level of Guitar (54.67%) was 7.7% above the corresponding average for school divisions not offering Guitar (62.4%; see Figure 114).

Figure 114

Averages of White Students in Virginia School Divisions Offering and Not Offering Guitar (N = 131)

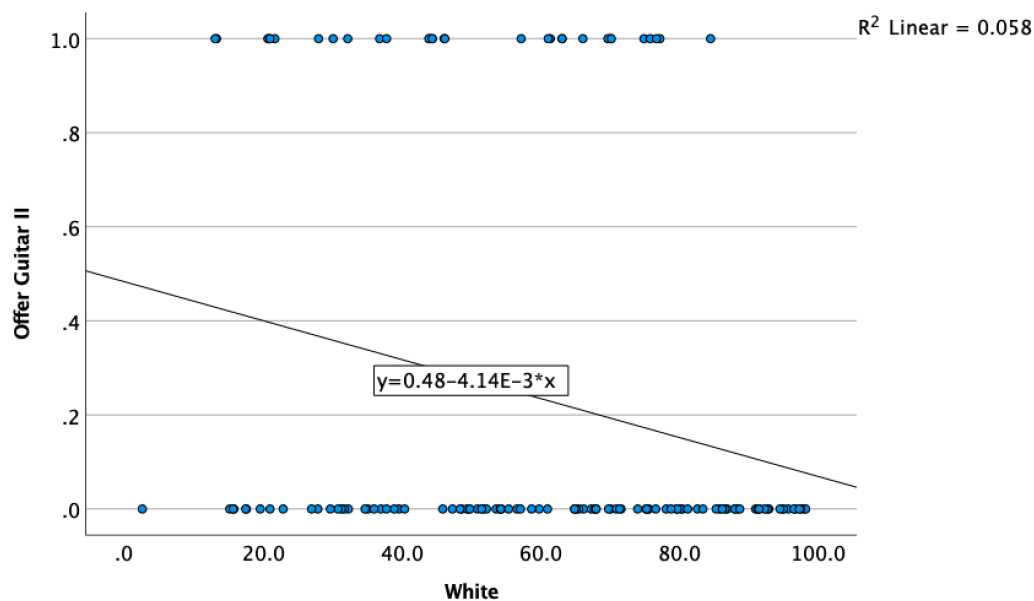


Note. 59.567% of students in Virginia school divisions were White.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of White student population and offering Guitar courses. Three tests were significant and negative. There was a significant negative correlation between offering Guitar II and White student enrollment, $r_{pb}(131) = -0.24$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 115).

Figure 115

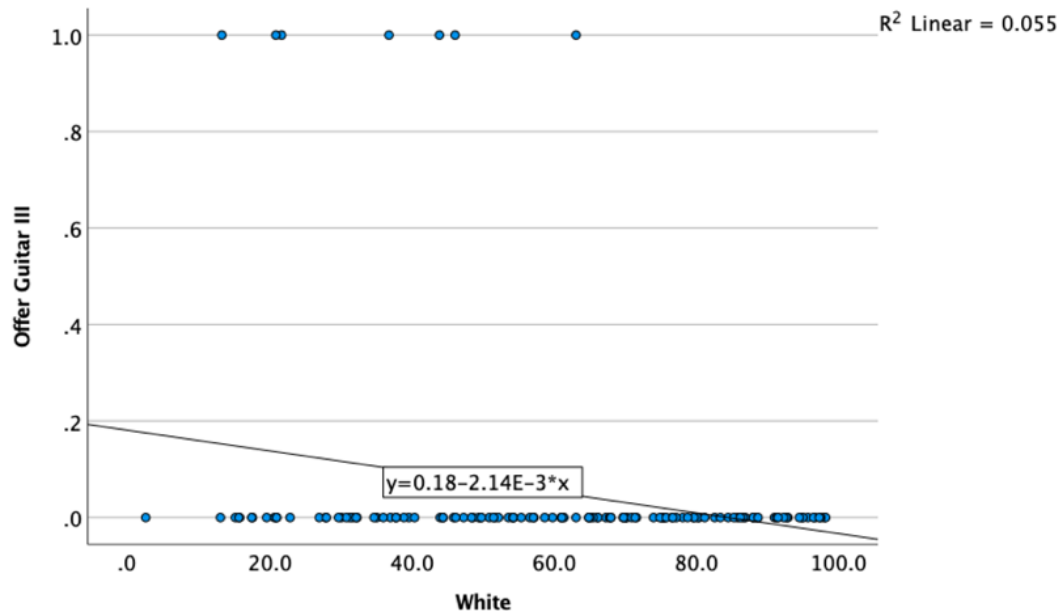
Point Biserial Correlation for Offering Guitar II and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Guitar III and White student enrollment, $r_{pb}(131) = -0.24$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 116).

Figure 116

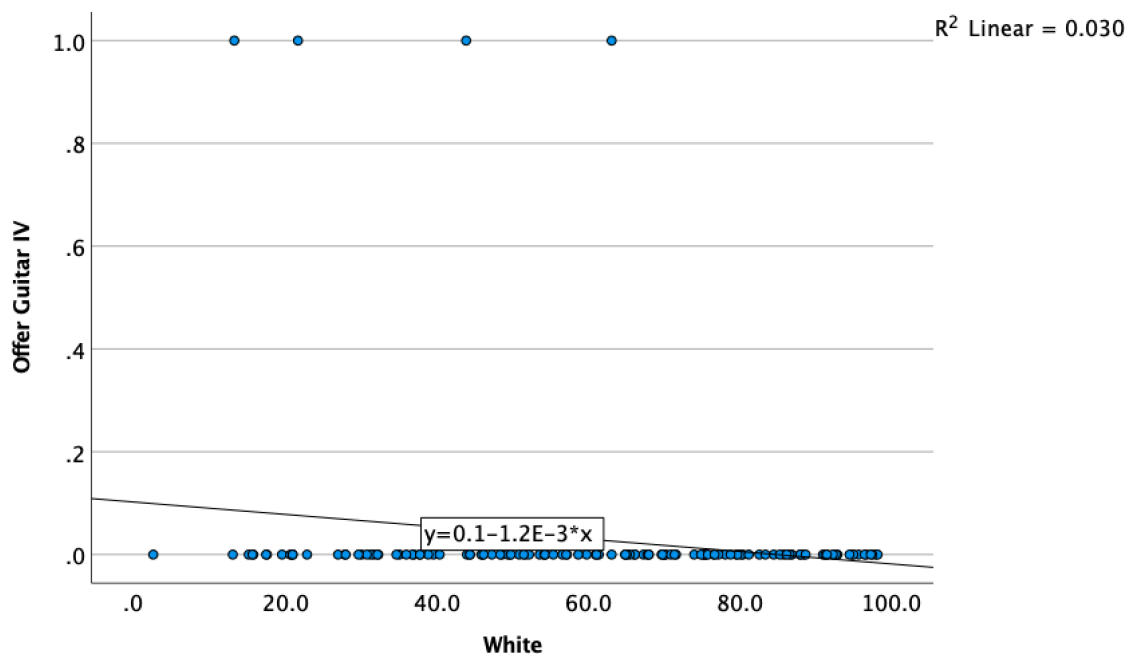
Point Biserial Correlation for Offering Guitar III and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Guitar IV and White student enrollment, $r_{pb}(131) = -0.17$, $p < 0.05$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 117).

Figure 117

Point Biserial Correlation for Offering Guitar IV and Percentages of White Students in Virginia School Divisions (N = 131)



Guitar Summary. Guitar was the fifth offered high school music course in Virginia, 36.6% of school divisions offered at least one level of Guitar. Guitar I and II were more frequently offered than Guitar III and IV.

Guitar courses were offered significantly disproportionately, predominantly offered in Virginia suburban and city school divisions. All levels of Guitar were offered among cities and suburbs, but Guitar III and Guitar IV were not offered in rural and town school divisions. School divisions offering Guitar courses were located near all large Virginia metropolitan areas; Richmond; Blacksburg; Charlottesville; Washington, D.C.; and Tidewater.

School divisions with larger enrollments were most likely to offer Guitar I, Guitar II, and at least one level of Guitar. School divisions with larger percentages of low SES students were

likely to offer Guitar courses, but the association was weak. School divisions with larger percentages of Asian and Hispanic student populations were most likely to offer Guitar courses. School divisions with larger Multiple Races student populations and fewer White students were likely to offer Guitar courses, but these correlations were weak.

IB Music

IB Music was the eighth offered course in the Virginia, offered by 17 school divisions (13% of all). IB Music I was twice more frequently offered than IB Music II: 17 school divisions (13% of all) offered IB Music I, and eight school divisions (6.1% of all) offered IB Music II.

Locality. IB Music courses were disproportionally offered across Virginia localities. 31.3% of city school divisions and 31.3% of suburban school divisions offered IB Music I and at least one level of IB Music, four times more frequently than rural school divisions (7.88%). 18.8% of city school divisions and 22.2% of suburban school divisions offered IB Music II, 14 and 17 times more frequently than rural school divisions (1.3%), respectively. Virginia towns did not offer IB Music (see Table 26 and Figure 118).

Table 26

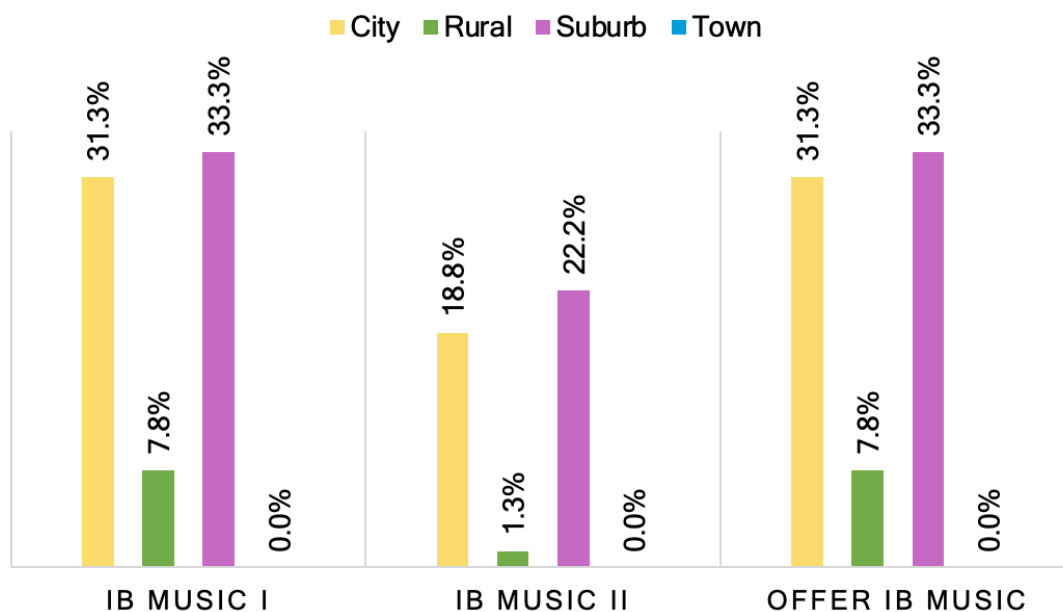
Frequencies of Offering International Baccalaureate Music Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

Course	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer IB Music	11	5	71	6	12	6	20	0	114	17
IBMusic I	11	5	71	6	12	6	20	0	114	17
IB Music II	13	3	76	1	14	4	20	0	123	8

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$. IB refers to International Baccalaureate

Figure 118

Percentages of Virginia School Divisions Offering International Baccalaureate Music Statewide and by Locality (N = 131)



Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Overall, 29.4% of school divisions offering IB Music I and at least one level of IB Music were city, 35.3% were rural, and 35.3% were suburban. 50% of school divisions offering IB Music II were suburban, 37.5% were city, and 12.5% were rural. Virginia towns did not offer IB Music. These distributions of localities offering IB Music courses were different from the statewide distribution: 12% city, 59% rural, 14% suburban, and 15% town (see Figures 119-120).

Figure 119

Localities of Virginia School Divisions Offering International Baccalaureate Music I and at Least One Level of IB Music (n = 17)

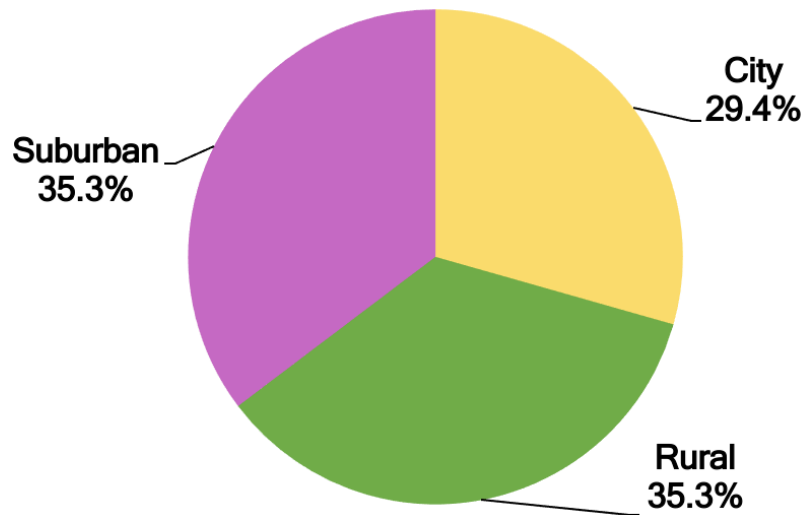
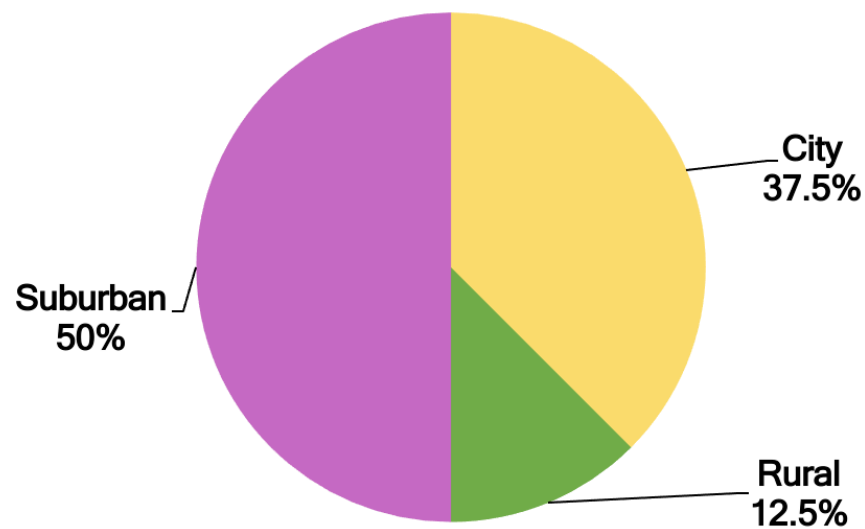


Figure 120

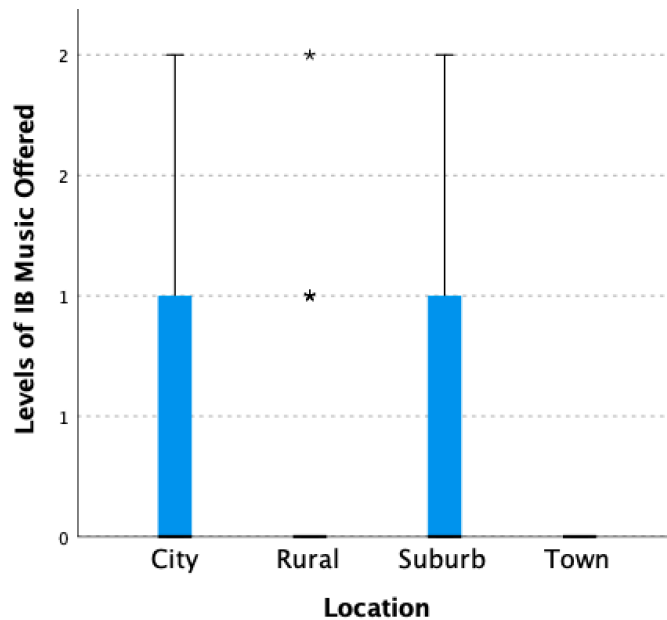
Localities of Virginia School Divisions Offering International Baccalaureate Music II (n = 8)



To examine whether IB Music courses are offered significantly disproportionately among Virginia localities, a nonparametric independent-samples Kruskal-Wallis test was performed in SPSS. With an alpha level of 0.05, the test was significant. IB Music courses were offered significantly disproportionately, $H_{(3)} = 16.10$, $N = 131$, $p < 0.001$, and the effect size was small, $\epsilon^2 = .1238$. Post hoc Dunn's pairwise comparisons administered with the Bonferroni correction revealed that rural school divisions offer significantly less levels of IB Music than suburban school divisions ($r = -3.02$, $MD = -17.49$, $p = 0.015$). Two significant pairwise comparisons involved towns; since towns did not offer IB Music, these comparisons were not reported (see Figure 121).

Figure 121

Independent-Samples Kruskal-Wallis Test for Levels of International Baccalaureate Music Offered in Virginia School Divisions ($N = 131$)



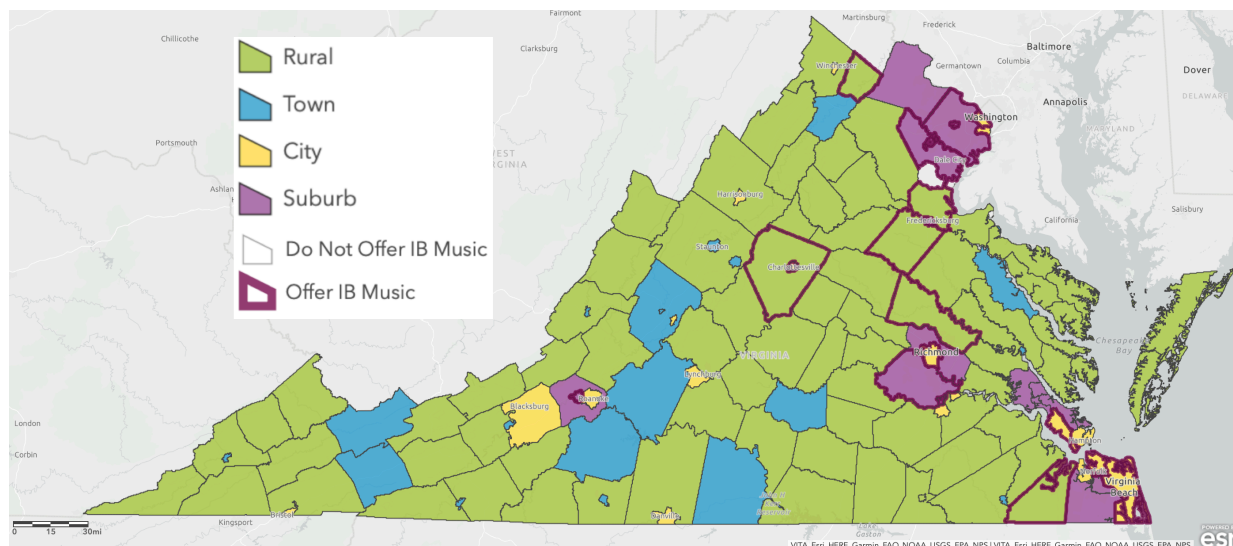
To explore whether there was a statistically significant relationship between offering IB Music courses and a school division's locality, chi-square tests of association were calculated in SPSS. Cramer's V indices were used to determine association strength; follow up analyses included examination of frequency tables. Two tests were significant. A moderate association was found for IB Music I, $\chi^2(3) = 16.15, p = 0.05, V = 0.35$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for city, rural, and suburban localities: Virginia city, rural, and suburban school divisions offered IB Music I less frequently than expected. A moderate association was found for IB Music II, $\chi^2(3) = 12.89, p < 0.01, V = 0.36$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for city, rural, and suburban localities. Virginia city, rural, and suburban school divisions offered IB Music II significantly less frequently than expected.

The results of the independent-sample Kruskal-Wallis test revealed that IB Music courses are offered significantly disproportionally across Virginia localities, $H_{(3)} = 16.10, N = 131, p < 0.001$, and the effect size is small, $\epsilon^2 = .1238$. Post hoc pairwise Dunn's comparisons revealed that rural school divisions offered significantly less levels of IB Music than suburban school divisions ($r = -3.02, MD = -17.49, p = 0.015$).

A search on the IB (2022a) website revealed that 57 Virginia schools state offer IB programs in high school. Thus, there were school divisions that offered IB (2022b) programs and did not offer IB Music. Figure 135 shows that most of the divisions offering IB Music were clustered around Southeastern Virginia, Central Virginia, and Northern Virginia.

Figure 122

Virginia School Divisions Offering International Baccalaureate Music in High School (n = 17)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com ArcGIS online](https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries). Full data information found at <https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries>.

Enrollment. Larger Virginia school divisions were likely to offer IB Music courses. The enrollment averages for school divisions offering IB Music I (36,136) and IB Music II (51,353) were 3.8 and 5.7 times the statewide average enrollment (9,560), respectively. The enrollment averages for school divisions not offering IB Music I (5,597) and IB Music II (6,842) were 3,962 and 2,717 below the statewide average (9,560), respectively. The enrollment average for school divisions offering IB Music I (36,136) was 6.5 times the enrollment average for school divisions not offering IB Music I (5,597). The enrollment average for school divisions offering IB Music II (51,353) was 7.5 times the enrollment average for school divisions not offering IB Music II (6,842; see Table 27).

Table 27

Enrollment Averages for Virginia School Divisions Offering and Not Offering IB Music Courses

(N = 131)

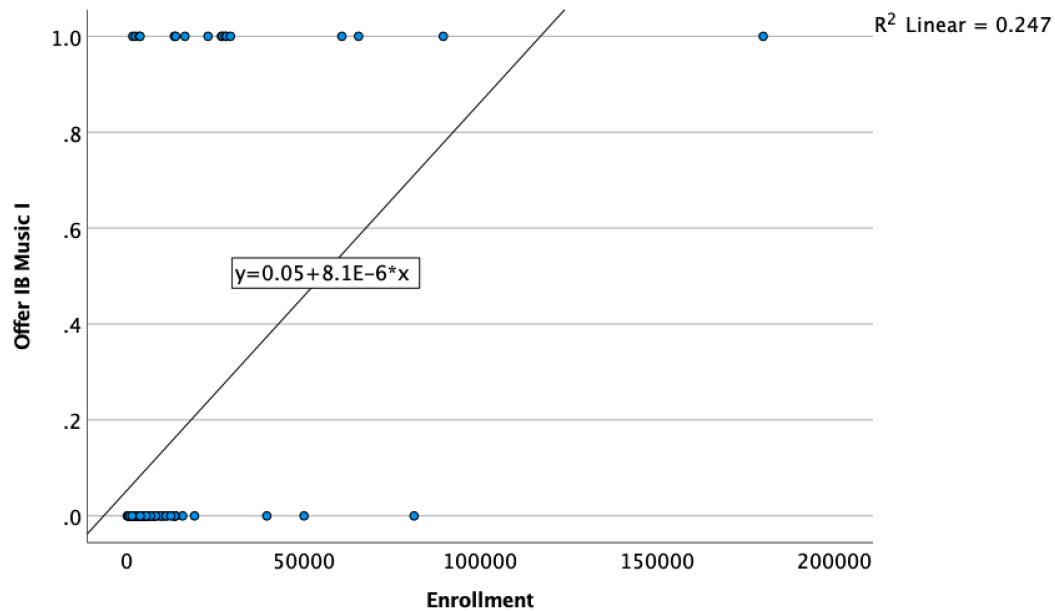
Courses	Enrollment Averages	
	No	Yes
IB Music I	5,597	36,136
IB Music II	6,842	51,353
Offer IB Music	5,597	36,136

Note. The enrollment average for Virginia public schools was 9,560. IB refers to International Baccalaureate.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering IB Music. Three tests were significant. There was a significant positive correlation between offering IB Music I and enrollment, $r_{pb}(131) = 0.50, p < 0.01, r^2 = 0.25$; 25% shared variance indicated a moderate relationship between the two variables (see Figure 123).

Figure 123

Point Biserial Correlation for Offering International Baccalaureate Music I and Enrollment in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering IB Music II and enrollment, $r_{pb}(131) = 0.52$, $p < 0.01$, $r^2 = 0.27$; 27% shared variance indicated a strong relationship between the two variables (see Figure 124).

Figure 124

Point Biserial Correlation for Offering International Baccalaureate Music II and Enrollment in Virginia School Divisions (N = 131)

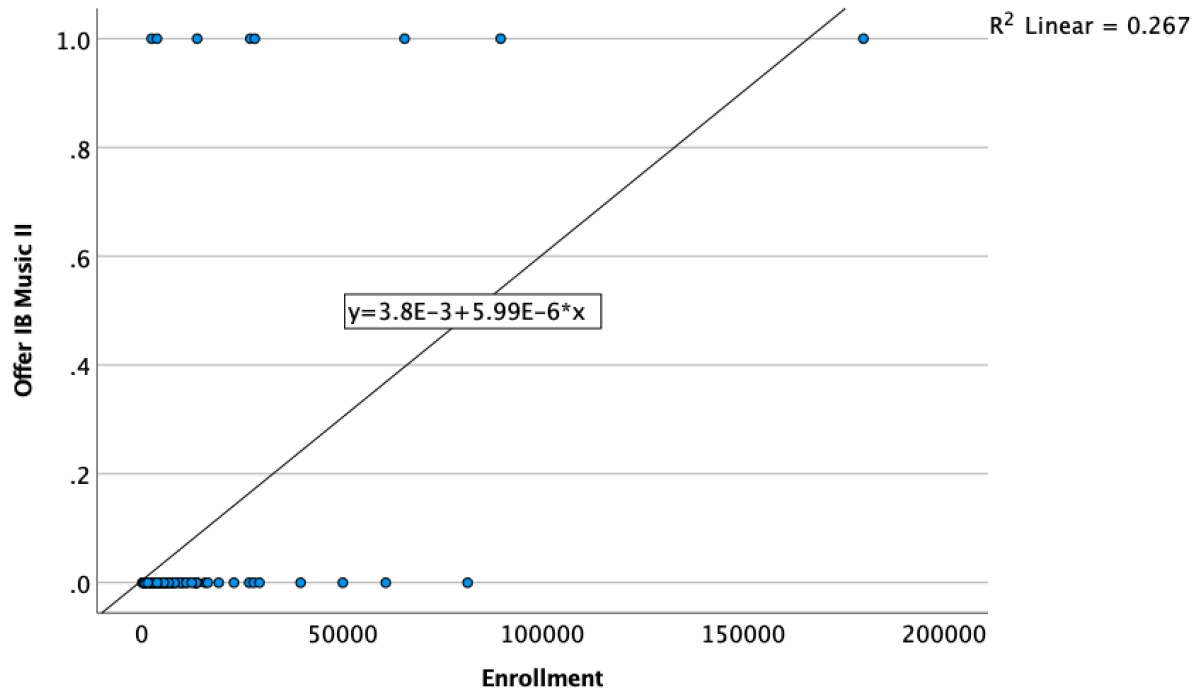
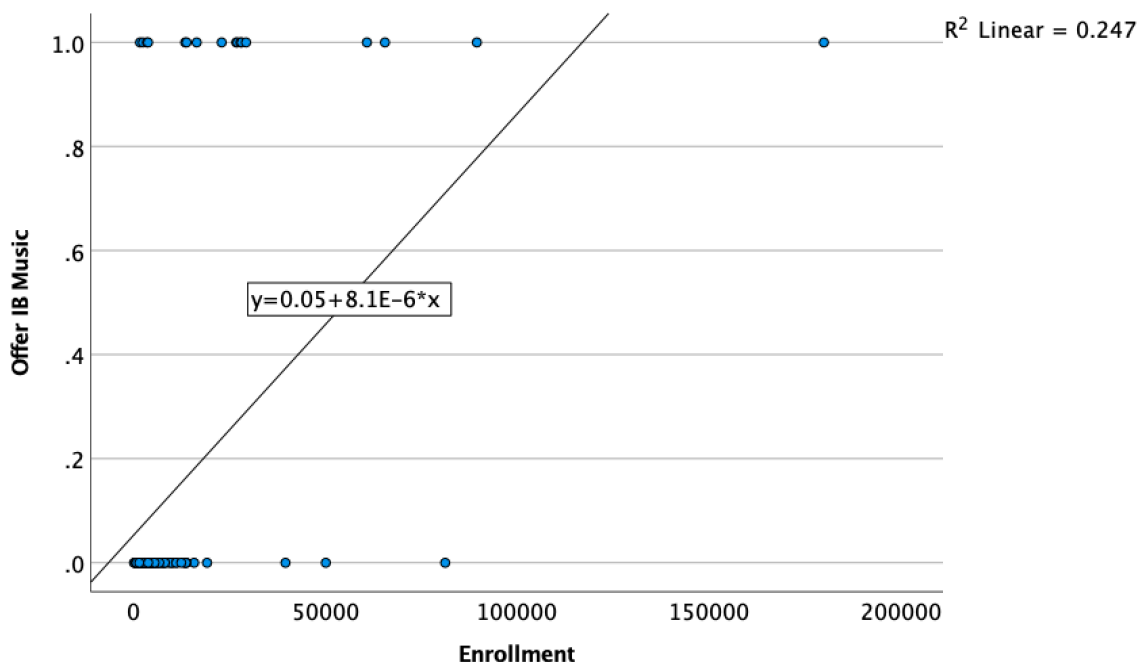


Figure 125

Point Biserial Correlation for Offering International Baccalaureate Music and Enrollment in Virginia School Divisions (N = 131)



LCI. Virginia school divisions capable of spending more on public education than an average Virginia school division were likely to offer IB Music courses. The average LCIs for school divisions offering IB Music I and at least one level of IB Music (.4790 each) were .0865 above the statewide average LCI (.3925). The average LCI for school divisions offering IB Music II (.4652) was .0727 above the statewide average LCI (.3925). The average LCIs for school divisions not offering IB Music I and not offering IB Music (.3796 each) and not offering IB Music II (.3878) were .0129 and .0047 below the statewide average (.3925), respectively. The differences between average LCIs for school divisions offering and not offering IB Music I, IB Music II, and at least one level of IB Music were .0994, .0774, and .0994 respectively (see Table 28).

Table 28

LCI Averages for Virginia School Divisions Offering and Not Offering IB Music Courses (N = 131)

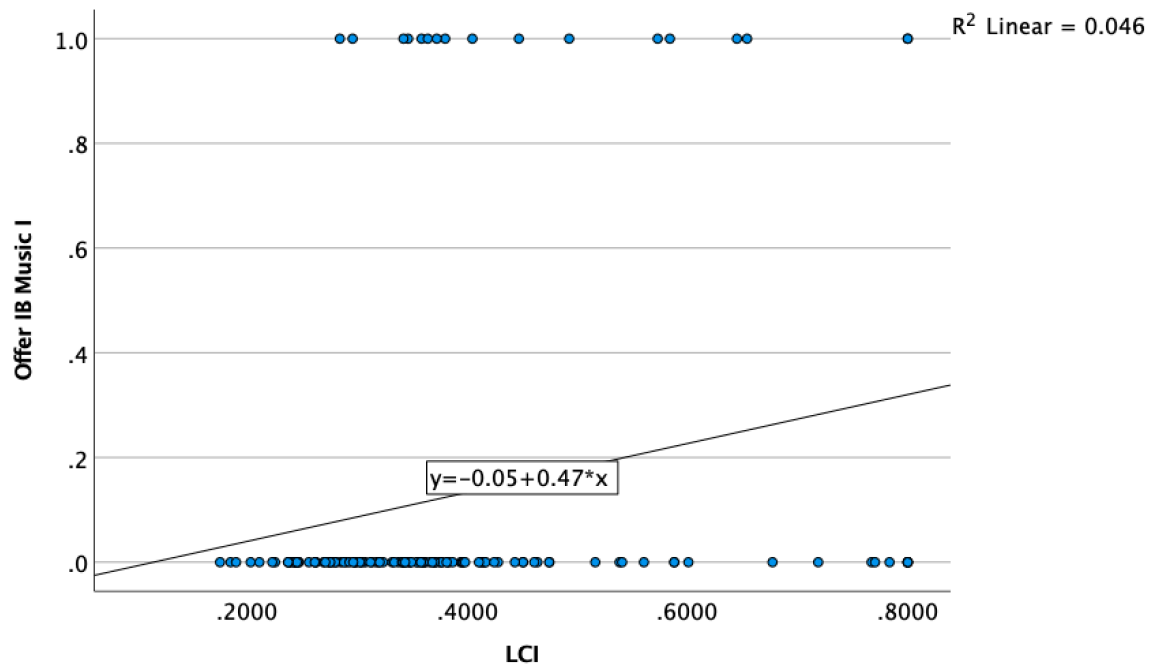
Courses	LCI Averages	
	No	Yes
IB Music I	.3796	.4790
IB Music II	.3878	.4652
Offer IB Music	.3796	.4790

Note. The average LCI for Virginia public schools was .3925. LCI refers to local composite index. IB refers to International Baccalaureate.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between Virginia school divisions' LCIs and offering IB Music. Two tests were significant. There was a significant positive correlation between offering IB Music I and LCI, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 126).

Figure 126

Point Biserial Correlation for Offering IB Music I and LCIs of Virginia School Divisions (N = 131)

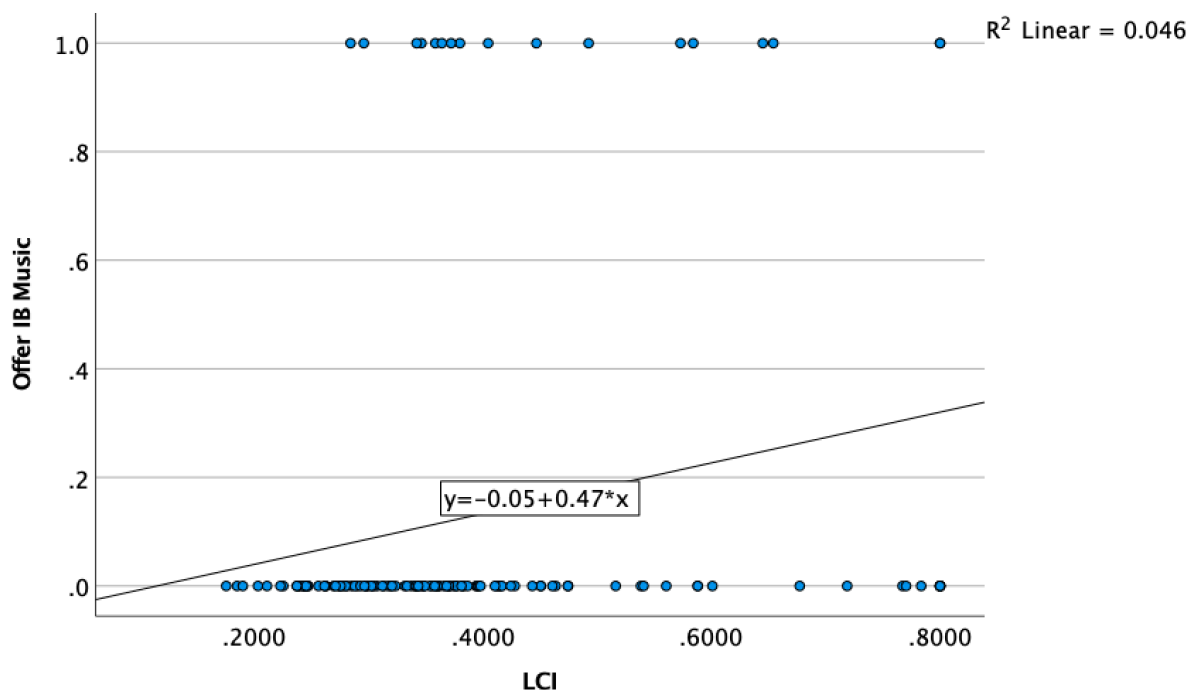


Note. The average LCI for Virginia public schools was .3925. LCI refers to local composite index. IB refers to International Baccalaureate.

There was a significant positive correlation between offering at least one level of IB Music and LCI, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 127).

Figure 127

Point Biserial Correlation for Offering IB Music and LCIs of Virginia School Divisions (N = 131)



Note. The average LCI for Virginia public schools was .3925. LCI refers to local composite index. IB refers to International Baccalaureate.

Low Student SES. Virginia school divisions with lower percentages of economically disadvantaged students were likely to offer IB Music courses. The low student SES averages for school divisions offering IB Music I (40.81%), IB Music II (39.54%), and at least one level of IB Music (40.81%) were 7.94%, 9.21%, and 7.94% below the statewide low student SES average (48.75%), respectively. The average low student SES for school divisions not offering IB Music I (49.94%), IB Music II (49.35%), and IB Music (49.94%) were 1.19%, 0.6%, and 1.19% below the statewide low student SES average (48.75%), respectively. The differences between the low

student SES averages for school divisions offering and not offering IB Music I, IB Music II, and IB Music were 9.13%, 9.81%, and 9.13%, respectively (see Table 29).

Table 29

Low Student Socio-Economic Status Averages for Virginia School Divisions Offering and Not Offering IB Music Courses (N = 131)

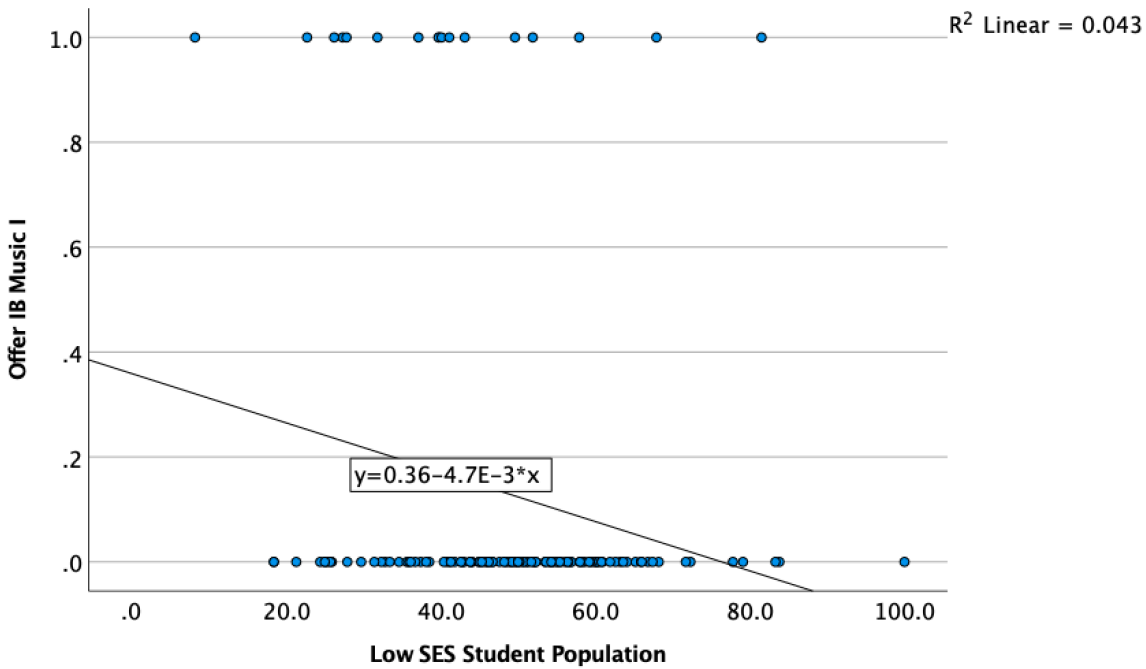
Courses	Low Student SES Averages	
	No	Yes
IB Music I	49.94%	40.81%
IB Music II	49.35%	39.54%
Offer IB Music	49.94%	40.81%

Note. The average low student SES for Virginia public schools was 48.75%. IB refers to International Baccalaureate.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between Virginia school divisions' percentages of low student SES and offering IB Music. Two tests were significant. There was a significant negative correlation between offering IB Music I and low student SES, $r_{pb}(131) = -0.21$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 128).

Figure 128

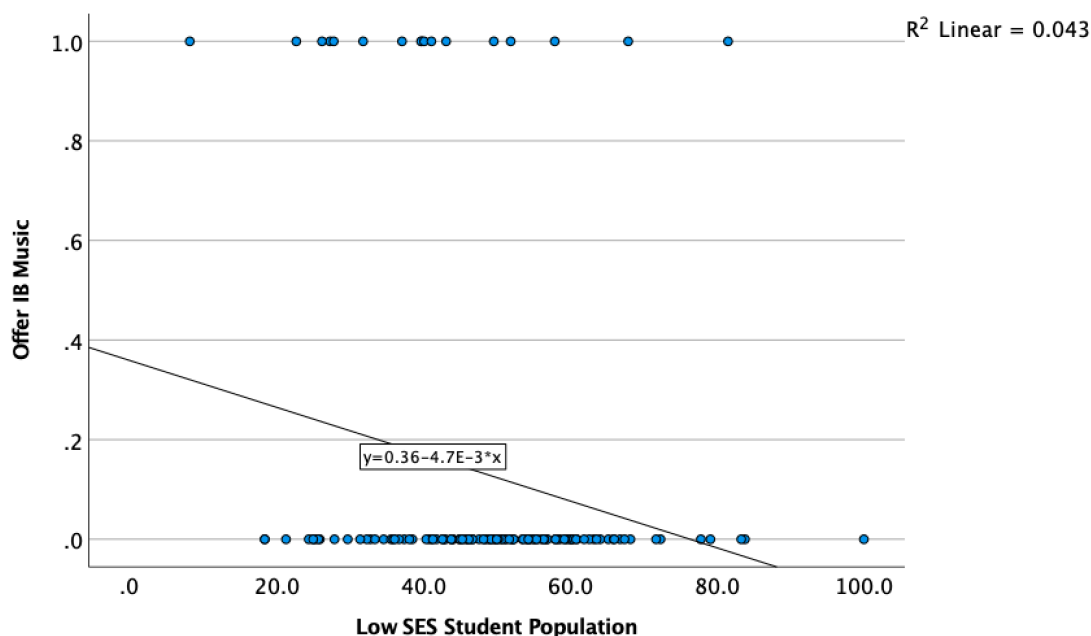
Point Biserial Correlation for Offering International Baccalaureate Music I and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of IB Music and low student SES, $r_{pb}(131) = -0.21$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 129).

Figure 129

Point Biserial Correlation for Offering International Baccalaureate Music and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



Race/Ethnicity. Table 30 shows average race/ethnicity compositions of school divisions offering IB Music. Three differences were particularly notable. First, the averages for Asian students in school divisions offering IB Music I (5.22%), offering IB Music II (6.38%), and offering at least one level of IB Music (5.22%) were 2.7, 3.3, and 2.7 times the statewide average of Asian students (1.917%), respectively. Second, the averages for Hispanic students for school divisions offering IB Music I (17.27%), offering IB Music II (17%), and offering at least one level of IB Music (17.27%) were 1.6 times the statewide average of Hispanic students (10.415%). Third, the averages of White students for school divisions not offering IB Music I (44.87%), not offering IB Music II (39.64%), and not offering IB Music (44.87%) were 1.3, 1.5, and 1.3 times below the statewide average of White students (59.567%).

Table 30*Student Race/Ethnicity Averages for Virginia School Divisions Offering and Not Offering IB**Music (N = 131)*

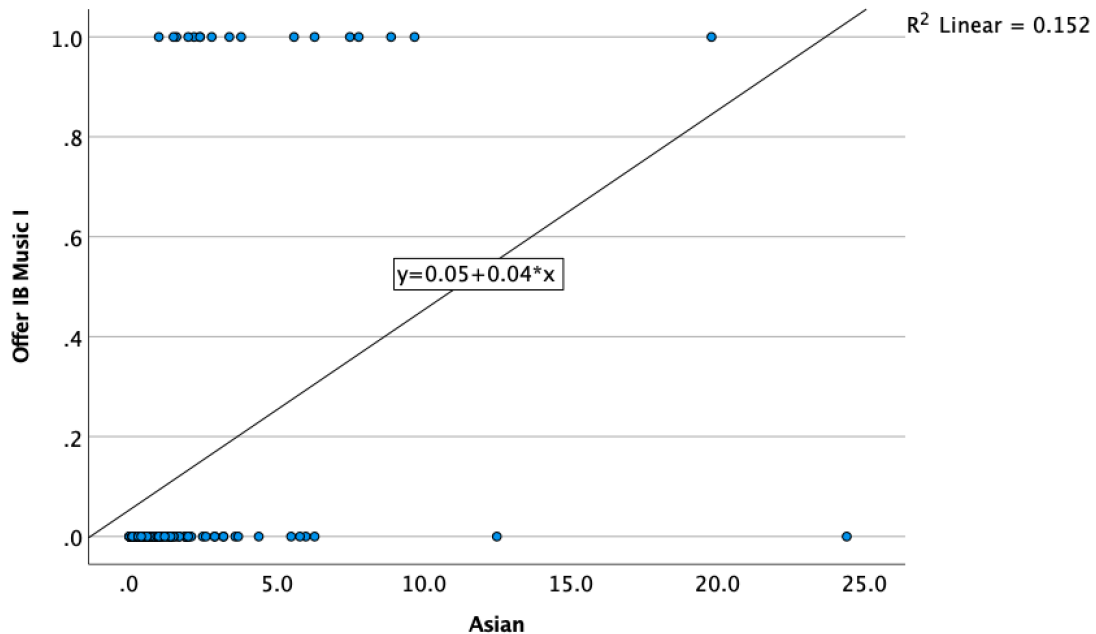
Course	American Indian %		Asian %		Black %		Hispanic %		Multiple Races %		Native Hawaiian %		White %	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
IB Music I	0.3	0.22	1.43	5.22	21.4	25.24	9.39	17.27	5.62	7.03	0.11	0.16	61.76	44.87
IB Music II	0.3	0.21	1.63	6.38	21.4	29.63	9.99	17	5.72	6.99	0.11	0.18	60.86	39.64
Offer IB Music	0.3	0.22	1.43	5.22	21.4	25.24	9.39	17.27	5.62	7.03	0.11	0.16	61.76	44.87

Note. 1.917% of students in Virginia school divisions were Asian, 0.29% were American Indian, 21.902% were Black, 10.415% were Hispanic, 5.801% were Multiple Races, 0.113% were Native Hawaiian, and 59.567% were White. IB refers to International Baccalaureate.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of student each race/ethnicity student population in Virginia and offering IB Music courses. Eight tests were significant. There was a significant positive correlation between offering IB Music I and Asian student enrollment, $r_{pb}(131) = 0.39, p < 0.01, r^2 = 0.15$; 15% shared variance indicated a moderate relationship between the two variables (see Figure 130).

Figure 130

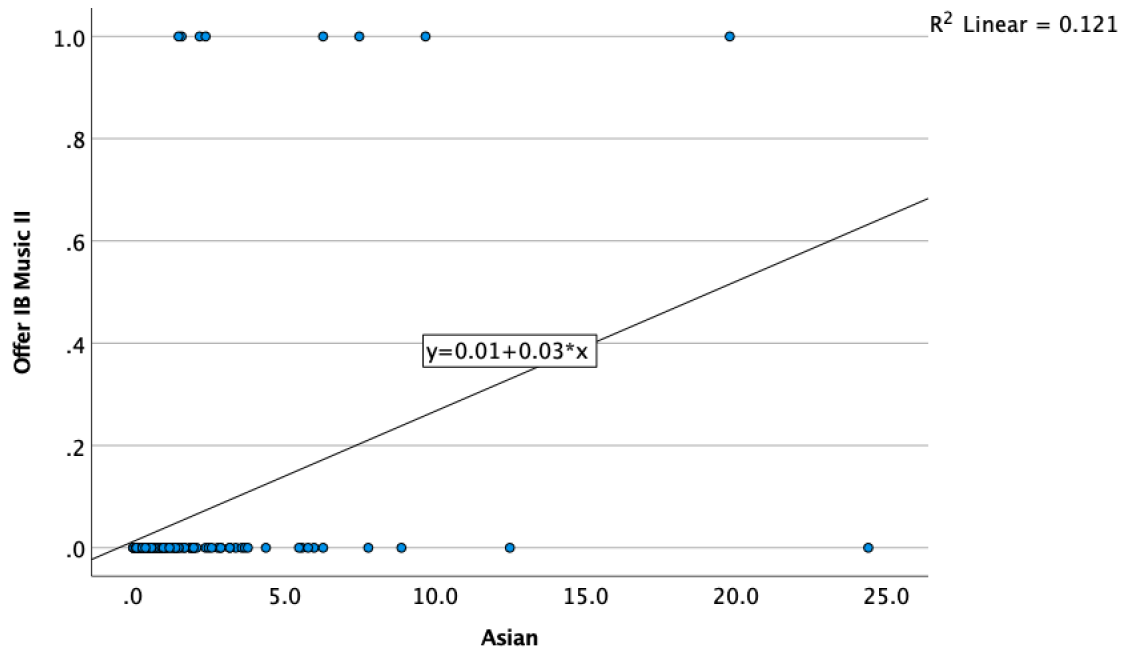
Point Biserial Correlation for Offering International Baccalaureate Music I and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering IB Music II and Asian student enrollment, $r_{pb}(131) = 0.35$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 131).

Figure 131

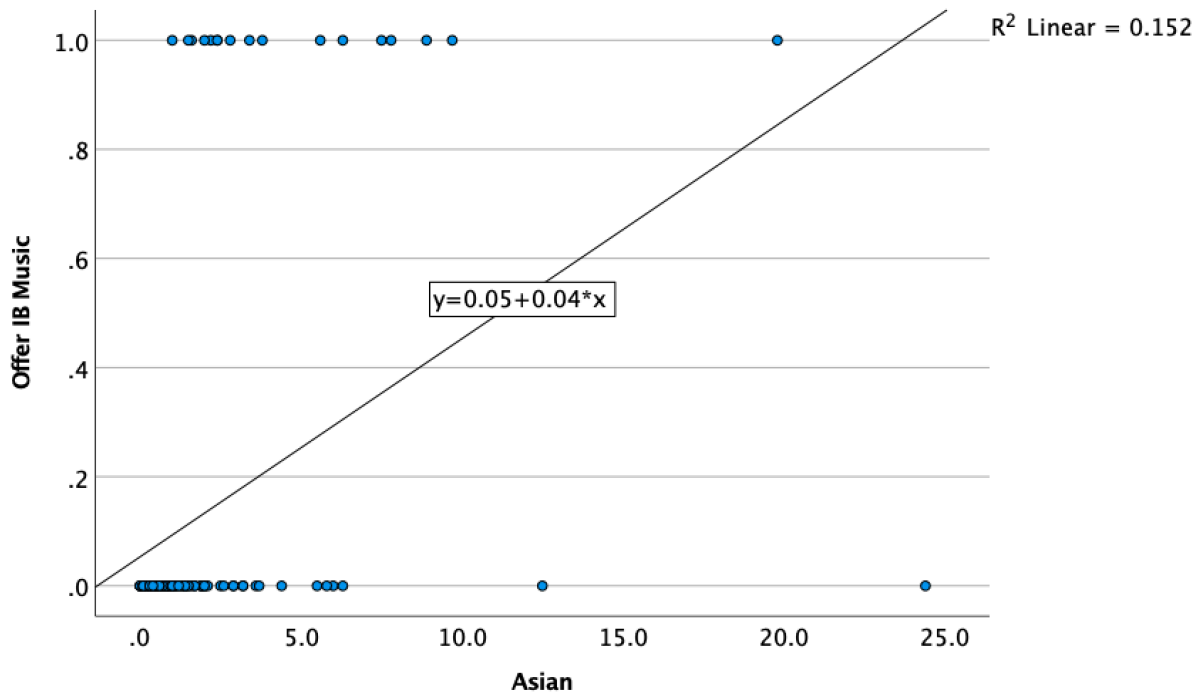
Point Biserial Correlation for Offering International Baccalaureate Music II and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of IB Music and Asian student enrollment, $r_{pb}(131) = 0.39$, $p < 0.01$, $r^2 = 0.15$; 15% shared variance indicated a moderate relationship between the two variables (see Figure 132).

Figure 132

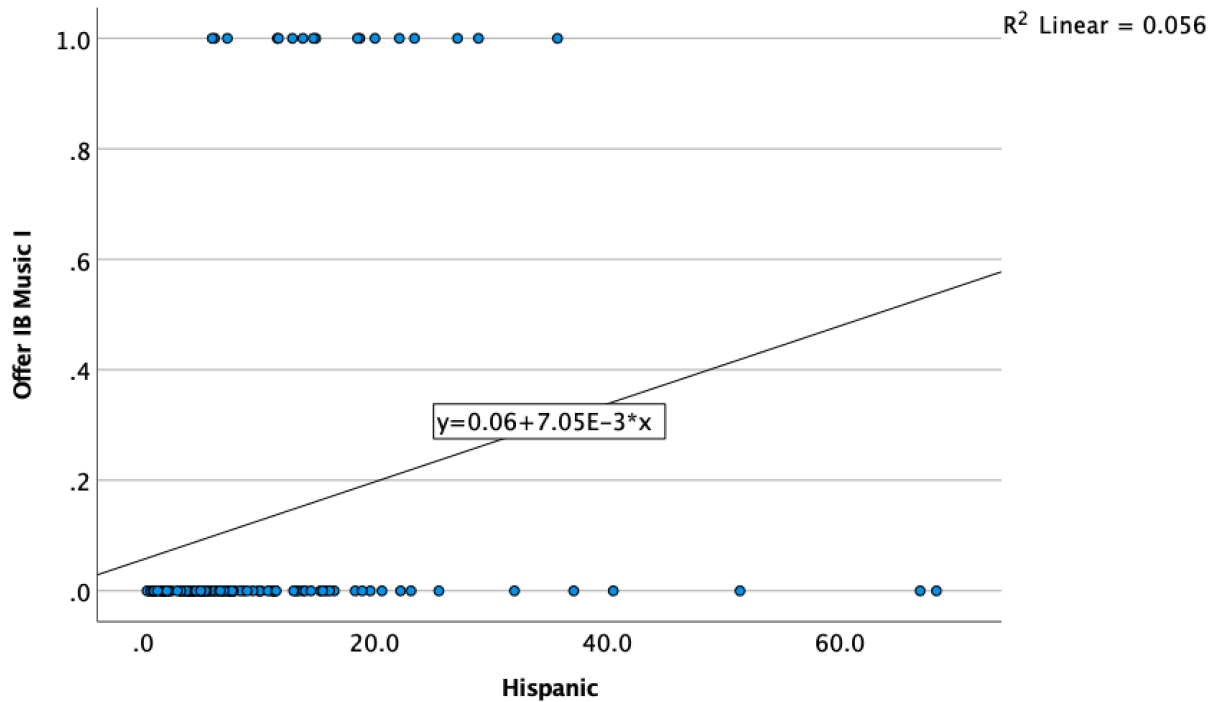
Point Biserial Correlation for Offering at Least One Level of International Baccalaureate Music and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering IB Music I and Hispanic student enrollment, $r_{pb}(131) = 0.24$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 133).

Figure 133

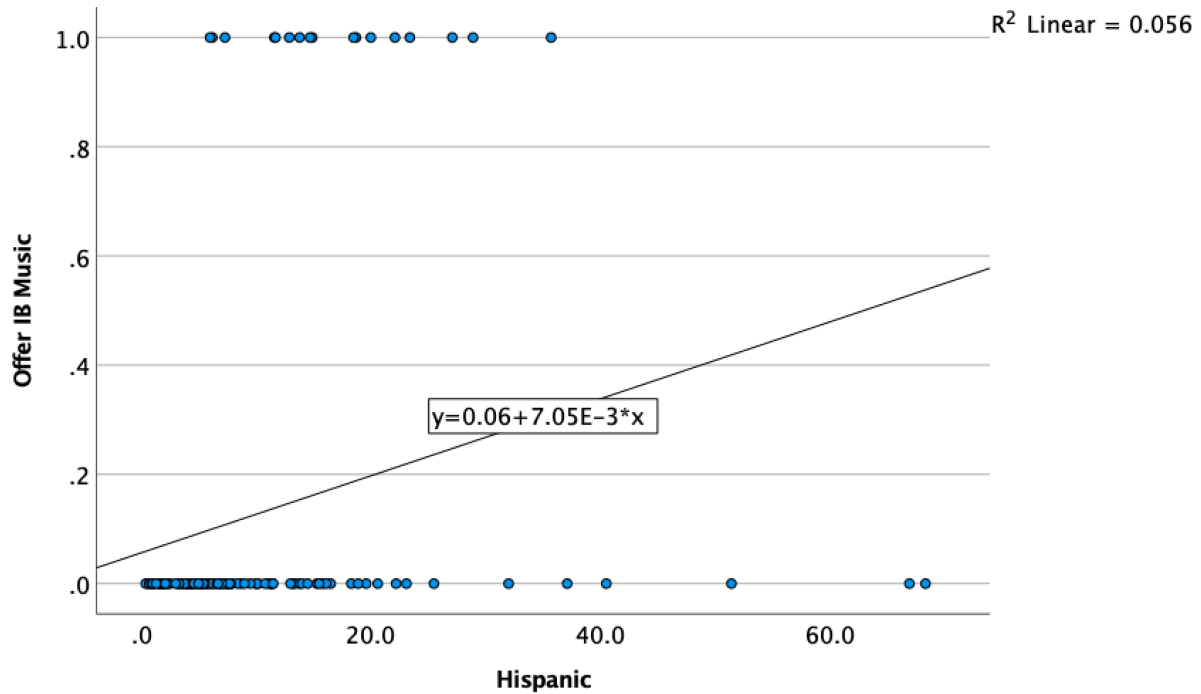
Point Biserial Correlation for Offering International Baccalaureate Music I and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of IB Music and Hispanic student enrollment, $r_{pb}(131) = 0.24$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 134).

Figure 134

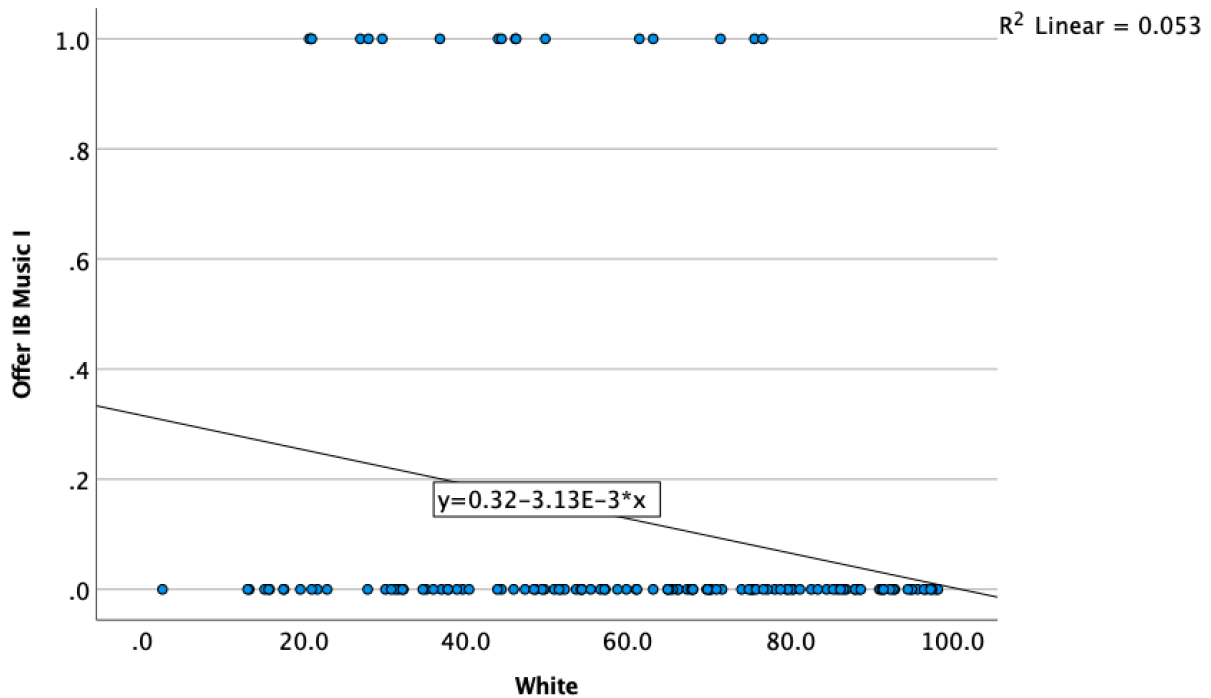
Point Biserial Correlation for Offering International Baccalaureate Music and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering IB Music I and White student enrollment, $r_{pb}(131) = -0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 135).

Figure 135

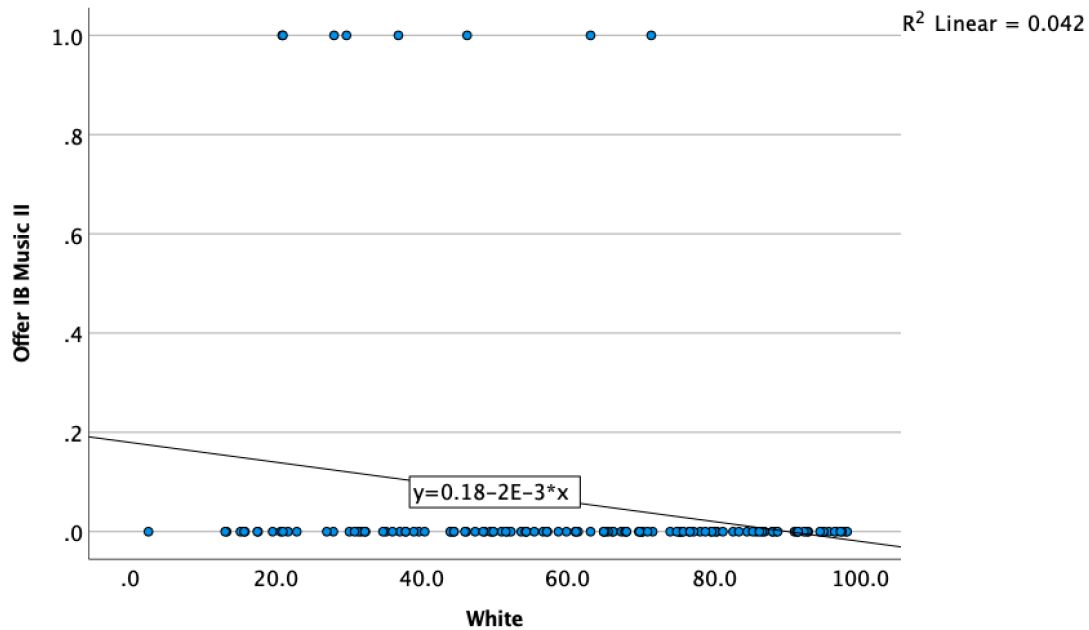
Point Biserial Correlation for Offering International Baccalaureate Music I and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering IB Music II and White student enrollment, $r_{pb}(131) = -0.21$, $p < 0.01$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 136).

Figure 136

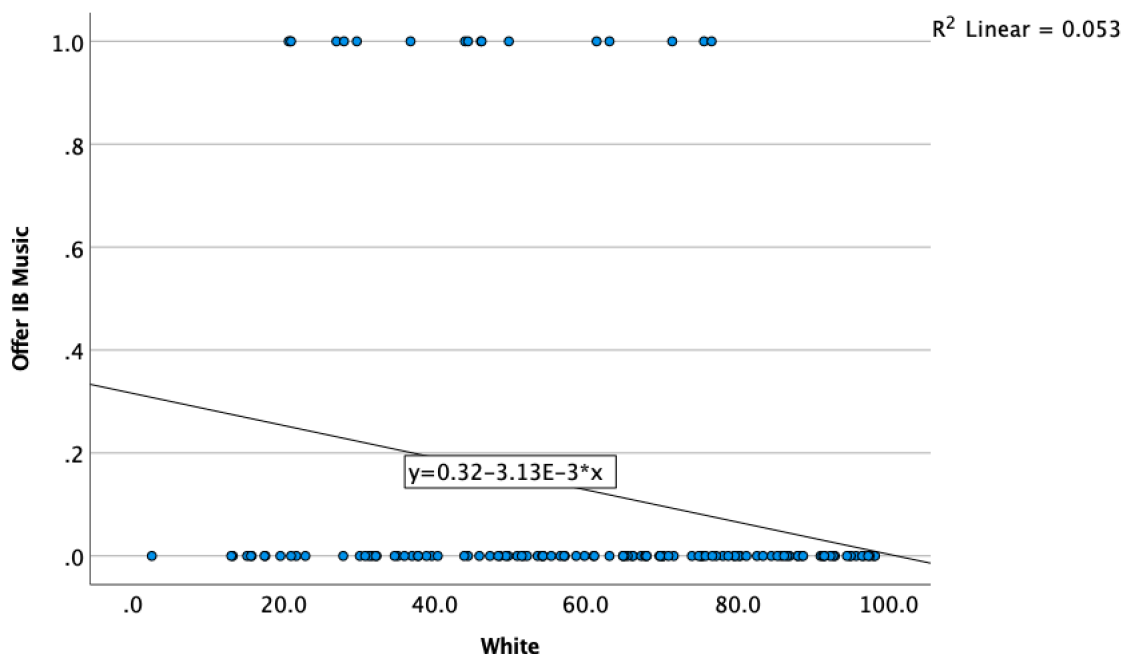
Point Biserial Correlation for Offering International Baccalaureate Music II and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of IB Music and White student enrollment, $r_{pb}(131) = -0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 137).

Figure 137

Point Biserial Correlation for Offering at Least One Level of International Baccalaureate Music and Percentages of White Students in Virginia School Divisions (N = 131)



IB Music Summary. IB Music was the eighth offered course type in Virginia, 17 school divisions (13% of all) offered at least one level of IB Music.

IB Music courses were offered across Virginia significantly disproportionally among all localities: city, rural, and suburban school divisions offered IB Music courses significantly less frequently than expected, and rural school divisions offered significantly less levels of IB Music than expected. Most school divisions offering IB Music courses were clustered in the Southeast, the East, and the North of the state; these school divisions were located in large metropolitan areas, the Northern Virginia, Charlottesville, the state capitol Richmond, and the Tidewater area.

Larger school divisions were most likely to offer IB Music courses. Whereas school divisions offering IB Music courses were likely to have a better ability to provide for public

education and enrolled less low SES students, these associations were weak. School divisions offering IB Music courses were most likely to have larger Asian student populations. While school divisions offering IB Music courses were likely to have more Hispanic and less White students, these associations were weak.

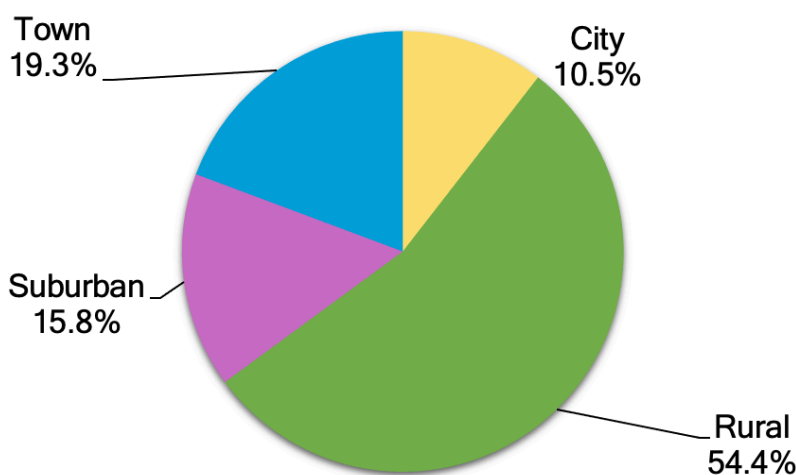
Music Appreciation

Music Appreciation was the fourth offered course in Virginia, 57 school divisions (43.5% of all) offered the course.

Locality. Music Appreciation was offered in all Virginia localities. Six school divisions offering Music Appreciation were city school divisions, 31 were rural, nine were suburban, and 11 were town. 37.5% of cities, 40.3% of rural areas, 50% of suburbs, and 55% of towns offered Music Appreciation. The distribution of localities offering Music Appreciation shown in Figure 138 approximated the statewide locality distribution as 59% rural, 15% town, 14% suburban, and 12% city.

Figure 138

Localities of Virginia School Divisions Offering Music Appreciation (n = 57)

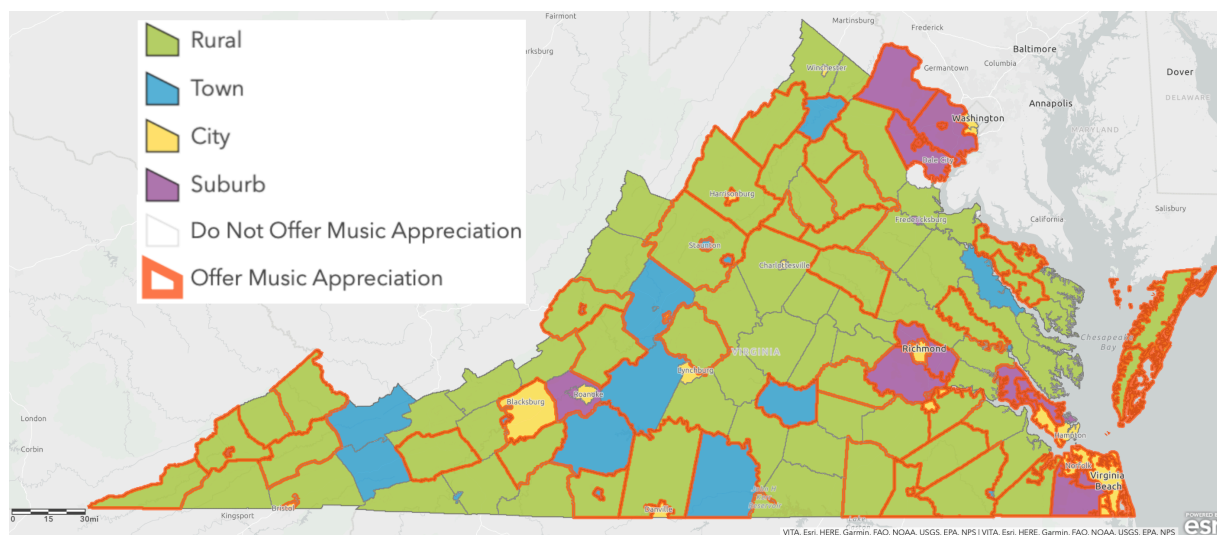


A chi-square test of association calculated in SPSS to explore whether there was a statistically significant relationship between offering Music Appreciation and a school division's locality was nonsignificant.

Most school divisions offering Music Appreciation were clustered across the state. The course was offered in all Virginia's large metropolitan areas, the Northern Virginia, the Tidewater area, and the Richmond area (see Figure 139).

Figure 139

Virginia School Divisions Offering Music Appreciation in High School (n = 57)



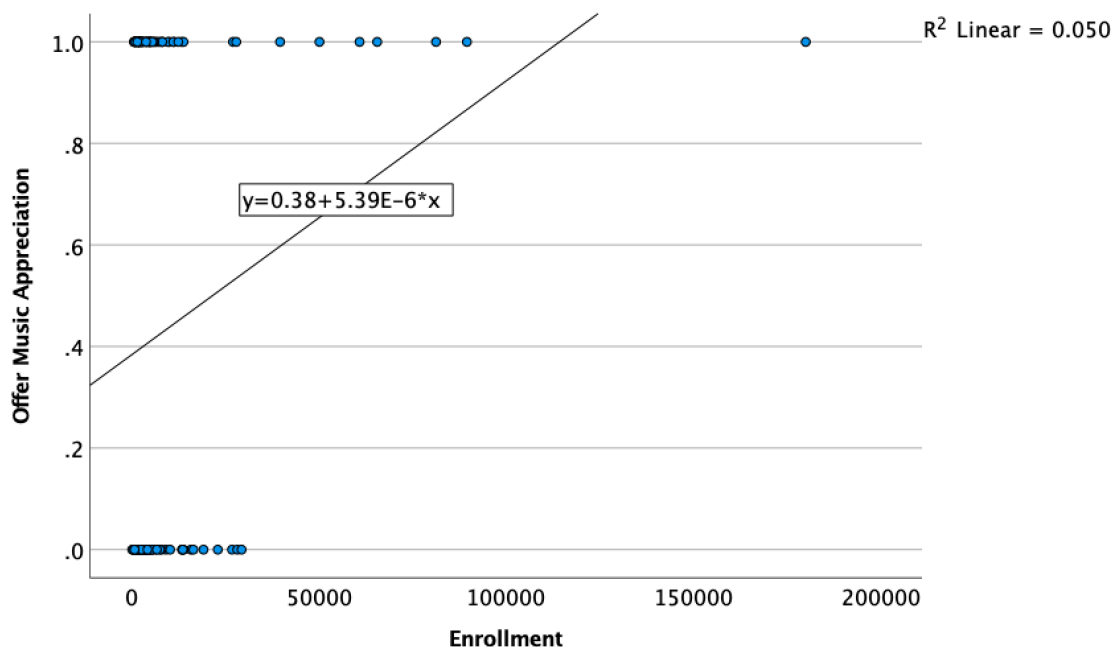
Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com ArcGIS online](https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries). Full data information found at <https://nces.ed.gov/ipeds/data/edge/geographic/districtboundaries>.

Enrollment. Larger Virginia school divisions were likely to offer Music Appreciation. The enrollment average enrollment for school divisions offering Music Appreciation (14,841) was 1.6 times the statewide enrollment average (9,560) and was 2.7 times the enrollment average for school divisions not offering the course (5,493). The enrollment average for school divisions

not offering Music Appreciation (5,493) was 1.7 times below the statewide enrollment average (9,560). Pearson product moment point biserial correlation test calculated in SPSS to assess significance of relationships between enrollment and offering Music Appreciation was significant. There was a significant positive correlation between offering Music Appreciation and enrollment in Virginia school divisions, $r_{pb}(131) = 0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 140).

Figure 140

Point Biserial Correlation for Offering Music Appreciation and Enrollment in Virginia School Divisions (N = 131)



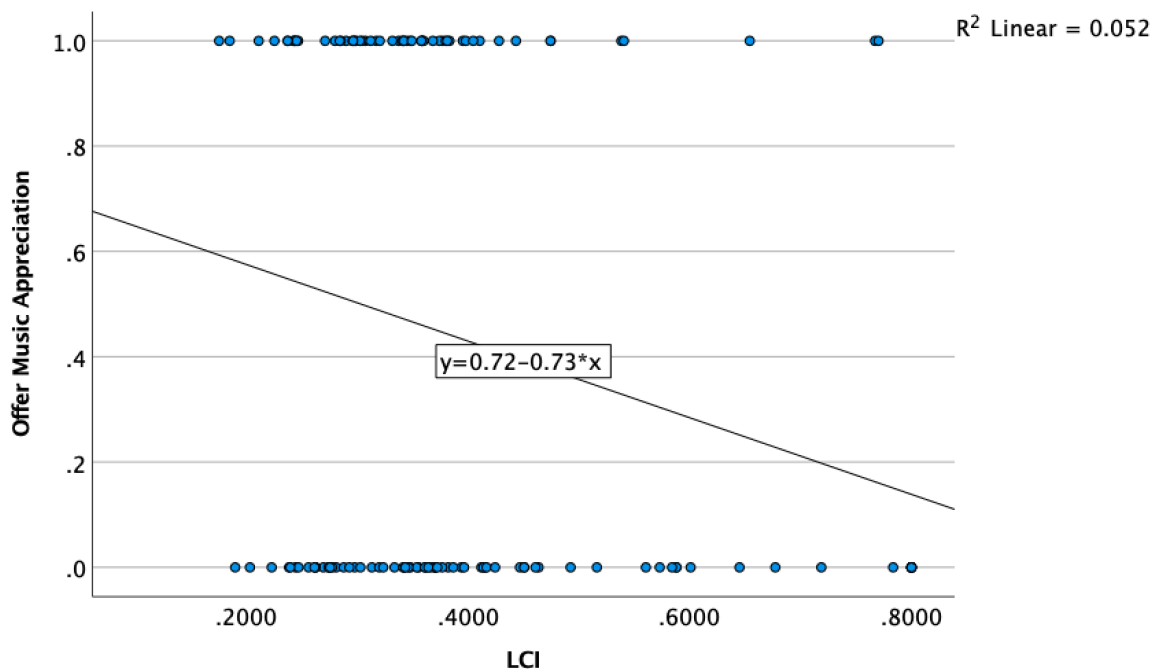
LCI. Virginia school divisions less capable of funding public education than an average school division in the state were likely to offer Music Appreciation. The LCI average for school divisions offering Music Appreciation (.3524) was .0401 below the statewide average LCI (.3925) and was .0711 below the average LCI for school divisions not offering the course

(.4235). The LCI average for school divisions not offering Music Appreciation (.4235) was .0310 above the statewide average LCI (.3925).

Pearson product moment point biserial correlation was calculated in SPSS to assess significance of relationships between Virginia school divisions' LCI's and offering Music Appreciation. The test was significant. There was a significant negative correlation between offering Music Appreciation and LCI, $r_{pb}(131) = 0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 141).

Figure 141

Point Biserial Correlation for Offering Music Appreciation and Local Composite Indexes of Virginia School Divisions (N = 131)



Low Student SES. Virginia school divisions offered Music Appreciation regardless of the number of low SES students. School divisions that offered Music Appreciation enrolled

48.82% of low SES students, school divisions that did not offer Music Appreciation enrolled 48.7% of low SES students, and the average statewide low student SES was 48.75%. These percentages were very similar. Pearson product moment point biserial correlation calculated in SPSS to assess significance of relationships between percentages of low SES students and offering Music Appreciation in Virginia school divisions was nonsignificant.

Race/Ethnicity. Analyses of frequencies revealed that student race/ethnicity weakly associated with offering Music Appreciation in Virginia. All but one race/ethnicity averages for school divisions that offered the course and for school divisions that did not offer the course approximated state averages. One gap (1.3 times) was between the average enrollment of Native Hawaiian students in school divisions offering Music Appreciation (0.15%) and the statewide average for Native Hawaiian students (0.113%; see Table 31).

Table 31

Student Race/Ethnicity Averages for Virginia School Divisions Offering and Not Offering Music Appreciation (N = 131)

Asian %		American Indian %		Black %		Hispanic %		Multiple Races %		Native Hawaiian %		White %	
No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
1.62	2.3	0.3	0.28	20.18	24.14	10.98	9.68	5.86	5.73	0.09	0.15	60.99	57.72

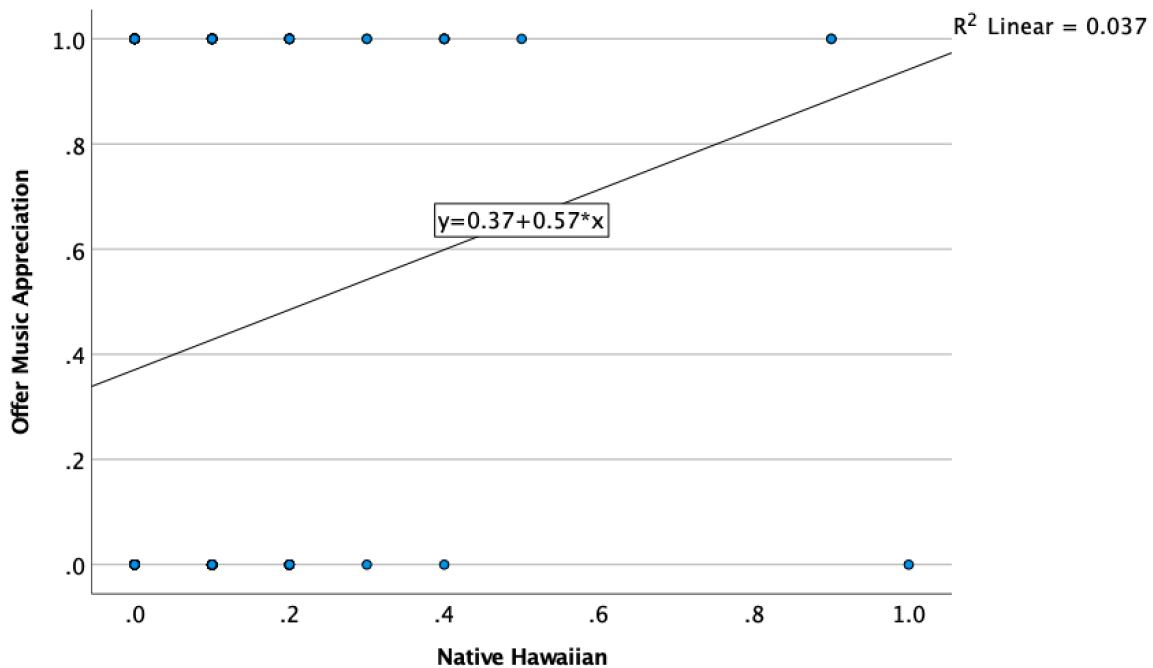
Note. 1.917% of students in Virginia school divisions were Asian, 0.29% were American Indian, 21.902% were Black, 10.415% were Hispanic, 5.801% were Multiple Races, 0.113% were Native Hawaiian, and 59.567% were White.

Pearson product moment point biserial correlation were calculated in SPSS to assess significance of relationships between race/ethnicity and offering Music Appreciation in Virginia. There was a significant positive correlation between offering Music Appreciation and Native

Hawaiian student population average, $r_{pb}(131) = 0.19$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 142).

Figure 142

Point Biserial Correlation for Offering Music Appreciation and Percentages of Native Hawaiian Students in Virginia School Divisions (N = 131)



Music Appreciation Summary. Music Appreciation was fourth offered high school music course in Virginia, 43.5% of school divisions offered the course. Music Appreciation was offered in all Virginia localities. School divisions offering Music Appreciation were clustered around the state; all large metropolitan areas offered the course. Larger school divisions were likely to offer Music Appreciation, but the association was weak. School divisions that were less capable to provide for public education were likely to offer Music Appreciation, but the association was weak. School divisions enrolling more Native Hawaiian students than an average Virginia school division offered Music Appreciation, but the association was weak.

Music Technology

Music Technology was the ninth offered course type in Virginia, 14 school divisions (10.7% of all) offered at least one level of Music Technology.

Locality. Music Technology courses were offered in all Virginia localities. 25% of cities, 7.8% of rural areas, 16.7% of suburbs, and 14% of towns offered at least one level of Music Technology and Music Technology I. 12.5% of city, 2.6% of rural, and 11.1% of suburban school divisions offered Music Technology II (see Table 32).

Table 32

Frequencies of Offering Music Technology Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

Course	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer Music Technology	12	4	71	6	15	3	19	1	117	14
Music Technology I	12	4	71	6	15	3	19	1	117	14
Music Technology II	14	2	75	2	16	2	20	0	125	6

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

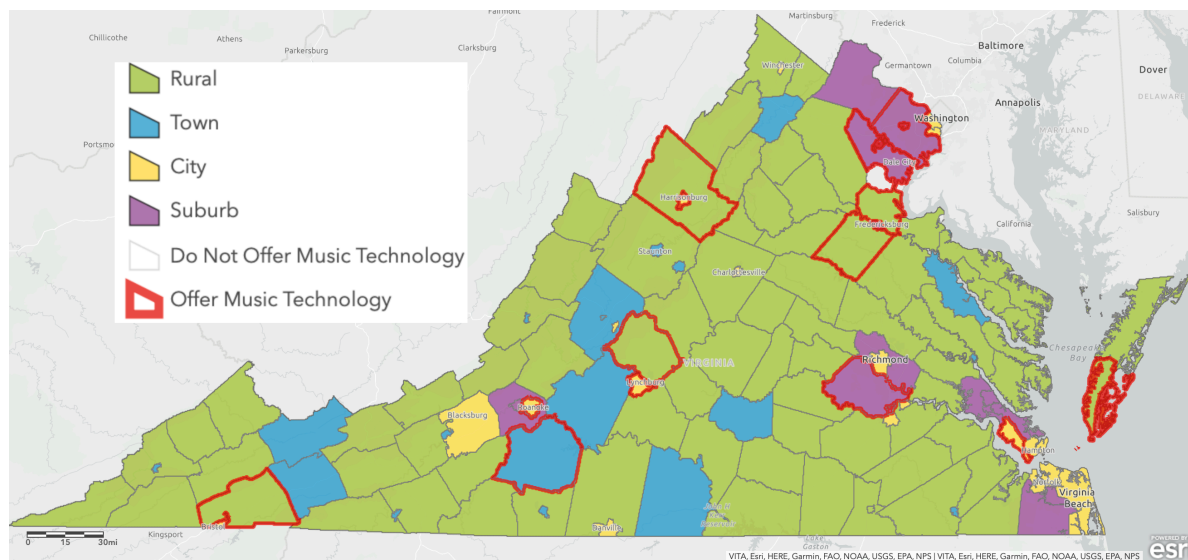
Music Technology courses were offered disproportionally among Virginia localities. 28.6% of school divisions offered at least one level of Music Technology and Music Technology I are city, 42.9% were rural, 21.4% were suburban, and 7.1% were town. 33% of school divisions offering Music Technology II were city, 33.3% were rural, and 33.3% were suburban. These percentages differed from the statewide distribution of school divisions' localities: 12% city, 59% rural, 14% suburban, and 15% town.

A nonparametric independent-samples Kruskal-Wallis test performed in SPSS to examine if Music Technology courses were offered across Virginia localities disproportionately was nonsignificant ($p = 0.128$). Chi-square tests of association calculated in SPSS to explore whether there was a statistically significant relationship between offering a particular Music Technology course and a school division's locality were nonsignificant.

Figure 143 shows that school divisions offering Music Technology were dispersed throughout the state; one cluster of school divisions was observed in the Northern Virginia, including, Fairfax County, Prince William County, Stafford County, and Spotsylvania County.

Figure 143

Virginia School Divisions Offering Music Technology in High School ($n = 14$)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com ArcGIS online](https://nces.ed.gov/programs/edge/Geographic/DistrictBoundaries). Full data information found at <https://nces.ed.gov/programs/edge/Geographic/DistrictBoundaries>.

Enrollment. Larger Virginia school divisions were likely to offer Music Technology courses. The enrollment averages for school divisions offering Music Technology I (33,467),

Music Technology II (37,213), and at least one level of Music Technology (33,467) were 3.5, 3.9, and 3.5 times the statewide enrollment average (9,560), respectively. The enrollment averages for school divisions not offering Music Technology I (6,699), Music Technology II (8,233), and at least one level of Music Technology (6,699) were 2,861, 1,327, and 2,861 below the statewide enrollment average (9,560), respectively. The enrollment averages for school divisions offering Music Technology I (33,467), Music Technology II (37,213), and at least one level of Music Technology (33,467) were almost 4-5 times the corresponding enrollment averages for not offering school divisions (6,699, 8,233, and 6,699), respectively (see Table 33).

Table 33

Enrollment Averages for Virginia School Divisions Offering and Not Offering Music Technology Courses (N = 131)

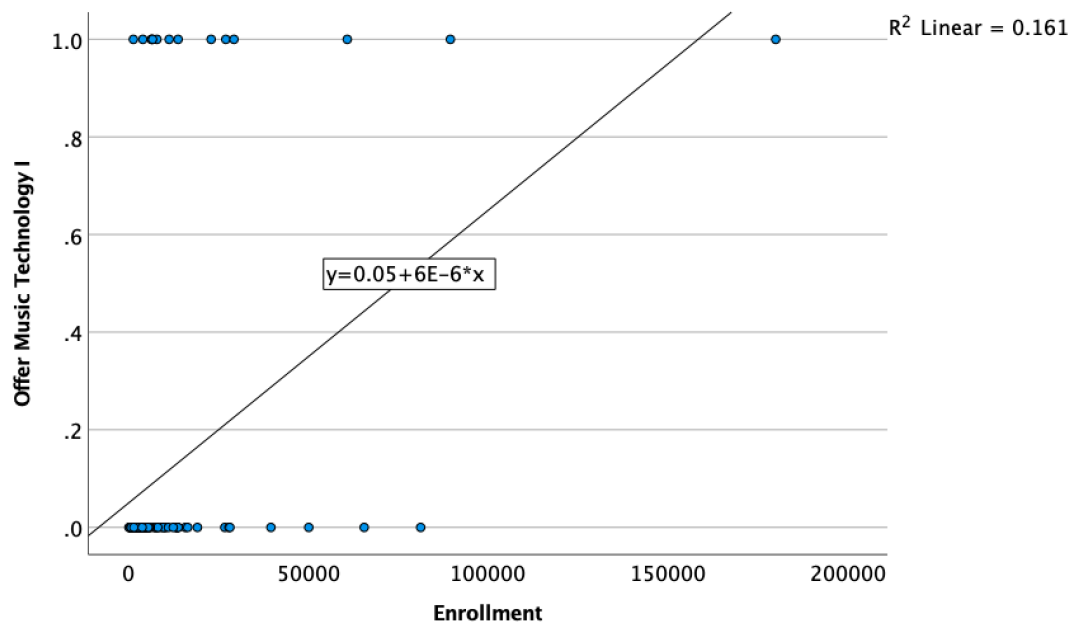
Course	Average Enrollment	
	No	Yes
Music Technology I	6,699	33,467
Music Technology II	8,233	37,213
Music Technology	6,699	33,467

Note. The enrollment average for Virginia school divisions was 9,560.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering Music Technology courses. Three tests were significant. There was a significant positive correlation between Music Technology I and enrollment, $r_{pb}(131) = 0.40, p < 0.01, r^2 = 0.16$; 16% shared variance indicated a moderate relationship between the two variables (see Figure 144).

Figure 144

Point Biserial Correlation for Offering Music Technology I and Enrollment in Virginia School Divisions (N = 131)

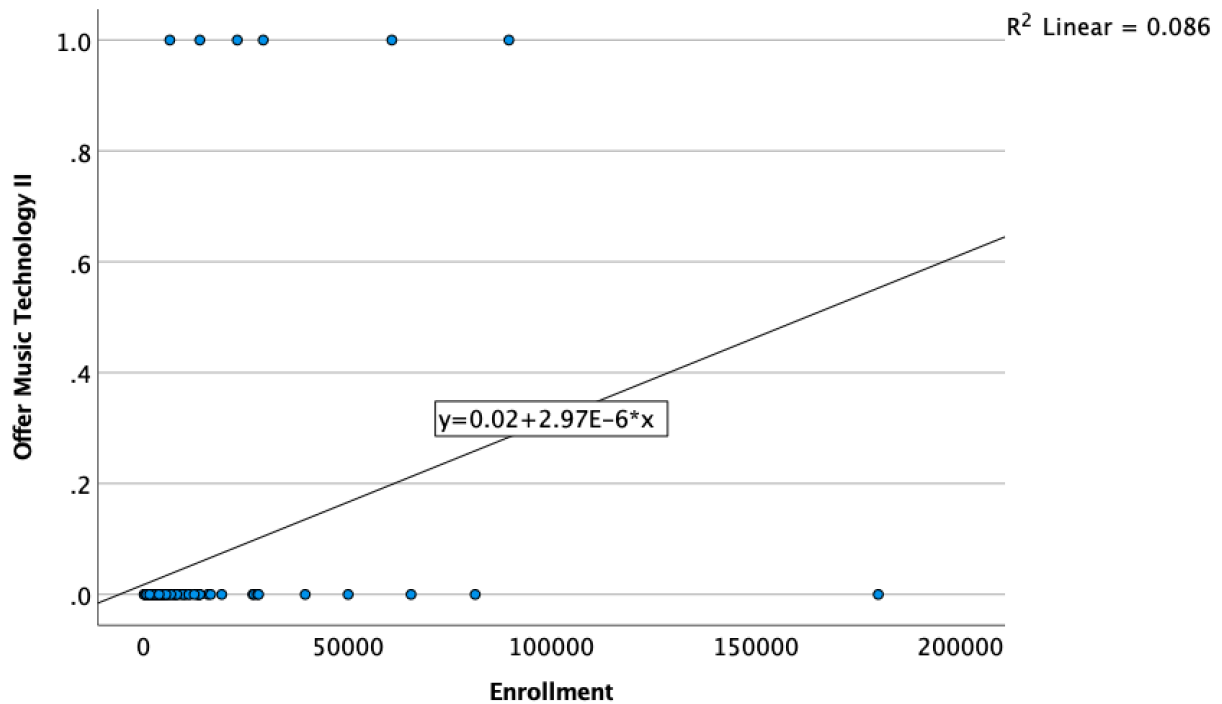


There was a significant positive correlation between Music Technology II and enrollment, $r_{pb}(131) = 0.29$, $p < 0.01$, $r^2 = 0.09$; 9% shared variance indicated a moderate relationship between the two variables (see Figure 145).

Figure 145

Point Biserial Correlation for Offering Music Technology II and Enrollment in Virginia School

Divisions (N = 131)

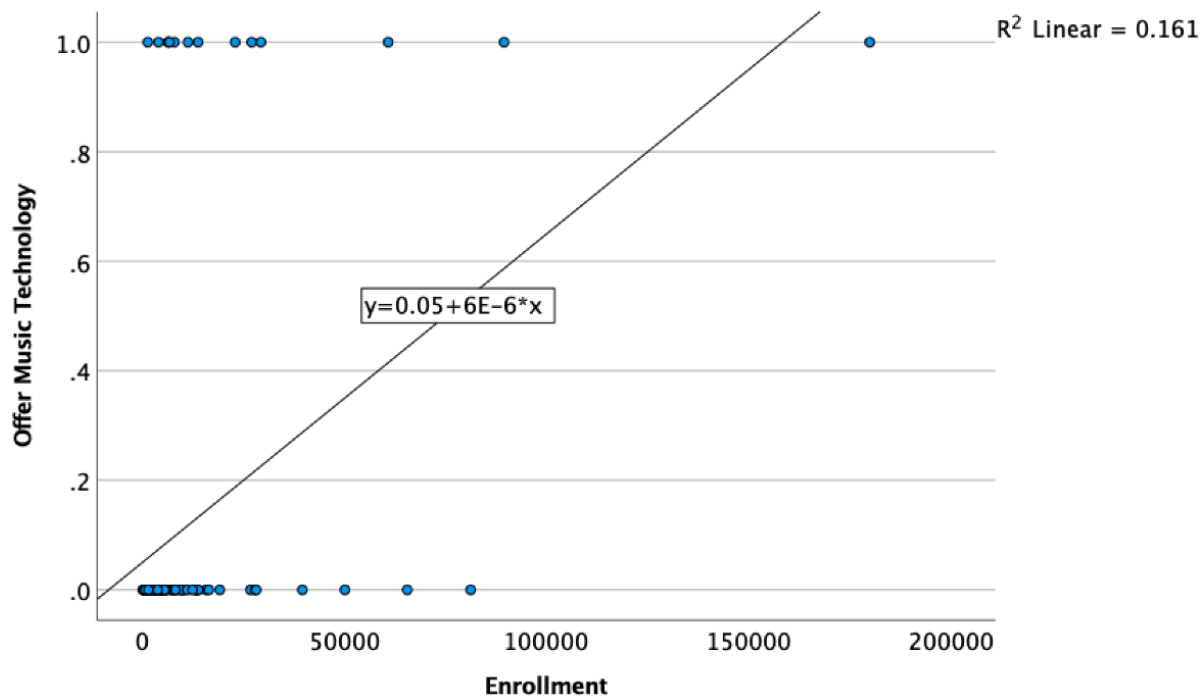


There was a significant positive correlation between offering at least one level of Music Technology and enrollment, $r_{pb}(131) = 0.40$, $p < 0.01$, $r^2 = 0.16$; 16% shared variance indicated a moderate relationship between the two variables (see Figure 146).

Figure 146

Point Biserial Correlation for Offering Music Technology and Enrollment in Virginia School

Divisions (N = 131)



LCI. Virginia school divisions' LCIs did not associate with offering Music Technology. LCI averages for school divisions offering the courses and for school divisions not offering the courses approximated the statewide average LCI (see Table 34).

Table 34

Local Composite Index Averages for Virginia School Divisions Offering and Not Offering Music

Technology Courses (N = 131)

Courses	Average LCI	
	No	Yes
Music Technology I	.3937	.3821
Music Technology II	.3942	.3587
Music Technology	.3938	.3821

Note. The average LCI for Virginia school divisions was .3925.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between LCI and offering Music Technology courses were nonsignificant.

Low Student SES. Percentages of low SES students in Virginia school divisions did not associate with offering Music Technology. Low student SES averages for school divisions offering Music Technology were below the statewide average (48.75%) by less than 2%. Low student SES averages for school divisions not offering these courses deviated from the statewide average (48.75%) by less than 1% (see Table 35).

Table 35

Low Student Socio-Economic Status Averages for Virginia School Divisions Offering and Not Offering Music Technology Courses (N = 131)

Courses	Average Low Student SES	
	No	Yes
Music Technology I	48.57%	50.27%
Music Technology II	48.82%	47.42%
Music Technology	48.57%	50.27%

Note. The low student socio-economic status average for Virginia school divisions was 48.75%.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between LCI and offering Music Technology courses were nonsignificant.

Race/Ethnicity. Virginia school divisions with larger Asian and Hispanic student populations and with less White students were likely to offer Music Technology courses. The rest of the race/ethnicity averages for school divisions offering and not offering Music Technology courses were close to corresponding statewide averages.

Asian. The Asian student averages for school divisions offering Music Technology I (3.79%), offering Music Technology II (4.23%), and offering at least one level of Music Technology (3.79%) were each double the statewide average of Asian students (1.917%). The

Asian student averages for school divisions not offering Music Technology I (1.69%), not offering Music Technology II (1.81%), and not offering at least one level of Music Technology (1.69%) were only slightly below the statewide Asian student population average (1.917%).

Hispanic. The averages of Hispanic students for school divisions offering Music Technology I (18.99%), Music Technology II (27.28%), and at least one level of Music Technology (18.99%) were 1.8, 2.6, and 1.8 times the statewide average of Hispanic students (10.415%). The averages of Hispanic students for school divisions not offering Music Technology I (9.29%), Music Technology II (9.61%) and at least one level of Music Technology (9.39%) were 1.02%, 0.8%, and 1.02% below the statewide average of Hispanic students (10.415%). The averages of Hispanic students for school divisions offering Music Technology I and at least one level of Music Technology (18.99% each) were two times the corresponding averages for school divisions not offering the courses (9.29% each). The average of Hispanic students for school divisions offering Music Technology II (27.28%) was 2.8 times the corresponding average for school divisions not offering the course (9.61%).

White. The averages of White students for school divisions offering Music Technology I and a least one level of Music Technology (47.19% each), and Music Technology II (38.7%) were 12.38% and 20.87% below the statewide average of White students (59.567%), respectively. The averages of White students for school divisions not offering Music Technology I and Music Technology (61.05% each) and Music Technology II (60.57%) were 1.5% and 1% above the statewide average of White students (59.567%), respectively. The averages of White students for school divisions not offering Music Technology I and at least one level of Music Technology (61.05% each) exceeded the corresponding averages for school divisions offering the course (47.19% each) by 11.9%, respectively. The average of White students for school

divisions not offering Music Technology II (60.57%) was 1.6 times the corresponding average of White students for school divisions offering the course (38.7%) (see Table 36).

Table 36

Student Race/Ethnicity Averages for Virginia School Divisions Offering and Not Offering Music Technology Courses (N = 131)

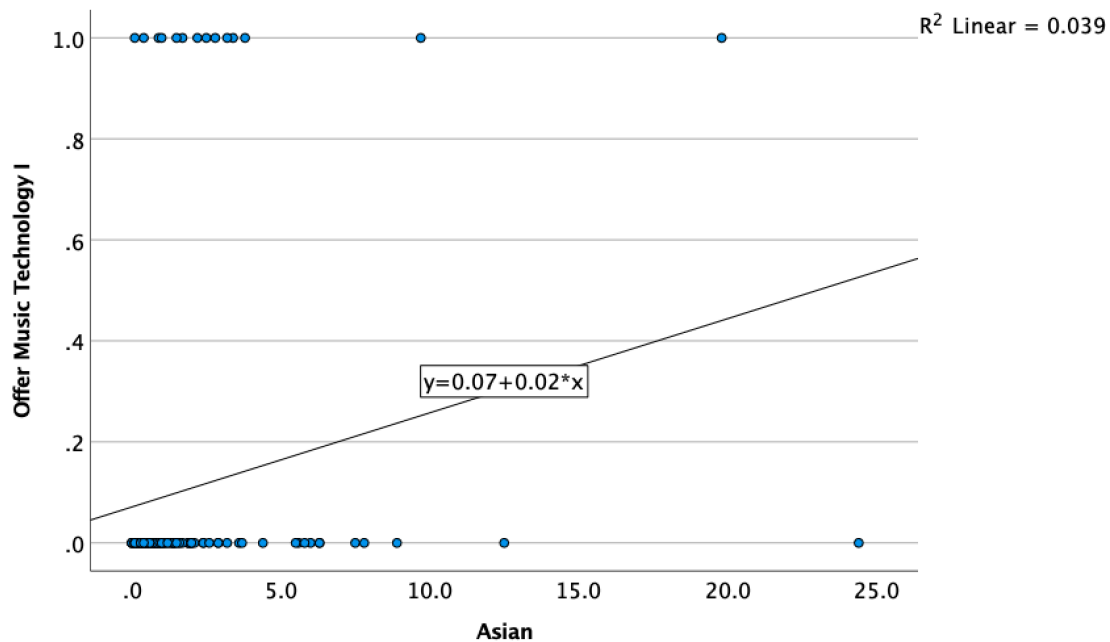
Course	Asian %		American Indian %		Black %		Hispanic %		Multiple Races %		Native Hawaiian %		White %	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Music Technology I	1.69	3.79	0.29	0.27	21.74	23.27	9.39	18.99	5.74	6.35	0.11	0.13	61.05	47.19
Music Technology II	1.81	4.23	0.29	0.22	21.84	23.23	9.61	27.28	5.78	6.2	0.11	0.17	60.57	38.7
Offer Music Technology	1.69	3.79	0.29	0.27	21.74	23.27	9.39	18.99	5.74	6.35	0.11	0.13	61.05	47.19

Note. 1.917% of students in Virginia school divisions were Asian, 0.29% were American Indian, 21.8902% were Black, 10.415% were Hispanic, 5.801% were Multiple Races, 0.113% were Native Hawaiian, and 59.567% were White.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between race/ethnicity percentages and offering Music Technology courses in Virginia school divisions. Eight tests were significant. There was a significant positive correlation between offering Music Technology I and Asian student enrollment, $r_{pb}(131) = 0.20$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 147).

Figure 147

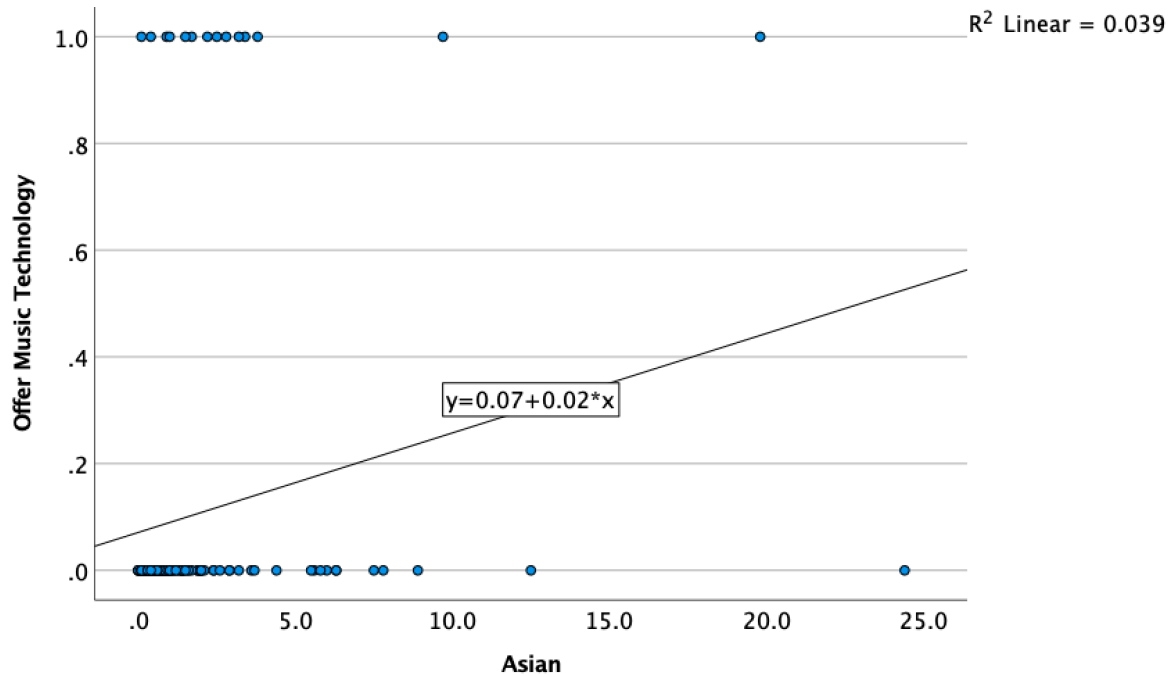
Point Biserial Correlation for Offering Music Technology I and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Music Technology and Asian student enrollment, $r_{pb}(131) = 0.20$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 148).

Figure 148

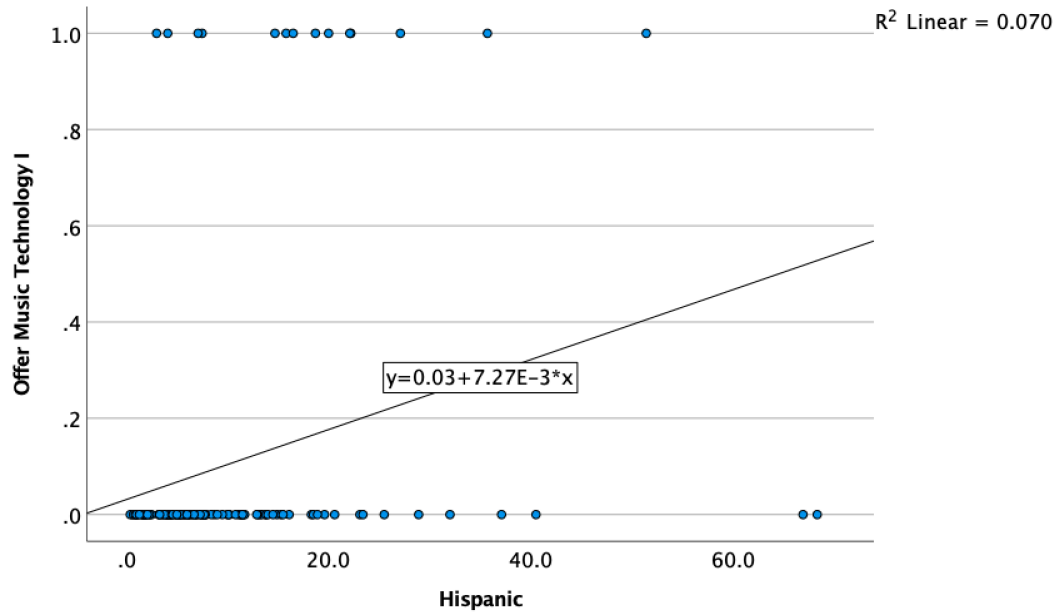
Point Biserial Correlation for Offering Music Technology and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Music Technology I and Hispanic student enrollment, $r_{pb}(131) = 0.26, p < 0.01, r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 149).

Figure 149

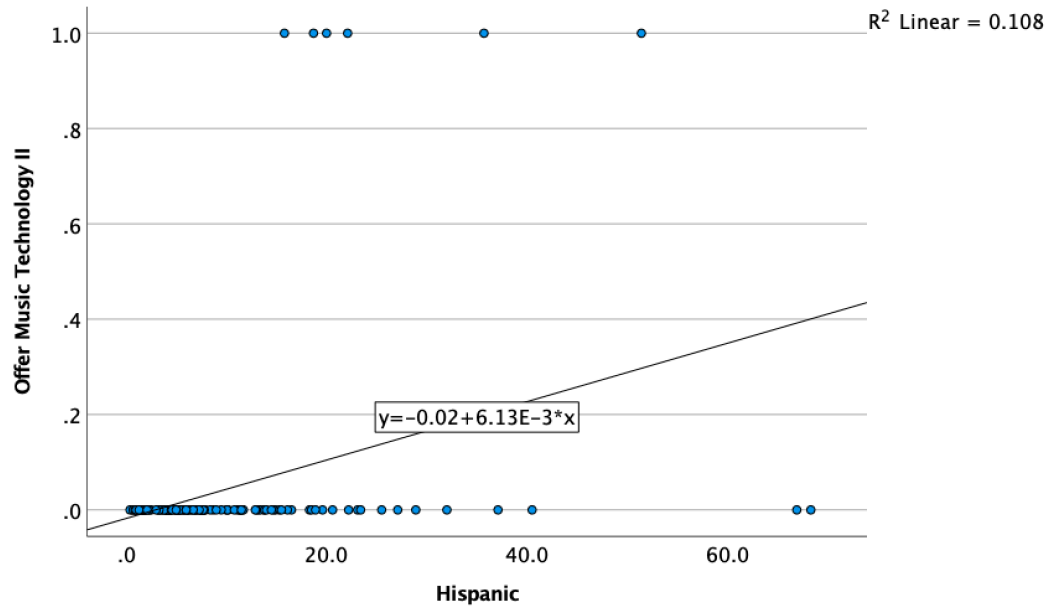
Point Biserial Correlation for Offering Music Technology I and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Music Technology II and Hispanic student enrollment, $r_{pb}(131) = 0.33$, $p < 0.01$, $r^2 = 0.11$; 11% shared variance indicated a moderate relationship between the two variables (see Figure 150).

Figure 150

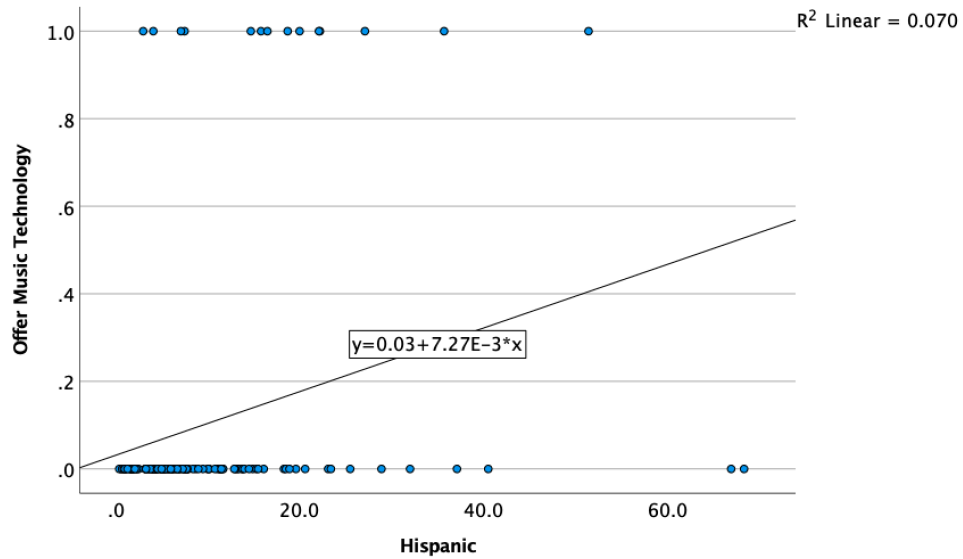
Point Biserial Correlation for Offering Music Technology II and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Music Technology and Hispanic student enrollment, $r_{pb}(131) = 0.26$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 151).

Figure 151

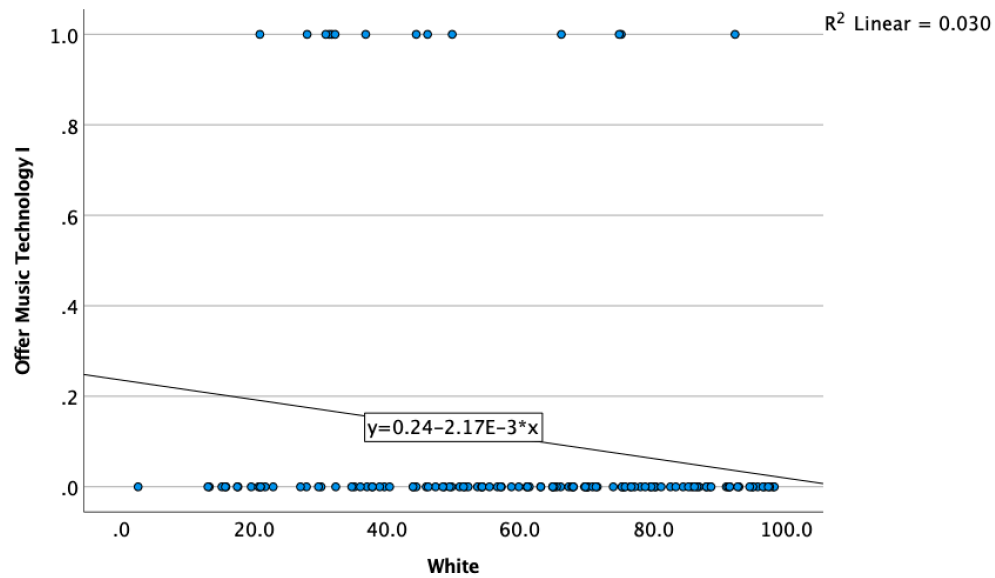
Point Biserial Correlation for Offering Music Technology and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Music Technology I and White student enrollment, $r_{pb}(131) = -0.17$, $p < 0.01$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 152).

Figure 152

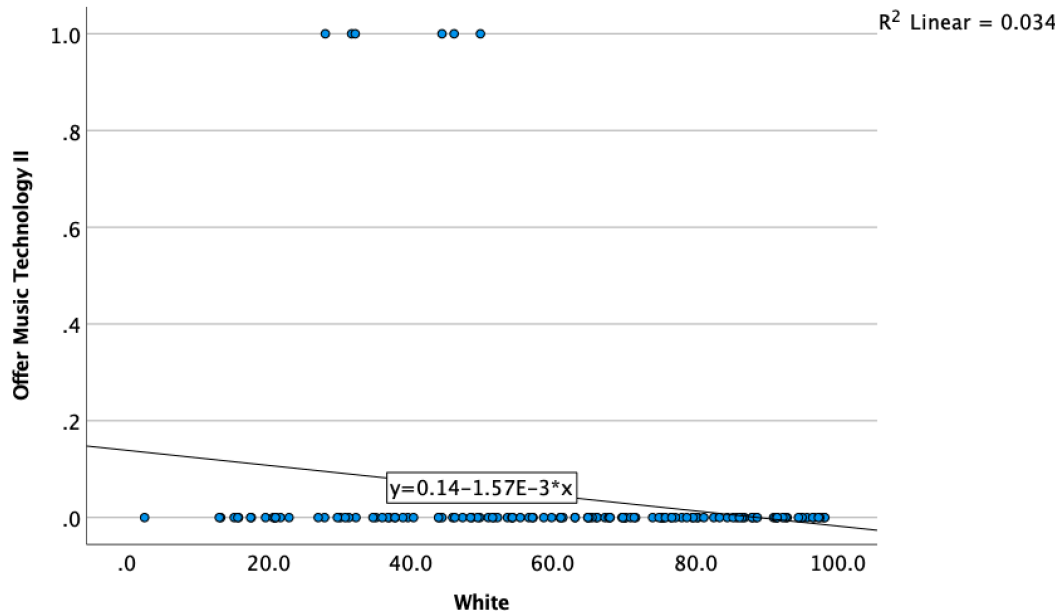
Point Biserial Correlation for Offering Music Technology I and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Music Technology II and White student enrollment, $r_{pb}(131) = -0.19$, $p < 0.01$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 153).

Figure 153

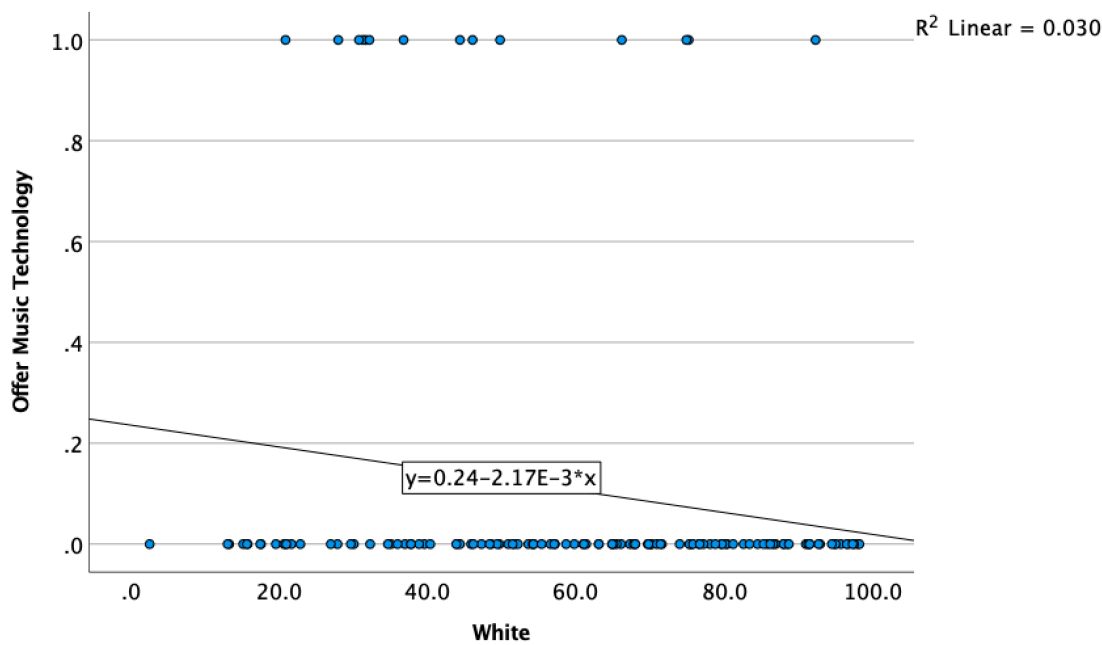
Point Biserial Correlation for Offering Music Technology II and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of Music Technology and White student enrollment, $r_{pb}(131) = -0.17$, $p < 0.01$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 154).

Figure 154

Point Biserial Correlation for Offering Music Technology and Percentages of White Students in Virginia School Divisions (N = 131)



Music Technology Summary. Music Technology was the ninth offered course in Virginia, 10.7% of school divisions offered at least one level of Music Technology. While school divisions offering at least one level of Music Technology were dispersed throughout the state, one cluster of four school divisions was observed in Northern Virginia.

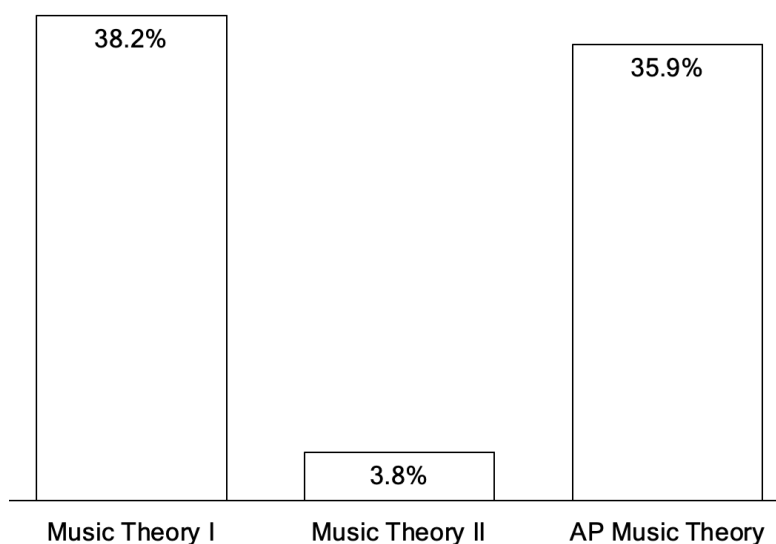
Larger Virginia school divisions were likely to offer Music Technology courses, enrollment averages in school divisions offering Music Technology tripled the statewide average. Low student SES and LCI did not associate with offering Music Technology courses. Virginia school divisions offering Music Technology had significantly more Asian and Hispanic students and significantly less White students, but most of these associations (except for offering Music Technology II and Hispanic student population) were weak.

Music Theory

Music Theory was the third offered course type in Virginia, 74 school divisions (56.5% of all) offered at least one level of Music Theory. 50 school divisions offered Music Theory I, five offered Music Theory II, and 47 offered AP Music Theory. Music Theory II was offered 10 times less frequently than Music Theory I and 9 times less frequently than AP Music Theory (see Figure 155).

Figure 155

Percentages of Virginia School Divisions Offering Music Theory Courses (N = 131)



Locality. Music Theory courses were offered across Virginia disproportionately. Music Theory courses were more frequently offered among Virginia city and suburban school divisions. 81.3% of cities and 83.3% of suburbs offered at least one level of Music Theory, 1.9 times more frequently than rural school divisions (42.9%). AP Music Theory was the most offered Music Theory course among cities (75%), while Music Theory I was the most offered Music Theory course among suburbs (66.7%). Music Theory II was the least offered Music

Theory course across Virginia. Towns did not offer Music Theory II (see Table 37 and Figure 156).

Table 37

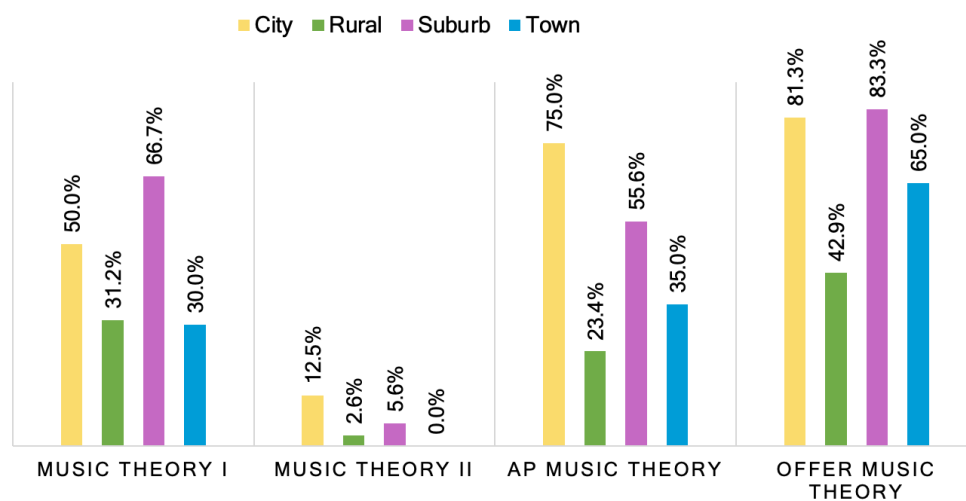
Frequencies of Offering Music Theory Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

Courses	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer Music Theory	3	13	44	33	3	15	7	13	57	74
Music Theory I	8	8	53	24	6	12	14	6	81	50
Music Theory II	14	2	75	2	17	1	20	0	126	5
AP Music Theory	4	12	59	18	8	10	13	7	84	47

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 156

Percentages of Virginia School Divisions Offering Music Theory Courses Statewide and by Locality (N = 131)

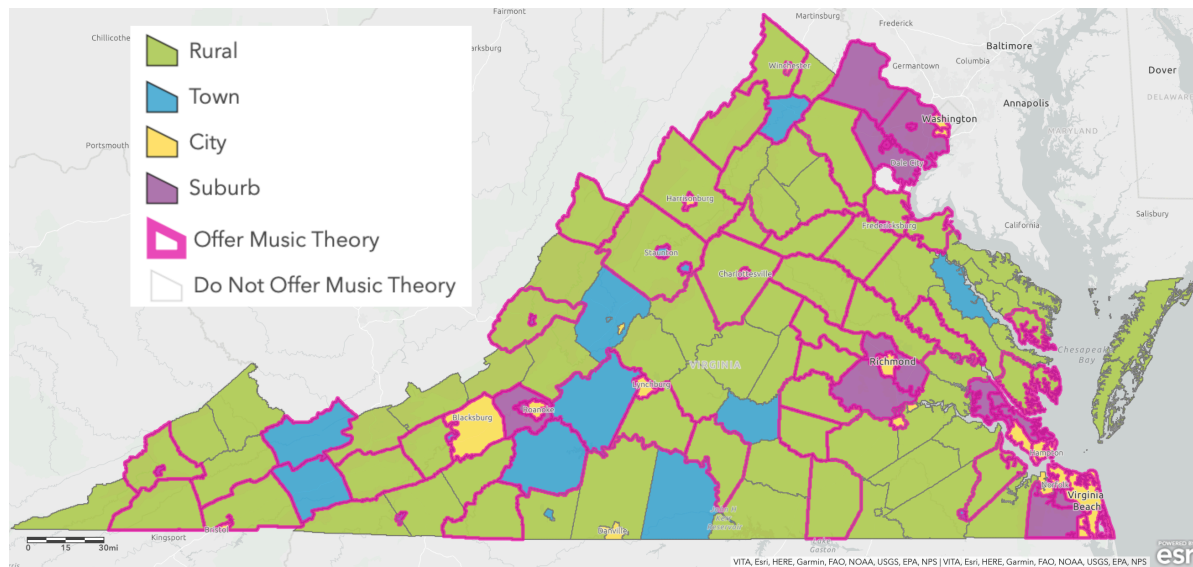


Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 157 represents localities of the school divisions offering at least one level of Music Theory on the map of Virginia; the course was offered in all parts of the state.

Figure 157

Virginia School Divisions Offering Music Theory in High School (n = 74)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com ArcGIS](https://nces.ed.gov/ipeds/data/arcgis/) online. Full data information found at <https://nces.ed.gov/ipeds/data/arcgis/>

City and suburban school divisions offered Music Theory courses at higher rates as compared to rural and town. 12% of Virginia school divisions were located in cities, but city school divisions accounted for 16%, 40%, and 26% school divisions offering Music Theory I, Music Theory II, and AP Music Theory, respectively. 14% of Virginia school divisions were suburban, but 24% of school divisions offering Music Theory I, 20% of school divisions offering Music Theory II, and 21% of school divisions offering AP Music Theory were suburban. While 59% Virginia school divisions were rural, 48% of school divisions offering Music Theory I, 40% of school divisions offering Music Theory II and 38% of school divisions offering AP Music

Theory, respectively, were rural. Additionally, towns did not offer Music Theory II (see Figures 158-160).

Figure 158

Localities of Virginia School Divisions Offering Music Theory I (n = 50)

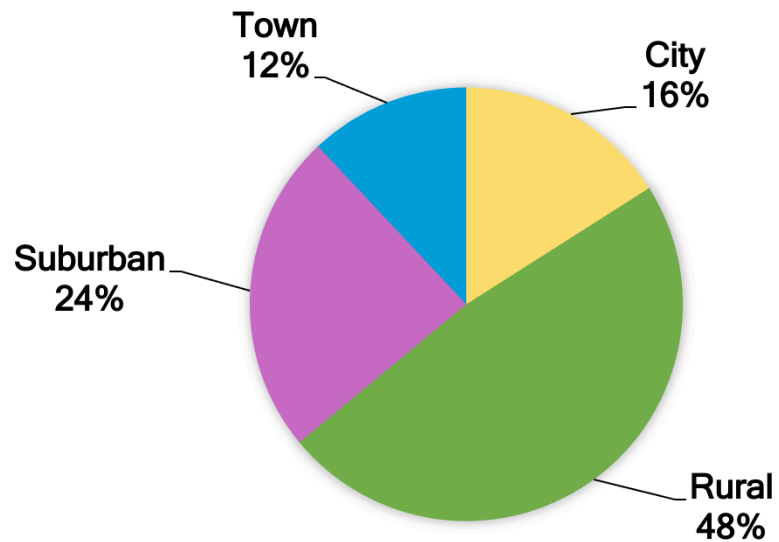


Figure 159

Localities of Virginia School Divisions Offering Music Theory II (n = 5)

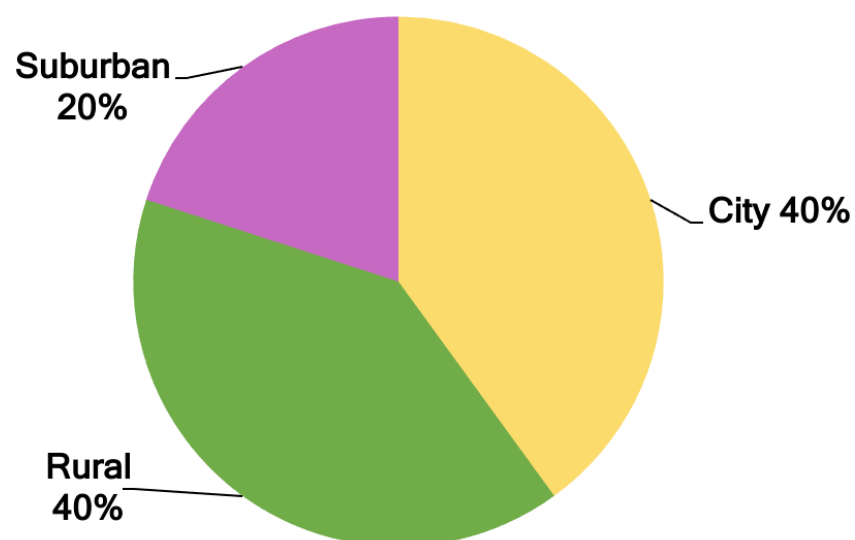
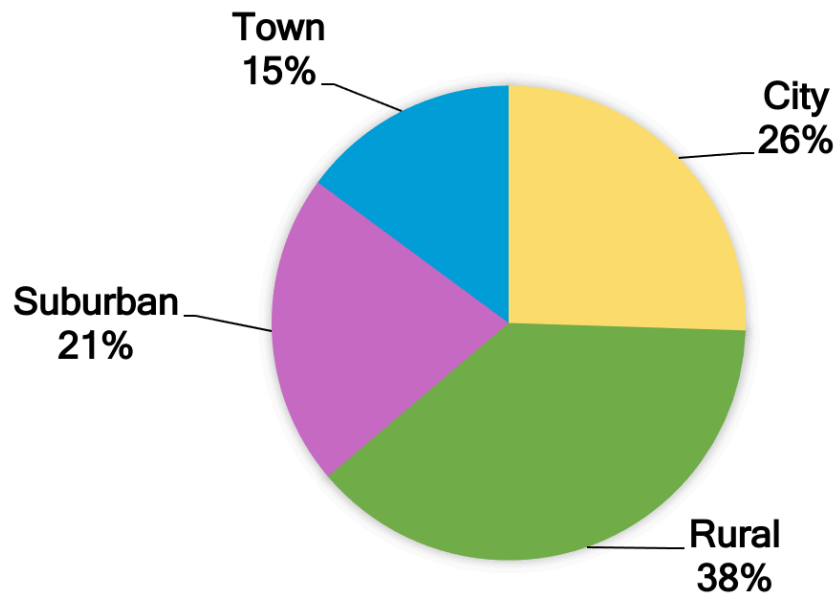


Figure 160

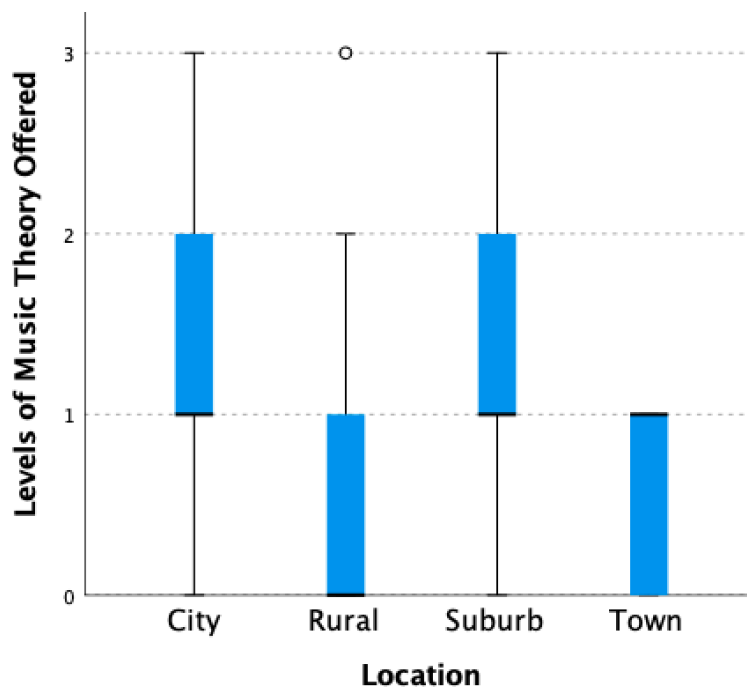
Localities of Virginia School Divisions Offering Advanced Placement Music Theory (n = 47)



To examine whether Music Theory courses were offered significantly disproportionately among Virginia localities, a nonparametric independent-samples Kruskal-Wallis test was performed in SPSS. With an alpha level of 0.05, the test was significant. Music Theory courses were offered significantly disproportionately, $H_{(3)} = 19.51$, $N = 131$, $p < 0.001$, and the effect size was small, $\epsilon^2 = .1501$. Post hoc Dunn's pairwise comparisons administered with the Bonferroni correction revealed that rural school divisions offered significantly less levels of Music Theory than suburban school divisions ($r = -3.39$, $MD = -31.23$, $p = 0.004$), and city school divisions offered significantly more levels of IB Music than rural school divisions ($r = 3.38$, $MD = 32.65$, $p = 0.004$). Figure 161 illustrates the test results.

Figure 161

Independent-Samples Kruskal-Wallis Test for Levels of Music Theory Offered in Virginia School Divisions (N = 131)



To explore whether there was a statistically significant relationship between offering a particular Music Theory course and a school division's locality, chi-square tests of association were calculated in SPSS. Cramer's V indices were used to determine the strength of association; follow up analyses included frequency tables examination. Two tests were significant. A moderate association was found for Music Theory I, $\chi^2(3) = 9.31, p < 0.05, V = 0.27$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for rural and suburban localities: Virginia rural school divisions offered Music Theory I significantly less frequently than expected, while Virginia suburban school divisions offered Music Theory I significantly more frequently than expected.

Enrollment. Larger Virginia school divisions offered Music Theory courses. The enrollment averages for school divisions offering Music Theory I (17,911), Music Theory II

(39,534), AP Music Theory (20,728), and at least one level of Music Theory (14,555) were 1.9, 4.1, 2.2, and 1.5 times the statewide enrollment average (9,560), respectively. The enrollment averages for school divisions not offering Music Theory I (4,405), AP Music Theory (3,311), and at least one level of Music Theory (3,076) were 2.2, 2.9, and 3.1 times the statewide enrollment average (9,560), respectively. The enrollment average for school divisions not offering Music Theory II (8,371) was 1,189 below the statewide average (9,560). The enrollment average for school divisions offering Music Theory I (17,911) was 4.1 times the enrollment average for school divisions not offering the course (4,405). The enrollment average for school divisions offering Music Theory II (39,534) was 4.7 times the enrollment average for school divisions not offering the course (8,371). The enrollment average for school divisions offering AP Music Theory (20,728) was 6.3 times the enrollment average for school divisions not offering the course (3,311). The enrollment average for school divisions offering at least one level of Music Theory (14,555) was 4.7 times the enrollment for school divisions not offering the course (3,076; see Table 38).

Table 38

Enrollment Averages for Virginia School Divisions Offering and Not Offering Music Theory

Courses (N = 131)

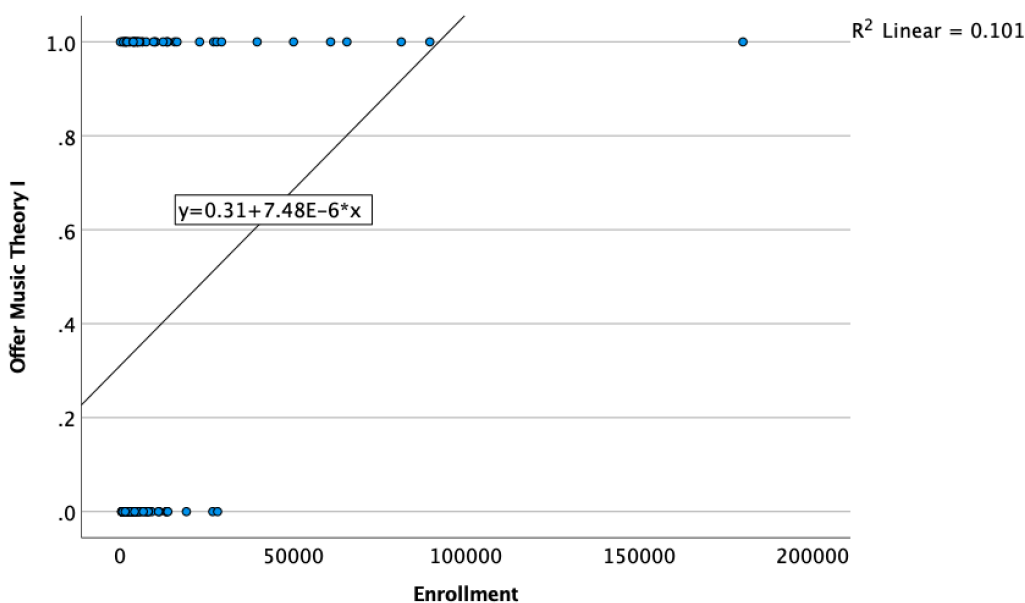
Course	Average Enrollment	
	No	Yes
Music Theory I	4,405	17,911
Music Theory II	8,371	39,534
Advanced Placement Music Theory	3,311	20,728
Offer at Least One Level of Music Theory	3,076	14,555

Note. The average enrollment for Virginia school divisions was 9,560.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering Music Theory courses. All four tests were significant. There was a significant positive correlation between offering Music Theory I and enrollment, $r_{pb}(131) = 0.32, p < 0.01, r^2 = 0.10$; 10% shared variance indicated a moderate relationship between the two variables (see Figure 162).

Figure 162

Point Biserial Correlation for Offering Music Theory I and Enrollment in Virginia School Divisions (N = 131)

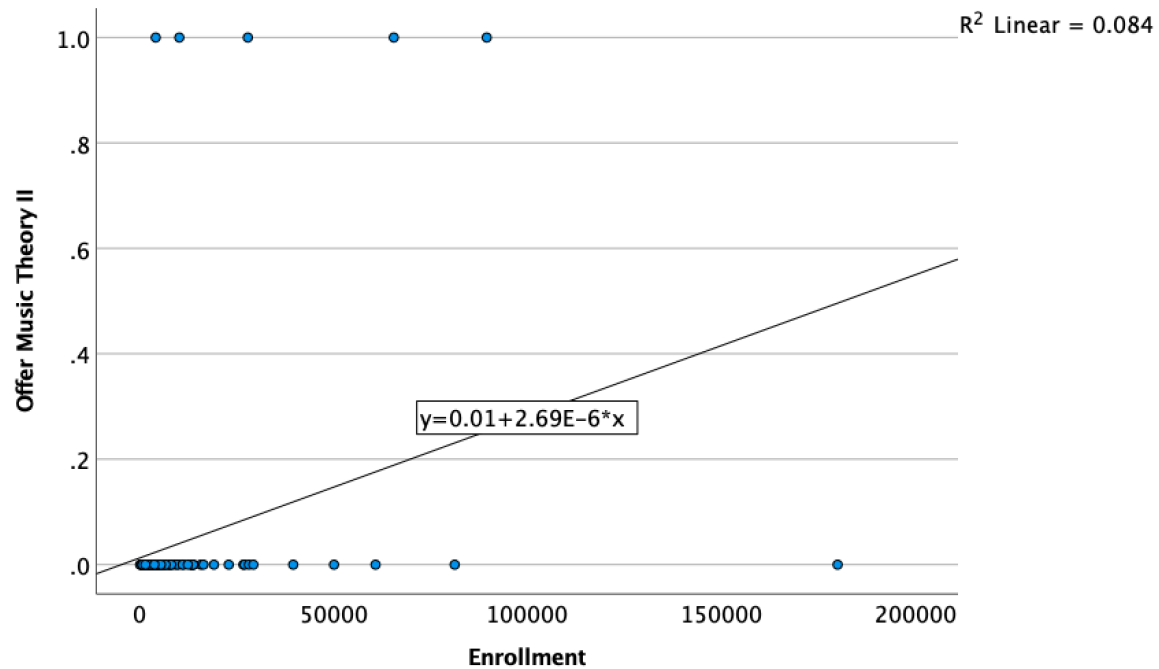


There was a significant positive correlation between offering Music Theory II and enrollment, $r_{pb}(131) = 0.29, p < 0.01, r^2 = 0.08$; 8% shared variance indicated a weak relationship between the two variables (see Figure 163).

Figure 163

Point Biserial Correlation for Offering Music Theory II and Enrollment in Virginia School

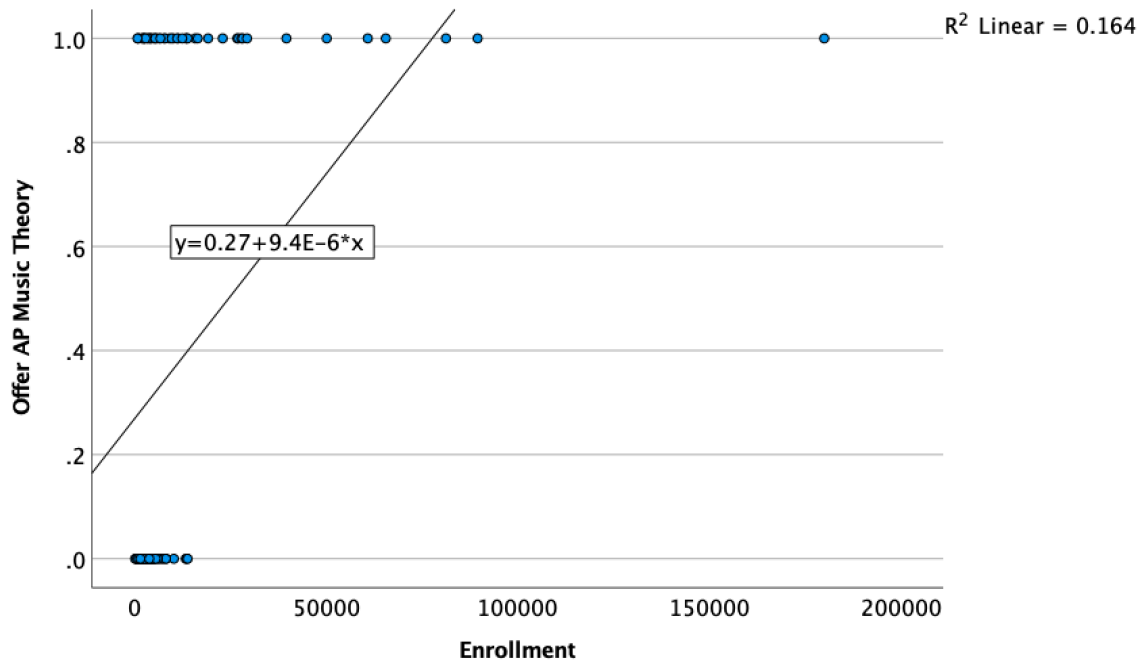
Divisions (N = 131)



There was a significant positive correlation between offering AP Music Theory and enrollment, $r_{pb}(131) = 0.41$, $p < 0.01$, $r^2 = 0.16$; 16% shared variance indicated a moderate relationship between the two variables (see Figure 164).

Figure 164

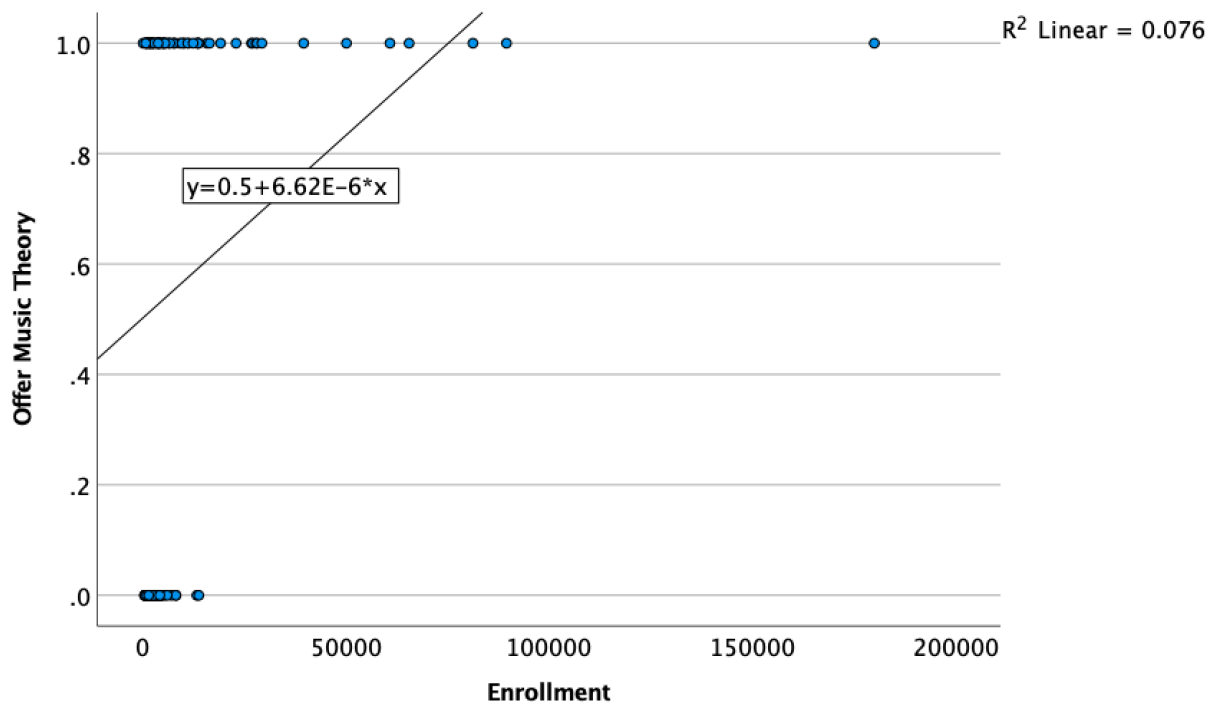
Point Biserial Correlation for Offering Advanced Placement Music Theory and Enrollment in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Music Theory and enrollment, $r_{pb}(131) = 0.28$, $p < 0.01$, $r^2 = 0.8$; 8% shared variance indicated a weak relationship between the two variables (see Figure 165).

Figure 165

Point Biserial Correlation for Offering at Least One Level of Music Theory and Enrollment in Virginia School Divisions (N = 131)



LCI. Virginia school divisions' LCIs did not associate with offering Music Theory courses. The LCI averages for the school divisions offering Music Theory courses exceeded the statewide average (.3925) by .004-.0313 and exceeded corresponding LCI averages for not offering school divisions by .0062-.0443 (see Table 39).

Table 39

Local Composite Index Averages for Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)

Course	Average LCI	
	No	Yes
Music Theory I	.3756	.4199
Music Theory II	.3913	.4238
Advanced Placement Music Theory	.3903	.3965
Offer at Least One Level of Music Theory	.3804	.4019

Note. The average LCI for Virginia school divisions was .3925.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between Virginia school divisions' LCIs and offering Music Theory courses were nonsignificant.

Low Student SES. Virginia school divisions with less economically disadvantaged students were likely to offer Music Theory. Low student SES averages for school divisions offering Music Theory I (44.65%), Music Theory II (39.94%), and AP Music Theory (45.39%) were 2.96-8.81% below the statewide average (48.75%). Differences among low student SES averages for school divisions offering Music Theory I (44.65%), Music Theory II (39.94%), and AP Music Theory (45.79%) and for school divisions not offering these courses (51.28%, 49.1%, and 50.41%, respectively) were 4.62-9.16%. Low student SES averages for school divisions not offering Music Theory I (51.28%), Music Theory II (49.1%), and AP Music Theory (50.41%) were 0.35-3.12% above the statewide low student SES average (48.75%; see Table 40).

Table 40

Low Student Socio-Economic Status Averages for Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)

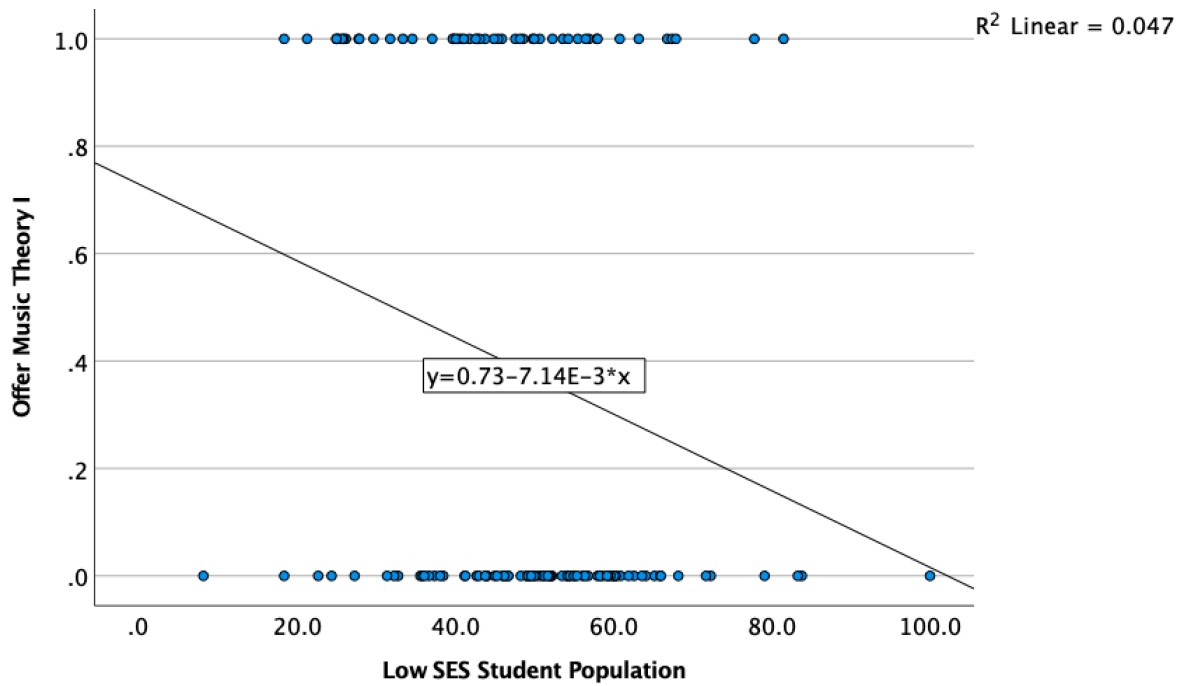
Courses	Average Low Student SES	
	No	Yes
Music Theory I	51.28%	44.65%
Music Theory II	49.1%	39.94%
Advanced Placement Music Theory	50.41%	45.79%
Offer at Least One Level of Music Theory	51.87%	46.35%

Note. The average low student SES for Virginia school divisions was 48.75%.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between Virginia school divisions' low student SES enrollment and offering Music Theory courses. Two tests were significant. There was a significant negative correlation between offering Music Theory I and low student SES, $r_{pb}(131) = -0.22, p < 0.05, r^2 = 0.05$; 5% shared variance indicated a weak relationship between the variables (see Figure 166).

Figure 166

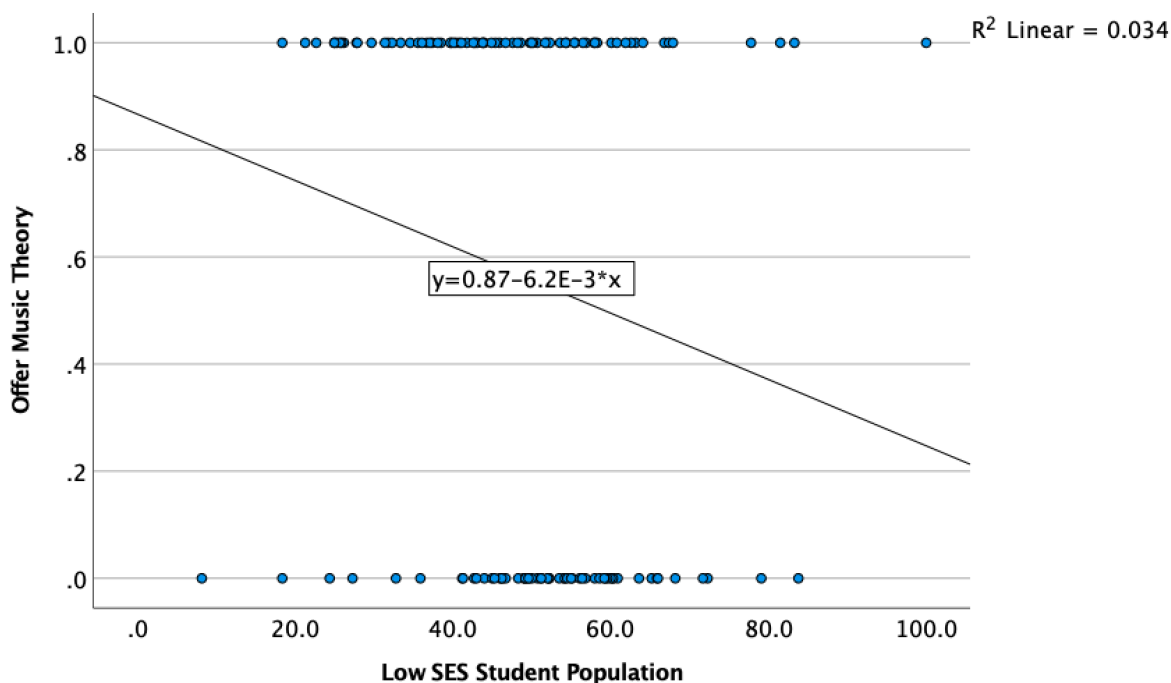
Point Biserial Correlation for Offering Music Theory I and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of Music Theory and low student SES, $r_{pb}(131) = -0.19$, $p < 0.04$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 167).

Figure 167

Point Biserial Correlation for Offering at Least One Level of Music Theory and Percentages of Low Socio-Economic Status Students in Virginia School Divisions (N = 131)

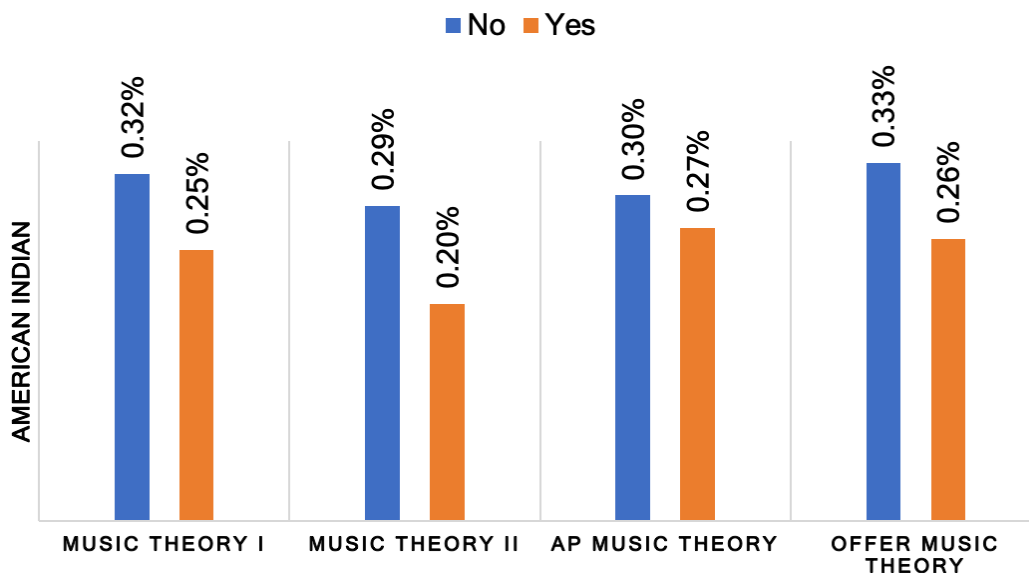


Race/Ethnicity. Virginia school divisions' student body racial/ethnic compositions were associated with what Music Theory courses are offered.

American Indian. Virginia school divisions were likely to offer Music Theory courses regardless of percentages of American Indian students enrolled. The American Indian student averages for school divisions offering Music Theory courses were below the statewide average of American Indian students (0.29%) by 0.02-0.09%. The American Indian student averages for school divisions not offering Music Theory courses were 0.01-0.04% above the statewide average of American Indian students (0.29%). Differences among American Indian student averages for offering and for not offering Music Theory courses school divisions ranged 0.03-0.07% (see Figure 168).

Figure 168

Averages of American Indian Students in Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)



Note. 0.29% of students in Virginia school divisions were American Indian.

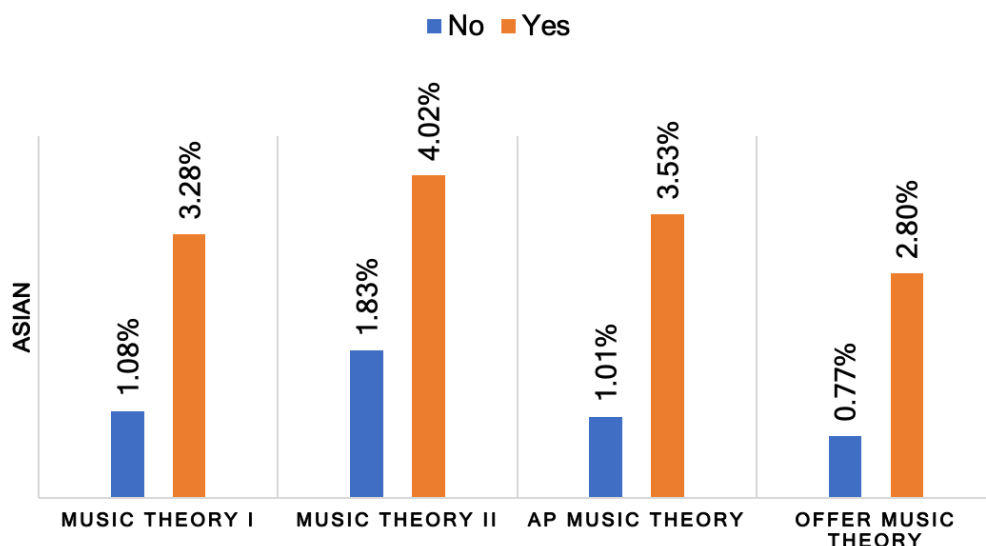
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of American Indian students and offering Music Theory courses were nonsignificant.

Asian. Virginia school divisions with larger Asian student populations were likely to offer Music Theory courses. The averages of Asian students for school divisions offering Music Theory I (3.28%), Music Theory II (4.02%), AP Music Theory (3.53%), and at least one level of Music Theory (2.80%) were 1.7, 2.1, 1.8, and 1.5 the statewide average of Asian students (1.917%), respectively. The averages of Asian students for school divisions not offering Music Theory I (1.08%), AP Music Theory (1.01%), and at least one level of Music Theory (0.77%) were 1.8, 1.9, and 2.5 times lower than the statewide average of Asian students (1.917%),

respectively. The average of Asian students for school divisions offering Music Theory I (3.28%) was 3 times the corresponding average for school divisions not offering the course. The average of Asian students for school divisions offering Music Theory II (4.02%) was 2.2 times the corresponding average for school divisions not offering the course (1.83%). The average of Asian students for school divisions offering AP Music Theory (3.53%) was 3.5 times the corresponding average for school divisions not offering the course (1.01%). The average of Asian students for school divisions offering at least one level of Music Theory (2.8%) was 3.6 times the corresponding average for school divisions not offering the course (0.77%; see Figure 169).

Figure 169

Averages of Asian Students for Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)

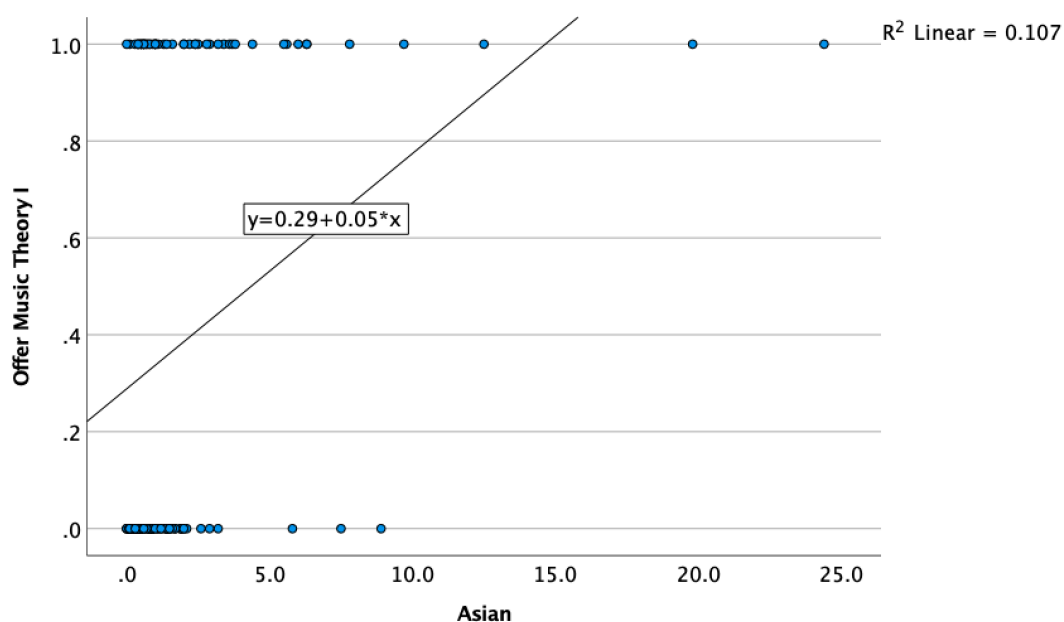


Note. 1.917% of students in Virginia school divisions were Asian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Asian students and offering Music Theory courses. Three tests were significant. There was a significant positive correlation between offering Music Theory I and Asian student enrollment, $r_{pb}(131) = 0.33$, $p < 0.01$, $r^2 = 0.11$; 11% shared variance indicated a moderate relationship between the two variables (see Figure 170).

Figure 170

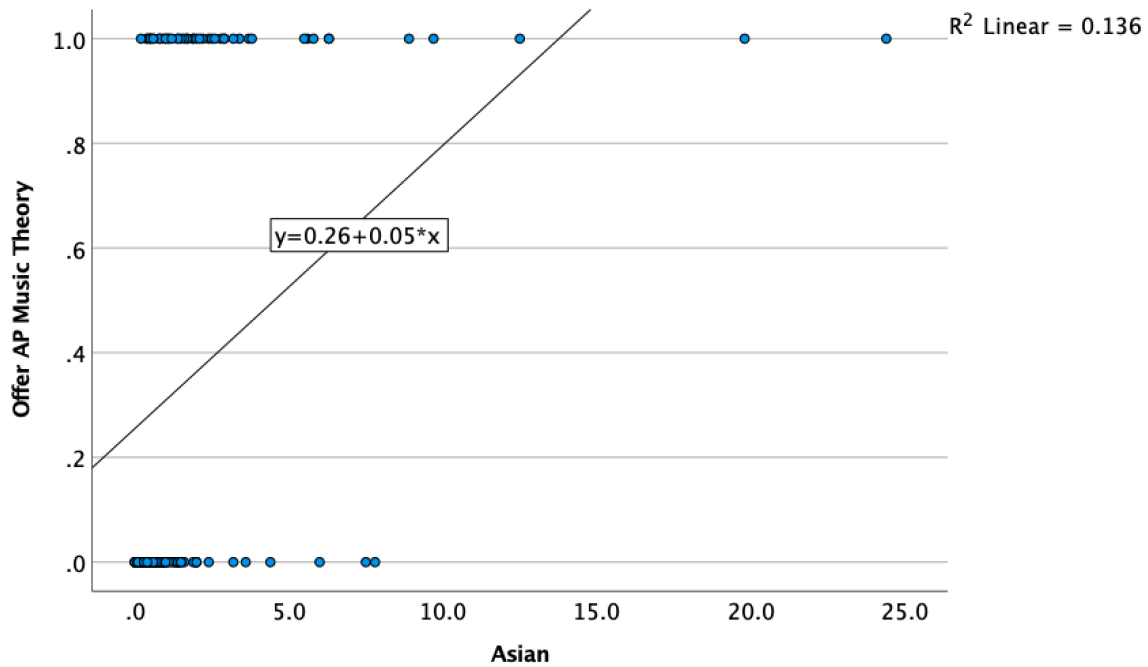
Point Biserial Correlation for Offering Music Theory I and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering AP Music Theory and Asian student enrollment, $r_{pb}(131) = 0.37$, $p < 0.01$, $r^2 = 0.14$; 14% shared variance indicated a moderate relationship between the two variables (see Figure 171).

Figure 171

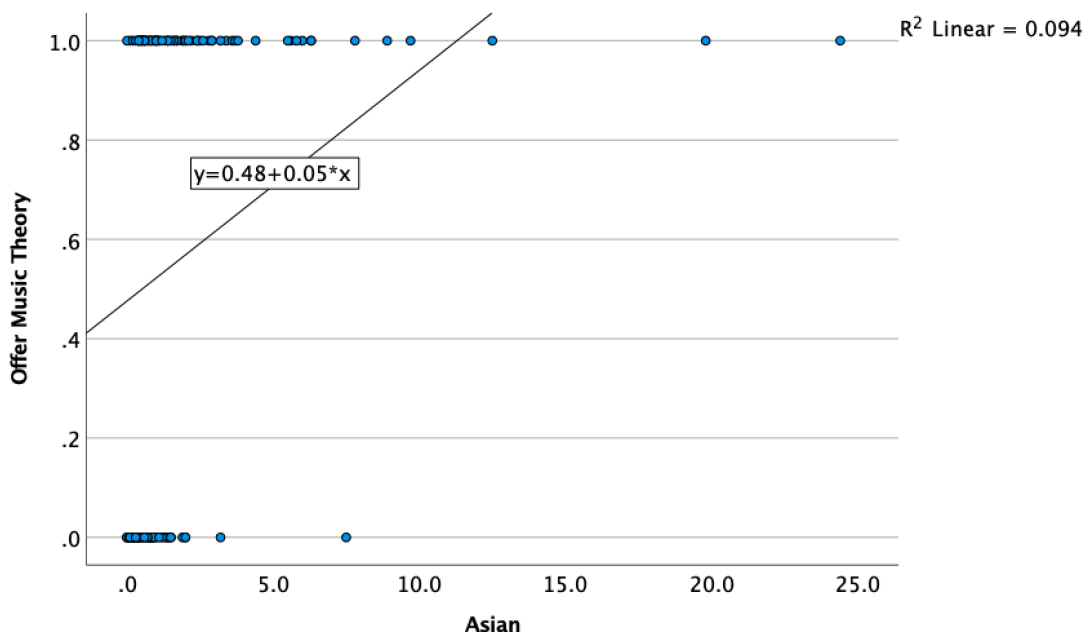
Point Biserial Correlation for Offering Advanced Placement Music Theory and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Music Theory and Asian student enrollment, $r_{pb}(131) = 0.31$, $p < 0.01$, $r^2 = 0.09$; 9% shared variance indicated a moderate relationship between the two variables (see Figure 172).

Figure 172

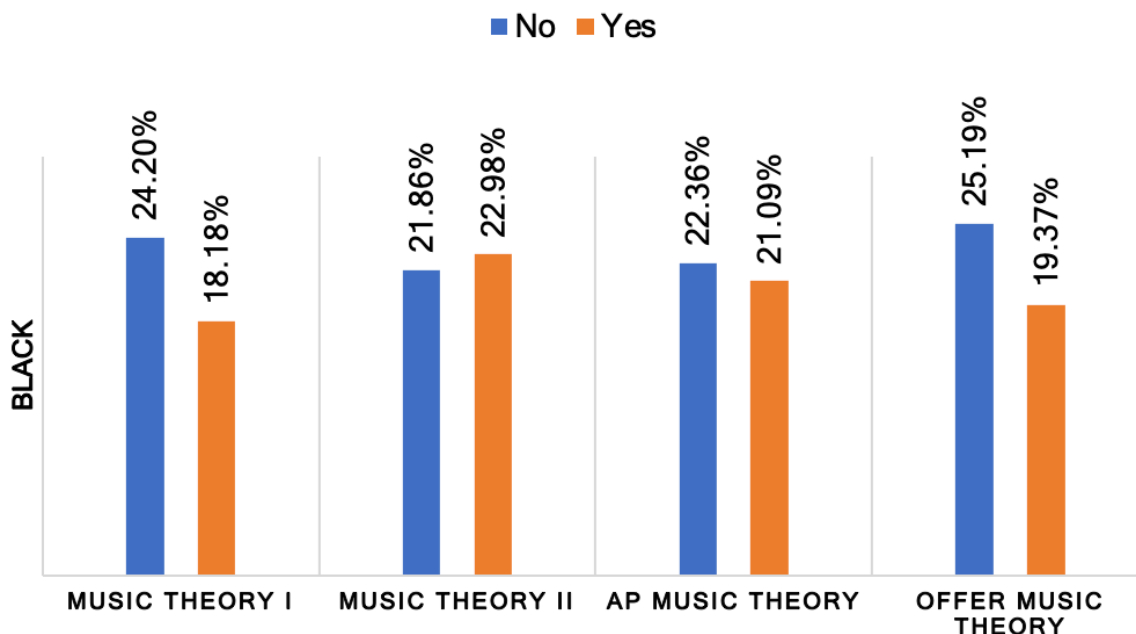
Point Biserial Correlation for Offering Music Theory and Percentages of Asian Students in Virginia School Divisions (N = 131)



Black. Percentages of Black students in Virginia school divisions did not associate with offering Music Theory courses. The averages of Black students for school divisions offering Music Theory I (18.18%) and AP Music Theory (21.09%) were 3.7% and 0.8% below the statewide average of Black students (21.902%), respectively. The average of Black students for school divisions offering Music Theory II (22.98%) was 1.1% above the statewide average of Black students (21.902%). The Black student averages for school divisions not offering Music Theory courses deviated from the statewide average of Black students (21.902) by 0.04-3.2%. The Black student averages for school divisions not offering Music Theory courses did not differ from the Black student averages for school divisions offering Music Theory courses by more than 6% (see Figure 173).

Figure 173

Averages of Black Students in Virginia School Divisions Offering and Not Offering Music Theory Courses (N =131)



Note. 21.902% of students in Virginia school divisions were Black.

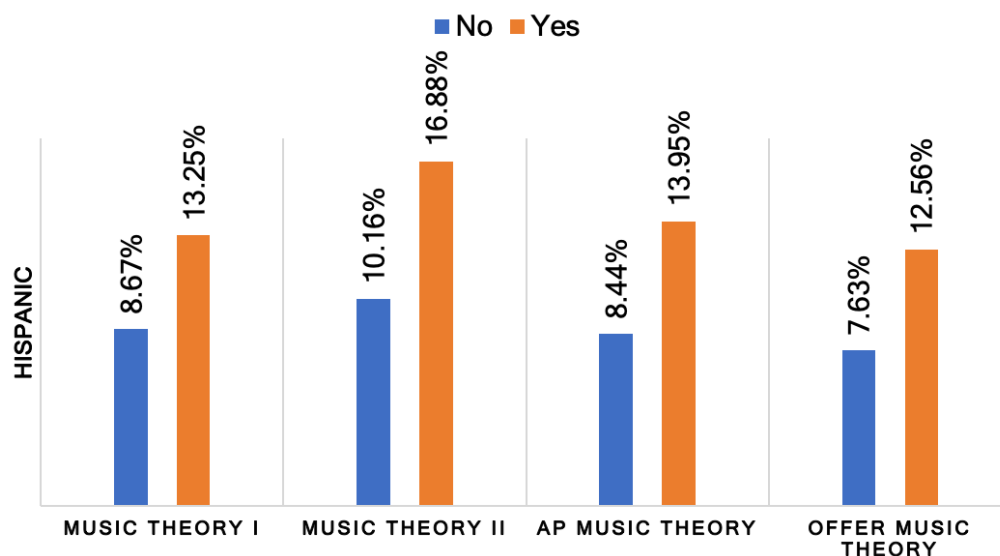
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Black students and offering Music Theory courses were nonsignificant.

Hispanic. Virginia school divisions with larger Hispanic student populations were likely to offer Music Theory courses. The averages of Hispanic students for school divisions offering Music Theory I (13.25%), Music Theory II (16.88%), AP Music Theory (13.95%) and at least one level of Music Theory (12.56%) were 2.1-6.5% above the statewide average of Hispanic students (10.415%). The averages of Hispanic students for school divisions not offering Music Theory I (8.67%), Music Theory II (10.16%), AP Music Theory (8.44%), and at least one level

of Music Theory (7.63%) were 0.3-2.8% below the statewide average of Hispanic students (10.415%). The averages of Hispanic students for school divisions offering Music Theory courses were 4.6-6.7% above the averages of Hispanic students for school divisions not offering Music Theory courses (see Figure 174).

Figure 174

Averages of Hispanic Students in Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)



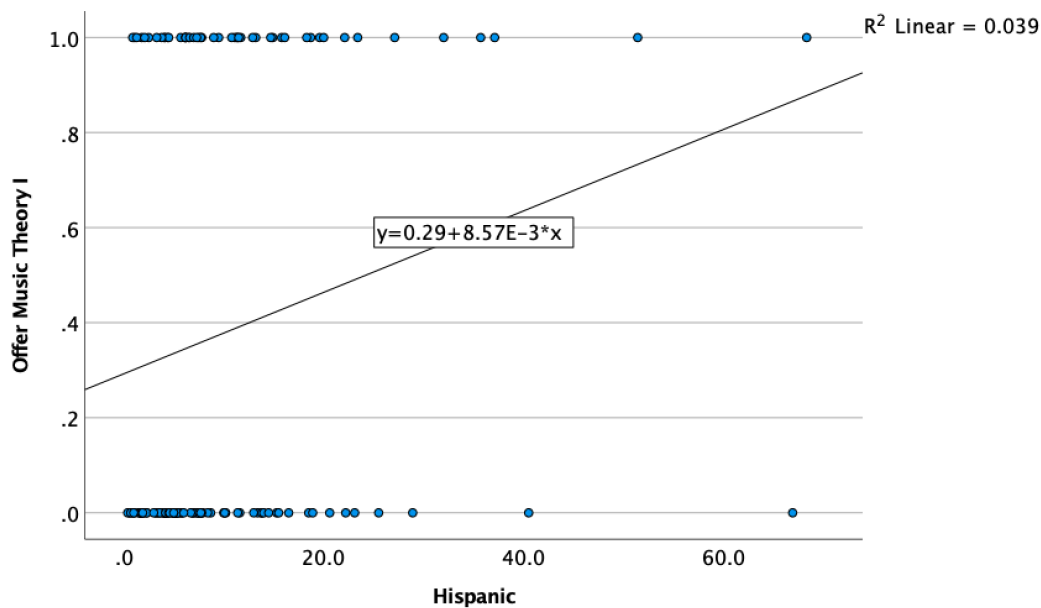
Note. 10.415% of students in Virginia school divisions were Hispanic.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Hispanic students and offering Music Theory courses. Three tests were significant. There was a significant positive correlation between offering Music Theory I and Hispanic student enrollment, $r_{pb}(131) = 0.20$, $p < 0.05$, $r^2 =$

0.04; 4% shared variance indicated a weak relationship between the two variables (see Figure 175).

Figure 175

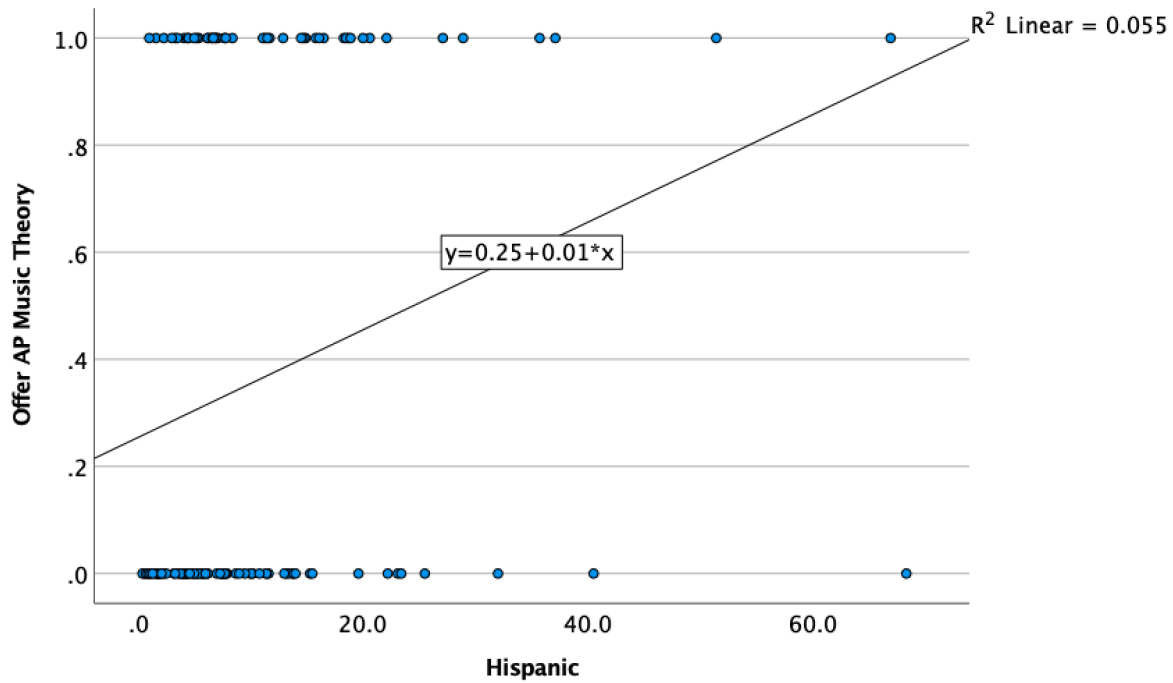
Point Biserial Correlation for Offering Music Theory I and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering AP Music Theory and Hispanic student enrollment, $r_{pb}(131) = 0.24$, $p < 0.01$, $r^2 = 0.06$; 6% shared variance indicated a weak relationship between the two variables (see Figure 176).

Figure 176

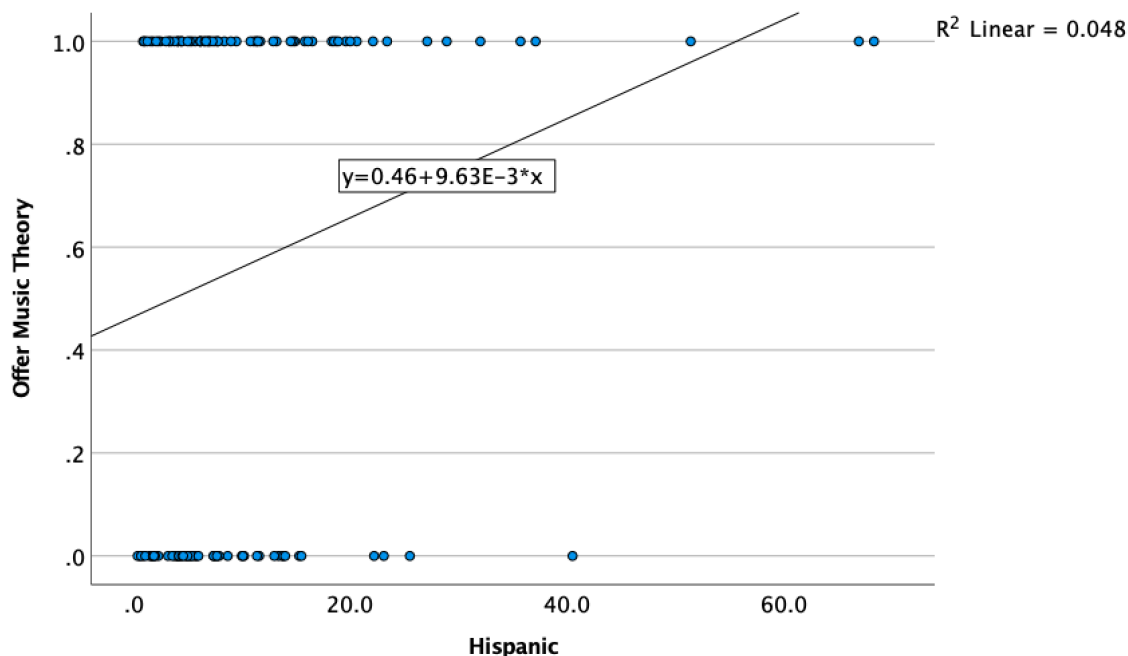
Point Biserial Correlation for Offering Advanced Placement Music Theory and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Music Theory and Hispanic student enrollment, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 177).

Figure 177

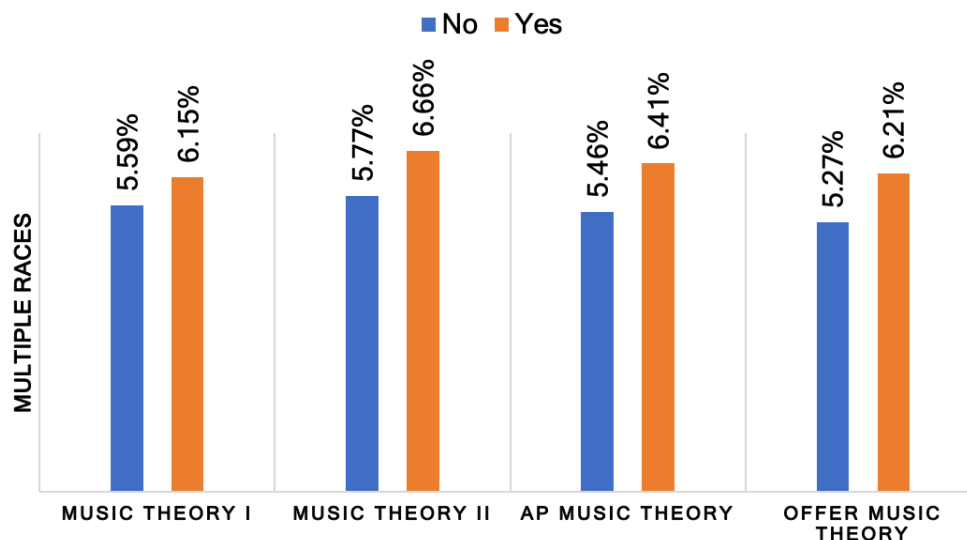
Point Biserial Correlation for Offering Music Theory and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



Multiple Races. Percentages of Multiple Races students in Virginia school divisions likely did not associate with offering Music Theory. School divisions offering Music Theory courses enrolled 0.3-0.9% more Multiple Races students than an average Virginia school division (5.801%). School divisions not offering Music Theory courses enrolled 0.2-0.3% less Multiple Races students than an average Virginia school division (5.801%) (see Figure 178).

Figure 178

Averages of Multiple Races Students in Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)



Note. 5.801% of students in Virginia school divisions were Multiple Races.

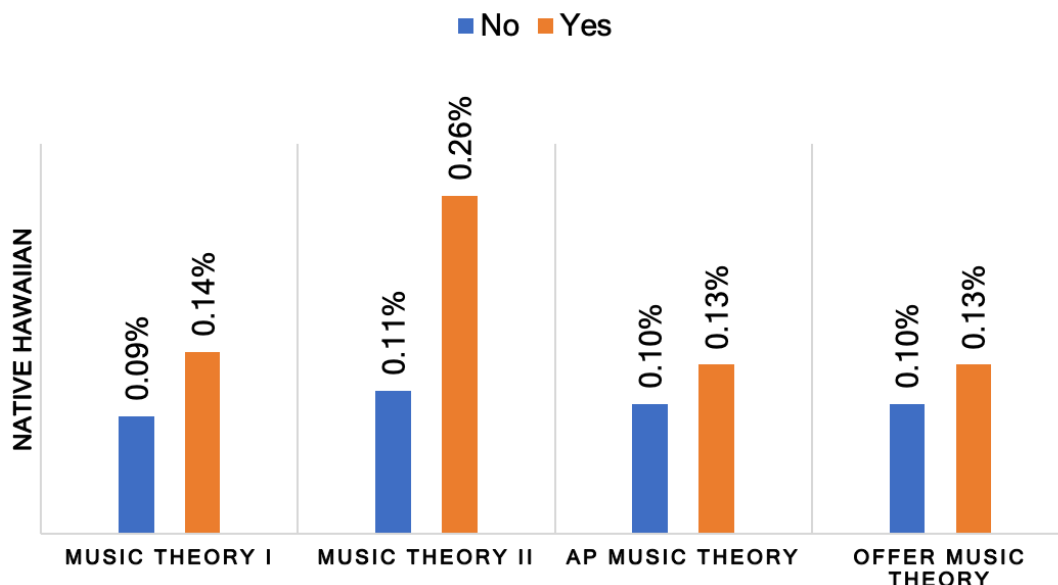
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Multiple Races students and offering Music Theory courses were nonsignificant.

Native Hawaiian. School divisions with larger populations of Native Hawaiian students were likely to offer Music Theory II. School divisions offering Music Theory II enrolled 2.3 times more Native Hawaiian students (0.26%) than an average Virginia school division (0.113%). It is important to note that only two city, two rural, and one suburban school division offered Music Theory II. The averages of Native Hawaiian students for school divisions offering Music Theory I (0.14%) and offering Music Theory II (0.13%) were 0.02-0.03% less than the statewide average of Native Hawaiian students (0.113%). School divisions not offering Music

Theory courses enrolled 0.09-0.11% of Native Hawaiian students, 0.003-0.2% less than an average Virginia school division (0.113%; see Figure 179).

Figure 179

Averages of Native Hawaiian Students in Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)

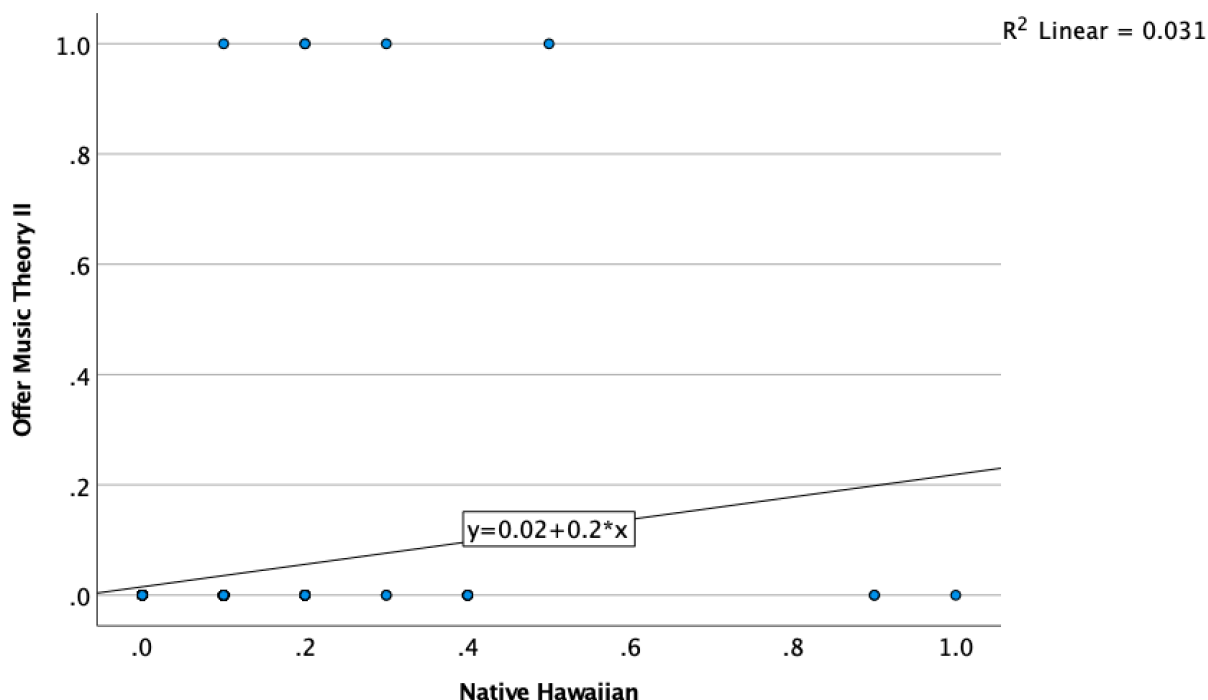


Note. 0.113% of students in Virginia school divisions were Native Hawaiian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Native Hawaiian students and offering Music Theory courses. One test was significant. There was a significant positive correlation between offering Music Theory II and Hispanic student enrollment, $r_{pb}(131) = 0.18$, $p < 0.05$, $r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 180).

Figure 180

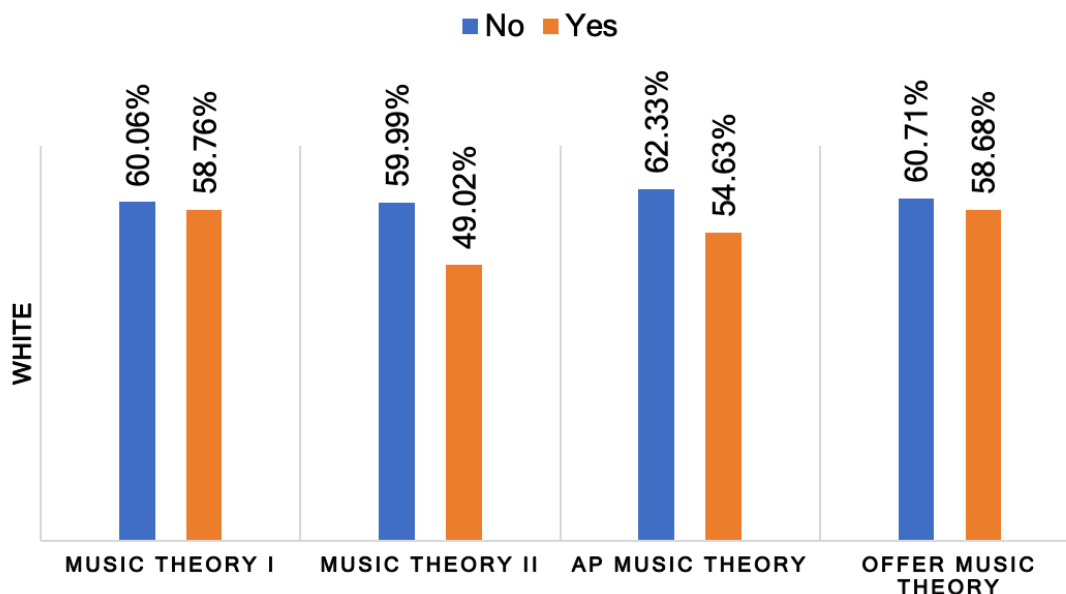
Point Biserial Correlation for Offering Music Theory II and Percentages of Native Hawaiian Students in Virginia School Divisions (N = 131)



White. Percentages of White student in Virginia school divisions did not associate with offering Music Theory courses. Averages of White students for school divisions offering Music Theory I (58.76%), Music Theory II (49.02%), and AP Music Theory (54.63%) were 0.8%, 10.5%, and 4.9% below the statewide average of White students (59.567%), respectively. The averages of White students for school divisions not offering Music Theory courses were 0.4-2.8% above the statewide average of White students (59.576%). The averages of White students for school divisions not offering Music Theory courses were 1.3-11% above the averages of White students for school divisions offering Music Theory courses (see Figure 181).

Figure 181

Averages of White Students in Virginia School Divisions Offering and Not Offering Music Theory Courses (N = 131)



Note. 59.567% of students in Virginia school divisions were White.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of White students and offering Music Theory courses were nonsignificant.

Music Theory Summary. Music Theory was the third offered course type in Virginia, 56.5% school divisions offered at least one level of Music Theory.

Music Theory is courses were offered in all Virginia localities, except for Music Theory II, not offered in towns. Music Theory courses were offered among Virginia school divisions significantly disproportionally. Rural school divisions offered Music Theory courses significantly less frequently as compared to cities and suburbs. School divisions offering at least one level of Music Theory were located all around Virginia.

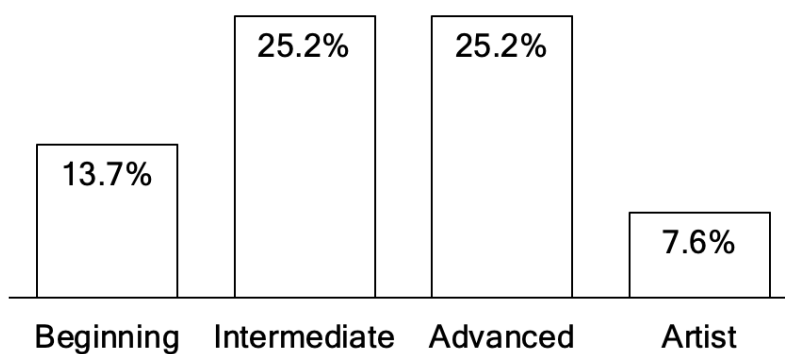
Larger school divisions were likely to offer Music Theory courses. Virginia school divisions' LCIs did not associate with offering Music Theory courses. School divisions with lower percentages of low student SES were likely to offer Music Theory, but the correlation was weak. School divisions with larger Asian and Hispanic student populations were likely to offer Music Theory courses. School divisions that offer Music Theory II had larger Native Hawaiian student populations.

Orchestra

Orchestra was the sixth offered course type in Virginia, 39 school divisions (29.8% of all) offered at least one level of Orchestra. Intermediate and Advanced Orchestra each were offered 1.8 times more frequently than Beginning Orchestra and 3.3 times more frequently than Artist Orchestra. 18 school divisions offered Beginning Orchestra, 33 offered Intermediate Orchestra, 33 offered Advanced Orchestra, and 10 offered Artist Orchestra (see Figure 182).

Figure 182

Percentages of Virginia School Divisions Offering Orchestra Courses (N = 131)



Locality. Orchestra courses were offered across Virginia disproportionately, were more likely to be offered in Virginia cities and suburbs than in rural areas and towns. All Orchestra

courses were offered among school divisions in each locality, except for Artist Orchestra, not offered in town school divisions. Intermediate Orchestra was the most offered among city school divisions (75%), while Advanced Orchestra was the most offered among suburban school divisions (55.6%). Beginning Orchestra was the third offered across all localities, and Artist Orchestra was the least offered (see Table 41 and Figure 183).

Table 41

Frequencies of Offering Orchestra Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

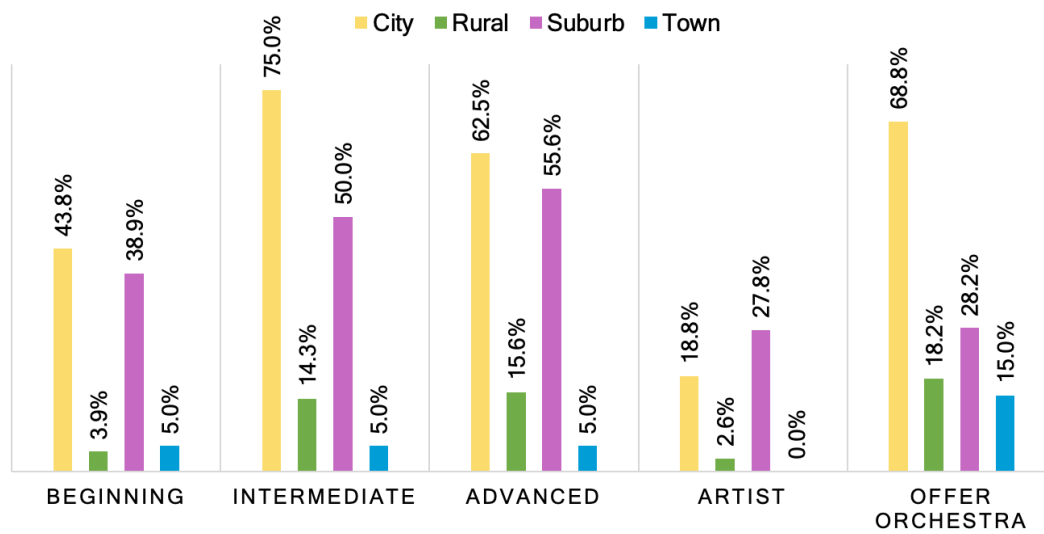
Courses	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer Orchestra	5	11	63	14	7	11	17	3	92	39
Beginning	9	7	74	3	11	7	19	1	113	18
Intermediate	4	12	66	11	9	9	19	1	98	33
Advanced	6	10	65	12	8	10	19	1	98	33
Artist	13	3	75	2	13	5	20	0	121	10

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 183

Percentages of Virginia School Divisions Offering Orchestra Courses Statewide and by Locality

(N = 131)

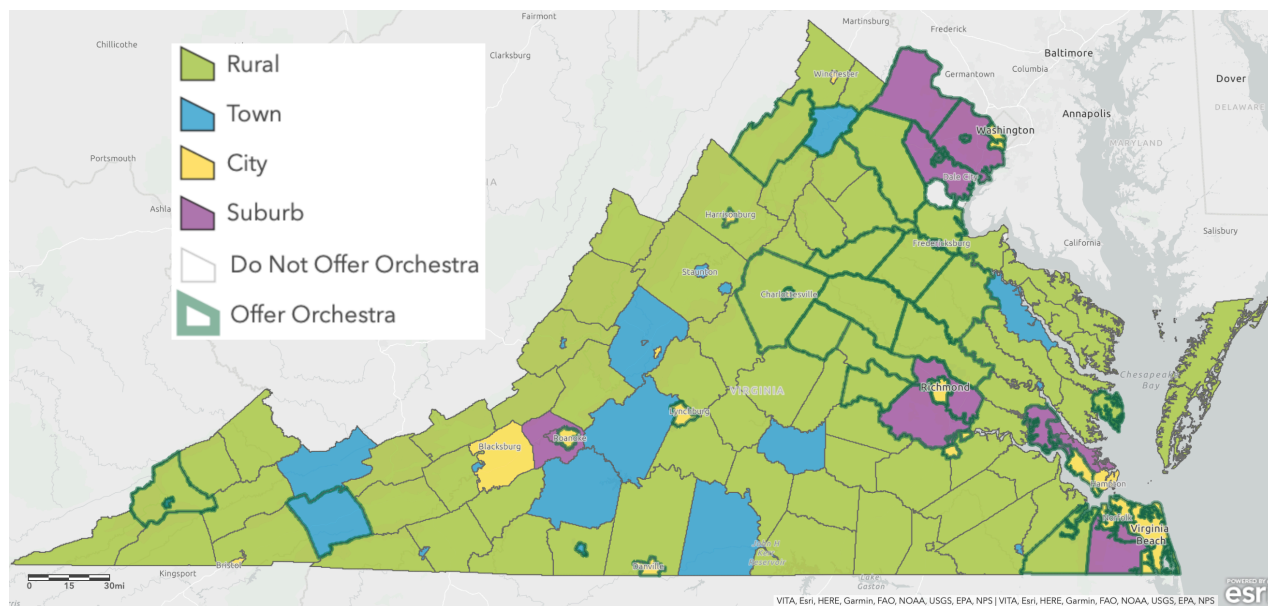


Note. Statewide school divisions $N = 131$, city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 184 shows that most of Virginia school divisions offering Orchestra were clustered around four regions: the Northern Virginia, the Central Virginia, Charlottesville, and the Tidewater area.

Figure 184

Virginia School Divisions Offering Orchestra in High School (n = 39)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com](https://nces.ed.gov/programs/ipeds/data/arcgis/) ArcGIS online. Full data information found at <https://nces.ed.gov/programs/ipeds/data/arcgis/>.

For every Orchestra course, percentages of localities constituting offering divisions were not in agreement with the statewide distribution of localities: 12% city, 59% rural, 14% suburban, and 15% town school divisions. Particularly substantial were disproportionalities among city, rural, and suburban school divisions. City and suburban school divisions accounted for over a third of school divisions offering Orchestra courses, while rural school divisions accounted for about a quarter to a third (see Figures 185-188).

Figure 185

Localities of Virginia School Divisions Offering Beginning Orchestra (n = 18)

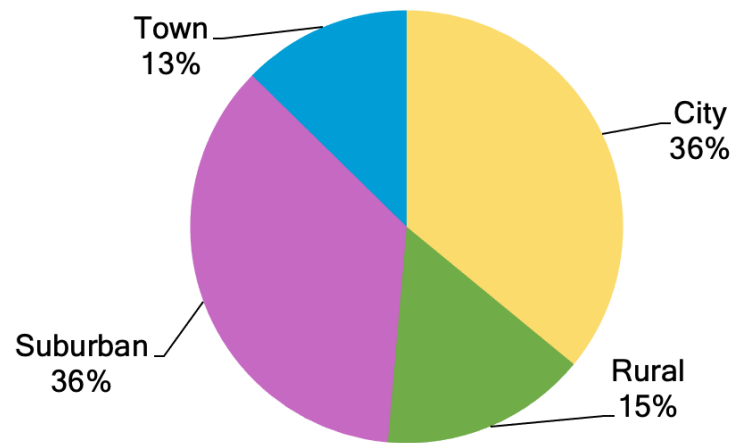


Figure 186

Localities of Virginia School Divisions Offering Intermediate Orchestra (n = 33)

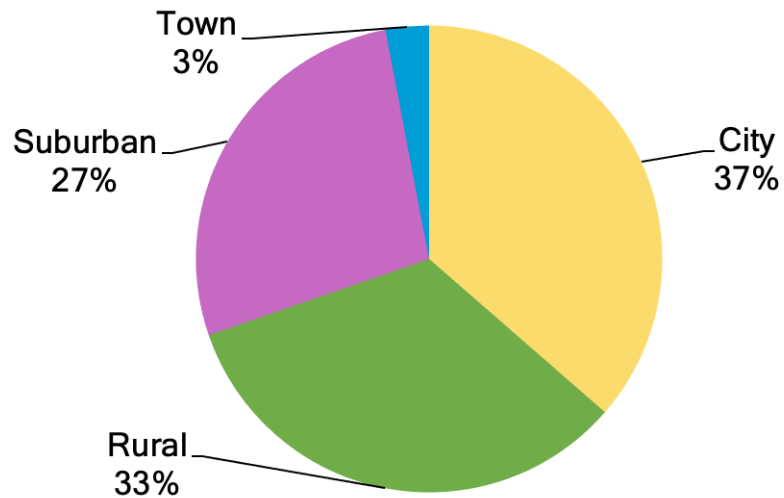


Figure 187

Localities of Virginia School Divisions Offering Advanced Orchestra (n = 33)

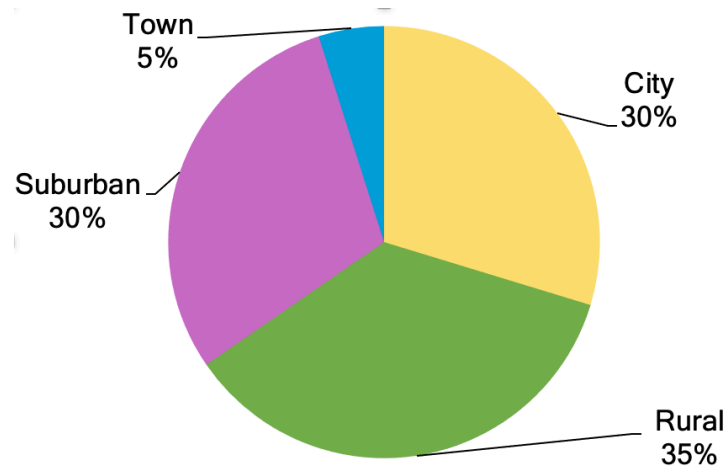
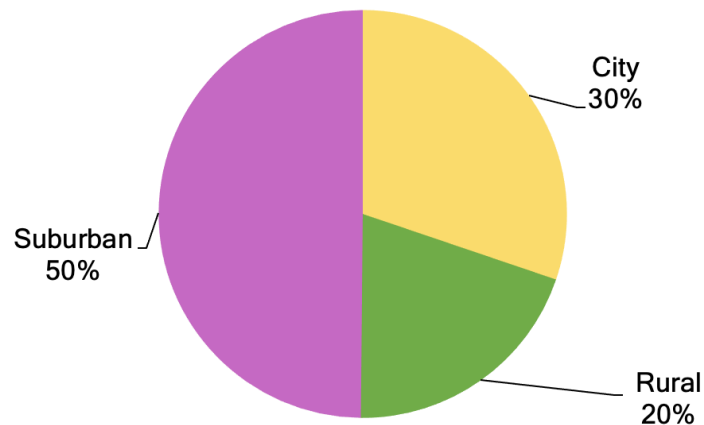


Figure 188

Localities of Virginia School Divisions Offering Artist Orchestra (n = 10)

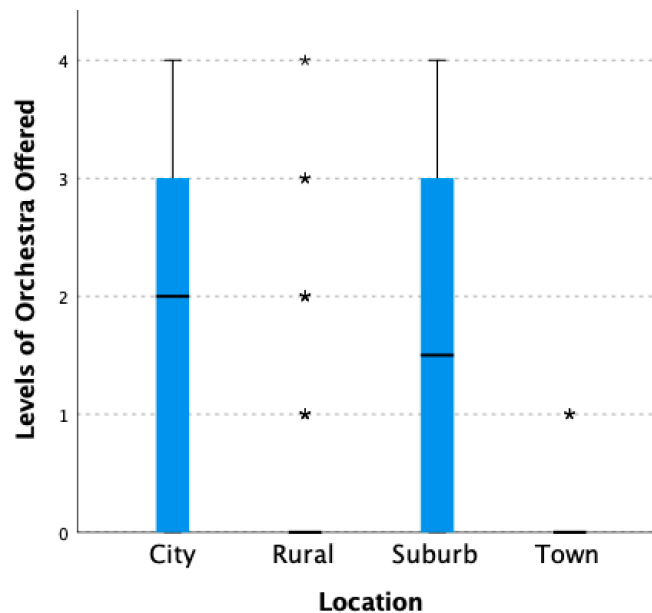


To examine whether Orchestra courses were offered significantly disproportionately among Virginia localities, a nonparametric independent-samples Kruskal-Wallis test was performed in SPSS. With the alpha level of 0.05, the test was significant. Orchestra courses were offered significantly disproportionately, $H_{(3)} = 32.61$, $N = 131$, $p < 0.001$, and the effect size was

medium, $\varepsilon^2 = .2508$. Post hoc Dunn's pairwise comparisons administered with the Bonferroni correction revealed that suburban school divisions offered significantly more levels of Orchestra than town school divisions ($r = 3.54$, $MD = 35.22$, $p = 0.002$), city school divisions offered significantly more levels of Orchestra than town school divisions ($r = 3.89$, $MD = 39.93$, $p = 0.001$), rural school divisions offered significantly less levels of Orchestra than suburban school divisions ($r = -3.95$, $MD = -31.72$, $p < 0.001$), and city school divisions offered significantly more levels of Orchestra than rural school divisions ($r = 4.33$, $MD = 36.43$, $p < 0.01$). Figure 189 illustrates the test results.

Figure 189

Independent-Samples Kruskal-Wallis Test for Levels of Orchestra Offered in Virginia School Divisions ($N = 131$)



To explore whether there was a statistically significant relationship between offering a particular Orchestra course and a school division's locality, chi-square tests of association were

calculated in SPSS. Cramer's V indices were used to determine the strength of association; follow up analyses included frequency tables examination. Five tests were significant.

A moderate association was found for Beginning Orchestra, $\chi^2(3) = 29.35, p < 0.01, V = 0.47$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for city, rural, and suburban localities: Virginia city and suburban school divisions offered the course significantly more frequently than expected, while rural school divisions offered the course significantly less frequently than expected.

A moderate association was found for Intermediate Orchestra, $\chi^2(3) = 36.13, p < 0.01, V = 0.53$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for all localities: Virginia city and suburban school divisions offered the course significantly more frequently than expected, while rural and town school divisions offered the course significantly less frequently than expected.

A moderate association was found for Advanced Orchestra, $\chi^2(3) = 28.72, p < 0.01, V = 0.47$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for all localities: Virginia city and suburban school divisions offered the course significantly more frequently than expected, while rural and town school divisions offered the course significantly less frequently than expected.

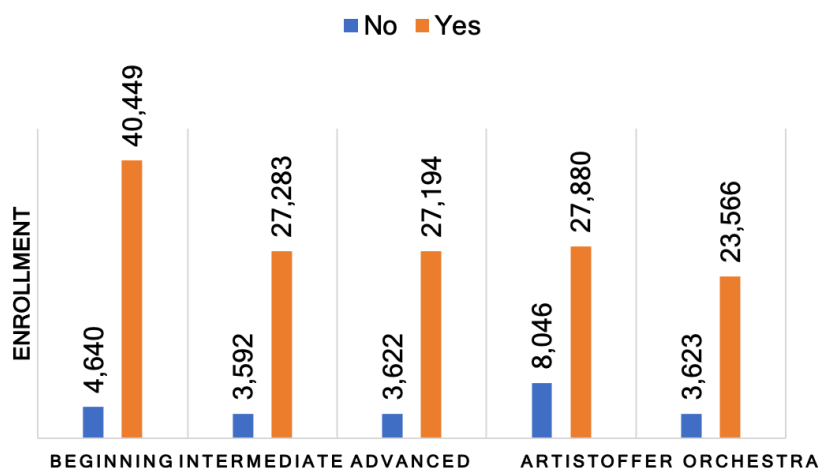
A moderate association was found for Artist Orchestra, $\chi^2(3) = 17.59, p < 0.01, V = 0.37$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for rural and suburban localities: Virginia suburban school divisions offered the course significantly more frequently than expected, while rural school divisions offered the course significantly less frequently than expected.

A moderate association was found for at least one level of Orchestra, $\chi^2(3) = 27.12, p < 0.01, V = 0.46$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for city, rural, and suburban localities: Virginia city and suburban school divisions offered Orchestra significantly more frequently than expected, while rural school divisions offered Orchestra significantly less frequently than expected.

Enrollment. Larger Virginia school divisions offered Orchestra courses. The enrollment averages for school divisions offering Beginning Orchestra (40,449), Intermediate Orchestra (27,283), Advanced Orchestra (27,194), Artist Orchestra (27,880), and at least one level of Orchestra (23,566) were 4.2, 2.9, 2.8, 2.9, and 2.5 times the statewide enrollment average (9,560), respectively. The enrollment averages for school divisions not offering Beginning Orchestra (4,640), Intermediate Orchestra (3,592), Advanced Orchestra (3,622), Artist Orchestra (8,046), and at least one level of Orchestra (23,566) were 2.1, 2.7, 2.6, 1.2, and 2.6 times lower the statewide enrollment average (9,560). The enrollment average for school divisions offering Beginning Orchestra (40,449) was 8.7 times the enrollment average for school divisions not offering the course (4,640). The enrollment average for school divisions offering Intermediate Orchestra (27,283) was 7.6 times the enrollment average for school divisions not offering the course (3,592). The enrollment average for school divisions offering Advanced Orchestra (27,194) was 7.5 times the enrollment average for school divisions not offering the course (3,622). The enrollment average for school divisions offering Artist Orchestra (27,880) was 3.5 times the enrollment average for school divisions not offering the course (8,046). The enrollment average for school divisions offering at least one level of Orchestra (23,566) was 6.5 times the enrollment average for school divisions not offering Orchestra (3,623; see Figure 190).

Figure 190

Enrollment Averages for Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)



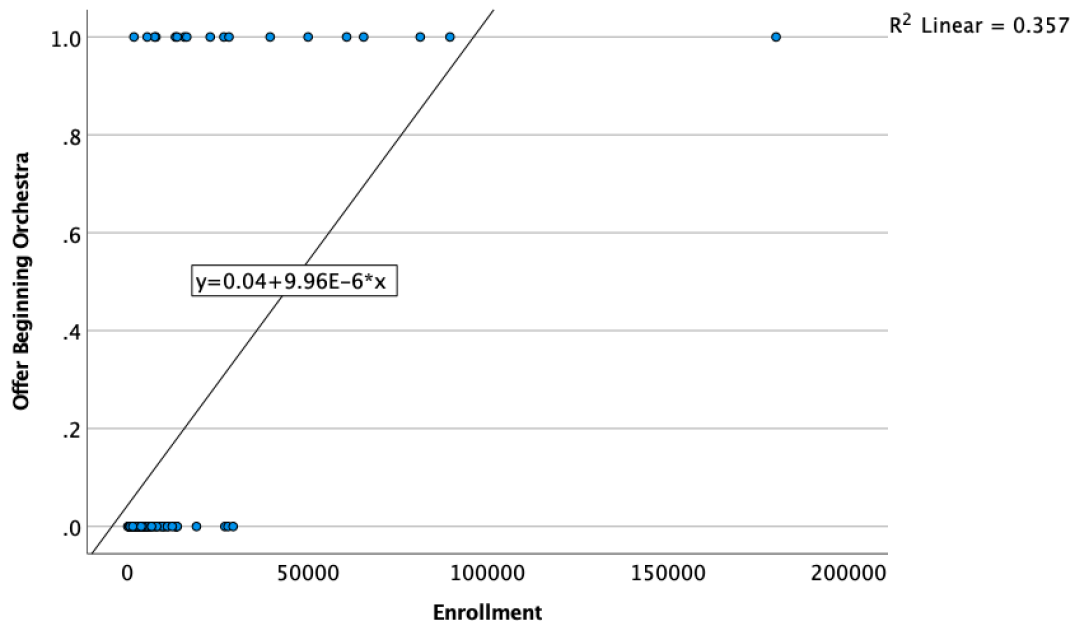
Note. The average enrollment for Virginia school divisions was 9,560.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering Orchestra courses. Five tests were significant. There was a significant positive correlation between offering Beginning Orchestra and enrollment, $r_{pb}(131) = 0.60$, $p < 0.01$, $r^2 = 0.36$; 36% shared variance indicated a strong relationship between the two variables (see Figure 191).

Figure 191

Point Biserial Correlation for Offering Beginning Orchestra and Enrollment in Virginia School

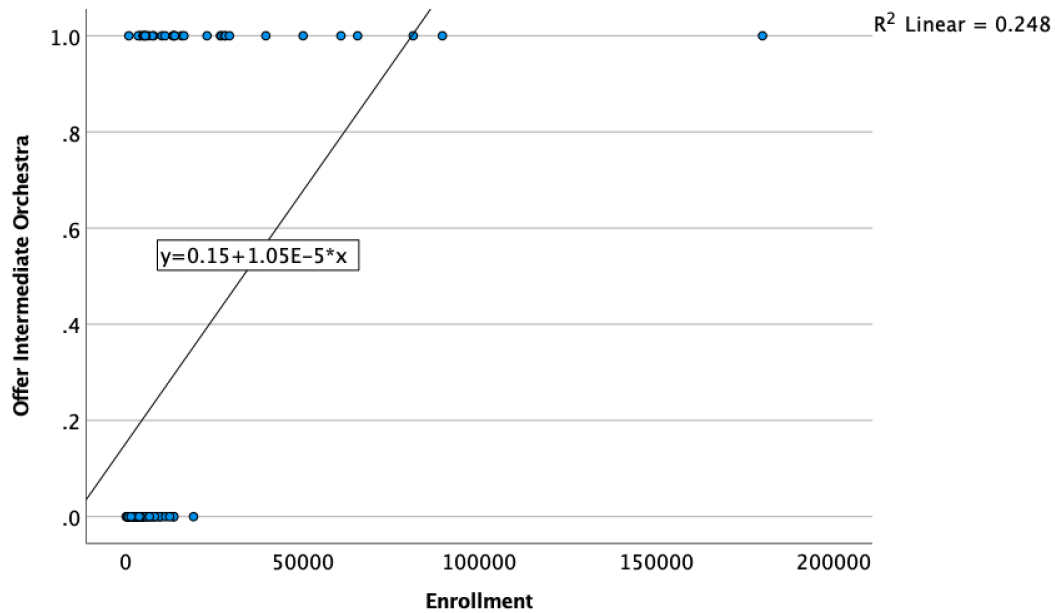
Divisions (N = 131)



There was a significant positive correlation between offering Intermediate Orchestra and enrollment, $r_{pb}(131) = 0.50$, $p < 0.01$, $r^2 = 0.25$; 25% shared variance indicated a moderate relationship between the two variables (see Figure 192).

Figure 192

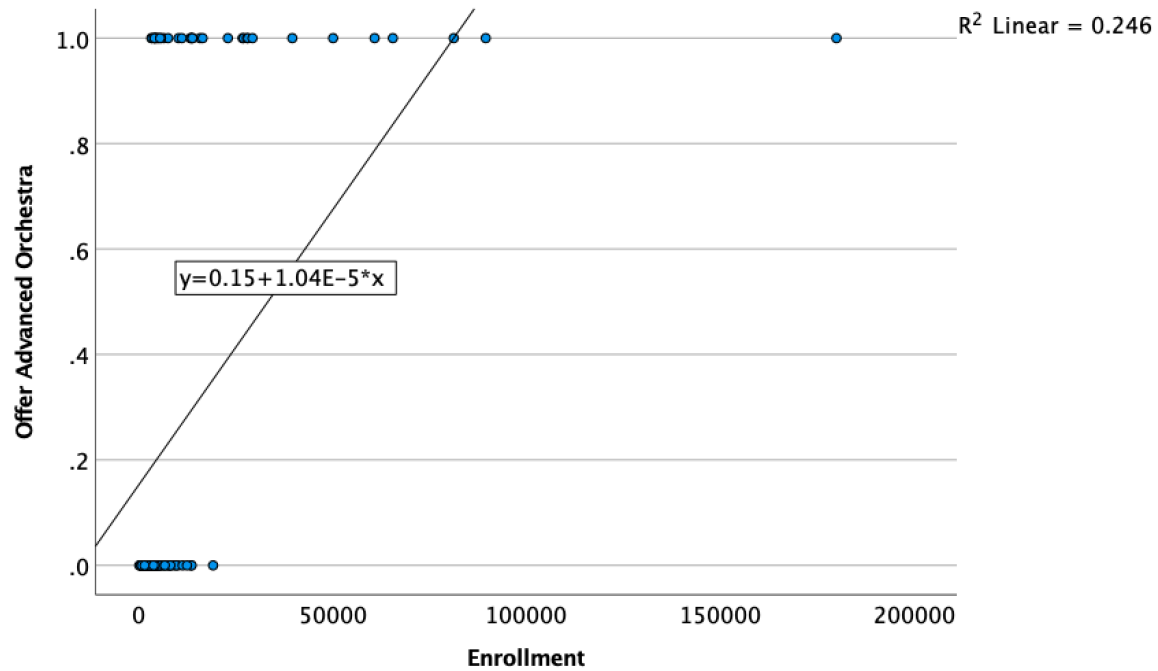
Point Biserial Correlation for Offering Intermediate Orchestra and Enrollment in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Advanced Orchestra and enrollment, $r_{pb}(131) = 0.50$, $p < 0.01$, $r^2 = 0.25$; 25% shared variance indicated a moderate relationship between the two variables (see Figure 193).

Figure 193

Point Biserial Correlation for Offering Advanced Orchestra and Enrollment in Virginia School Divisions (N = 131)

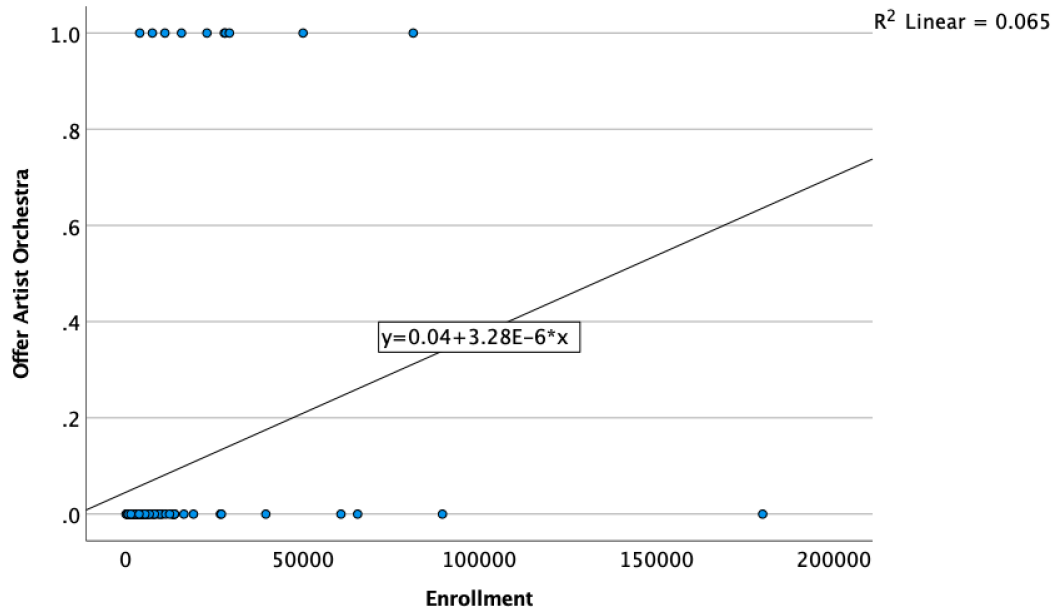


There was a significant positive correlation between offering Artist Orchestra and enrollment, $r_{pb}(131) = 0.26$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 194).

Figure 194

Point Biserial Correlation for Offering Artist Orchestra and Enrollment in Virginia School

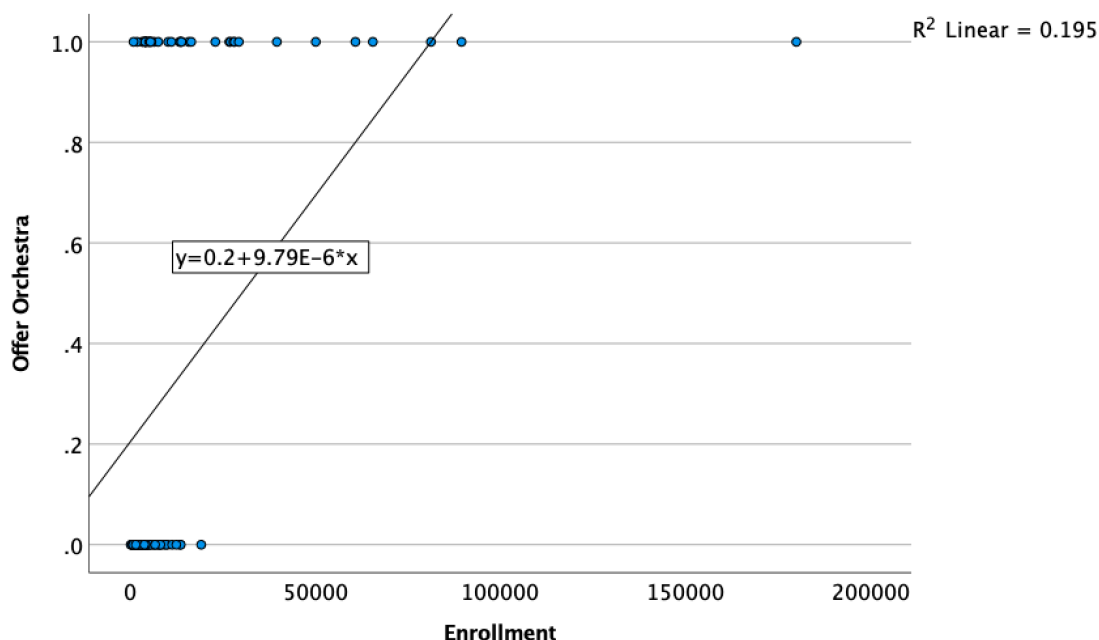
Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Orchestra and enrollment, $r_{pb}(131) = 0.44$, $p < 0.01$, $r^2 = 0.20$; 20% shared variance indicated a moderate relationship between the two variables (see Figure 195).

Figure 195

Point Biserial Correlation for Offering at Least One Level of Orchestra and Enrollment in Virginia School Divisions (N = 131)

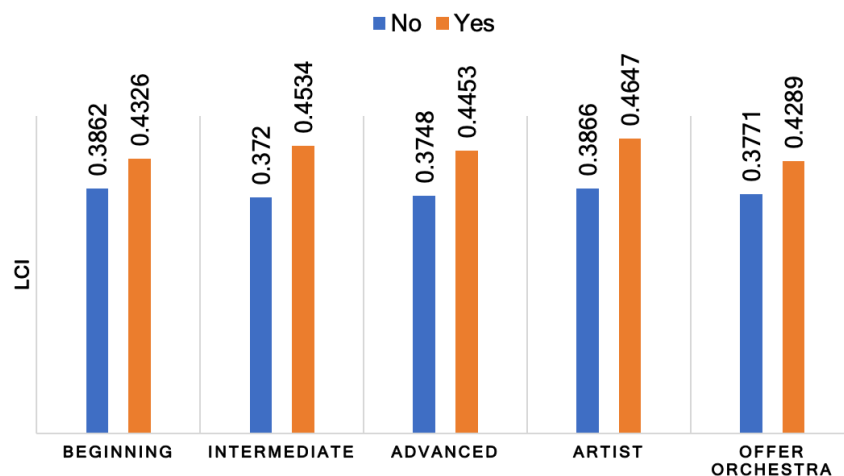


LCI. Virginia school divisions offering Orchestra were more capable of financing public education than an average school division in the state. The LCI averages for school divisions offering Beginning Orchestra (.4326), Intermediate Orchestra (.4534), Advanced Orchestra (.4453), and Artist Orchestra (.4647) were .0401-.0722 above the statewide average LCI (.3925). The LCI averages for school divisions not offering Beginning Orchestra (.3862), Intermediate Orchestra (.3720), Advanced Orchestra (.3748), and Artist Orchestra (.3866) were .0059-.0205 below the statewide LCI average (.3925). The LCI average for school divisions not offering Orchestra (.3771) was .0154 below the statewide average LCI (.3925). The LCI average for school divisions offering Beginning Orchestra (.4326) was .0464 above the LCI average for school divisions not offering the course (.3862). The LCI average for school divisions offering

Intermediate Orchestra (.4534) was .0814 above the LCI average for school divisions not offering the course (.3720). The LCI average for school divisions offering Advanced Orchestra (.4453) was .0705 above the LCI average for school divisions not offering the course (.3748). The LCI average for school divisions offering Artist Orchestra (.4647) was .0781 above the LCI average for school divisions not offering the course (.3866). The LCI average for school divisions offering at least one level of Orchestra (.4289) was .0518 above the LCI average for school divisions not offering Orchestra (.3771) and was .0364 above the statewide LCI average (.3925; see Figure 196).

Figure 196

Local Composite Index Averages for Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)



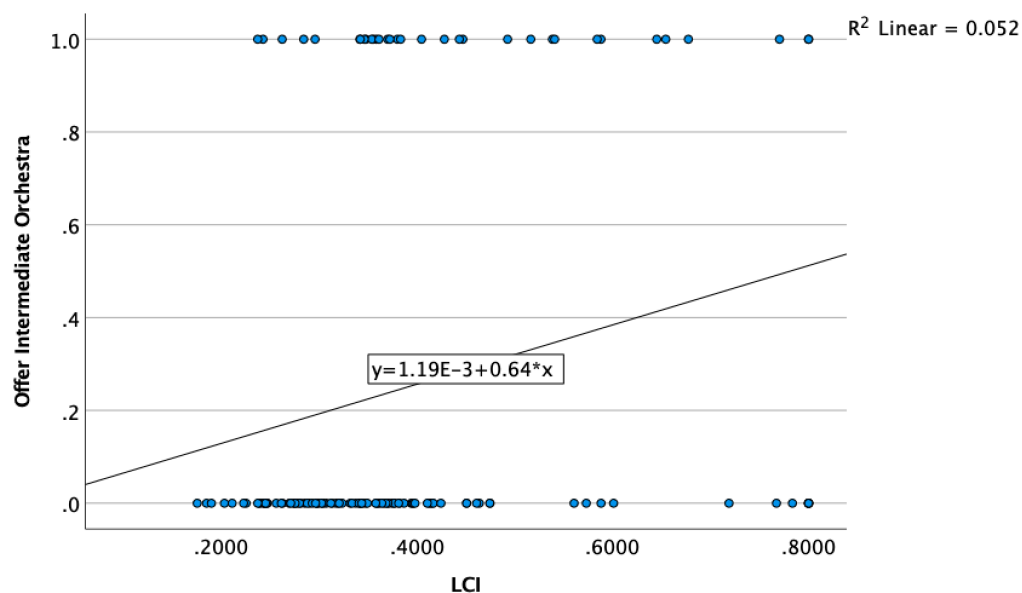
Note. The average LCI for Virginia school divisions was .3925.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between LCI and offering Orchestra courses. Two tests were

significant. There was a significant positive correlation between offering Intermediate Orchestra and LCI, $r_{pb}(131) = 0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 197).

Figure 197

Point Biserial Correlation for Offering Intermediate Orchestra and Virginia School Divisions' Local Composite Indexes (N = 131)

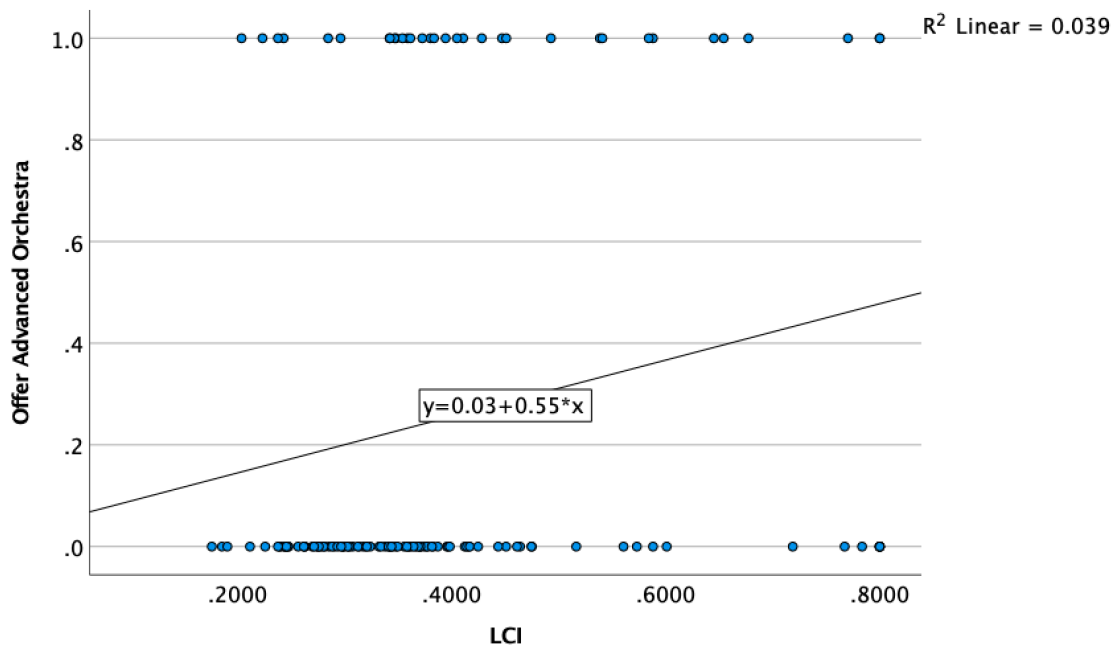


There was a significant positive correlation between offering Advanced Orchestra and LCI, $r_{pb}(131) = 0.20$, $p < 0.05$, $r^2 = 0.04$; 4% shared variance indicated a weak relationship between the two variables (see Figure 198).

Figure 198

Point Biserial Correlation for Offering Advanced Orchestra and Virginia School Divisions'

Local Composite Indexes (N = 131)

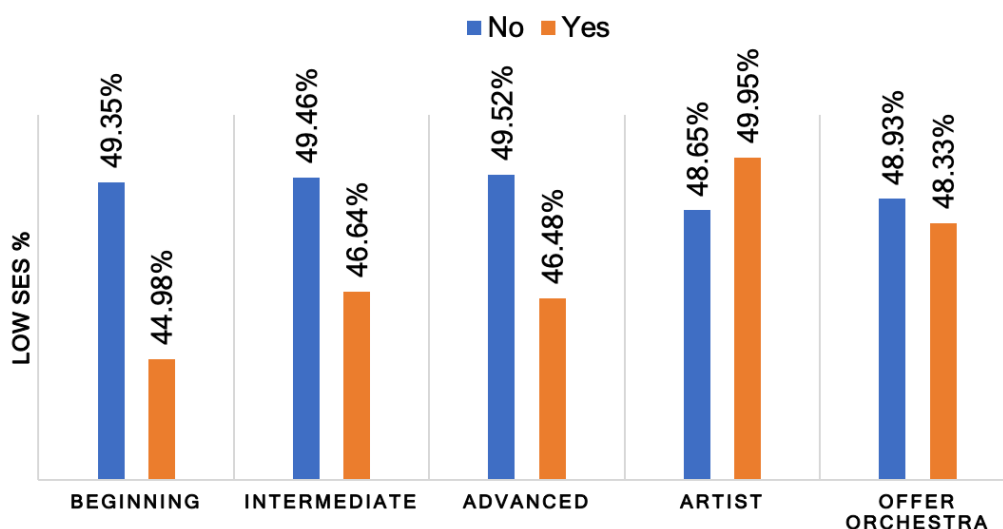


Low Student SES. Virginia school divisions offering Beginning, Intermediate, and Advanced Orchestra courses enrolled less low SES students than an average school division in the state, while school divisions offering Artist Orchestra enrolled more low SES students than an average school division in the state. The low student SES averages for school divisions offering Beginning Orchestra (44.98%), Intermediate Orchestra (46.64%), and Advanced Orchestra (46.48%) were 3.8%, 2.1%, and 2.3% below the statewide average low SES (48.75%), respectively. The low student SES averages for school divisions not offering Beginning Orchestra (49.35%), Intermediate Orchestra (49.46%), and Advanced Orchestra (49.52%) were 0.6%, 0.7%, and 0.8% above the statewide average low SES (48.75%), respectively. The low student SES average for school divisions offering Beginning Orchestra (44.98%) was 4.4%

below the low student SES average for school divisions not offering the course (49.35%). The low student SES average for school divisions offering Intermediate Orchestra (46.64%) was 2.8% below the low student SES average for school divisions not offering the course (49.46%). The low student SES average for school divisions offering Advanced Orchestra (46.48%) was 3% below the low student SES average for school divisions not offering the course (49.52%). The low student SES average for school divisions offering at least one level Orchestra (48.33%) was 0.6% below the low student SES average for school divisions not offering the course (48.93%). A different pattern was revealed with Artist Orchestra: the low student SES average for offering school divisions (49.95%) was 1.2% above the statewide average (48.75%) and 1.3% above the low student SES average for not offering school divisions (48.93%) (see Figure 199).

Figure 199

Averages of Low Student Socio-Economic Status for Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)



Note. The low student SES average for Virginia school divisions was 48.75%.

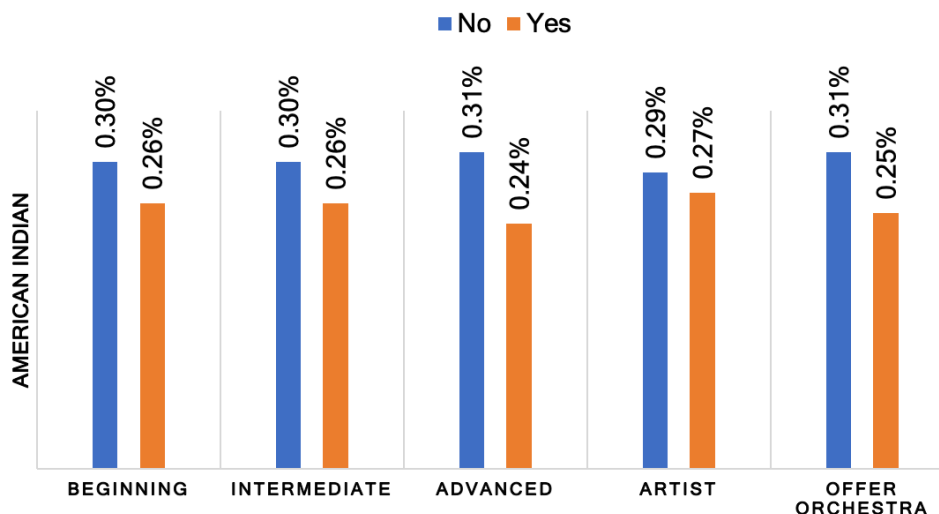
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of low SES students and offering Orchestra courses were not significant. Low student SES did not associate with offering Orchestra.

Race/Ethnicity. Student race/ethnicity compositions of Virginia school divisions associated with offering Orchestra courses.

American Indian. Percentages of American Indian students in Virginia school divisions did not influence offering Orchestra courses across the state. The averages of American Indian students for school divisions offering Beginning Orchestra (0.30%), Intermediate Orchestra (0.26%), Advanced Orchestra (0.31%), Artist Orchestra (0.29%), and at least one level of Orchestra (0.25%) were only 0.02-0.05% below the statewide average of American Indian students (0.29%). The averages of American Indian students for school divisions not offering Beginning Orchestra (0.30%), Intermediate Orchestra (0.30%), Advanced Orchestra (0.31%), Artist Orchestra (0.27%), and at least one level of Orchestra were only 0.01-0.02% above the statewide average of American Indian students (0.29%). Differences between averages of Native Hawaiian students for school divisions offering and not offering Orchestra courses were only 0.02-0.06% (see Figure 200).

Figure 200

Averages of American Indian Students in Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)



Note. 0.29% of students in Virginia school divisions were American Indian.

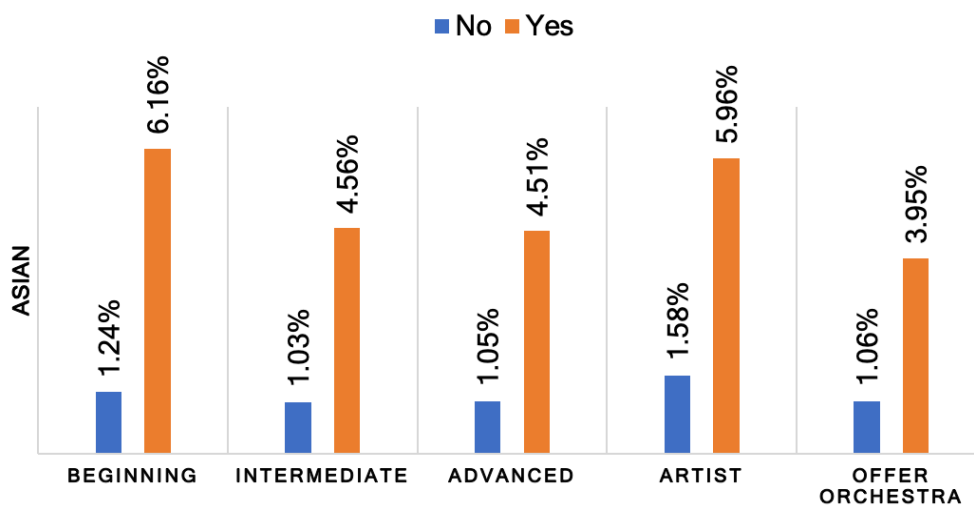
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of American Indian students and offering Orchestra courses were nonsignificant.

Asian. Virginia school divisions with larger Asian student populations offer Orchestra courses. The averages of Asian students for school divisions offering Beginning Orchestra (6.16%), Intermediate Orchestra (4.56%), Advanced Orchestra (4.51%), and Artist Orchestra (5.96%) were 3.2, 2.4, 2.4, and 3.1 times the statewide average of Asian students (1.917%), respectively. The averages of Asian students for school divisions not offering Beginning Orchestra (1.24%), Intermediate Orchestra (1.03%), Advanced Orchestra (1.05%) and Artist Orchestra (1.58%) were 0.3-0.9% below the statewide average of Asian students (1.917%). The average of Asian students for school divisions offering Beginning Orchestra (6.16%) was 5 times

the average of Asian students for school divisions not offering the course (1.24%). The average of Asian students for school divisions offering Intermediate Orchestra (4.56%) was 4.4 times the average of Asian students for school divisions not offering the course (1.03%). The average of Asian students for school divisions offering Advanced Orchestra (4.51%) was 4.3 times the average of Asian students for school divisions not offering the course (1.05%). The average of Asian students for school divisions offering Artist Orchestra (5.96%) was 3.8 times the average of Asian students for school divisions not offering the course (1.58%). The average of Asian students for school divisions offering at least one level of Orchestra (3.95%) was 3.7 times the average of Asian students for school divisions not offering the course (1.06%) (see Figure 201).

Figure 201

Averages of Asian Students in Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)

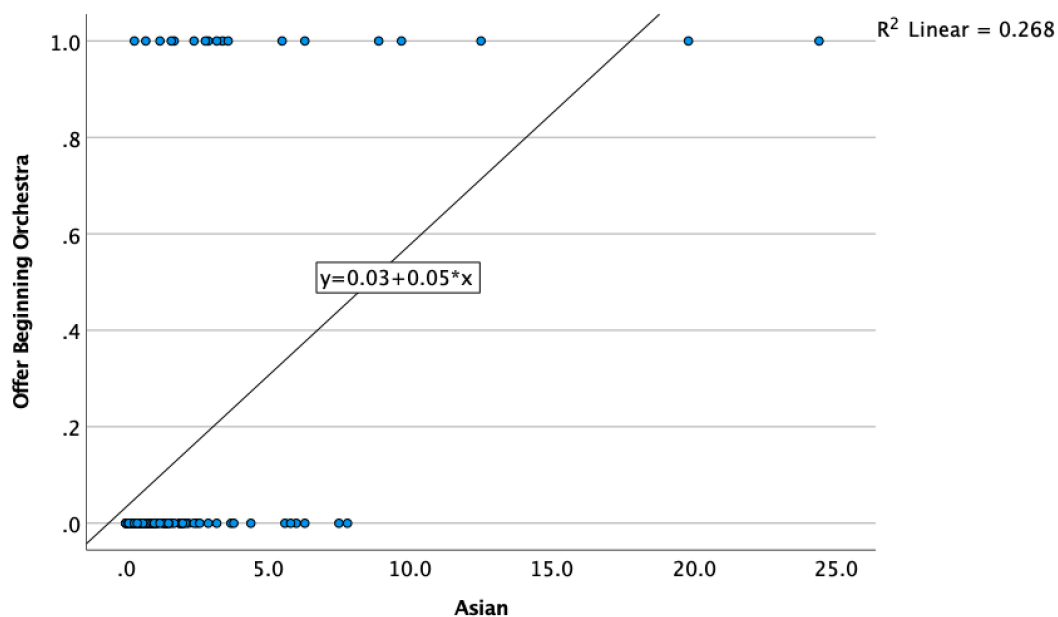


Note. 1.917% of students in Virginia school divisions were Asian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Asian student population and offering Orchestra courses. Five tests were significant. There was a significant positive correlation between offering Beginning Orchestra and Asian student enrollment, $r_{pb}(131) = 0.52, p < 0.01, r^2 = 0.27$; 27% shared variance indicated a strong relationship between the two variables (see Figure 202).

Figure 202

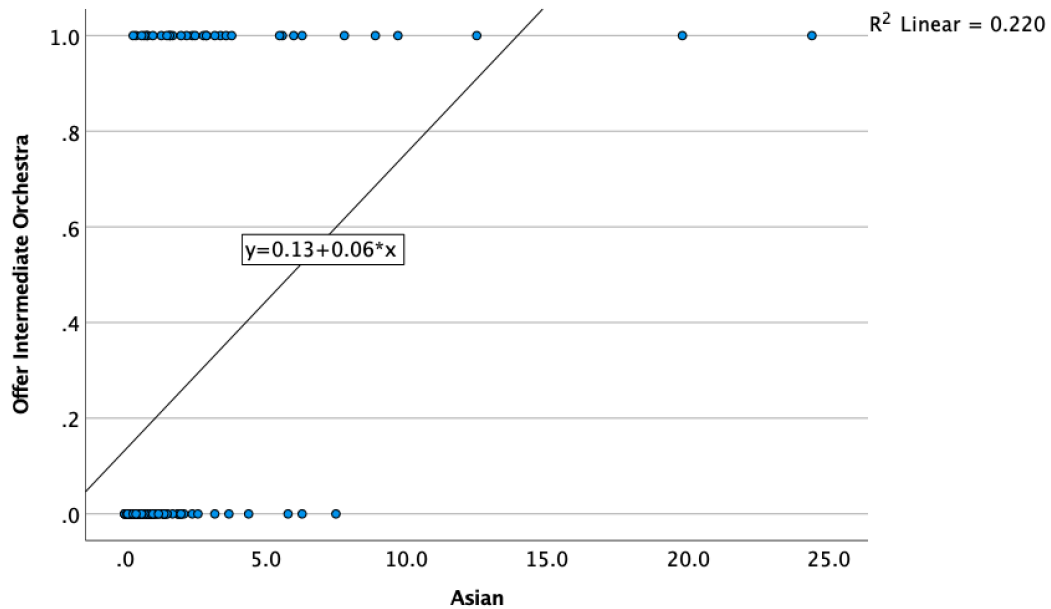
Point Biserial Correlation for Offering Beginning Orchestra and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Intermediate Orchestra and Asian student enrollment, $r_{pb}(131) = 0.47, p < 0.01, r^2 = 0.22$; 22% shared variance indicated a moderate relationship between the two variables (see Figure 203).

Figure 203

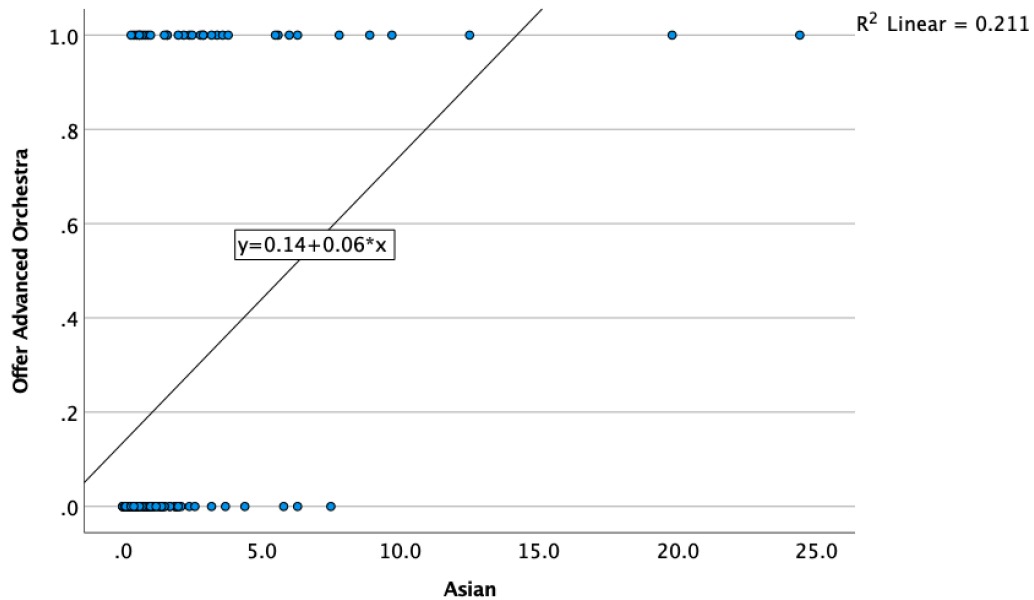
Point Biserial Correlation for Offering Intermediate Orchestra and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Advanced Orchestra and Asian student enrollment, $r_{pb}(131) = 0.46$, $p < 0.01$, $r^2 = 0.21$; 21% shared variance indicated a moderate relationship between the two variables (see Figure 204).

Figure 204

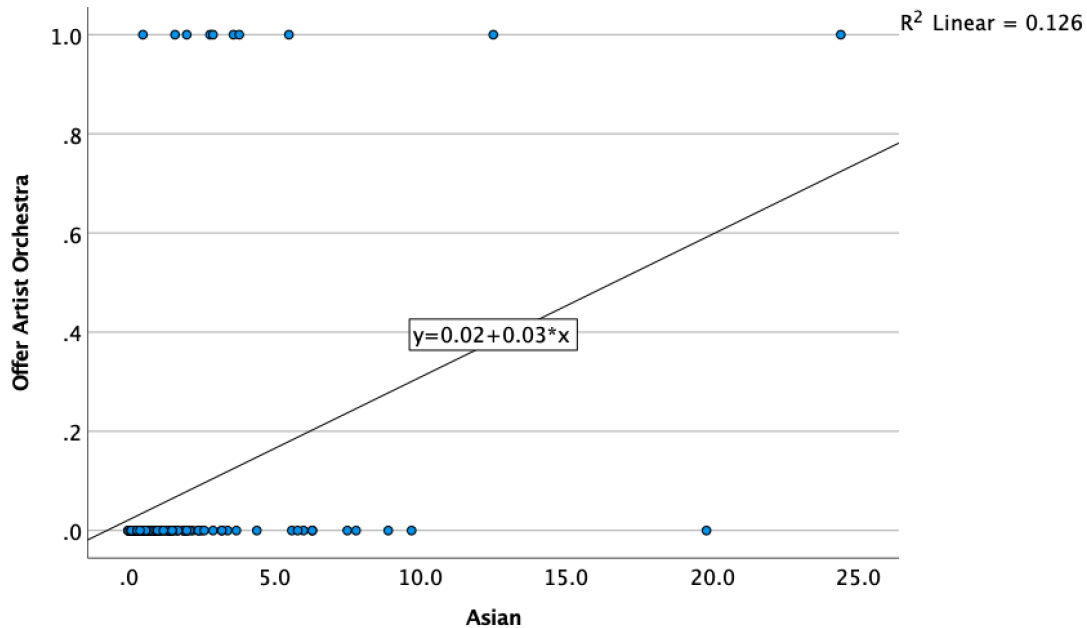
Point Biserial Correlation for Offering Advanced Orchestra and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Artist Orchestra and Asian student enrollment, $r_{pb}(131) = 0.36$, $p < 0.01$, $r^2 = 0.13$; 13% shared variance indicated a moderate relationship between the two variables (see Figure 205).

Figure 205

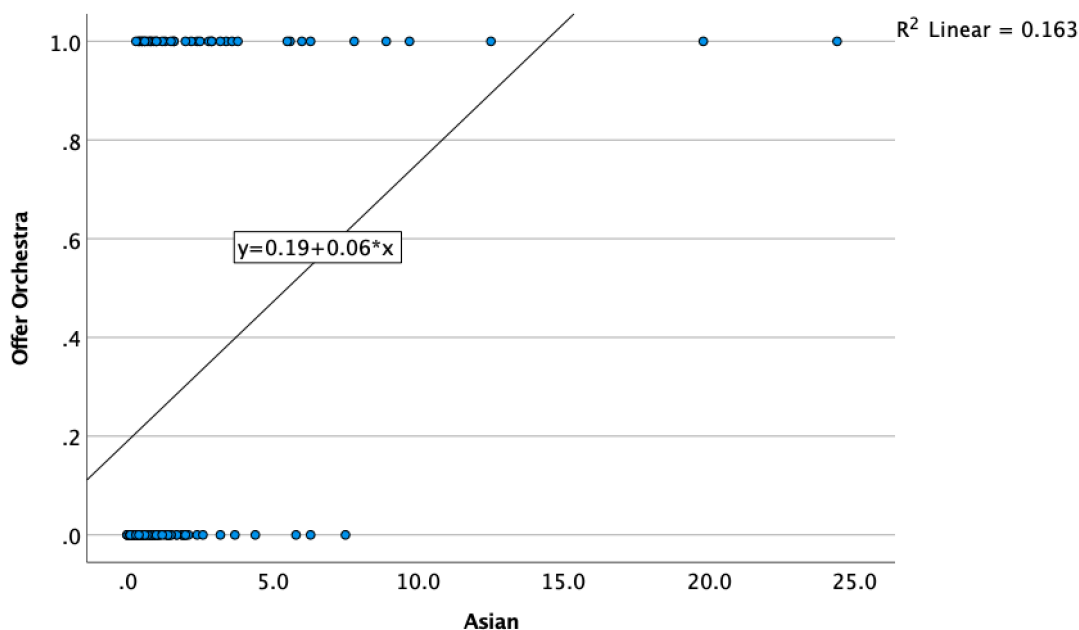
Point Biserial Correlation for Offering Artist Orchestra and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Orchestra and Asian student enrollment, $r_{pb}(131) = 0.40$, $p < 0.01$, $r^2 = 0.16$; 16% shared variance indicated a moderate relationship between the two variables (see Figure 206).

Figure 206

Point Biserial Correlation for Offering at Least One Level of Orchestra and Percentages of Asian Students in Virginia School Divisions (N = 131)

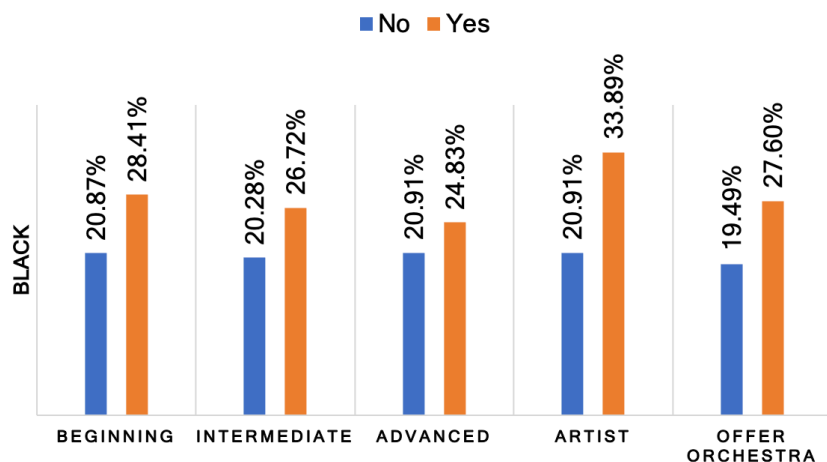


Black. Virginia school divisions offering Orchestra were likely to enroll more Black students. The Black student averages for school divisions offering Beginning Orchestra (28.41%), Intermediate Orchestra (26.72%), Advanced Orchestra (24.83%), Artist Orchestra (33.89%), and at least one level of Orchestra (27.60%) were 6.5%, 4.8%, 2.9%, 12%, and 5.7% above the statewide average of Black students (21.902%), respectively. The Black student averages for school divisions not offering Beginning Orchestra (20.87%), Intermediate Orchestra (20.28%), Advanced Orchestra (20.91%), Artist Orchestra (20.91%), and at least one level of Orchestra (19.49%) were 1%, 1.6%, 1%, 1%, and 2.4% below the statewide average of Black students (21.897%), respectively. The average of Black students for school divisions offering Beginning Orchestra (28.41%) was 7.5% above the average of Black students for school

divisions not offering the course (20.87%). The average of Black students for school divisions offering Intermediate Orchestra (26.72%) was 6.4% above the average of Black students for school divisions not offering the course (20.28%). The average of Black students for school divisions offering Advanced Orchestra (24.83%) was 3.9% above the average of Black students for school divisions not offering the course (20.91%). The average of Black students for school divisions offering Artist Orchestra (33.89%) was 13% above the average of Black students for school divisions not offering the course (20.91%). The average of Black students for school divisions offering at least one level of Orchestra (27.6%) was 8.1% above the average of Black students for school divisions not offering the course (19.49%; see Figure 207).

Figure 207

Averages of Black Students in Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)



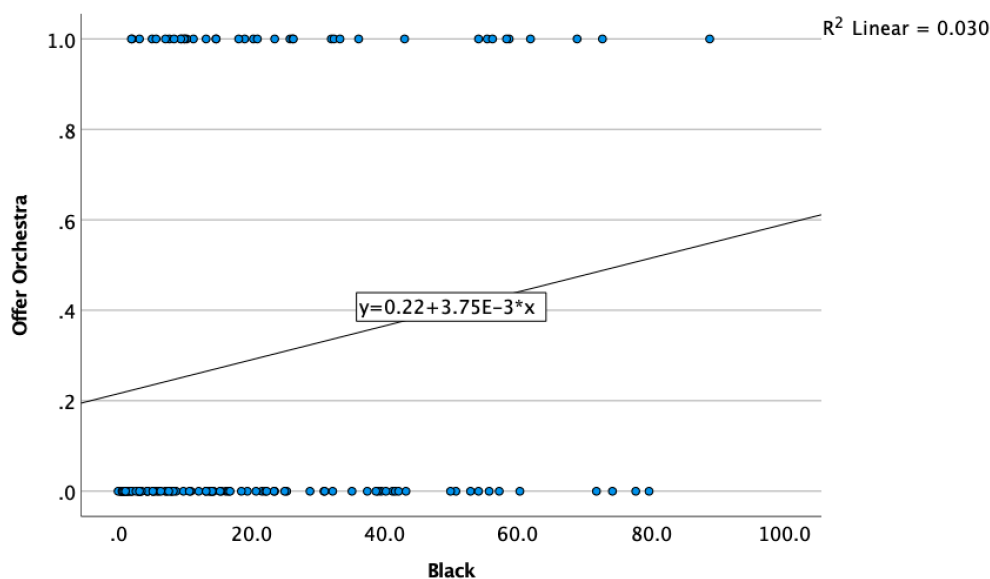
Note. 21.897% of students in Virginia school divisions were Black.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Black student population and offering

Orchestra courses. One test significant. There is a significant positive correlation between offering at least one level of Orchestra and Black student enrollment, $r_{pb}(131) = 0.17, p < 0.05, r^2 = 0.03$; 3% shared variance indicated a weak relationship between the two variables (see Figure 208).

Figure 208

Point Biserial Correlation for Offering Orchestra and Percentages of Black Students in Virginia School Divisions (N = 131)

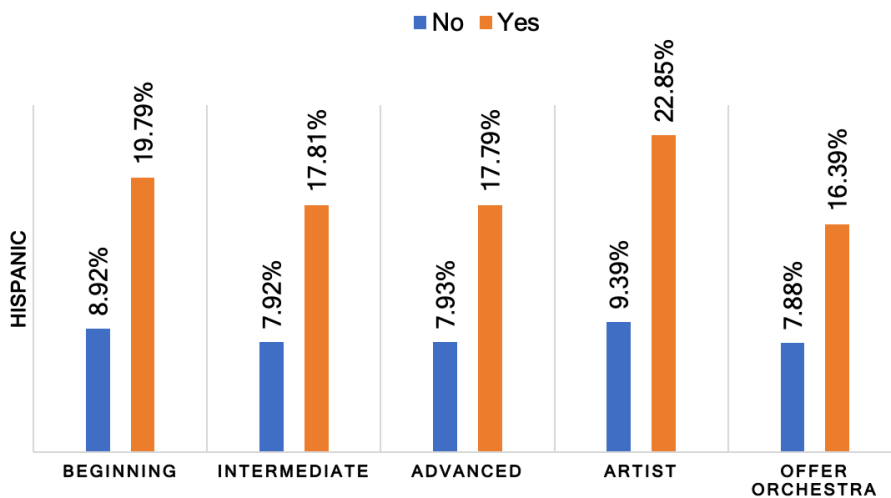


Hispanic. Virginia school divisions with larger Hispanic student populations were likely to offer Orchestra courses. The Hispanic student averages for school divisions offering Beginning Orchestra (19.79%), Intermediate Orchestra (17.81%), Advanced Orchestra (17.79%), Artist Orchestra (22.85%), and at least one level of Orchestra (16.39%) were 1.9, 1.7, 1.7, 2.2, and 1.6 times than the statewide average of Hispanic students (10.415%). The Hispanic student averages for school divisions not offering Beginning Orchestra (8.92%), Intermediate Orchestra

(7.92%), Advanced Orchestra (7.93%), Artist Orchestra (9.39%), and at least one level of Orchestra (7.88%) were 1.5%, 2.5%, 2.5%, 1%, and 2.5% below the statewide average of Hispanic students (10.415%). The average of Hispanic students for school divisions offering Beginning Orchestra (19.79%) was 2.2 times the average of Hispanic students for school divisions not offering the course (8.92%). The average of Hispanic students for school divisions offering Intermediate Orchestra (17.81%) was 2.2 times the average of Hispanic students for school divisions not offering the course (7.92%). The average of Hispanic students for school divisions offering Advanced Orchestra (17.79%) was 2.2 times the average of Hispanic students for school divisions not offering the course (7.93%). The average of Hispanic students for school divisions offering Artist Orchestra (22.85%) was 2.4 times the average of Hispanic students for school divisions not offering the course (9.39%). The average of Hispanic students for school divisions offering at least one level of Orchestra (16.39%) was 2.1 times the average of Hispanic students for school divisions not offering the course (7.88%; see Figure 209).

Figure 209

Averages of Hispanic Students in Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)

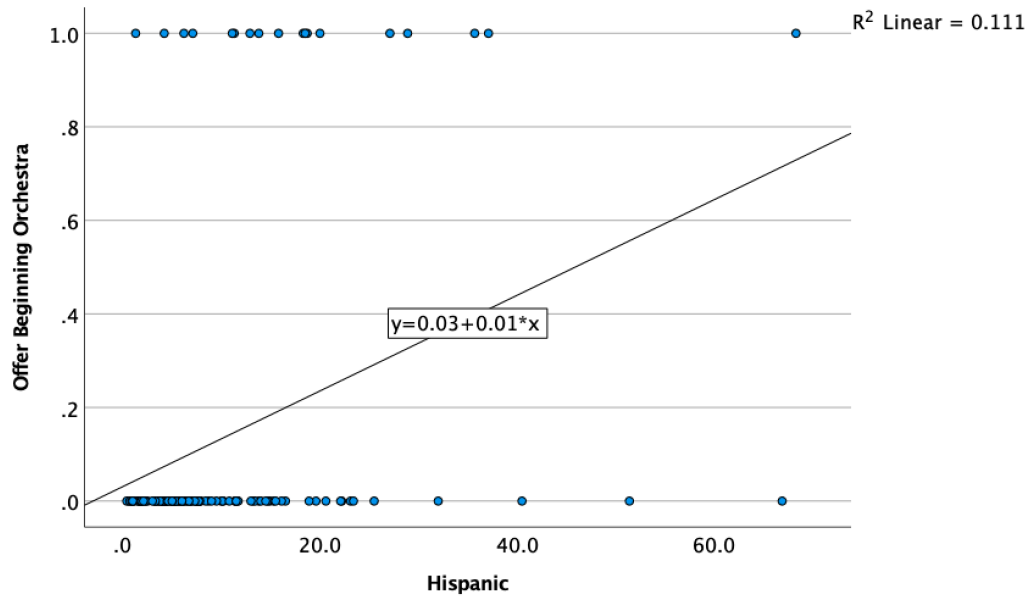


Note. 10.415% of students in Virginia school divisions were Hispanic.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Hispanic student population and offering Orchestra courses. Five tests were significant. There was a significant positive correlation between offering Beginning Orchestra and Hispanic student enrollment, $r_{pb}(131) = 0.33$, $p < 0.01$, $r^2 = 0.11$; 11% shared variance indicated a moderate relationship between the two variables (Figure 221).

Figure 210

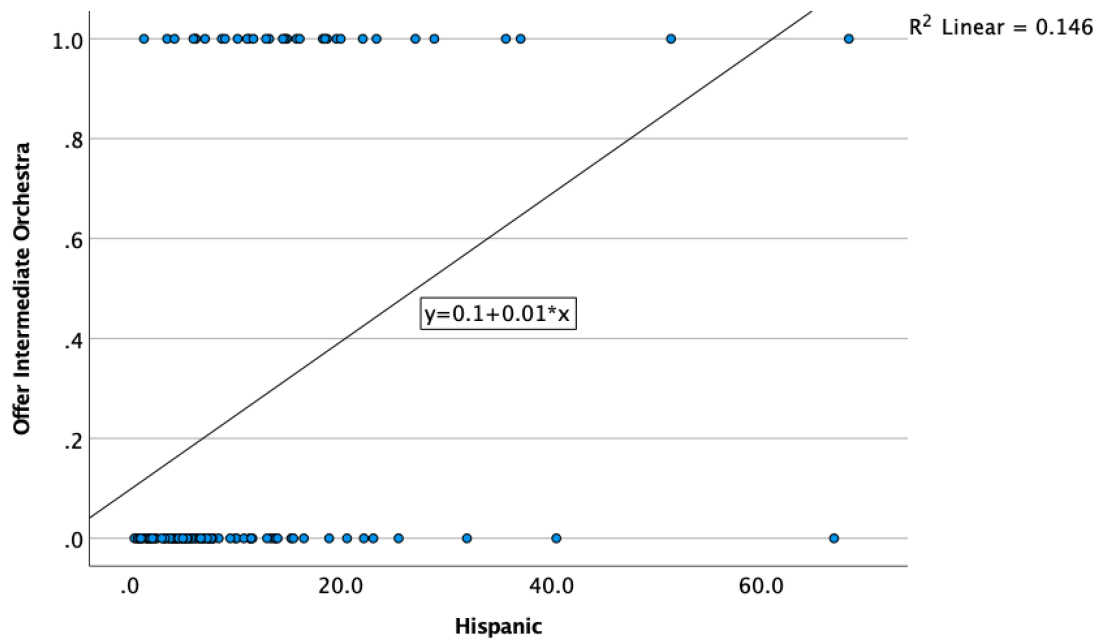
Point Biserial Correlation for Offering Beginning Orchestra and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Intermediate Orchestra and Hispanic student enrollment, $r_{pb}(131) = 0.38$, $p < 0.01$, $r^2 = 0.15$; 15% shared variance indicated a moderate relationship between the two variables (Figure 211).

Figure 211

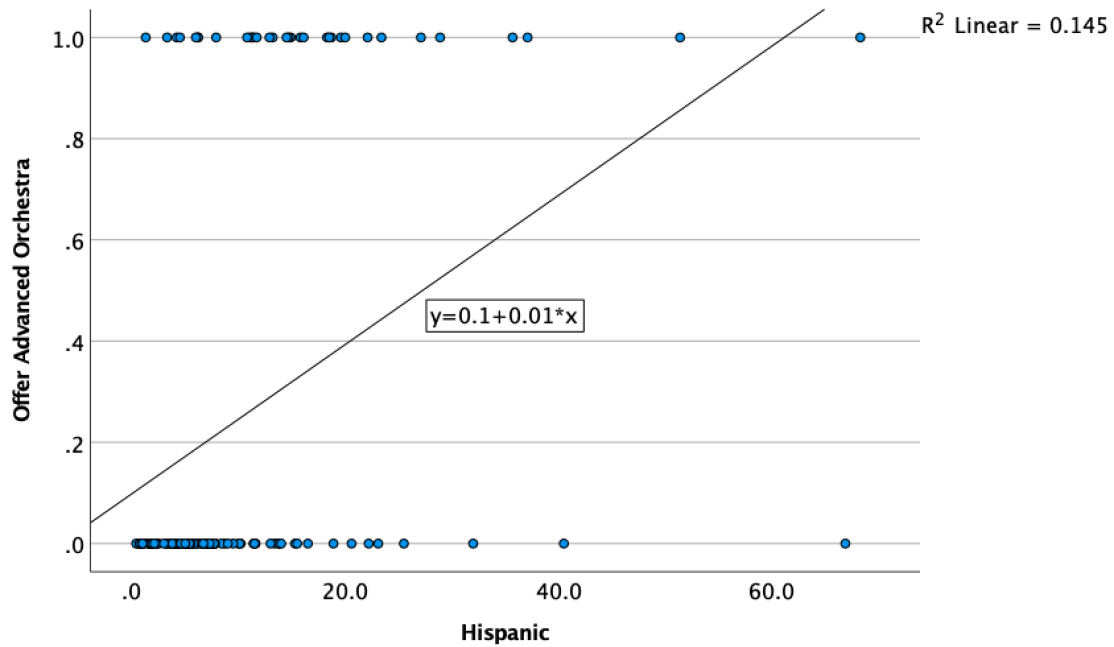
Point Biserial Correlation for Offering Intermediate Orchestra and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Advanced Orchestra and Hispanic student enrollment, $r_{pb}(131) = 0.38$, $p < 0.01$, $r^2 = 0.15$; 15% shared variance indicated a moderate relationship between the two variables (Figure 212).

Figure 212

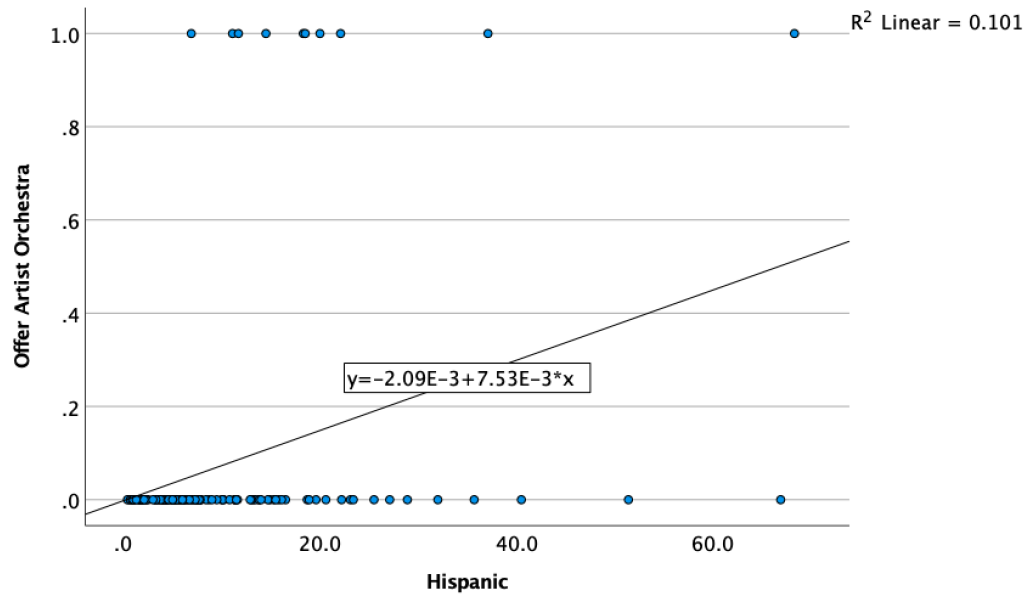
Point Biserial Correlation for Offering Advanced Orchestra and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Artist Orchestra and Hispanic student enrollment, $r_{pb}(131) = 0.32$, $p < 0.01$, $r^2 = 0.10$; 10% shared variance indicated a moderate relationship between the two variables (Figure 213).

Figure 213

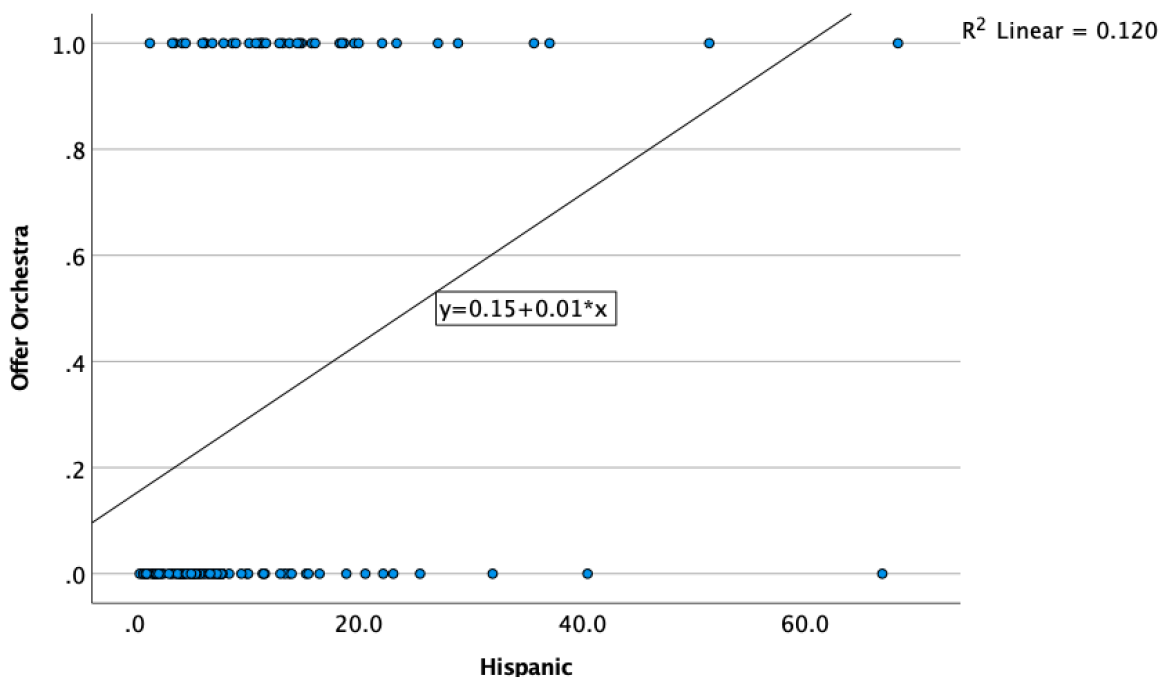
Point Biserial Correlation for Offering Artist Orchestra and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Orchestra and Hispanic student enrollment, $r_{pb}(131) = 0.35$, $p < 0.01$, $r^2 = 0.12$; 12% shared variance indicated a moderate relationship between the two variables (see Figure 214).

Figure 214

Point Biserial Correlation for Offering at Least One Level of Orchestra and Percentages of Hispanic Students in Virginia School Divisions (N = 131)

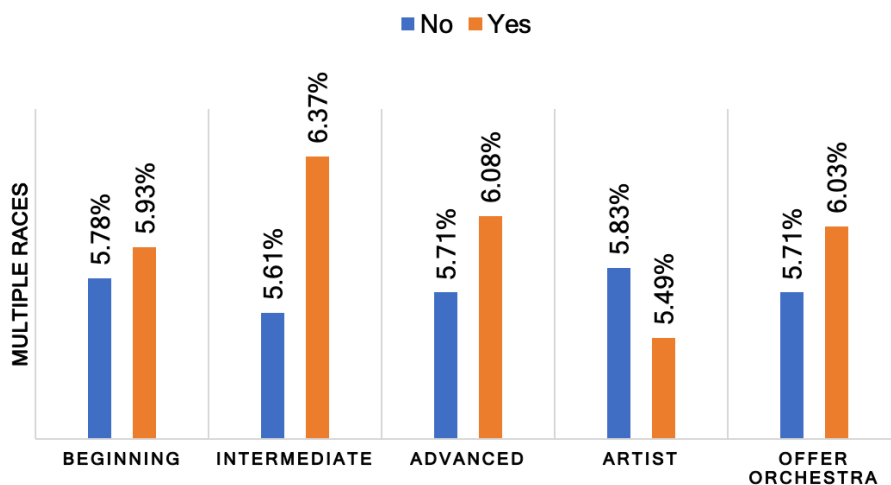


Multiple Races. Percentages of Multiple Races students in Virginia school divisions did not influence offering Orchestra courses. The averages of Multiple Races students for school divisions offering Beginning Orchestra (5.93%), Intermediate Orchestra (6.73%), Advanced Orchestra (6.08%), and at least one level of Orchestra (6.03%) were only 0.1%, 0.9%, 0.3%, and 0.2% above the statewide average of Multiple Races students (5.801%), respectively. The averages of Multiple Races students for school divisions not offering Beginning Orchestra (5.78%), Intermediate Orchestra (5.61%), Advanced Orchestra (5.71%), and at least one level of Orchestra (5.71%) were only 0.02%, 0.3, 0.9%, 0.1%, and 0.1% below the statewide average of Multiple Races students (5.801%), respectively. In case with Artist Orchestra, the average of Multiple Races students for offering school divisions (5.49%) was 0.3% below the statewide

average (5.801), while the average of Multiple races students for not offering school divisions (5.83%) was 0.03% above the statewide average. The average of Multiple Races students for school divisions offering Beginning Orchestra (5.93%) was only 0.2% above the average for school divisions not offering the course (5.78%). The average of Multiple Races students for school divisions offering Intermediate Orchestra (6.37%) was only 0.8% above the average for school divisions not offering the course (5.61%). The average of Multiple Races students for school divisions offering Advanced Orchestra (6.08%) was only 0.4% above the average for school divisions not offering the course (5.71%). The average of Multiple Races students for school divisions offering Artist Orchestra (5.49%) was only 0.3% below the average for school divisions not offering the course (5.83%). The average of Multiple Races students for school divisions offering at least one level of Orchestra (6.03%) was only 0.3% above the average for school divisions not offering the course (5.71%; see Figure 215).

Figure 215

Averages of Multiple Races Students in Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)



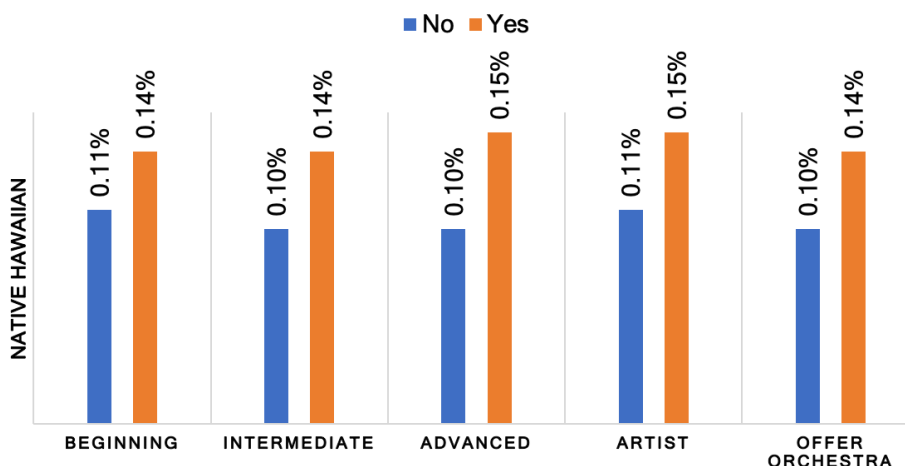
Note. 5.801% of students in Virginia school divisions were Multiple Races.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Multiple Races students and offering Orchestra courses were nonsignificant.

Native Hawaiian. Percentages of Native Hawaiian students in Virginia school divisions did not influence offering Orchestra courses. The averages of Native Hawaiian students for school divisions offering Beginning Orchestra (0.14%), Intermediate Orchestra (0.14%), Advanced Orchestra (0.15%), Artist Orchestra (0.15%), and at least one level of Orchestra (0.14%) were only 0.03-0.04% above the statewide average of Native Hawaiian students (0.113%). The averages of Native Hawaiian students for school divisions not offering Beginning Orchestra (0.11%), Intermediate Orchestra (0.10%), Advanced Orchestra (0.10%), Artist Orchestra (0.11%), and at least one level of Orchestra (0.14%) deviated from the statewide average of Native Hawaiian students (0.113%) by only 0.03%. Differences between averages of Native Hawaiian students for school divisions offering and not offering Orchestra courses were only 0.03-0.05% (see Figure 216).

Figure 216

Averages of Native Hawaiian Students in Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)



Note. 0.113% of students in Virginia school divisions were Native Hawaiian.

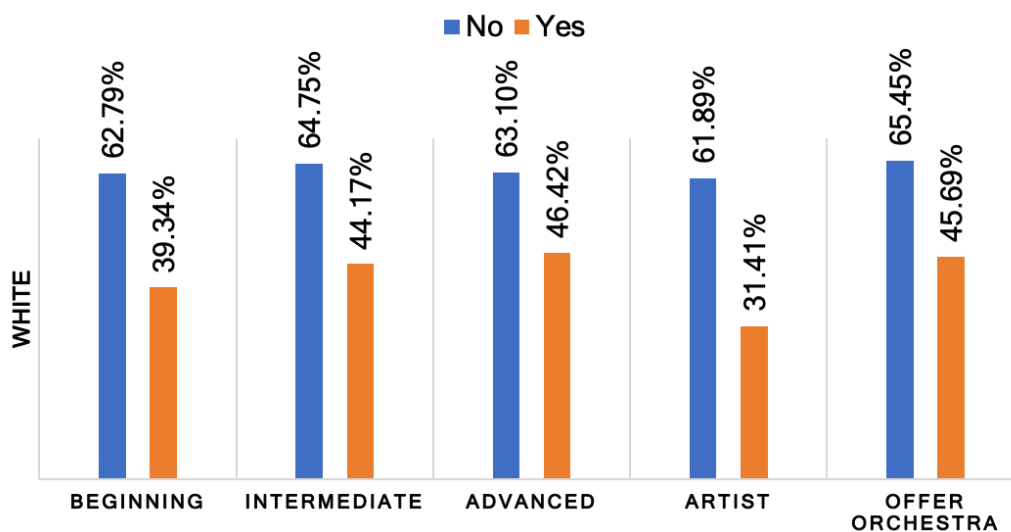
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Native Hawaiian students and offering Orchestra courses were nonsignificant.

White. Virginia school divisions with less White students were likely to offer Orchestra courses. The averages of White students for school divisions offering Beginning Orchestra (39.34%), Intermediate Orchestra (44.17%), Advanced Orchestra (46.42%), Artist Orchestra (31.41%), and at least one level of Orchestra (45.69%) were 1.5, 1.3, 1.3, 1.9, and 1.3 times lower than the statewide average of White students (59.567%), respectively. The averages of White students for school divisions not offering Beginning Orchestra (62.79%), Intermediate Orchestra (64.75%), Advanced Orchestra (63.10%), Artist Orchestra (61.89%), and at least one level of Orchestra (65.45%) were 3.2%, 5.2%, 3.5%, 2.3%, and 5.9% below the statewide average of White students (59.567%). The average of White students for school divisions not

offering Beginning Orchestra (62.79%) was 23.45% above the average of White students for school divisions offering the course (39.34%). The average of White students for school divisions not offering Intermediate Orchestra (64.75%) was 20.58% above the average of White students for school divisions offering the course (44.17%). The average of White students for school divisions not offering Advanced Orchestra (63.10%) was 16.68% above the average of White students for school divisions offering the course (46.42%). The average of White students for school divisions not offering Artist Orchestra (61.89%) was twice the average of White students for school divisions offering the course (31.41%). The average of White students for school divisions not offering Orchestra (65.45%) was 19.76% above the average of White students for school divisions offering the course (45.69%; see Figure 217).

Figure 217

Averages of White Students in Virginia School Divisions Offering and Not Offering Orchestra Courses (N = 131)

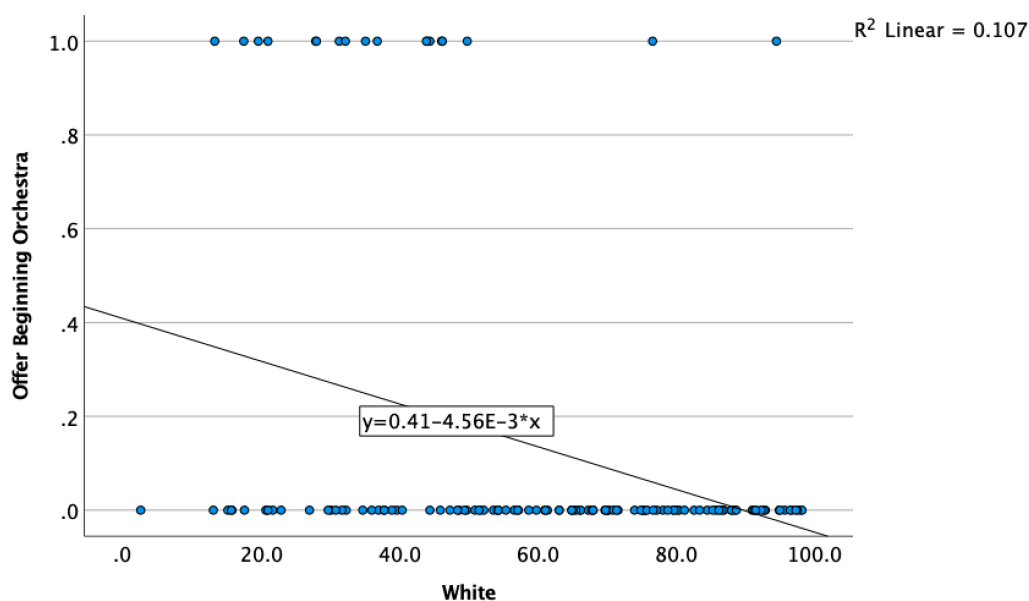


Note. 59.567% of students in Virginia school divisions were White.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of White student population and offering Orchestra courses. Five tests were significant. There was a significant negative correlation between offering Beginning Orchestra and White student enrollment, $r_{pb}(131) = -0.33, p < 0.01, r^2 = 0.11$; 11% shared variance indicates a moderate relationship between the two variables (Figure 218).

Figure 218

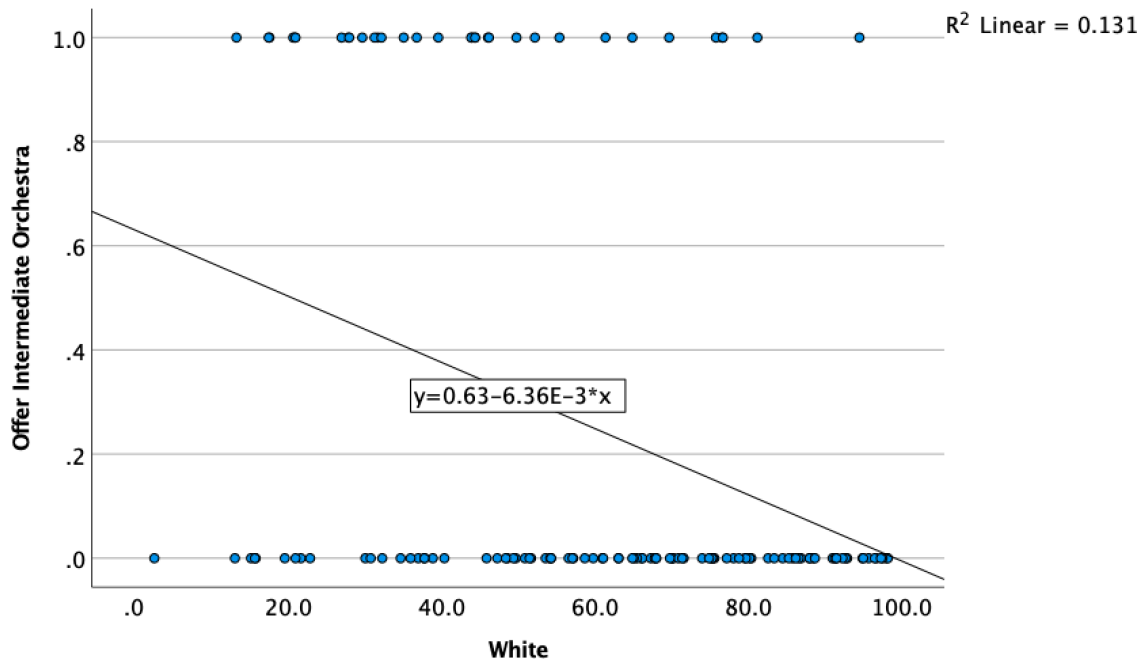
Point Biserial Correlation for Offering Beginning Orchestra and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Intermediate Orchestra and White student enrollment, $r_{pb}(131) = -0.36, p < 0.01, r^2 = 0.13$; 13% shared variance indicated a moderate relationship between the two variables (see Figure 219).

Figure 219

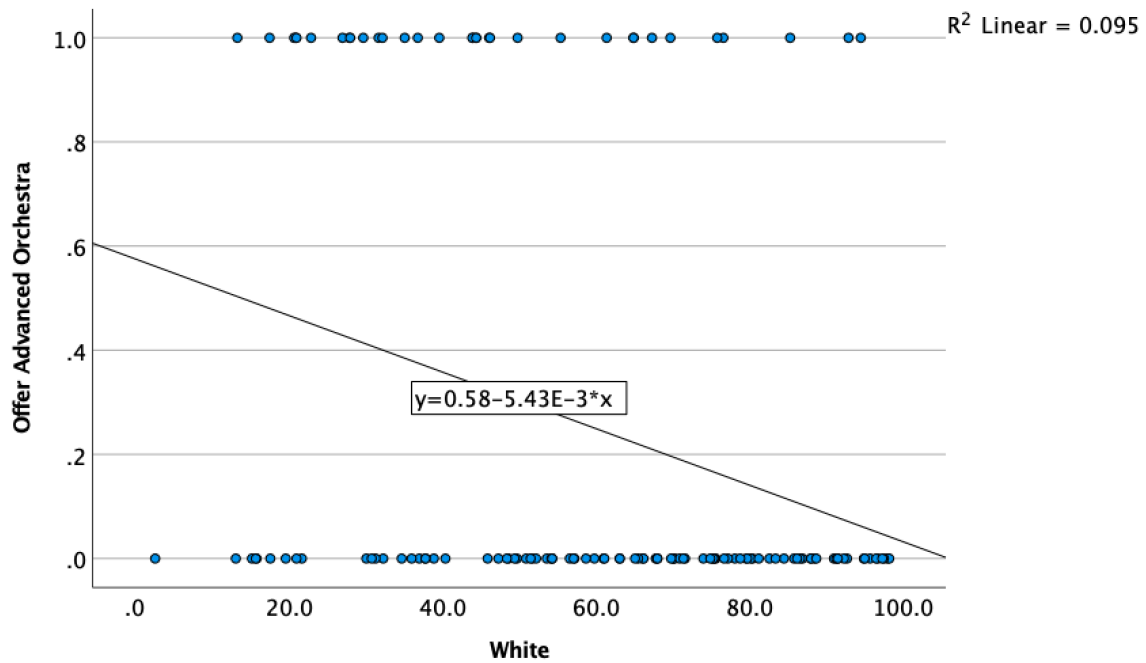
Point Biserial Correlation for Offering Intermediate Orchestra and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Advanced Orchestra and White student enrollment, $r_{pb}(131) = -0.31$, $p < 0.01$, $r^2 = 0.10$; 10% shared variance indicates a moderate relationship between the two variables (see Figure 220).

Figure 220

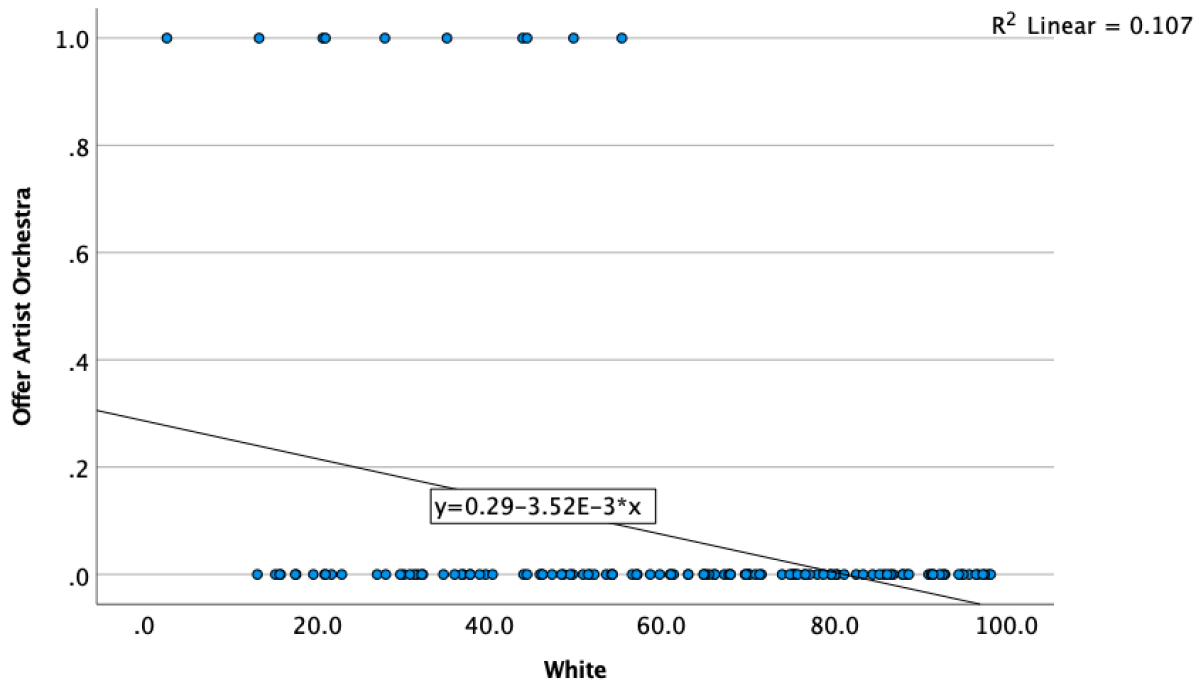
Point Biserial Correlation for Offering Advanced Orchestra and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering Artist Orchestra and White student enrollment, $r_{pb}(131) = -0.33$, $p < 0.01$, $r^2 = 0.11$; 11% shared variance indicated a moderate relationship between the two variables (see Figure 221).

Figure 221

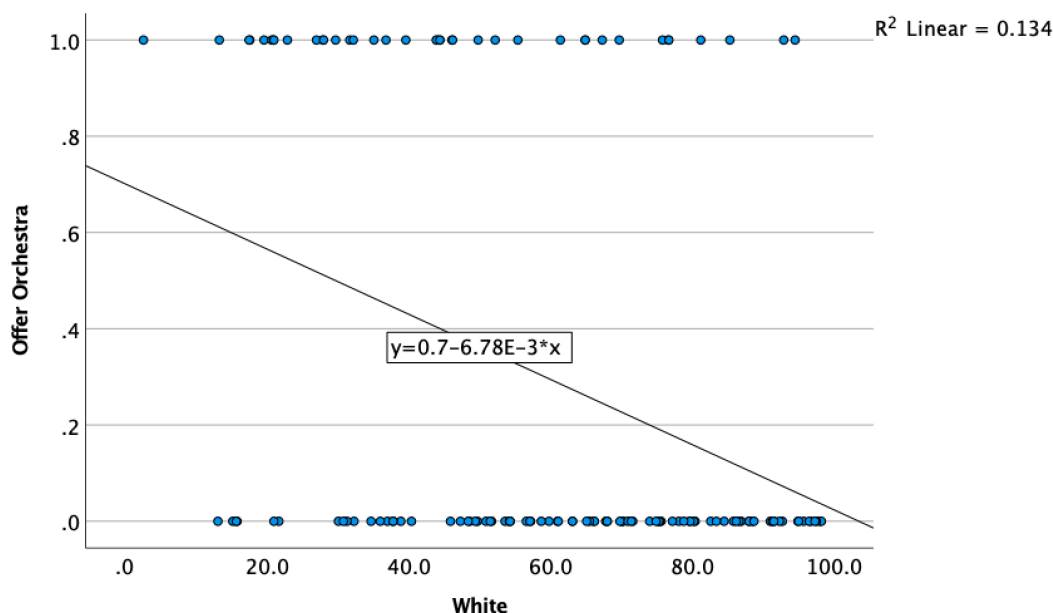
Point Biserial Correlation for Offering Artist Orchestra and Percentages of White Students in Virginia School Divisions (N = 131)



There was a significant negative correlation between offering at least one level of Orchestra and White student enrollment, $r_{pb}(131) = -0.37$, $p < 0.01$, $r^2 = 0.13$; 13% shared variance indicated a moderate relationship between the two variables (see Figure 222).

Figure 222

Point Biserial Correlation for Offering Orchestra and Percentages of White Students in Virginia School Divisions (N = 131)



Orchestra Summary. Orchestra was the sixth offered high school music course type in Virginia, offered by a third of the Virginia school divisions.

Orchestra courses were offered disproportionately across the Virginia localities, cities and suburbs were significantly more likely to offer Orchestra courses as compared to rural and town localities. School divisions offering Orchestra were clustered around large well-developed areas.

Enrollment was significantly higher in Virginia school divisions offering Orchestra courses. School divisions offering at least one level of Orchestra on average enrolled 6.5 times more students than an average Virginia school division, and strong and moderate correlations were found among offering Orchestra courses and enrollment. Virginia school divisions more capable of financing public education were likely to offer Orchestra courses, but the associations were weak and were significant only for Intermediate Orchestra and Advanced Orchestra. Low

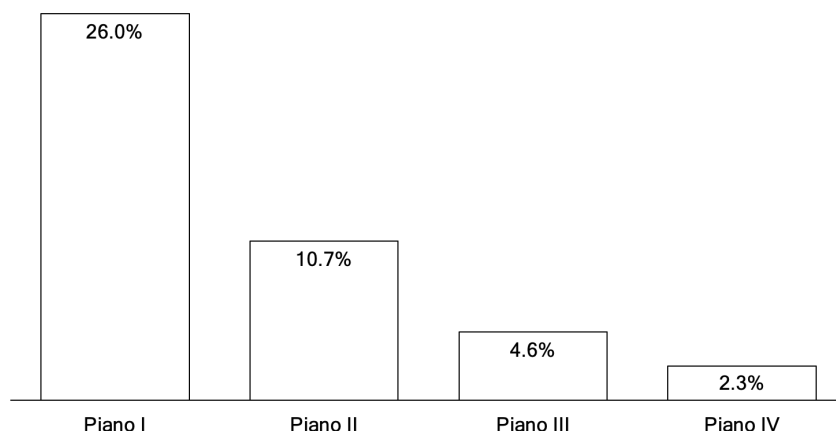
student SES did not associate with offering Orchestra courses. Orchestra courses were offered in Virginia school divisions with significantly more Hispanic, Black, and Asian students and less White students.

Piano

Piano was the seventh offered high school music course in Virginia, 34 school divisions, (26% of all) offered at least one level of Piano. Piano I was offered by 34 school divisions, and Piano II was offered 2.4 times less frequently, by 14 school divisions. Piano III was offered by six school divisions, 5.6 times less frequently than Piano I and 2.3 times less frequently than Piano II. Piano IV was offered by three school divisions, 11.3 times less frequently than Piano I, 4.7 times less frequently than Piano II, and twice less frequently than Piano III (see Figure 223).

Figure 223

Percentages of Virginia School Divisions Offering Piano Courses (N = 131)



Locality. Piano courses were offered disproportionately among Virginia localities, more offered by Virginia city and suburban school divisions as compared to rural and town school divisions. At least one level of Piano, Piano I, and Piano II courses were offered among school

divisions in each locality. Piano I was the most offered Piano course, both statewide and by locality, followed by Piano II, Piano III and Piano IV (with town school divisions not offering Piano III and Piano IV; see Table 42 and Figure 224).

Table 42

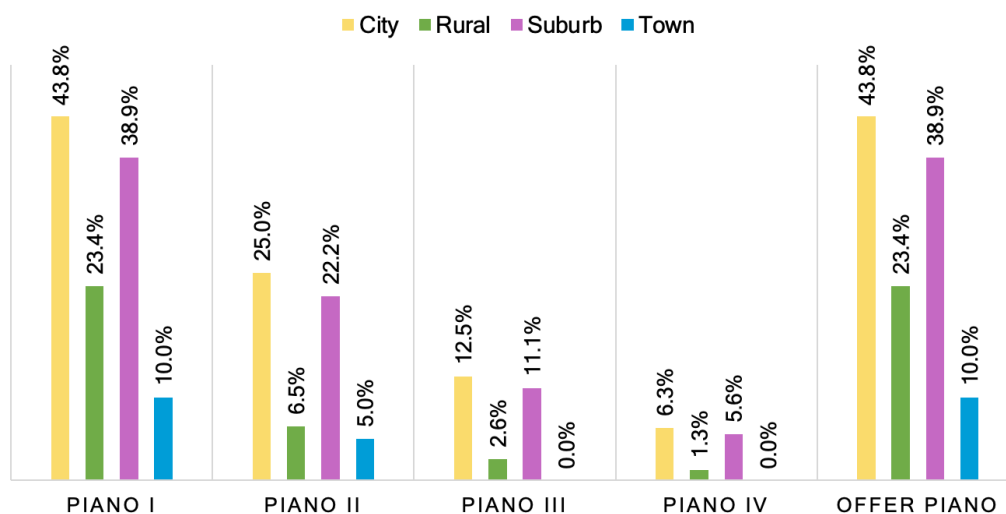
Frequencies of Offering Piano Courses Among Virginia School Divisions Statewide and by Locality (N = 131)

Courses	Offering (f)									
	City		Rural		Suburban		Town		Statewide	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Offer Piano	9	7	59	18	11	7	18	2	97	34
Piano I	9	7	59	18	11	7	18	2	97	34
Piano II	12	4	72	5	14	4	19	1	117	14
Piano III	14	2	75	2	16	2	20	0	125	6
Piano IV	15	1	76	1	17	1	20	0	128	3

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 224

Percentages of Virginia School Divisions Offering Piano Courses Statewide and by Locality (N = 131)

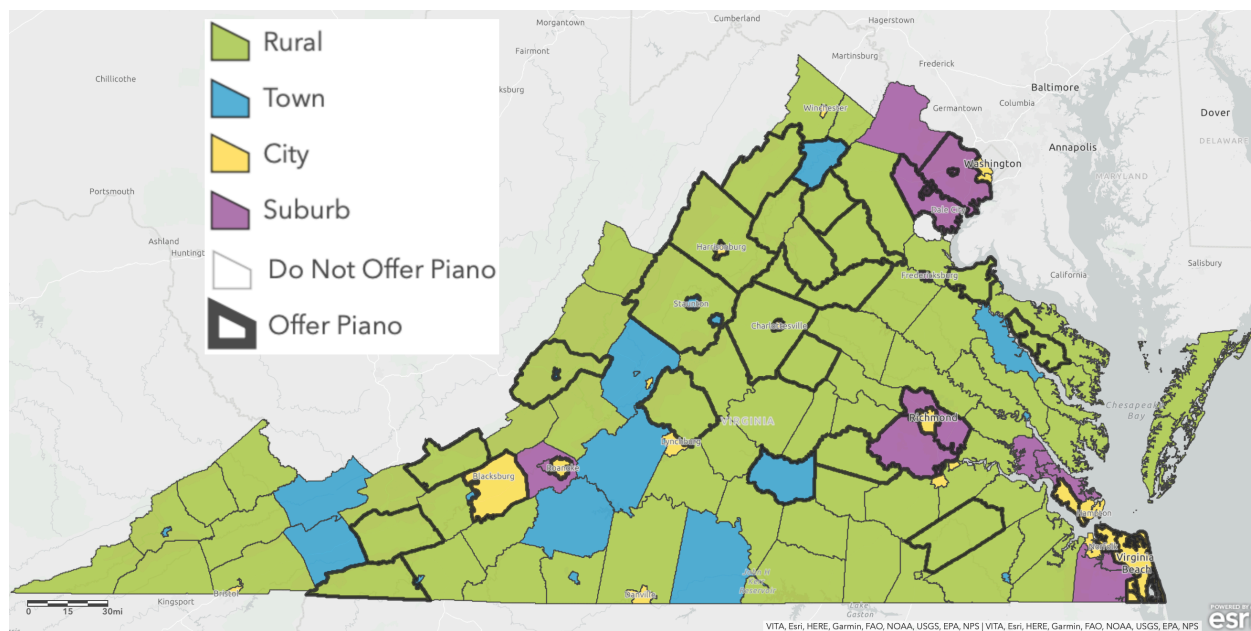


Note. Statewide school divisions $N = 131$, city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 225 depicts school divisions offering at least one level of Piano on the map of Virginia. There was a cluster of rural school divisions in the Northwestern part of the state, and only a few of the school divisions in the South offered the course.

Figure 225

Virginia School Divisions Offering Piano in High School ($n = 34$)



Note. Adapted from National Center for Education Statistics, Education Demographic and Geographic Estimates. Accessed January 1, 2022, from [arcgis.com](https://nces.ed.gov/programs/ipeds/data/arcgis/) ArcGIS online. Full data information found at <https://nces.ed.gov/programs/ipeds/data/arcgis/>

Figures 226-229 illustrated localities of school divisions offering Piano courses. For every Piano level, distributions of localities within each course were not in agreement with the statewide distribution of localities: 12% city, 59% rural, 14% suburb, and 15% town. Substantial disproportionalities were observed in case with Piano I. The percentage of city school divisions offering the course (20%) was 1.7 times the statewide representation for city school divisions (12%); the percentage of town school divisions offering the course (6%) was 2.5 less the

statewide representation for town school divisions (15%); and the percentage of suburban school divisions offering the course (21%) was 1.5 times the statewide representation for suburban school divisions (21%). Similar disproportionalities observed in case with Piano II.

Figure 226

Localities of Virginia School Divisions Offering Piano I (n = 34)

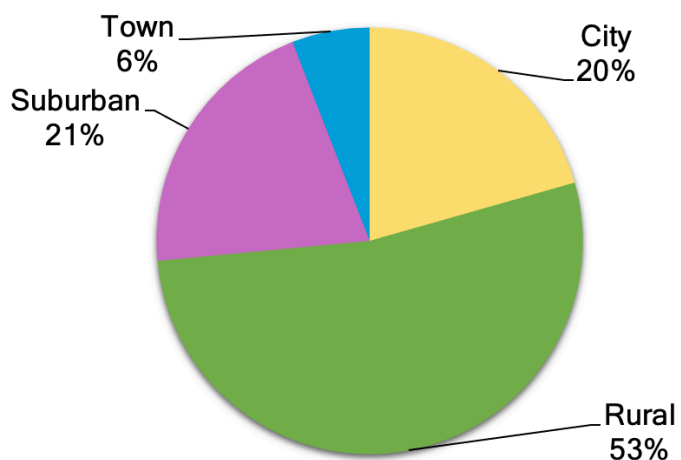


Figure 227

Localities of Virginia School Divisions Offering Piano II (n = 14)

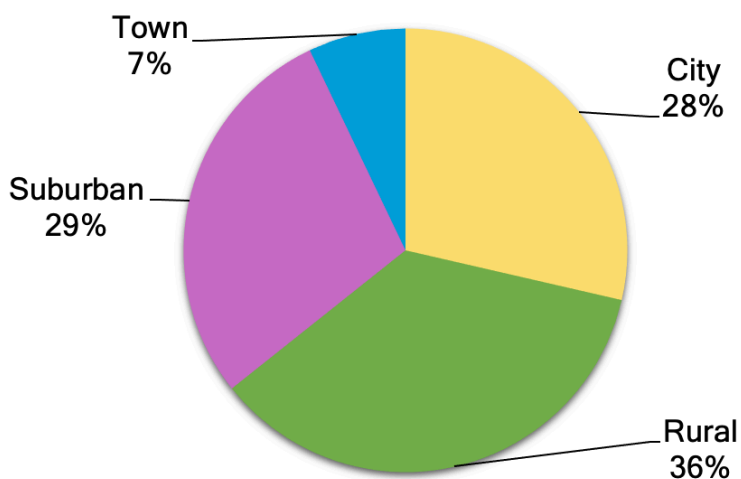


Figure 228

Localities of Virginia School Divisions Offering Piano III (n = 6)

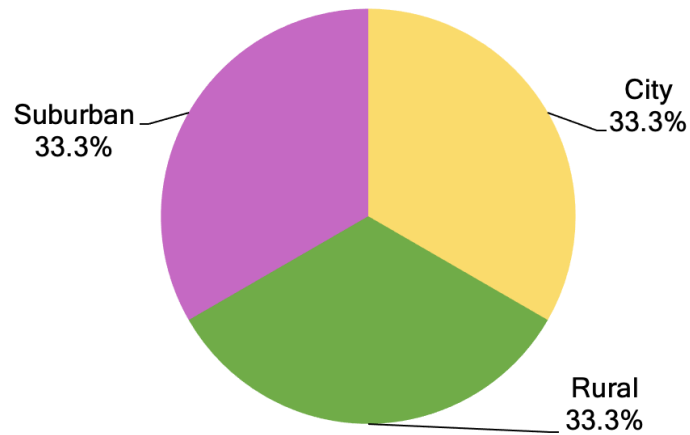
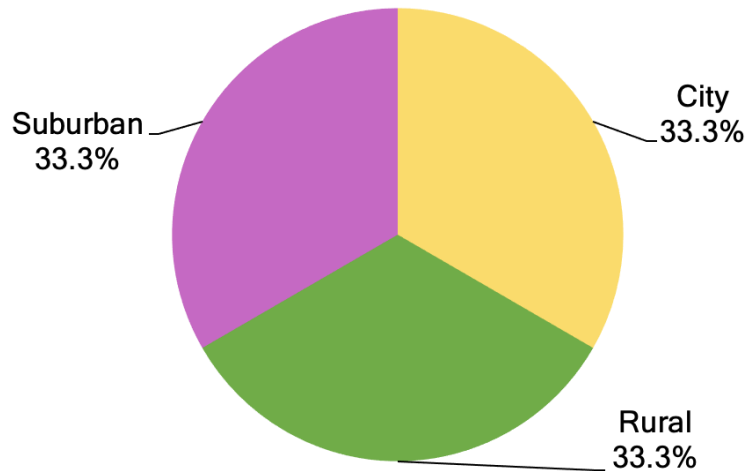


Figure 229

Localities of Virginia School Divisions Offering Piano IV (n = 3)



The independent-samples Kruskal-Wallis test performed to explore whether Piano courses are offered significantly disproportionally across Virginia localities was significant $H_{(3)} = 8.15$, $N = 131$, $p < 0.043$, and the effect size was small, $\epsilon^2 = .006$. The follow up pairwise comparisons were nonsignificant.

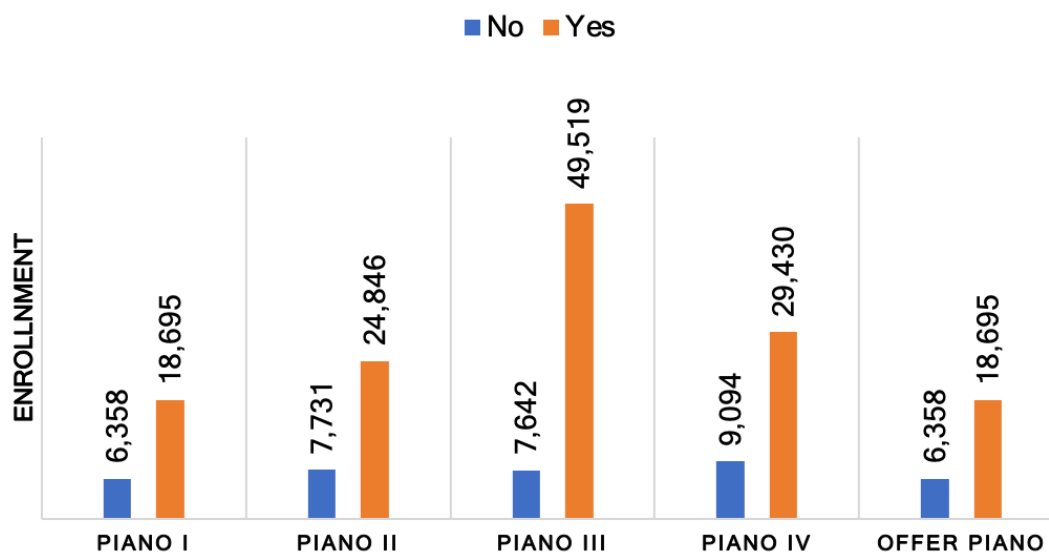
To explore whether there was a statistically significant relationship between offering a particular Piano course and a school division's locality, chi-square tests of association were calculated in SPSS. Cramer's V indices were used to determine the strength of association; follow up analyses included frequency tables examination. One test was significant. A moderate association was found for Piano II, $\chi^2(3) = 8.04, p < 0.05, V = 0.25$. The follow up analyses showed statistically significant differences in the proportions of offering and not offering school divisions for city school divisions: Virginia city school divisions offered Piano II more frequently than expected.

Enrollment. Larger Virginia school divisions offered Piano courses. The enrollment averages for school divisions offering Piano I (18,695), Piano II (24,846), Piano III (49,519), Piano IV (29,430), and at least one level of Piano (18,695) were 2.0, 2.6, 5.2, 3.1, and 2.0 times the statewide enrollment average (9,560), respectively. The enrollment averages for school divisions not offering Piano I (6,358), Piano II (7,731), Piano III (7,642), Piano IV (9,094), and at least one level of Piano (6,358) were 3,201, 1,828, 1,918, 466, and 3,201 below the statewide enrollment average (9,560). The enrollment average for school divisions offering Piano I (18,695) was 2.9 times the enrollment average for school divisions not offering the course (6,358). The enrollment average for school divisions offering Piano II (24,846) was 3.2 times the enrollment average for school divisions not offering the course (7,731). The enrollment average for school divisions offering Piano III (49,519) was 6.5 times the enrollment average for school divisions not offering the course (7,642). The enrollment average for school divisions offering Piano IV (29,430) was 3.2 times the enrollment average for school divisions not offering the course (9,094). The enrollment average for school divisions offering at least one level of Piano

(18,695) was 2.9 times the enrollment average for school divisions not offering Piano courses (6,358; see Figure 230).

Figure 230

Enrollment Averages for Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)

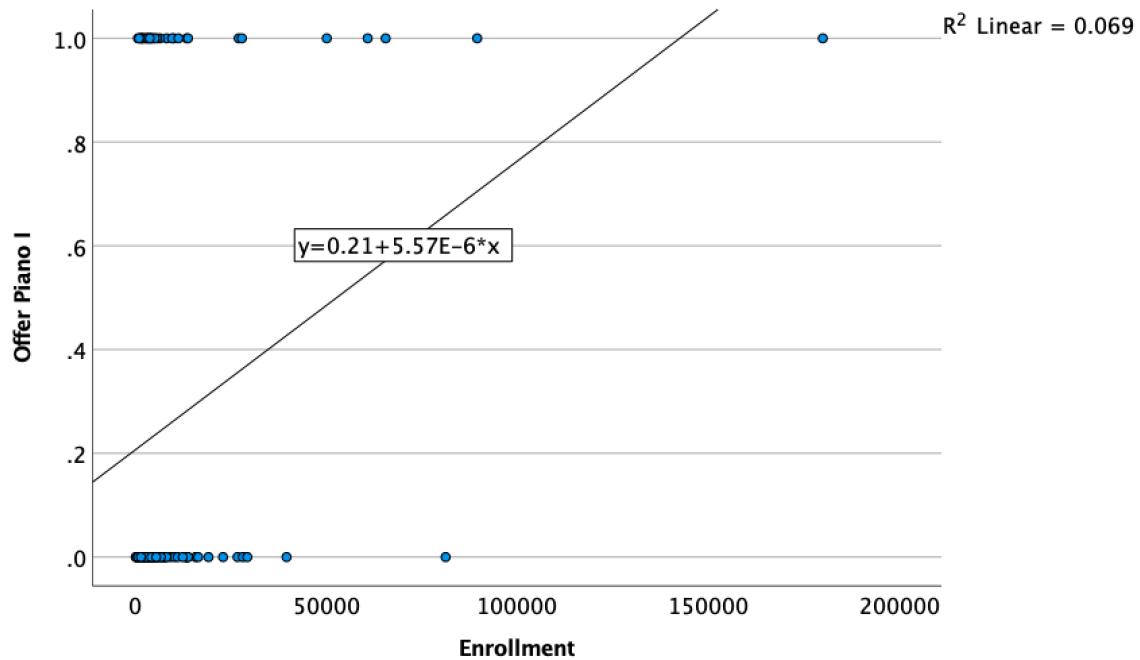


Note. The average enrollment for Virginia school divisions was 9,560.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between enrollment and offering Piano courses. Four tests were significant. There was a significant positive correlation between Piano I and enrollment, $r_{pb}(131) = 0.26, p < 0.01, r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 231).

Figure 231

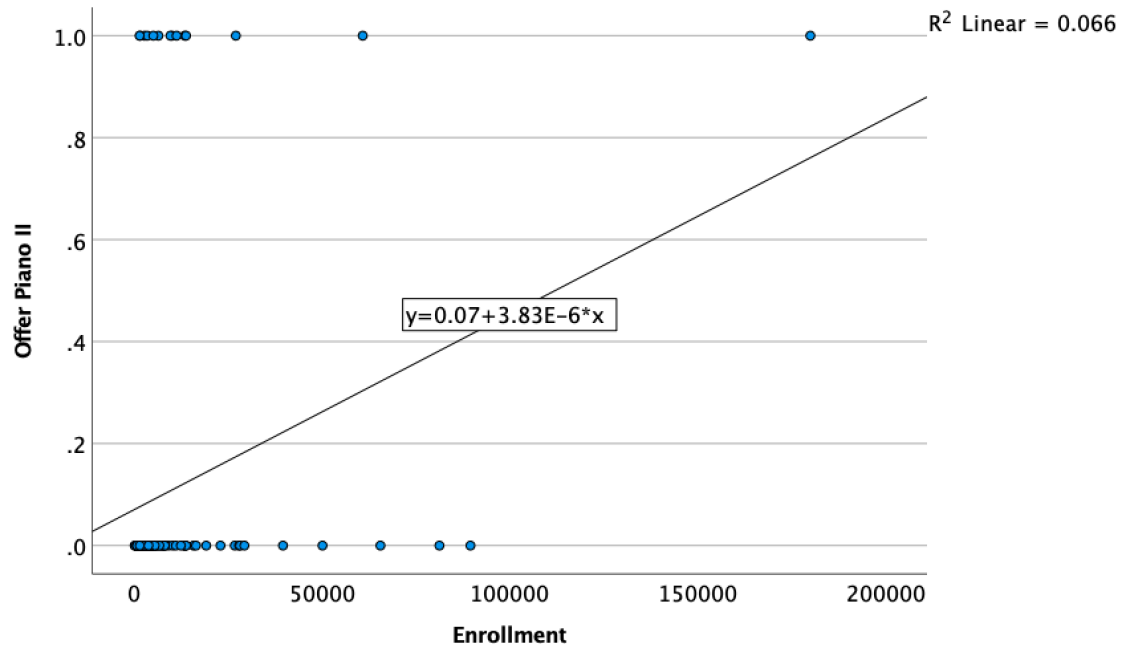
Point Biserial Correlation for Offering Piano I and Enrollment in Virginia School Divisions (N = 131)



There was a significant positive correlation between Piano II and enrollment, $r_{pb}(131) = 0.26$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 232).

Figure 232

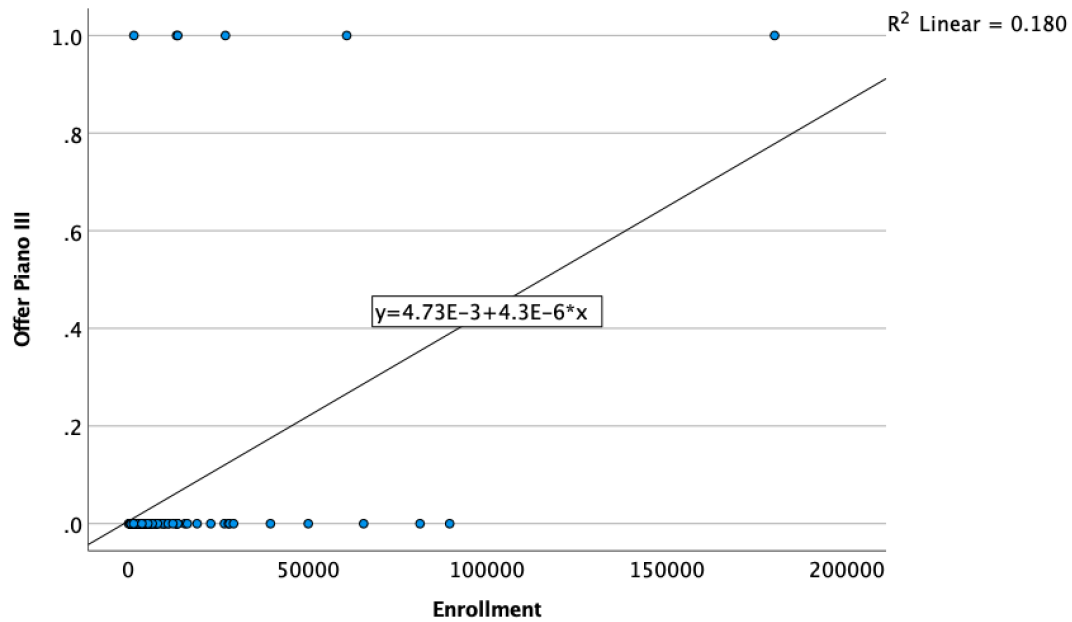
Point Biserial Correlation for Offering Piano II and Enrollment in Virginia School Divisions (N = 131)



There was a significant positive correlation between Piano III and enrollment, $r_{pb}(131) = 0.42$, $p < 0.01$, $r^2 = 0.18$; 18% shared variance indicated a moderate relationship between the two variables (see Figure 233).

Figure 233

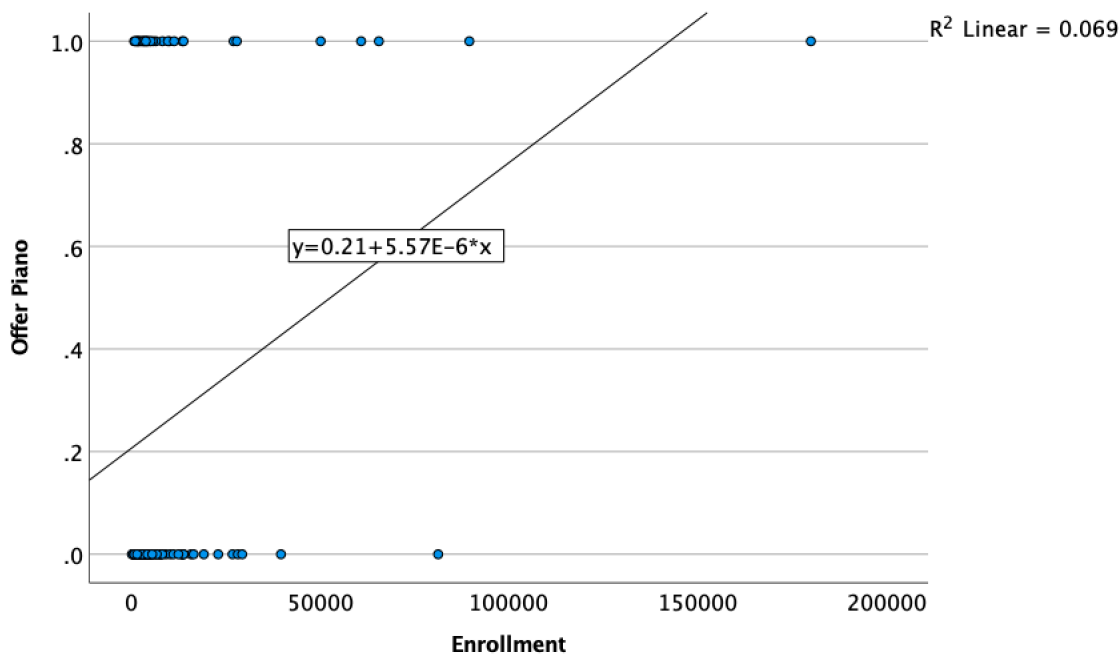
Point Biserial Correlation for Offering Piano III and Enrollment in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Piano and enrollment, $r_{pb}(131) = 0.26$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 234).

Figure 234

Point Biserial Correlation for Offering Piano and Enrollment in Virginia School Divisions (N = 131)

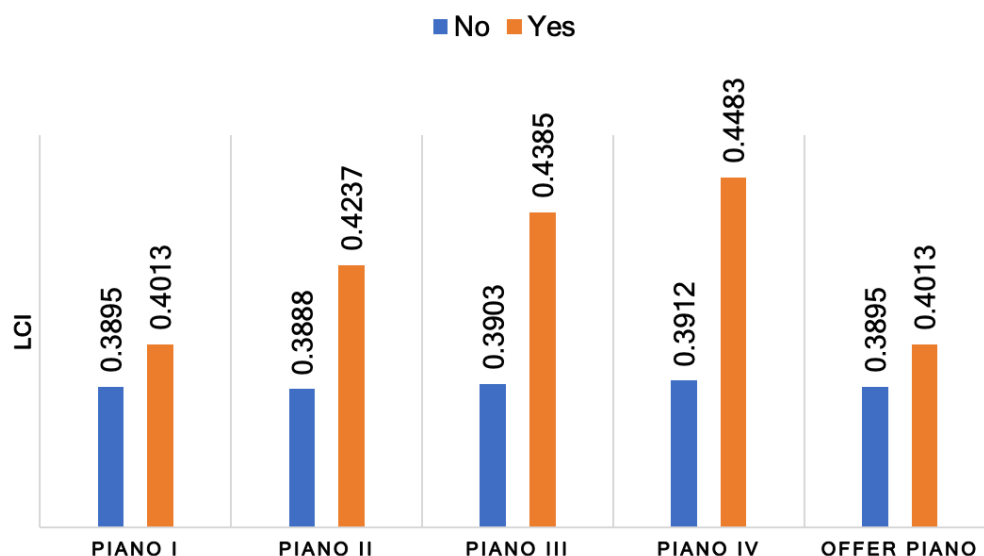


LCI. Virginia school divisions' ability to finance education did not associate with offering Piano courses. The LCI averages for school divisions offering Piano I (.4013), Piano II (.4237), Piano III (.4385), Piano IV (.4483), and at least one level of Piano (.4013) were .0088, .0312, .0460, .0558, and .0088 above the statewide average LCI (.3925), respectively. The LCI averages for school divisions not offering Piano I (.3895), Piano II (.3888), Piano III (.3903), Piano IV (.3912), and at least one level of Piano (.3895) were .0030, .0037, .0022, .0013, and .0030 below the statewide average LCI (.3925), respectively. The average LCI for school divisions offering Piano I (.4013) was .0118 above the average LCI for school divisions not offering the course (.4013). The average LCI for school divisions offering Piano II (.4237) was .0349 above the average LCI for school divisions not offering the course (.3888). The average

LCI for school divisions offering Piano III (.4385) was .0482 above the average LCI for school divisions not offering the course (.3903). The average LCI for school divisions offering Piano IV (.4483) was .0571 above the average LCI for school divisions not offering the course (.3912). The average LCI for school divisions offering at least one level of Piano (.4013) was .0118 above the average LCI for school divisions not offering Piano (.4013; see Figure 235).

Figure 235

Local Composite Index Averages for Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)



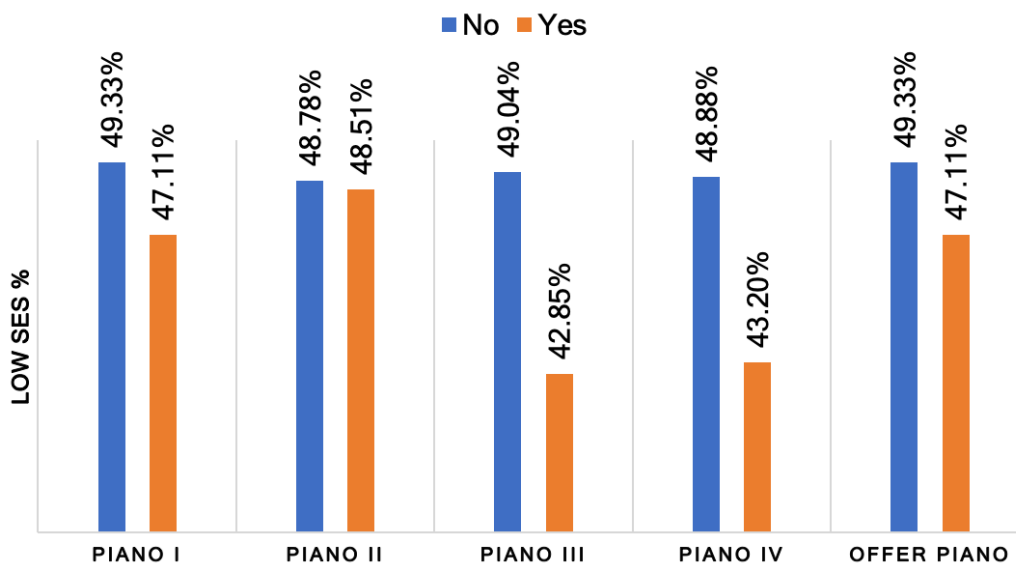
Note. The average local composite index for Virginia school divisions was .3925.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between Virginia school divisions LCIs and offering Piano courses were nonsignificant.

Low Student SES. Percentages of low SES students in Virginia school divisions did not associate with offering Piano courses. The low SES averages for school divisions offering Piano I (47.11%), Piano II (48.51%), Piano III (42.85%), Piano IV (43.20%), and at least one level of Piano (47.11%) were 1.64%, 0.24%, 5.9%, 5.6%, and 1.64% below the statewide average low student SES (48.75%), respectively. The low student SES averages for school divisions not offering Piano I (49.33%), Piano II (48.78%), Piano III (42.85%), Piano IV (43.20%), and at least one level of Piano (47.11%) were 0.6%, 0.03%, 0.3%, 0.1%, and 0.6% above the statewide average low student SES (48.75%), respectively. The average low student SES for school divisions not offering Piano I (49.33%) was 2.2% above the average low student SES for school divisions offering the course (47.11%). The average low student SES for school divisions not offering Piano II (48.78%) was 0.3% above the average low student SES for school divisions offering the course (48.51%). The average low student SES for school divisions not offering Piano III (49.04%) was 6.2% above the average low student SES for school divisions offering the course (42.85%). The average low student SES for school divisions not offering Piano IV (48.88%) was 5.7% above the average low student SES for school divisions offering the course (43.20%). The average low student SES for school divisions not offering Piano I (49.33%) was 2.2% above the average low student SES for school divisions offering the course (47.11%; see Figure 236).

Figure 236

Low Student Socio-Economic Status Averages for Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)



Note: The low student socio-economic status average for Virginia school divisions was 48.75%.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of low SES students and offering Piano courses in Virginia school divisions were nonsignificant.

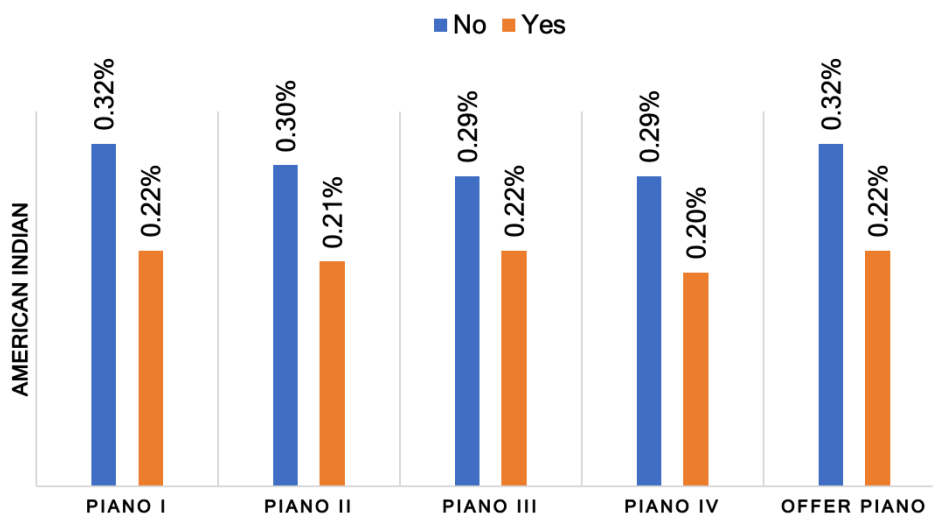
Race/Ethnicity. Virginia school divisions' student body racial/ethnic composition was associated with offering Piano courses.

American Indian. Percentages of American Indian students in Virginia school divisions did not associate with offering Piano courses. The American Indian student averages for school divisions offering Piano I (0.22%), Piano II (0.21%), Piano III (0.22%), Piano IV (0.20%), and at least one level of Piano (0.22%) were 0.07-0.09% below the statewide average of American Indian students (0.29%). The American Indian student averages for school divisions not offering

Piano I (0.32%), Piano II (0.30%), Piano III (0.29%), Piano IV (0.29%), and at least one level of Piano (0.32%) were 0-0.03% above the statewide average of American Indian students (0.29%). The average of American Indian students for school divisions offering Piano I (0.22%) was 0.1% below the average of American Indian students for school divisions not offering the course (0.32%). The average of American Indian students for school divisions offering Piano II (0.21%) was 0.09% below the average of American Indian students for school divisions not offering the course (0.30%). The average of American Indian students for school divisions offering Piano III (0.22%) was 0.07% below the average of American Indian students for school divisions not offering the course (0.29%). The average of American Indian students for school divisions offering Piano IV (0.20%) was 0.09% below the average of American Indian students for school divisions not offering the course (0.20%). The average of American Indian students for school divisions offering at least one level of Piano (0.22%) was 0.1% below the average of American Indian students for school divisions not offering the course (0.32%; see Figure 237).

Figure 237

Averages of American Indian Students in Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)



Note. 0.29% of students in Virginia school divisions were American Indian.

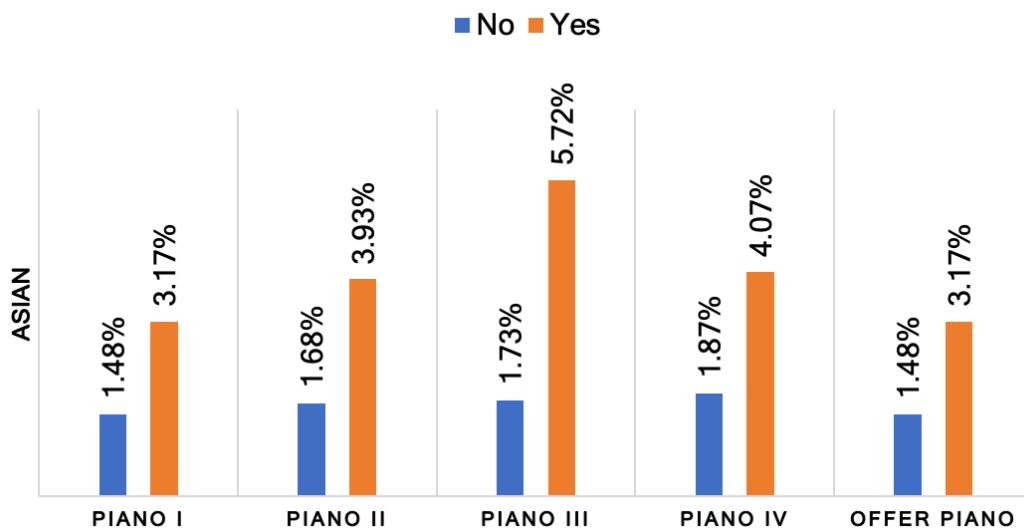
Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of American Indian students and offering Piano courses were nonsignificant.

Asian. Virginia school divisions with larger Asian student populations are likely to offer Piano courses. The averages of Asian students for school divisions offering Piano I (3.17%), Piano II (3.93%), Piano III (5.72%), Piano IV (4.07%), and at least one level of Piano (3.17%) were 1.7, 2.1, 3, 2.1, and 1.7 times the statewide average of Asian students (1.917%), respectively. The averages of Asian students for school divisions not offering Piano I (1.48%), Piano II (1.68%), Piano III (1.73%), Piano IV (1.87%), and at least one level of Piano (1.48%) were 0.4%, 0.2%, 0.2%, 0.04%, and 0.4% below the statewide average of Asian students (1.917%), respectively. The average of Asian students for school divisions offering Piano I

(3.17%) was 2.1 times the average of Asian students for school divisions not offering the course (1.48%). The average of Asian students for school divisions offering Piano II (3.93%) was 2.3 times the average of Asian students for school divisions not offering the course (1.68%). The average of Asian students for school divisions offering Piano III (5.72%) was 3.3 times the average of Asian students for school divisions not offering the course (1.73%). The average of Asian students for school divisions offering Piano IV (4.07%) was 2.2 times the average of Asian students for school divisions not offering the course (1.87%). The average of Asian students for school divisions offering at least one level of Piano (3.17%) was 2.1 times the average of Asian students for school divisions not offering the course (1.48%; see Figure 238).

Figure 238

Averages of Asian Students in Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)

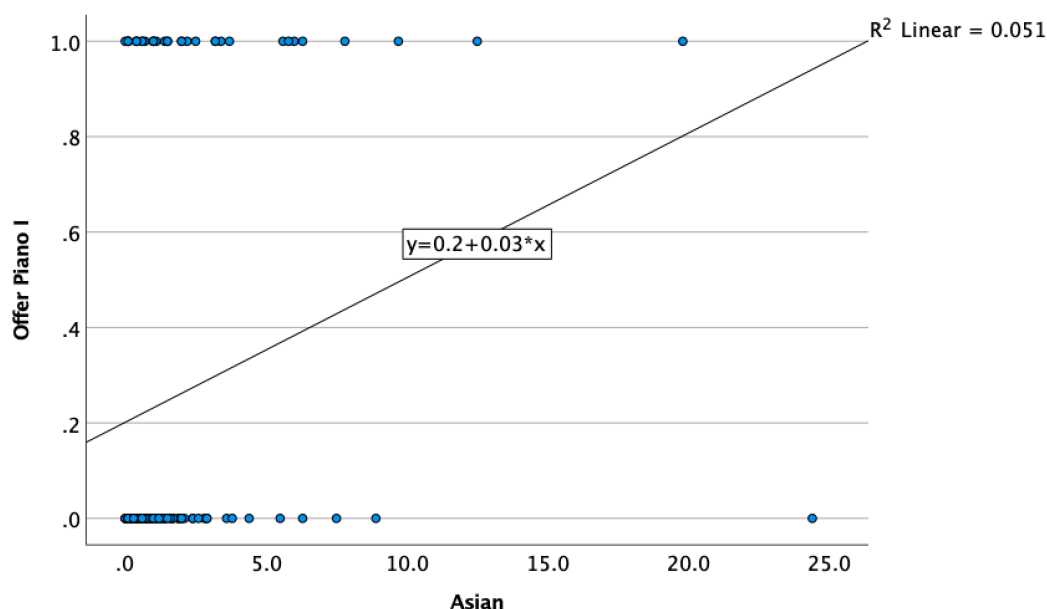


Note. 1.917% of students in Virginia school divisions were Asian.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Asian students and offering Piano courses. Four tests were significant. There was a significant positive correlation between offering Piano I and Asian student enrollment, $r_{pb}(131) = 0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 239).

Figure 239

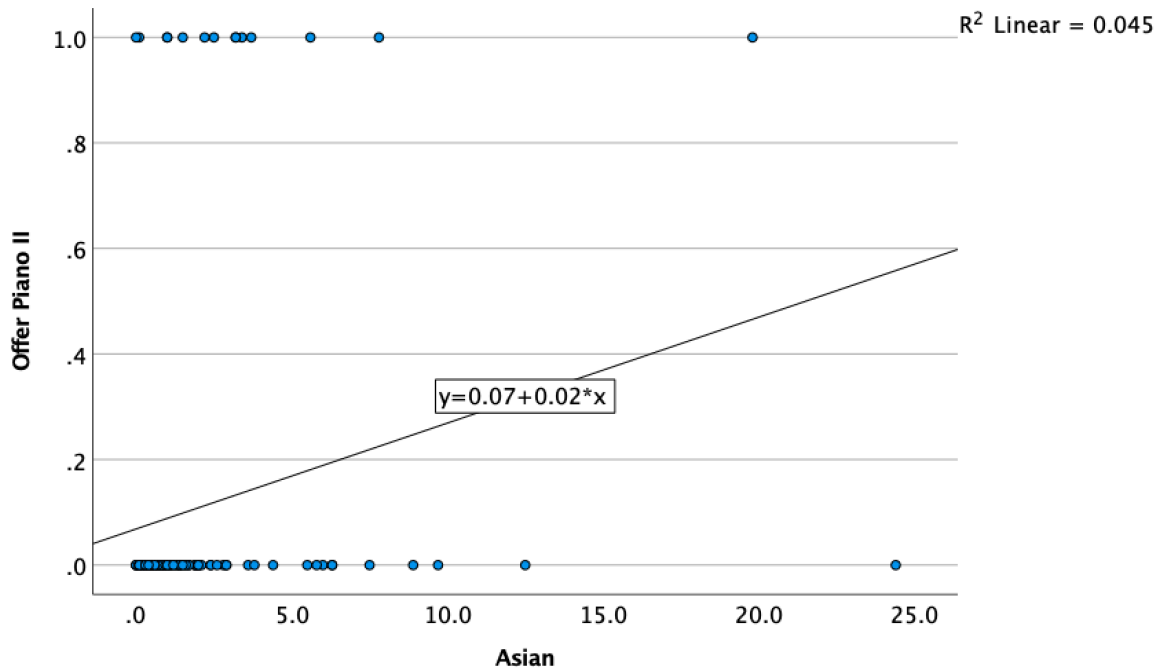
Point Biserial Correlation for Offering Piano I and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Piano II and Asian student enrollment, $r_{pb}(131) = 0.21$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 240).

Figure 240

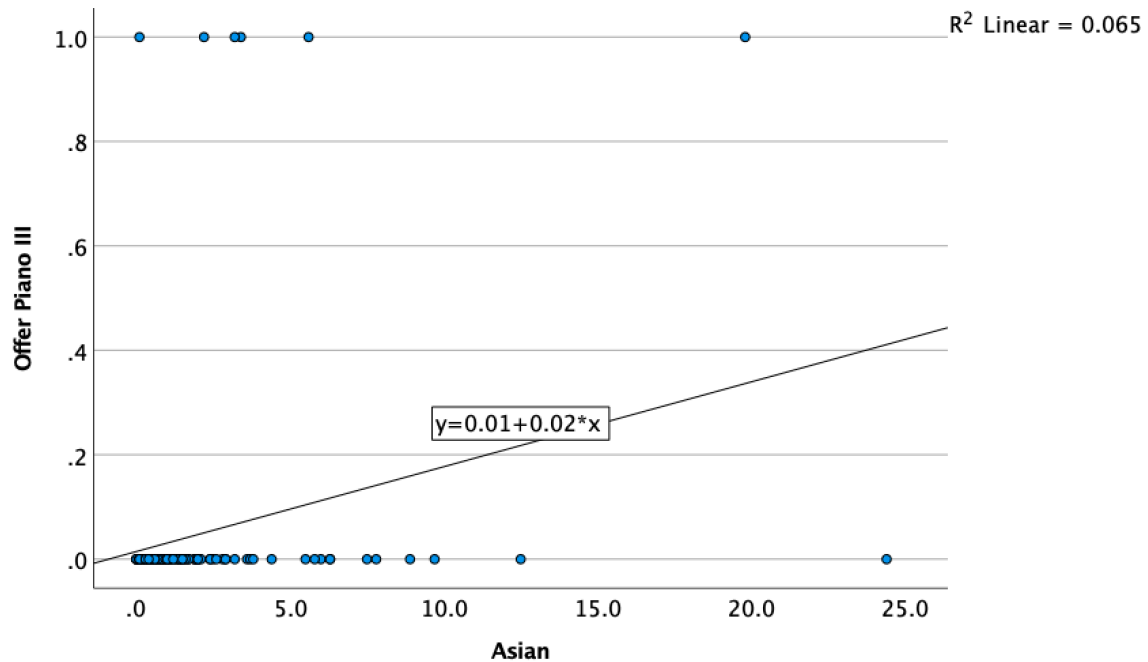
Point Biserial Correlation for Offering Piano II and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Piano III and Asian student enrollment, $r_{pb}(131) = 0.25$, $p < 0.01$, $r^2 = 0.07$; 7% shared variance indicated a weak relationship between the two variables (see Figure 241).

Figure 241

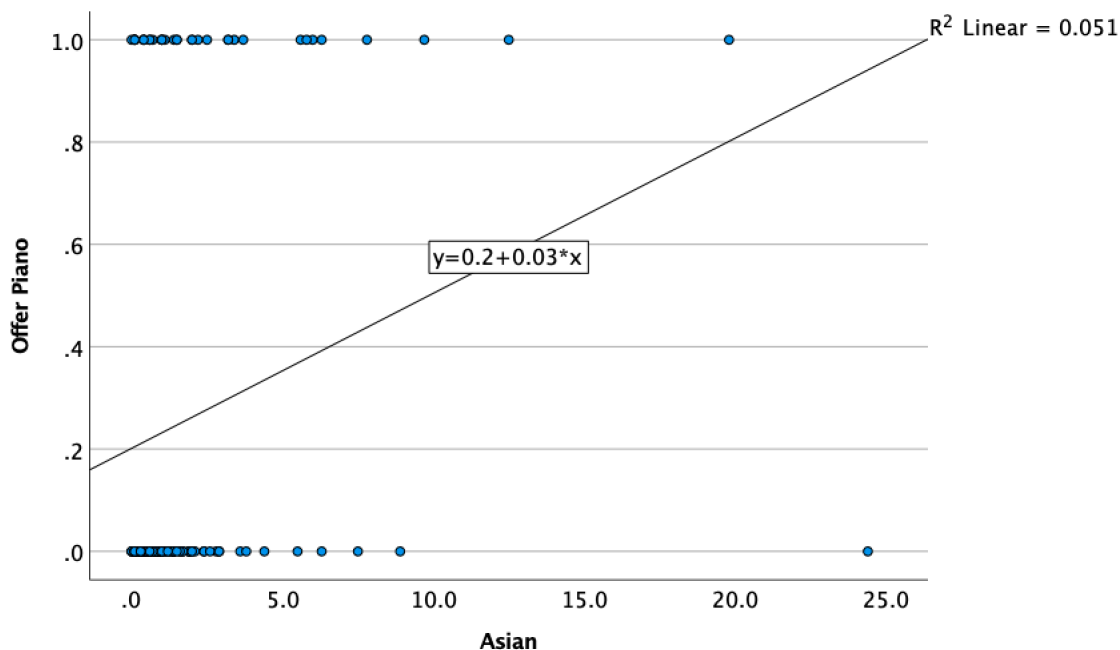
Point Biserial Correlation for Offering Piano III and Percentages of Asian Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Piano and Asian student enrollment, $r_{pb}(131) = 0.23$, $p < 0.01$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 242).

Figure 242

Point Biserial Correlation for Offering Piano and Percentages of Asian Students in Virginia School Divisions (N = 131)

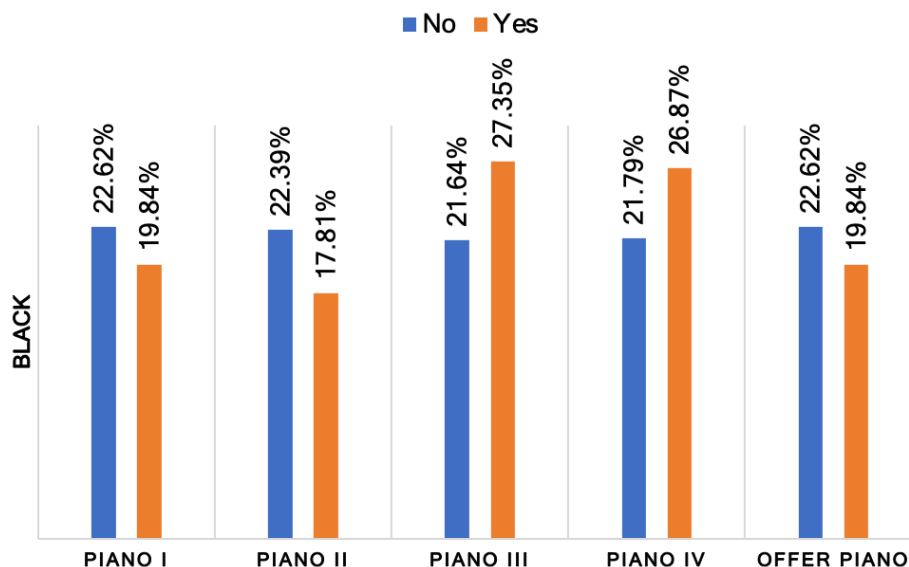


Black. Percentages of Black students in Virginia school divisions did not associate with offering Piano courses. The Black student averages for school divisions offering Piano I (19.84%), Piano II (17.81%), and at least one level of Piano (19.84%) were 2.1%, 4.1%, and 2.1% below the statewide average of Black students (21.902%), respectively. The Black student averages for school divisions offering Piano III (27.35%) and Piano IV (26.87%) were 5.4% and 5% above the statewide average of Black students (21.902%), respectively. The Black student averages for school divisions not offering Piano I (22.62%), Piano II (22.39%), and at least one level of Piano (22.62%) were 0.7%, 0.5%, and 0.7% above the statewide average of Black students (21.902%), respectively. The Black student averages for school divisions not offering Piano III (21.64%) and Piano IV (21.79%) were 0.3% and 0.1% below the statewide average of

Black students (21.902%), respectively. The average of Black students for school divisions offering Piano I (19.84%) was 2.8% below the average of Black students for school divisions not offering the course (22.62%). The average of Black students for school divisions offering Piano II (17.81%) was 4.6% below the average of White students for school divisions not offering the course (22.39%). The average of Black students for school divisions offering at least one level of Piano (19.84%) was 2.8% below the average of White students for school divisions not offering the course (22.62%). The average of Black students for school divisions offering Piano III (27.35%) was 5.7% above the average of White students for school divisions not offering the course (21.64%). The average of Black students for school divisions offering Piano IV (26.87%) was 5.1% above the average of Black students for school divisions not offering the course (21.79%; see Figure 243).

Figure 243

Averages of Black Students in Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)



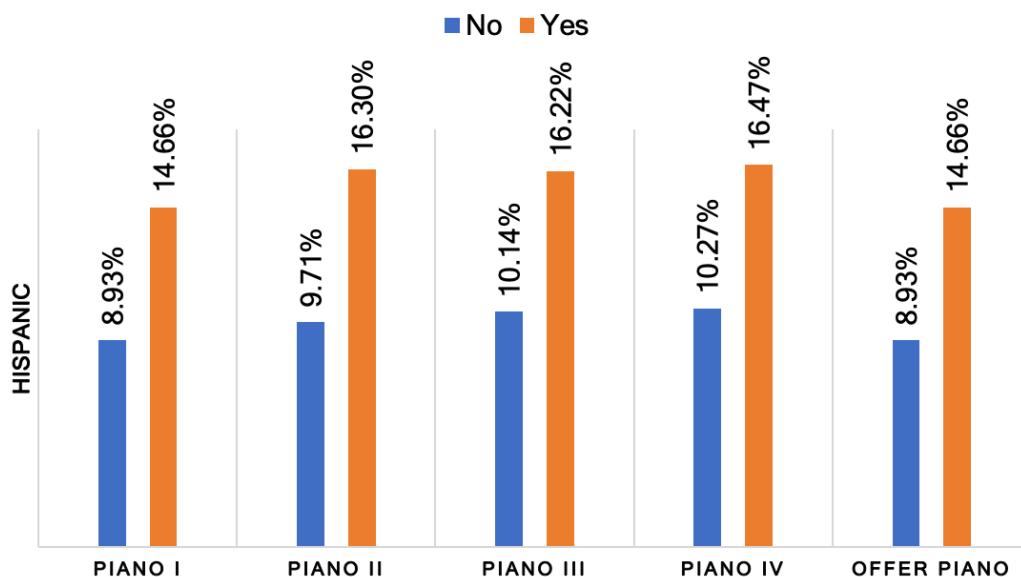
Note. 21.902% of students in Virginia school divisions were Black.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Black students and offering Piano courses were nonsignificant.

Hispanic. Virginia school divisions with larger Hispanic student populations were likely to offer Piano courses. The averages of Hispanic students for school divisions offering Piano I (14.66%), Piano II (16.3%), Piano III (16.22%), Piano IV (16.47%), and at least one level of Piano (14.66%) were 4.2%, 5.9%, 5.8%, 6.1%, and 4.2% above the statewide average of Hispanic student (10.415%), respectively. The averages of Hispanic students for school divisions not offering Piano I (8.93%), Piano II (9.71%), Piano III (10.14%), Piano IV (10.27%), and at least one level of Piano (8.93%) were 1.5%, 0.7%, 0.3%, 0.1%, and 1.5% below the statewide average of Hispanic student (10.415%), respectively. The average of Hispanic students for school divisions offering Piano I (14.66%) was 5.7% below the average of Hispanic students for school divisions not offering the course (8.93%). The average of Hispanic students for school divisions offering Piano II (16.3%) was 6.6% below the average of Hispanic students for school divisions not offering the course (9.71%). The average of Hispanic students for school divisions offering Piano III (16.22%) was 6.1% below the average of Hispanic students for school divisions not offering the course (10.14%). The average of Hispanic students for school divisions offering Piano IV (16.47%) was 6.2% below the average of Hispanic students for school divisions not offering the course (10.27%). The average of Hispanic students for school divisions offering at least one level of Piano (14.66%) was 5.7% below the average of Hispanic students for school divisions not offering the course (8.93%; see Figure 244).

Figure 244

Averages of Hispanic Students in Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)

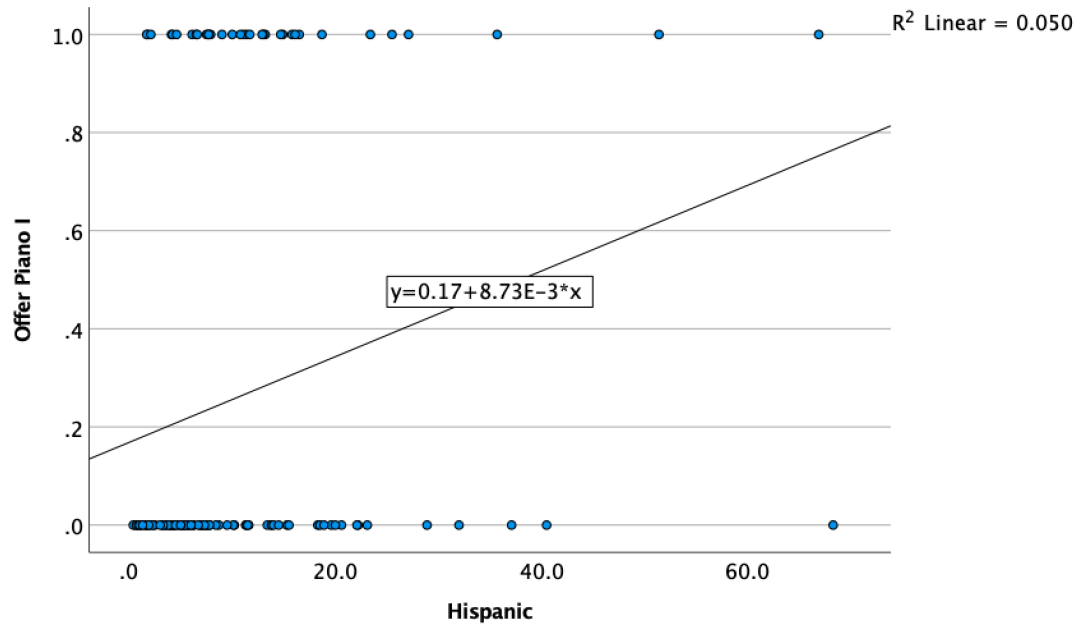


Note. 10.415% of students in Virginia school divisions were Hispanic.

Pearson product moment point biserial correlations were calculated in SPSS to assess significance of relationships between percentages of Hispanic students and offering Piano courses. Three tests were significant. There was a significant positive correlation between offering Piano I and Hispanic student enrollment, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicated a weak relationship between the two variables (see Figure 245).

Figure 245

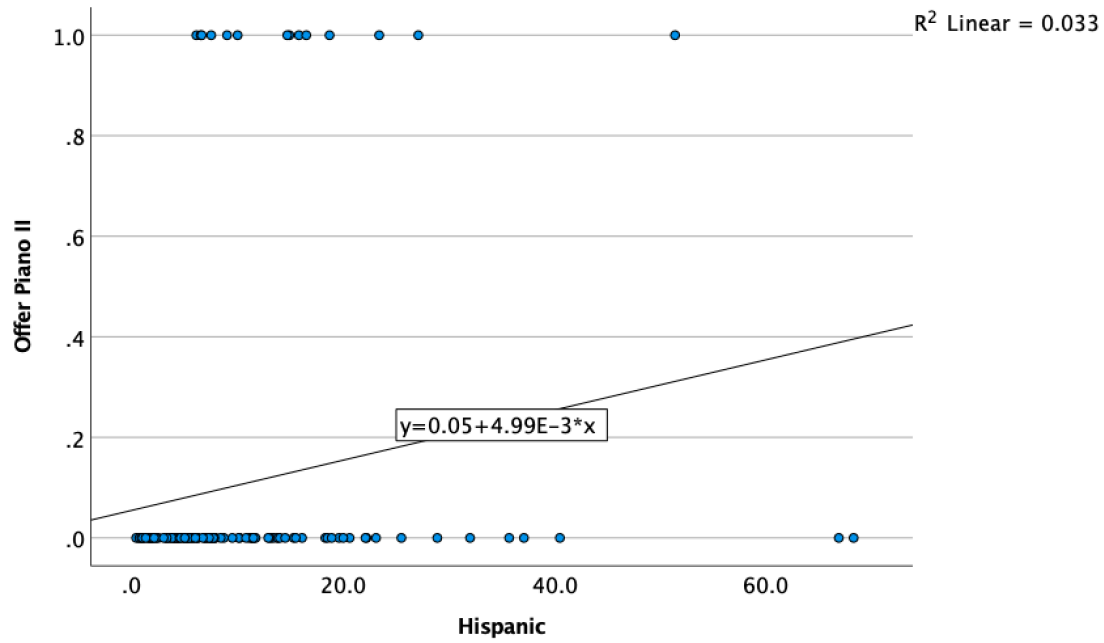
Point Biserial Correlation for Offering Piano I and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering Piano II and Hispanic student enrollment, $r_{pb}(131) = 0.18$, $p < 0.05$, $r^2 = 0.03$; 3% shared variance indicates a weak relationship between the two variables (see Figure 246).

Figure 246

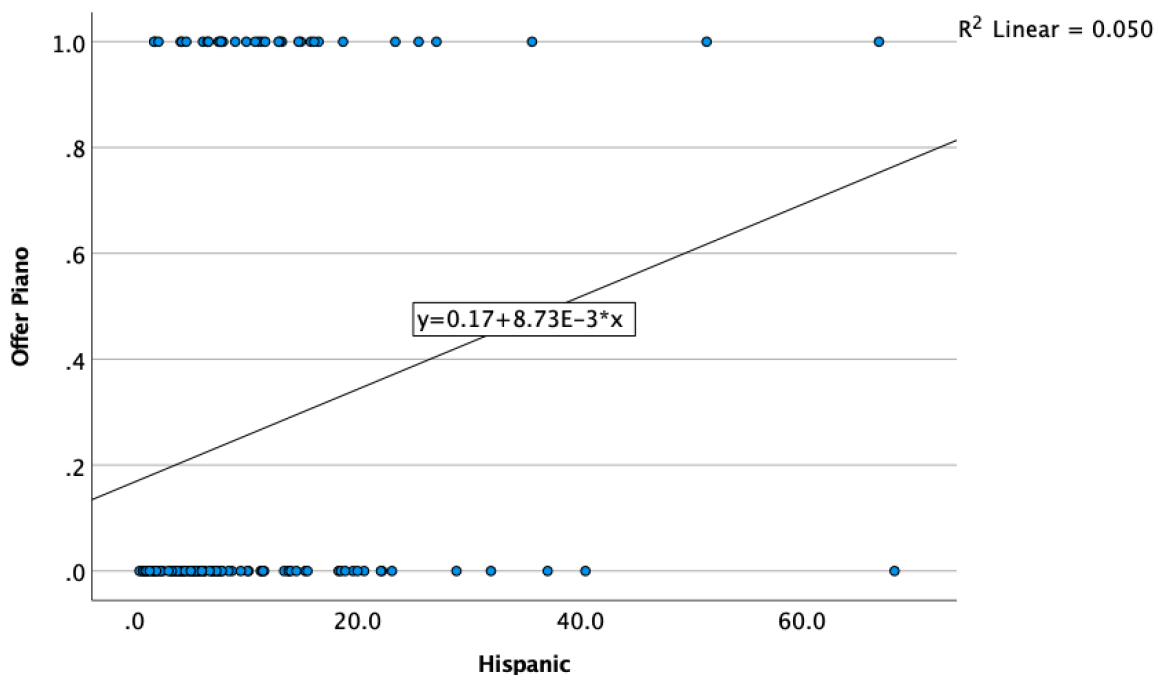
Point Biserial Correlation for Offering Piano II and Percentages of Hispanic Students in Virginia School Divisions (N = 131)



There was a significant positive correlation between offering at least one level of Piano and Hispanic student enrollment, $r_{pb}(131) = 0.22$, $p < 0.05$, $r^2 = 0.05$; 5% shared variance indicates a weak relationship between the two variables (see Figure 247).

Figure 247

Point Biserial Correlation for Offering Piano and Percentages of Hispanic Students in Virginia School Divisions (N = 131)

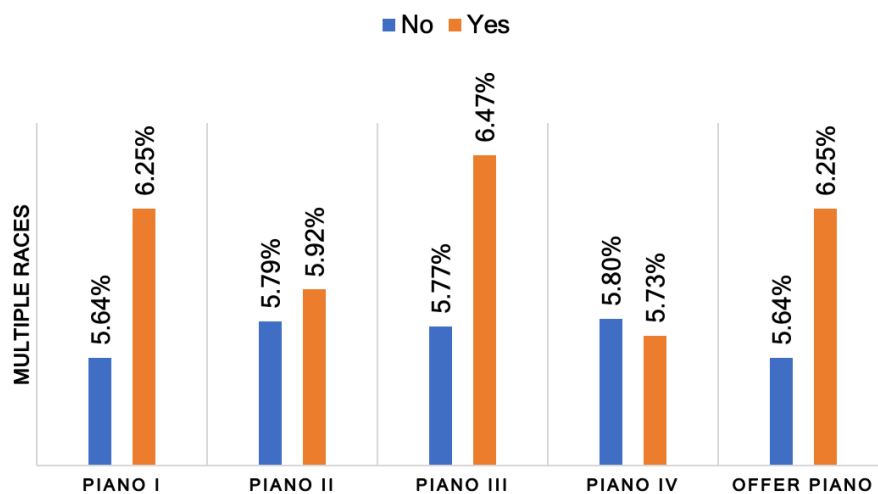


Multiple Races. Percentages of Multiple Races students in Virginia school divisions did not associate with offering Piano courses. The Multiple Races student averages for school divisions offering Piano I (6.25%), Piano II (5.92%), Piano III (6.47%), and at least one level of Piano (6.25%) were 0.4%, 0.1%, 0.7%, and 0.4% above the statewide average of Multiple Races students (5.801%), respectively. The Multiple Races student average for school divisions offering Piano IV (5.73%) was 0.07% below the statewide average of Multiple Races students (5.801%). The averages of Multiple Races students for school divisions not offering Piano I (5.64%), Piano II (5.79%), Piano III (5.77%), Piano IV (5.8%), and at least one level of Piano (5.64%) were 0.2%, 0.01%, 0.03%, 0.001%, and 0.2% below the statewide average of Multiple Races students (5.801%), respectively. The average of Multiple Races students for school

divisions offering Piano I (6.25%) was 0.6% above the average of Multiple Races students for school divisions not offering the course (5.64%). The average of Multiple Races students for school divisions offering Piano II (5.92%) was 0.1% above the average of Multiple Races students for school divisions not offering the course (5.79%). The average of Multiple Races students for school divisions offering Piano III (6.47%) was 0.7% above the average of Multiple Races students for school divisions not offering the course (5.77%). The average of Multiple Races students for school divisions offering Piano IV (5.73%) was 0.07% below the average of Multiple Races students for school divisions not offering the course (5.80%). The average of Multiple Races students for school divisions offering at least one level of Piano (6.25%) was 0.6% above the average of Multiple Races students for school divisions not offering the course (5.64%; see Figure 248).

Figure 248

Averages of Multiple Races Students in Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)



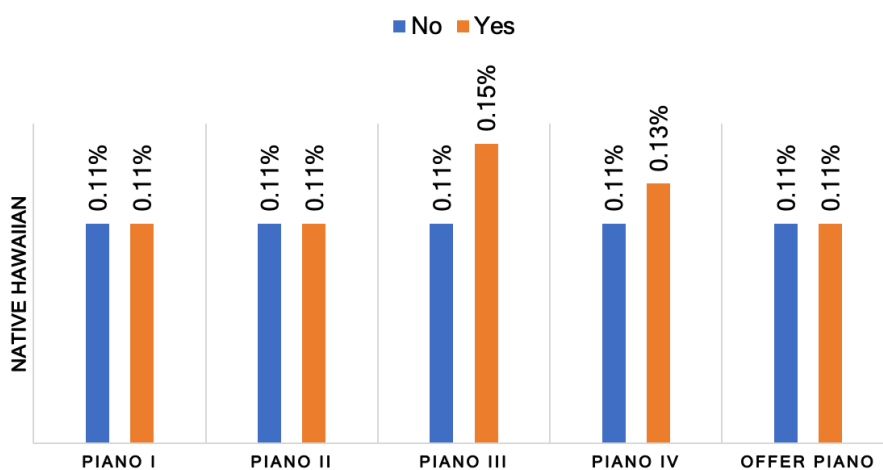
Note. 5.801% of students in Virginia school divisions were Multiple Races.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Multiple Races students and offering Piano courses were nonsignificant.

Native Hawaiian. Percentages of Native Hawaiian students in Virginia school divisions did not associate with offering Piano courses. The Native Hawaiian student population averages for school divisions offering and for school divisions not offering Piano I, Piano II, and at least one level of Piano and not offering Piano III and Piano IV were equal to the statewide average of Native Hawaiian students (0.11%). The Native Hawaiian student population averages for school divisions offering Piano III (0.15%) and Piano IV (0.13%) were 0.04% and 0.02% above the statewide average of Native Hawaiian Students and the averages of Native Hawaiian students not offering these courses (0.11%), respectively (see Figure 249).

Figure 249

Averages of Native Hawaiian Students in Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)



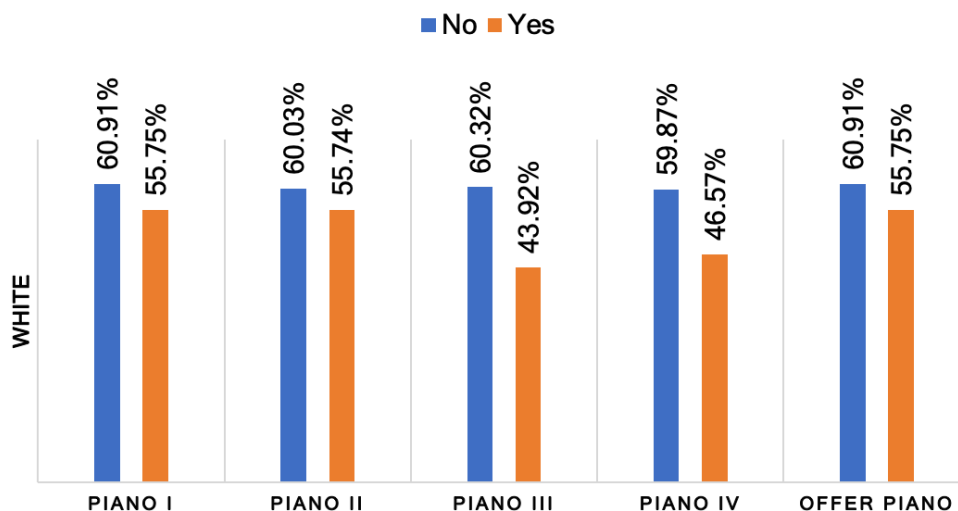
Note. 0.113% of students in Virginia school divisions were Native Hawaiian.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of Native Hawaiian students and offering Piano courses were nonsignificant.

White. Percentages of White students in Virginia school divisions did not associate with offering Piano courses. The White student averages for school divisions offering Piano I (55.75%), Piano II (55.74%), Piano III (43.92%), Piano IV (46.57%), and at least one level of Piano (55.75%) were 3.8%, 3.8%, 15.6%, 13%, and 3.8% below the statewide average of White students (59.567%), respectively. The White student averages for school divisions not offering Piano I (60.91%), Piano II (60.03%), Piano III (60.32%), Piano IV (59.87%), and at least one level of Piano (60.91%) were 0.3-1.3% above the statewide average of White students (59.567%). The average of White students for school divisions offering Piano I (55.75%) was 5.2% below the average of White students for school divisions not offering the course (60.91%). The average of White students for school divisions offering Piano II (55.74%) was 4.3% below the average of White students for school divisions not offering the course (60.03%). The average of White students for school divisions offering Piano III (43.92%) was 16.4% below the average of White students for school divisions not offering the course (60.32%). The average of White students for school divisions offering Piano IV (46.57%) was 13.3% below the average of White students for school divisions not offering the course (59.87%). The average of White students for school divisions offering at least one level of Piano (55.75%) was 5.2% below the average of White students for school divisions not offering the course (60.91%; see Figure 250).

Figure 250

Averages of White Students in Virginia School Divisions Offering and Not Offering Piano Courses (N = 131)



Note. 59.567% of students in Virginia school divisions were White.

Pearson product moment point biserial correlations calculated in SPSS to assess significance of relationships between percentages of White students and offering Piano courses were nonsignificant.

Piano Summary. Piano was the seventh offered course type in Virginia, 26% of school divisions offered at least one level of Piano. Piano I was the most offered Piano course, offered 2-11 times more frequently than other Piano courses.

Piano courses were offered significantly disproportionally among Virginia localities, were more offered in city and suburban school divisions as compared to town and rural. A cluster of rural school divisions offering Piano was observed in the Northwestern part of the state, and very few school divisions in the South offered Piano. Larger school divisions offered

Piano courses. School divisions offering Piano enrolled significantly more Asian and Hispanic students.

Summary of Answers to Research Question 1

Five performance (Band, Chorus, Guitar, Orchestra, and Piano) and five nonperformance (Composition, IB Music, Music Appreciation, Music Technology, and Music Theory) course types were offered among Virginia school divisions—overall, 29 different courses (counting levels). Performance-based high school music courses were on average twice more frequently offered than nonperformance courses: 56% of the school divisions offered at least one performance course type, and only 25.8% of the school divisions offered at least one nonperformance course type. Rich-in-course-variety high school music programs were not common in Virginia: six out of ten course types and 23 out of 29 course levels were offered across the state at significantly low rate and likely in the same school divisions.

Course Prevalence Patterns. Every school division in Virginia, except for one, the rural King and Queen County Schools, offered at least one music course. Of the five performance-based courses, Band and Chorus were predominant, offered by 98.5% and 89.3% of the school divisions respectively, while Guitar, Orchestra, and Piano were offered by 36.6%, 29.8%, and 26% of the school divisions, respectively. Out of the five performance courses, two (Band and Chorus) were offered at significantly high rates, while three (Guitar, Orchestra and Piano) were offered at significantly low rates. Out of the five nonperformance courses, three, IB Music, Music Technology, and Composition, were offered at significantly low rates. Advanced Band was the most frequently offered course across the state, offered in 84.7% of the school divisions. Piano IV was the least offered, offered in only 2.3% of the school divisions.

Highest-level performance courses (Artist and IV) were offered less frequently than Intermediate (II) and Advanced (III) levels. Three nonperformance courses, Music Appreciation, Music Theory I, and AP Music Theory, were more prevalent than 12 performance courses: Artist Band, Artist Chorus, Piano I-IV, Guitar II-IV, and all levels of Orchestra. Out of 29 course levels, only five (Band and Chorus types) were offered at significantly high rates: Intermediate and Advanced Band and Beginning, Intermediate, and Advanced Chorus. Notably, all Orchestra, Piano, IB Music, and Music Technology courses were offered at significantly low rates.

Locality. All four localities offered all 10 high school music course types on at least one level, except for Composition and IB Music not offered in towns. Towns offered fewer levels of Chorus, Guitar, Music Technology, Music Theory, Orchestra, and Piano than any other locality. Every city school division offered every music course on every level, at least one level of Chorus, and two levels of Band. Table 43 lists ranges of course levels offered statewide and by locality.

Table 43

*Ranges of Levels of High School Music Courses Offered Among Virginia School Divisions
Statewide and in Each Locality (N = 131)*

Course	Range of Levels Offered				Range of Levels Offered Statewide
	City	Rural	Suburb	Town	
Band	2-4	0-4	1-4	0-4	0-4
Chorus	1-4	0-4	1-4	0-3	0-4
Composition	0-1	0-1	0-1	0	0-1
Guitar	0-4	0-2	0-4	0-2	0-4
International Baccalaureate Music	0-2	0-2	0-2	0	0-2
Music Appreciation	0-1	0-1	0-1	0-1	0-1
Music Technology	0-2	0-2	0-2	0-1	0-2
Music Theory	0-3	0-3	0-3	0-1	0-3
Orchestra	0-4	0-4	0-4	0-1	0-4
Piano	0-4	0-4	0-4	0-2	0-4

Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Except for Music Theory, all multi-level courses were offered at least significantly disproportionately among Virginia localities. City and suburban school divisions offered significantly more variety of courses as compared to rural and town school divisions. Figures 251 and 252 summarize and illustrate such disproportionalities.

Figure 251

Summary of the Independent-Sample Kruskal-Wallis Tests Results

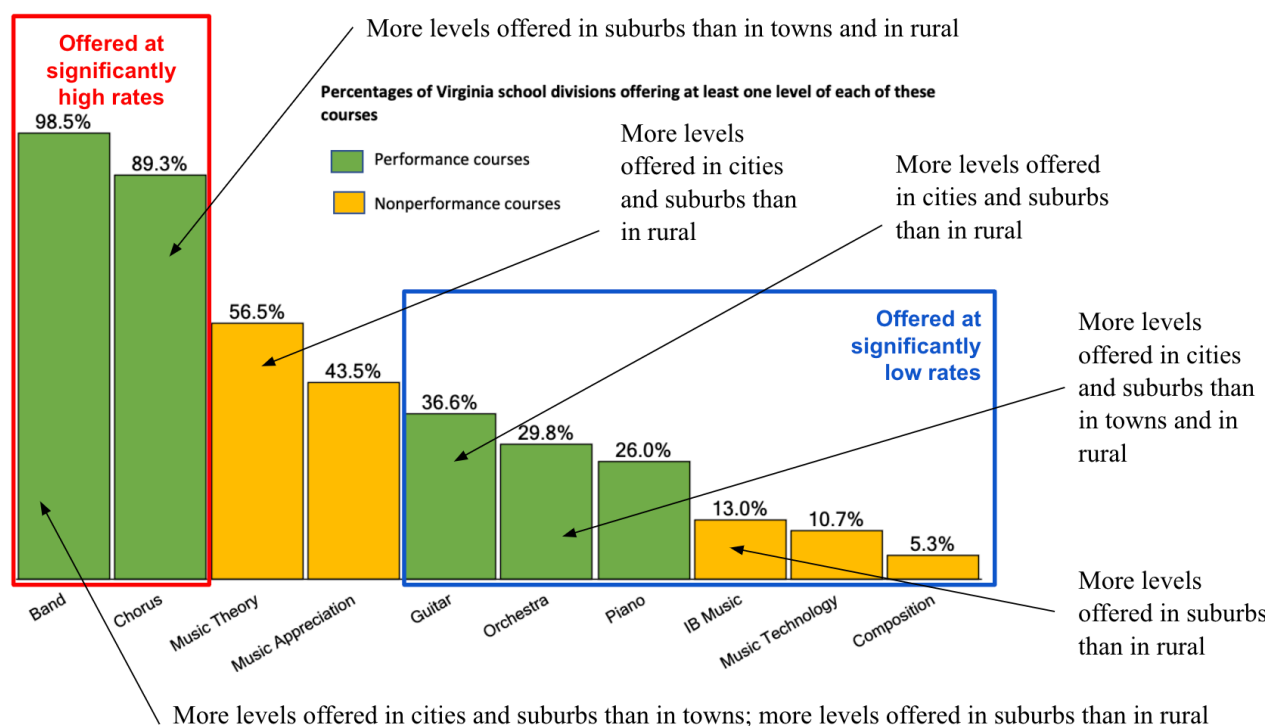


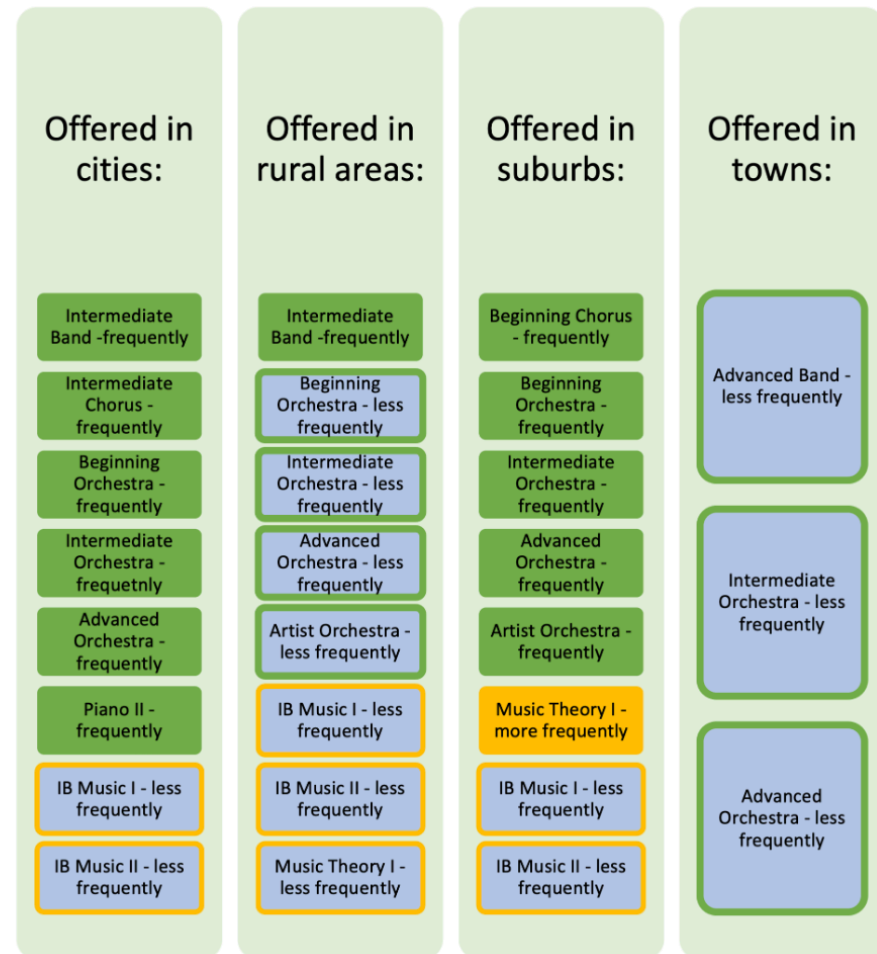


Figure 252

Summary of the Results of the Chi-Square Tests of Association

Chi-square tests of association results: towns and rural areas offer the least variety of courses, while cities and suburbs offer the most variety of courses.

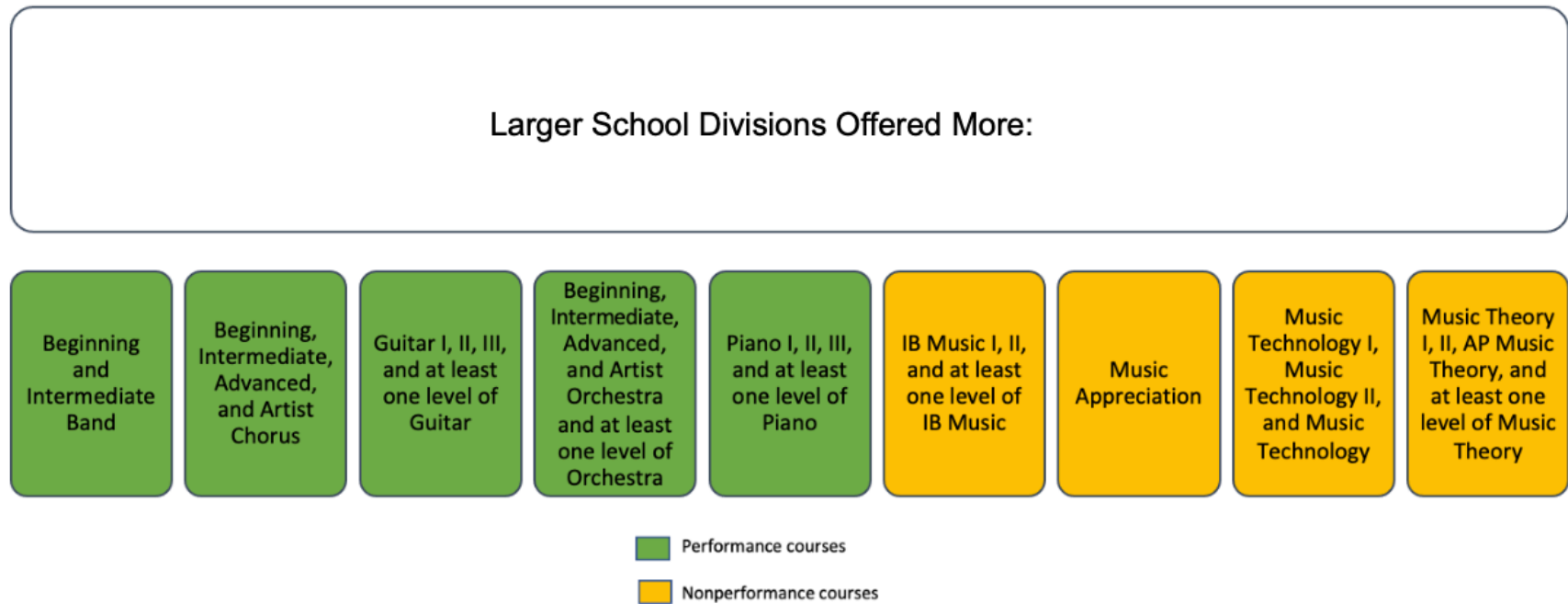
 Performance courses
 Nonperformance courses



Enrollment. Analyses of frequencies showed that Virginia school divisions that offered 9 out of 10 high school music course types had 1.01-3.78 times larger than statewide enrollment averages. The results of the Pearson product-moment biserial correlations revealed that larger school divisions were significantly more likely to offer 9 out of 10 course types and 24 out 29 course levels. Figure 253 illustrates these disproportionalities.

Figure 253

Summary of the Pearson Product-Moment Biserial Correlation Tests for Enrollment



LCI. School divisions offering Band, Chorus, Guitar, IB Music, Music Theory, Orchestra, and Piano, 7 out of 10 course types, had higher than the statewide average LCIs. Only school divisions offering IB Music I and offering IB Music II had significantly higher LCIs.

Low Student SES. School divisions offering Band, Chorus, Guitar, IB Music, Music Technology, Music Theory, Orchestra, and Piano, 8 out of 10 course types, had lower than the statewide average percentages of low SES students. Only school divisions offering Intermediate Chorus, at least one level of Chorus, every Guitar and IB Music, Music Theory I, and at least one level of Music Theory enrolled significantly less low SES students. School divisions offering Intermediate Orchestra and Advanced Orchestra enrolled significantly more low SES students.

Race/Ethnicity. Virginia school divisions' student body racial/ethnic composition was associated with offering several courses. School divisions enrolling more Asian students were significantly more likely to offer Intermediate Band, Artist Band, Chorus, Guitar, IB Music, Music Technology, Music Theory, Orchestra, and Piano. School divisions enrolling more Hispanic students were significantly more likely to offer Intermediate Band, Guitar, Chorus, IB Music, Music Technology, Music Theory, Orchestra, and Piano. School divisions enrolling more Native Hawaiian students were significantly more likely to offer Music Appreciation. School divisions enrolling more Multiple Races students were significantly more likely to offer Guitar I, Guitar II, and at least one level of Guitar. School divisions enrolling more Black students were significantly more likely to offer Orchestra. School divisions enrolling less White students were significantly less likely to offer Guitar II, Guitar III, Guitar IV, Music Technology I, Music Technology II, at least one level of Music Technology, every Orchestra course, and at least one level of Orchestra. Therefore, Virginia school divisions offering richer in course variety high school music programs were significantly racially/ethnically diverse (see Figure 254).

Figure 254

Summary of the Pearson Product-Moment Biserial Correlation Tests for Race/Ethnicity

Virginia school divisions that offer:	Enroll more students who are:	And less students who are:
Intermediate Band	Asian, Hispanic	Multiple Races
Artist Band	Asian	
Advanced Band		Multiple Races
Band		Multiple Races, Native Hawaiian
Chorus	Asian, Hispanic	American Indian, Black
Beginning Chorus	Asian, Hispanic	
Intermediate Chorus	Asian, Hispanic	
Advanced Chorus	Asian, Hispanic	
Artist Chorus	Asian, Hispanic	
Guitar I	Asian, Hispanic, Multiple Races	
Guitar II	Asian, Hispanic, Multiple Races	White
Guitar III	Asian, Hispanic	White
Guitar IV	Asian, Hispanic	White
Guitar	Asian, Hispanic, Multiple Races	
Beginning Orchestra	Asian, Hispanic	White
Intermediate Orchestra	Asian, Hispanic	White
Advanced Orchestra	Asian, Hispanic	White
Artist Orchestra	Asian, Hispanic	White
At least one level of Orchestra	Asian, Black, Hispanic	
Piano I	Asian, Hispanic	
Piano II	Asian, Hispanic	
Piano III	Asian	
Piano	Asian, Hispanic	
IB Music I	Asian, Hispanic	White
IB Music II	Asian	White
IB Music	Asian, Hispanic	White
Music Technology I, II	Asian	White
Music Theory I	Asian, Hispanic	
Music Theory II	Native Hawaiian	
AP Music Theory	Asian, Hispanic	
At least one level of Music Theory	Asian, Hispanic	
Music Appreciation	Native Hawaiian	

Offered at significantly low rates

Therefore, out of 29 high school music courses offered among Virginia school divisions, 19 were offered at significantly low rates and were significantly more likely to be offered in larger and more diverse school divisions. Out of these 19 courses, five (all four levels of Orchestra and Music Theory I) were significantly more likely to be offered in suburbs and four (Beginning, Advanced, and Artist Orchestra and Piano II) were significantly more likely to be offered in cities. Figures 255 and 256 illustrate these disproportionalities

Figure 255

Summary of Quantitative Tests for Cities

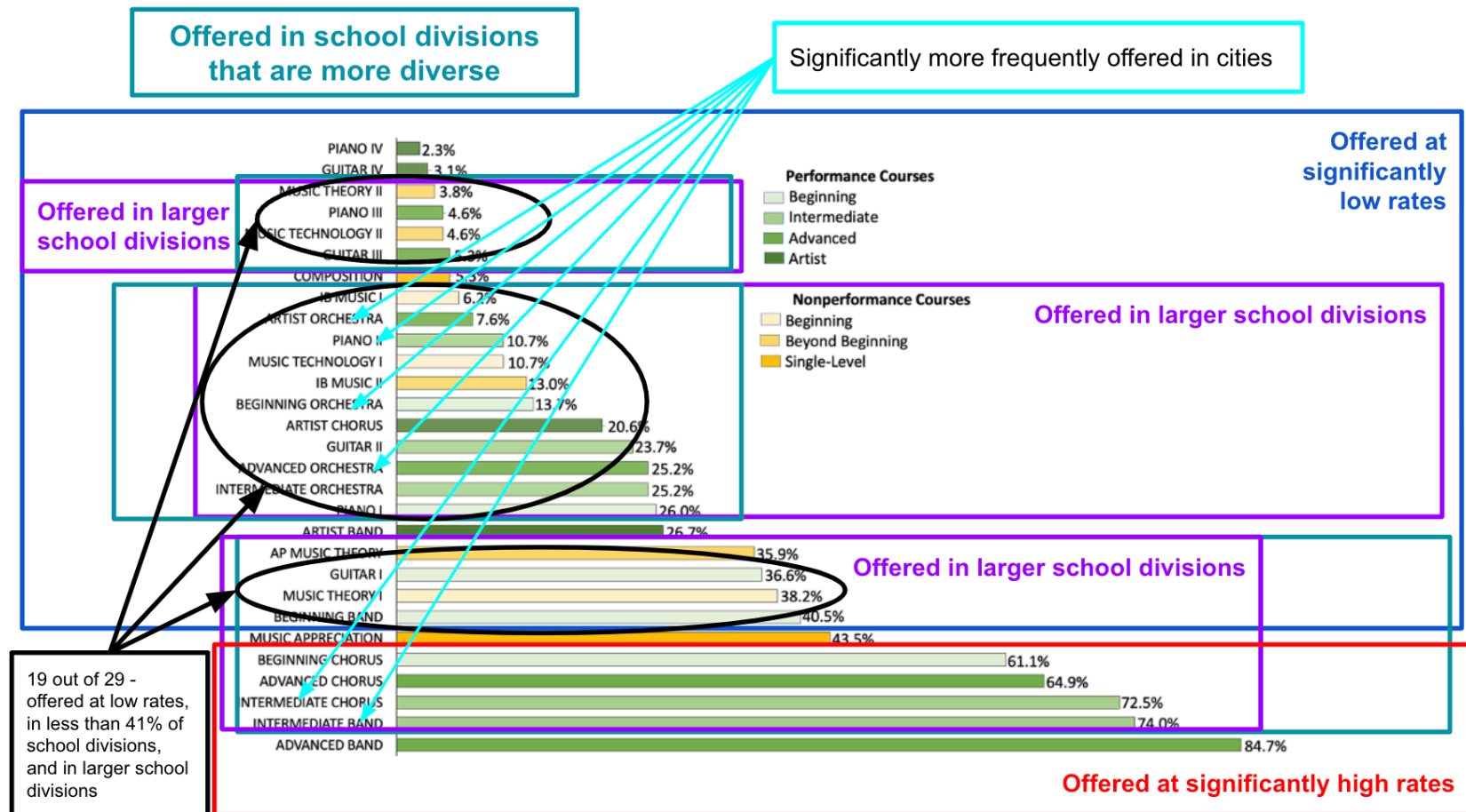
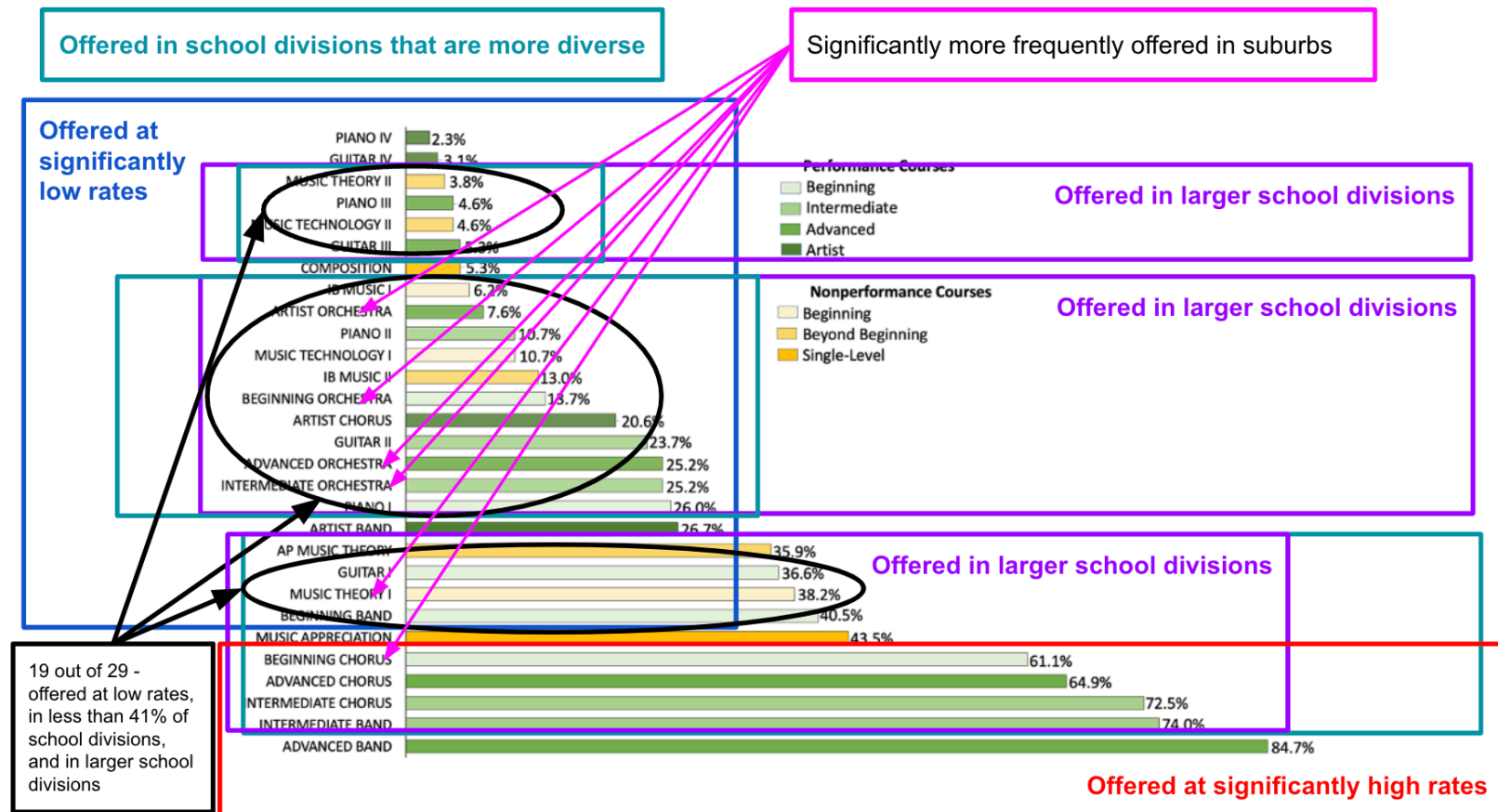


Figure 256

Summary of Quantitative Tests for Suburbs



Considerations. Differences in high school music course offerings among Virginia school divisions could be attributed to multiple societal factors. Larger and more diverse Virginia school divisions located in cities and suburbs tended to offer richer high school music programs. One explanation to this could be is that Virginia cities and suburbs were more racially/ethnically diverse as compared to town and rural school divisions. Table 44 lists statewide enrollment, LCI, and low student SES statistics. Multiple disparities, particularly among minimums and maximum, could be observed within and across locations.

Table 44

Virginia School Divisions' Enrollment, LCI, and Low SES

Variable ^a	<i>M</i>	<i>Mdn</i>	Minimum	Maximum	Range
Enrollment					
City	17,391	13,490	2,214	65,612	63,398
Rural	4,458	2,928	184	29,395	29,211
Suburb	31,846	9,379	2,090	180,076	177,986
Town	2,875	2,235	634	9,175	8,541
State	9,560	3,552	184	180,076	179,892
LCI					
City	.4203	.3619	.2426	.8	.5574
Rural	.3964	.3479	.1754	.8	.6246
Suburb	.4356	.3751	.2032	.8	.5968
Town	.3166	.3003	.1849	.4636	.2787
State	.3925	.3553	.1754	.8	.6246
Low SES %					
City	54.56	57.95	22.7	67.9	45.2
Rural	48.52	49.6	18.4	100	81.6
Suburb	43.49	39.75	8.2	83.8	75.6
Town	49.71	50.15	29.7	71.7	42
State	48.75	49.6	8.2	100	91.8

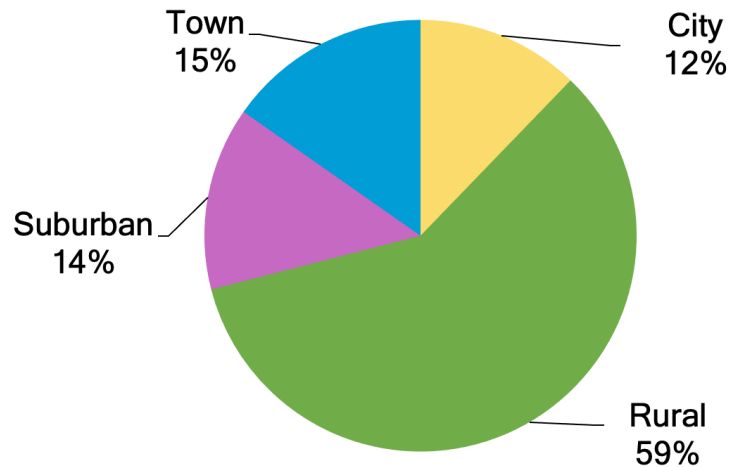
Note. LCI refers to local composite index. SES refers to socio-economic status.

^aStatewide school divisions *N* = 131, city *n* = 16, rural *n* = 77, suburb *n* = 18, town *n* = 20 (VDOE School Quality Profiles, n.d.).

Figures 257 and 258 suggest that about 60% of students in Virginia public schools were White and live in rural areas.

Figure 257

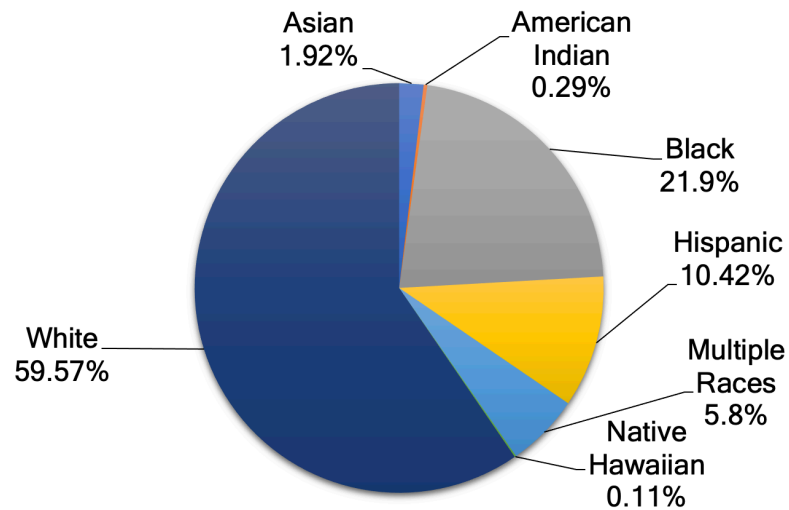
Virginia School Divisions' Localities (N = 131)



Note. Virginia school divisions localities: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$.

Figure 258

Student Race/Ethnicity Averages for Virginia School Divisions



However, these averages varied across locations and divisions. Figures 264-269 show how race/ethnicity student population clusters differed from the state average pattern (VDOE School Quality Profiles, n.d.). The American Indian, the Multiple Races, and the Native Hawaiian student enrollment averages across all locations compared to the corresponding state averages. However, the average Asian student enrollment in suburbs (6.63%) was 3.5 times the Asian student enrollment statewide average (1.92%), was 2.1 times the city Asian student enrollment average (3.14%), and more than six times of the rural (0.79%) or the town (1.05%) Asian student enrollment averages. The average Black city enrollment (36.64%) was twice the average rural (18.74%), 13.57% less the average suburban (23.07%), and 15.64% less the average town (21%) Black student enrollments. The average Hispanic student enrollment in suburban school divisions (20.41%) doubled the Hispanic state average (10.42%), was 2.7 times the average rural Hispanic student enrollment (7.42%) and 2.9 times the average town Hispanic student enrollment (7.16%).

Figure 259

Student Race/Ethnicity Averages in Virginia City School Divisions (n = 16)

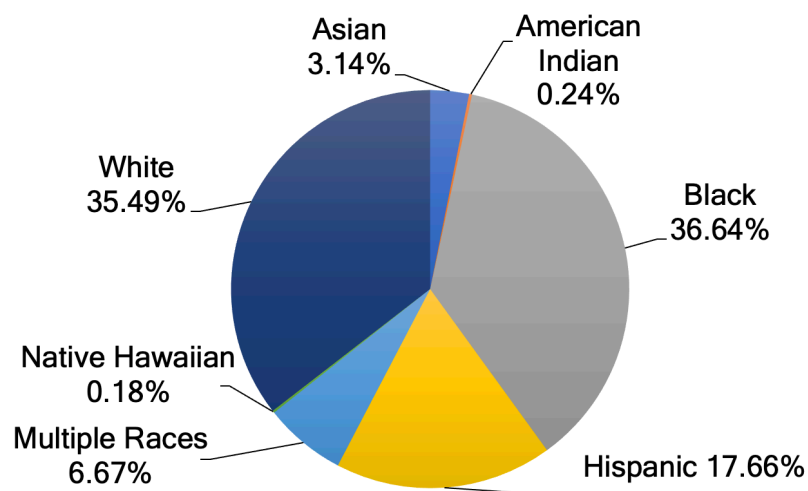


Figure 260

Student Race/Ethnicity Averages in Virginia Rural School Divisions (n = 77)

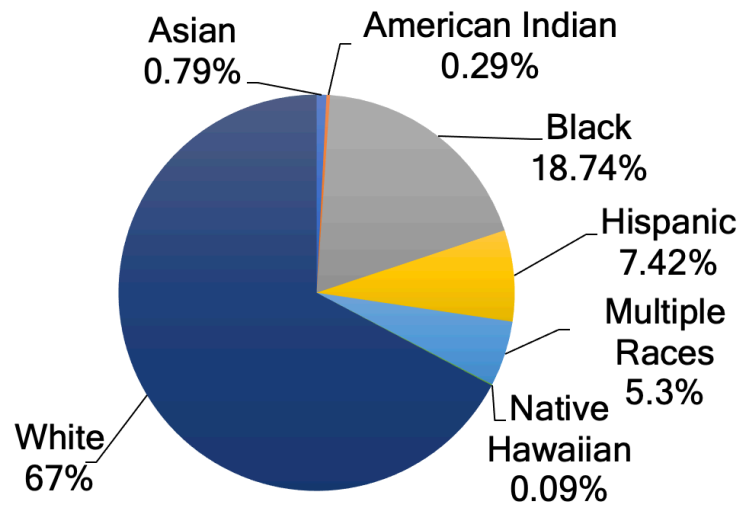


Figure 261

Student Race/Ethnicity Averages in Virginia Suburban School Divisions (n = 18)

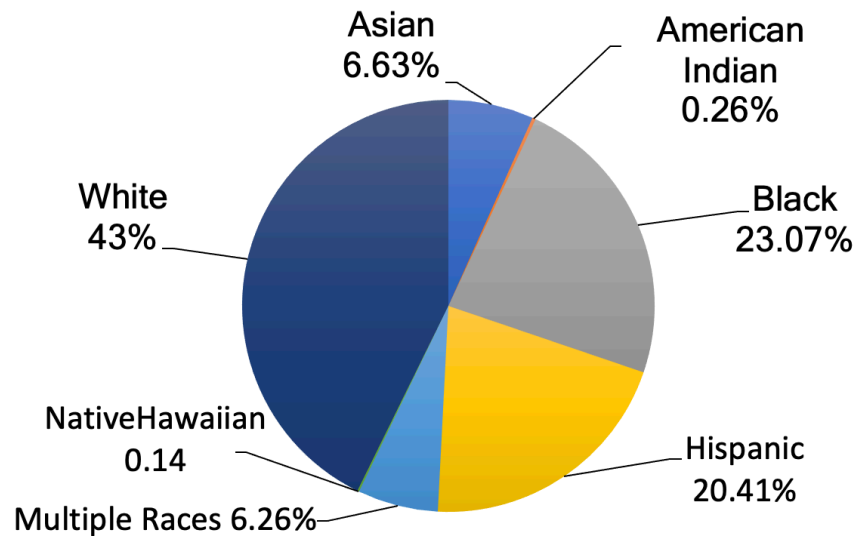


Figure 262

Student Race/Ethnicity Averages in Virginia Town School Divisions (n = 20)

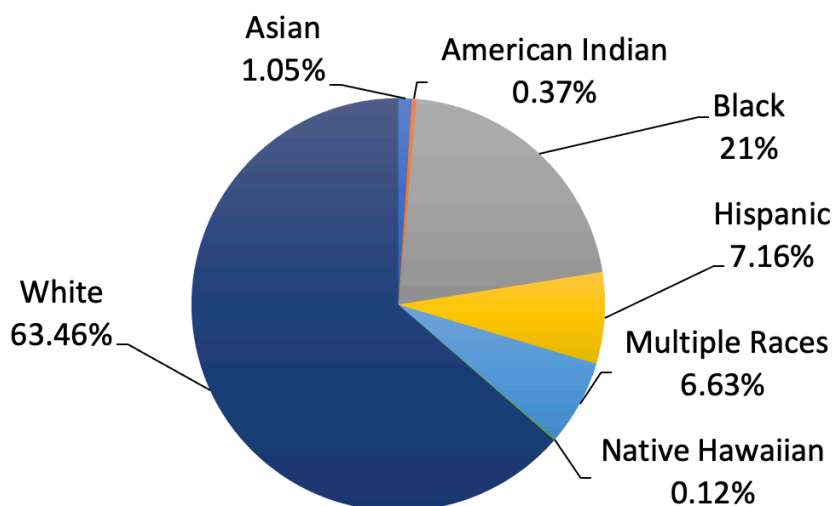
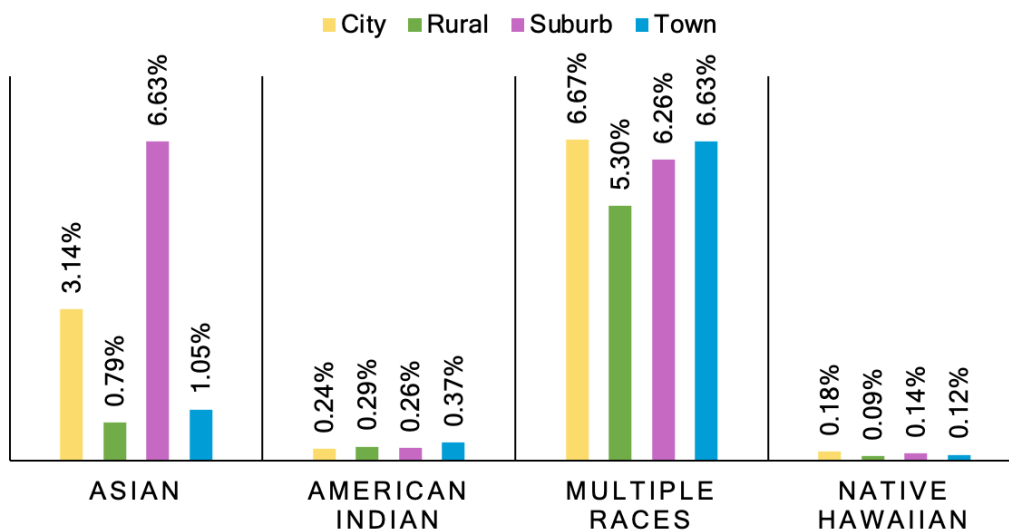


Figure 263

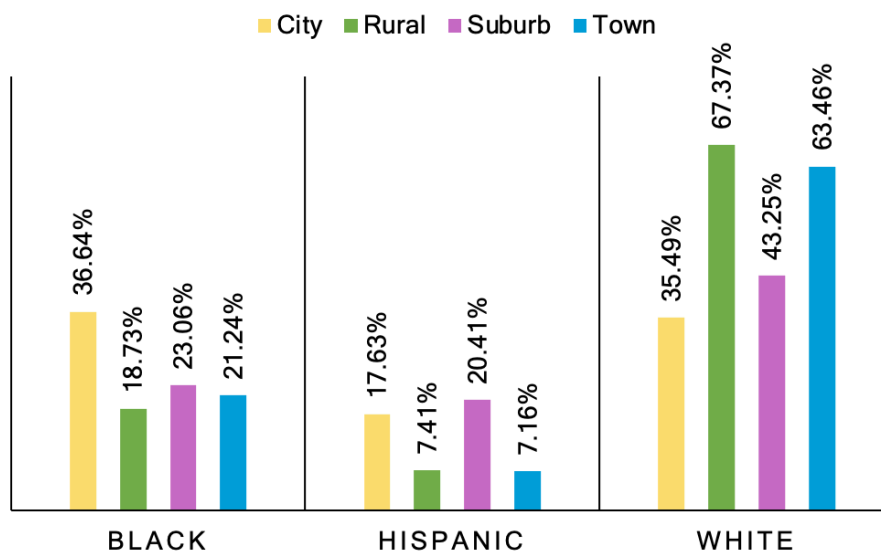
Asian, American Indian, Multiple Races, and Native Hawaiian Student Enrollment Percentages in Virginia School Divisions (N = 131)



Note. Statewide school divisions: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$. City – 12%, rural – 59%, suburb – 14%, town – 15%.

Figure 264

Black, Hispanic, and White Student Enrollment Averages in Virginia School Divisions (N = 131)



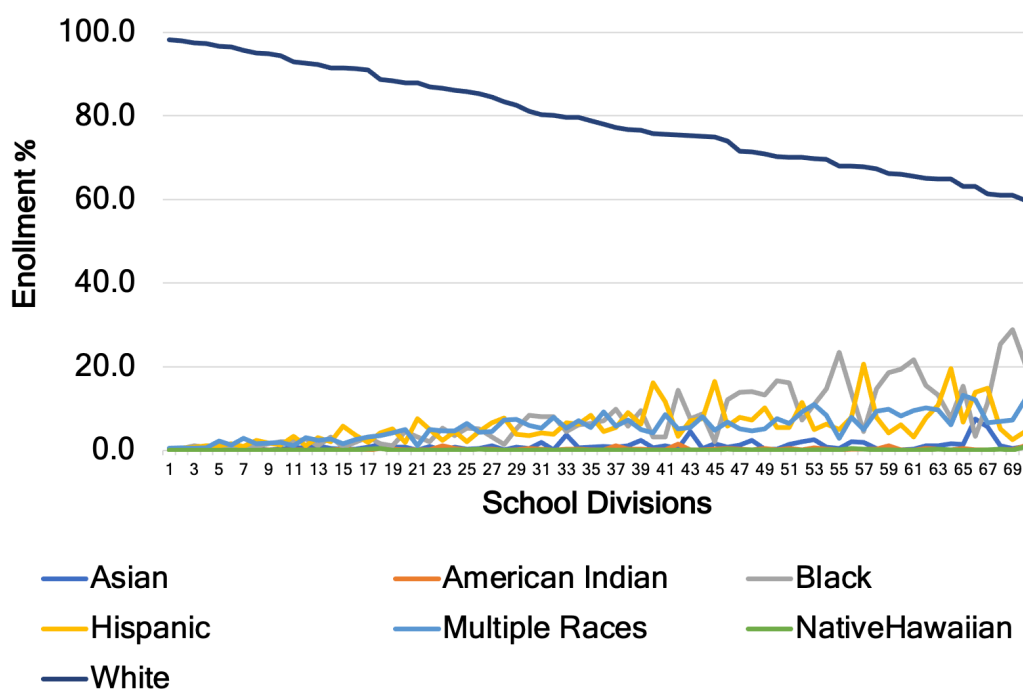
Note. Statewide school divisions: city $n = 16$, rural $n = 77$, suburb $n = 18$, town $n = 20$. City – 12%, rural – 59%, suburb – 14%, town – 15%.

In terms of minimums and maximums, Asian, American Indian, Black, and Native Hawaiian enrollments started at 0%. In 33 school divisions, 25.19% of all, percentages of Asian students ranged from 2% to 24.4%, above the 1.917% statewide Asian student population average. In 43 school divisions, 32.82% of all, percentages of Hispanic students ranged from 11.1% to 68.3%, surpassing the 10.415% state average. In 54 school divisions, 41.22% of all, percentages of American Indian students ranged from 0.3% to 5.2%, surpassing the 0.29% state average. In 49 school divisions, 37.4% of all, percentages of Black students ranged from 22% to 88%, surpassing the 21.897% state average. In 61 school divisions, 46.56% of all, Multiple Races student enrollments ranged from 5.9% to 13.1%, surpassing the 5.801% state average. In 31 school divisions, 23.66% of all, percentages of Native Hawaiians ranged from 0.2% to 1%, surpassing the 0.18% statewide average. In 70 school divisions, 53.44% of all, average

percentages of White students ranged from 59.8% to 98.2%, surpassing the 35.49% statewide average. Figure 270 represents average race/ethnicity composition of 53.44% of Virginia school divisions with larger than state average White student population. Figure 271 depicts racial/ethnic composition for the rest of the schools. A visual examination shows that the higher the percentage of the White students was, the lower are the percentages of students of other races/ethnicities were.

Figure 265

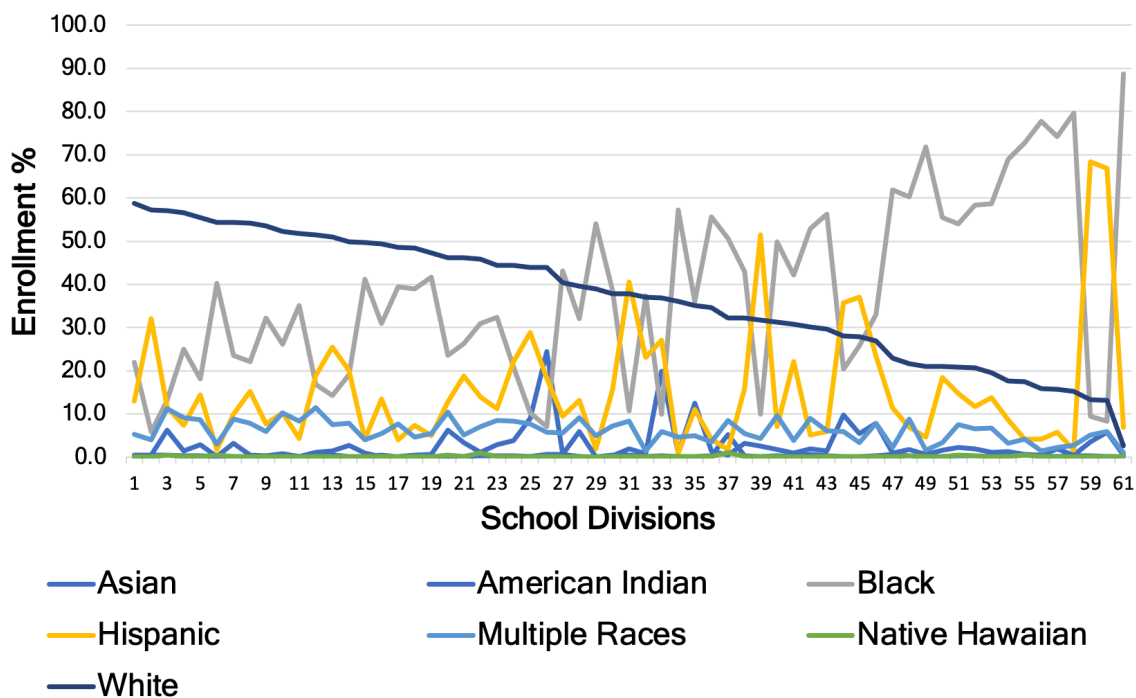
Average Racial/Ethnic Student Body Composition of 53.44% of Virginia School Divisions



Note. Calculated from the VDOE School Quality Profiles (n.d.) data.

Figure 266

Racial/Ethnic Student Body Composition of 46.66% of Virginia School Divisions



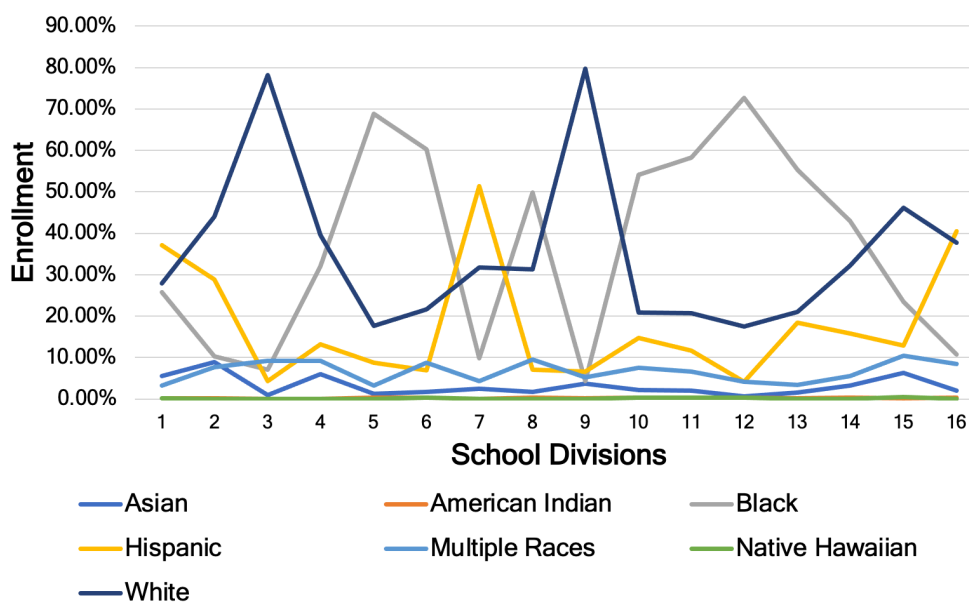
Note. Calculated from the VDOE School Quality Profiles (n.d.) data.

An examination of student race/ethnicity by geographic locations contradicted these tendencies.

Figures 272-275 show how diverse student body racial/ethnic averages were in each geographic location.

Figure 267

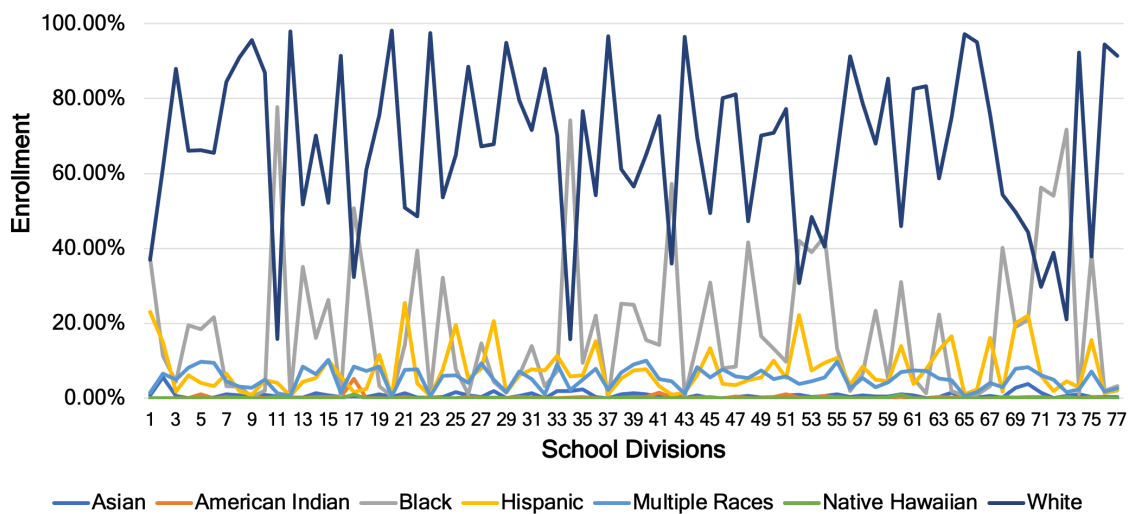
Racial/Ethnic Student Body Composition of 16 Virginia's City School Divisions



Note. Percentages of race/ethnicity obtained from the VDOE School Quality Profiles (n.d.).

Figure 268

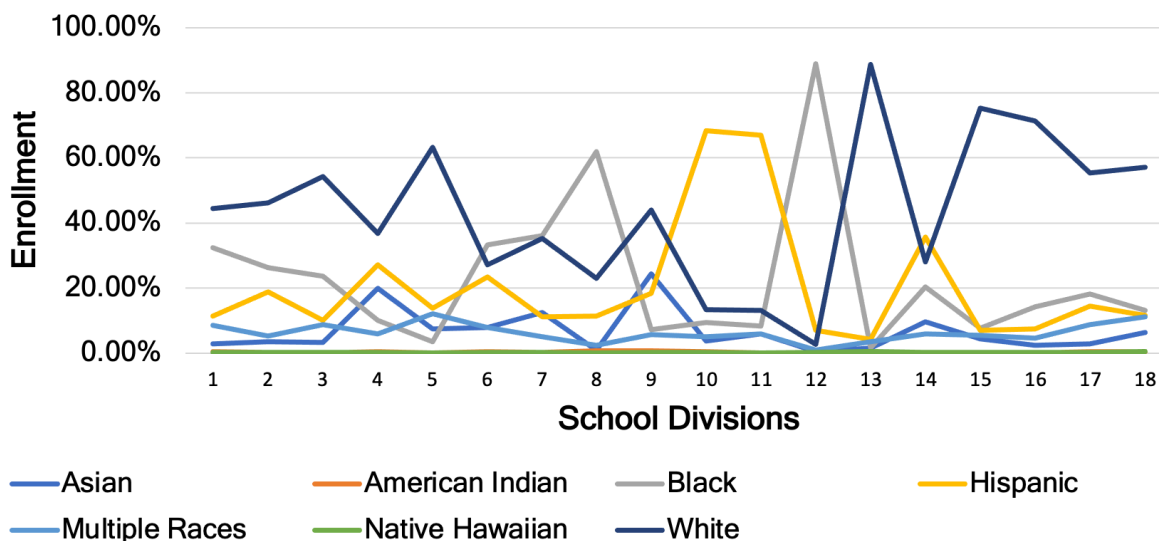
Racial/Ethnic Student Body Composition of 77 Virginia's Rural School Divisions



Note. Percentages of race/ethnicity obtained from the VDOE School Quality Profiles (n.d.).

Figure 269

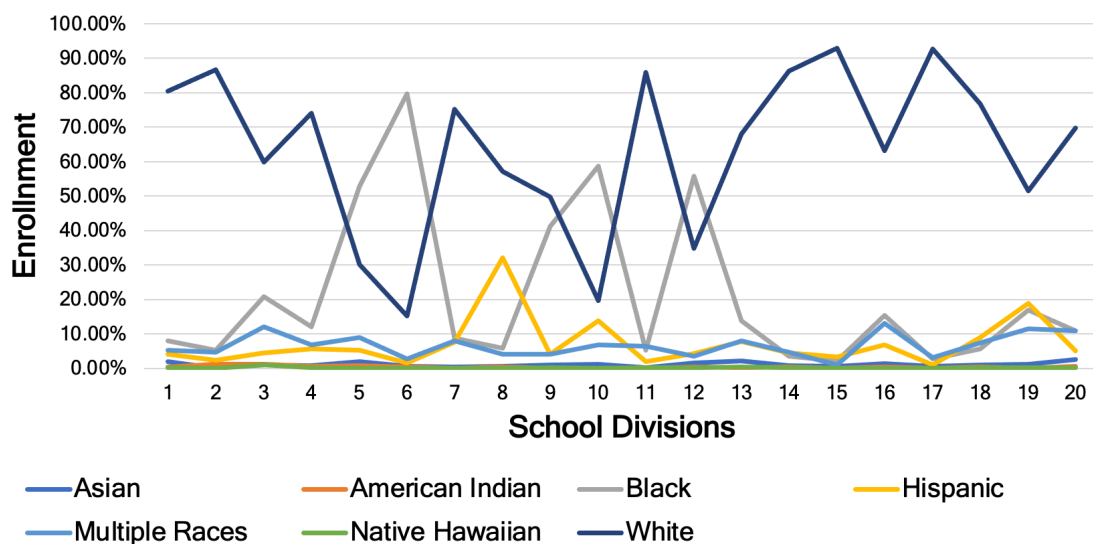
Racial/Ethnic Student Body Composition of 18 Virginia's Suburban School Divisions



Note. Percentages of race/ethnicity obtained from the VDOE School Quality Profiles (n.d.).

Figure 270

Racial/Ethnic Student Body Composition of 20 Virginia's Town School Divisions



Note. Percentages of race/ethnicity obtained from the VDOE School Quality Profiles (n.d.).

These economic and social factors shaped Virginia public high school music education into a unique phenomenon. Understanding these diversity patterns is essential in examining how high school music education is affected by school division demographics and in analyzing administrative approaches to developing high school music programs.

Research Question 2

The second research question was, “How does offering of each high school music course type in a given Virginia public school division correlate with this school division’s select demographic characteristics: enrollment, geographic location, socio-economic status, and race/ethnicity?” Analyses revealed that the four selected demographics jointly predicted offering Chorus, Guitar, IB Music, Music Appreciation, Music Technology, Music Theory, Orchestra and do not associate with offering Band, Composition, and Piano. Larger enrollment was positively associated with offering Guitar, IB Music, Music Technology, and Orchestra.

Ten logistic regression analyses were performed in SPSS to predict offering each of the high school music course types on at least one level in 131 Virginia school divisions from 14 demographic characteristics: four locality categories (i.e., city, rural, suburban, and town); enrollment; LCI; low student SES; and seven student race/ethnicity categories (i.e., Asian, American Indian, Black, Hispanic, Multiple Races, Native Hawaiian, and White). The categorical outcome variable (offering a course) was coded as: 0 = no and 1 = yes. One of the predictor variables, locality, was categorical, coded as: 0 = city, 1 = rural, 2 = suburban, and 3 = town. 131 cases were included in each regression. The $\alpha = .05$ was set as a criterion of statistical significance for overall models and for significance for each of the predictors. Recommended by Warner (2013) statistics were used to report the results.

Full model significance, or whether odds of offering a course could be predicted significantly better with addition of the 14 variables than without, was evaluated with a chi-square test of improvement of fit, $\chi^2(df)$. Nagelkerke R^2 (a version of another pseudo R^2 , Cox and Snell R^2), calculated to determine association strength in regressions with categorical outcomes, was used to determine effect sizes (IBM, 2009; Warner, 2013). Full model prediction accuracy was conveyed by the percentage of correctly predicted group membership cases. Statistically significant contributions of individual predictor variables (with accounting for all covariates) were interpreted using the following coefficients: (1) $\exp(B)$, the value of 1.0 of which illustrated no relationship, indicated change in odds of offering a course based on a predictor; (2) Wald chi-square test result, $\chi^2(df)$; and (3) 95% lower and upper confidence intervals (CIs) for coefficient $\exp(B)$. Predicted probabilities for each case were interpreted and illustrated. Seven tests were significant.

Band

A test of the full model (with the 14 predictor variables) compared with a constant-only or null model was nonsignificant, $\chi^2(13) = 20.698, p = .079$. As only two of 131 school divisions did not offer Band, it was not possible to predict offering the course from the 14 demographics.

Chorus

A test of the full model (with the 14 predictor variables) compared to a null model (without the predictors) was significant, $\chi^2(13) = 46.436, p < .001$. The Cox and Snell R^2 of .298 and the Nagelkerke R^2 of .605 indicated that the association between the predictor variables combined and the odds of offering Chorus was moderate. Contribution of one predictor, low student SES, to the full model was statistically significant. The Wald ratio associated with low student SES was statistically significant, $B = -.102, \chi^2(1) = 4.396, p = .036$. $\exp(B)$ for low

student SES was .903. The 95% CIs for $\exp(B)$ were .821 (lower) and .993 (upper). It was concluded with 90.8% accuracy that as low student SES percentage increased, odds of offering Chorus decreased. Table 45 summarizes statistically significant regression coefficients, and Figure 271 illustrates the decrease of predicted probabilities of offering Chorus for each case (based on the 14 predictors) as low student SES increased.

Table 45

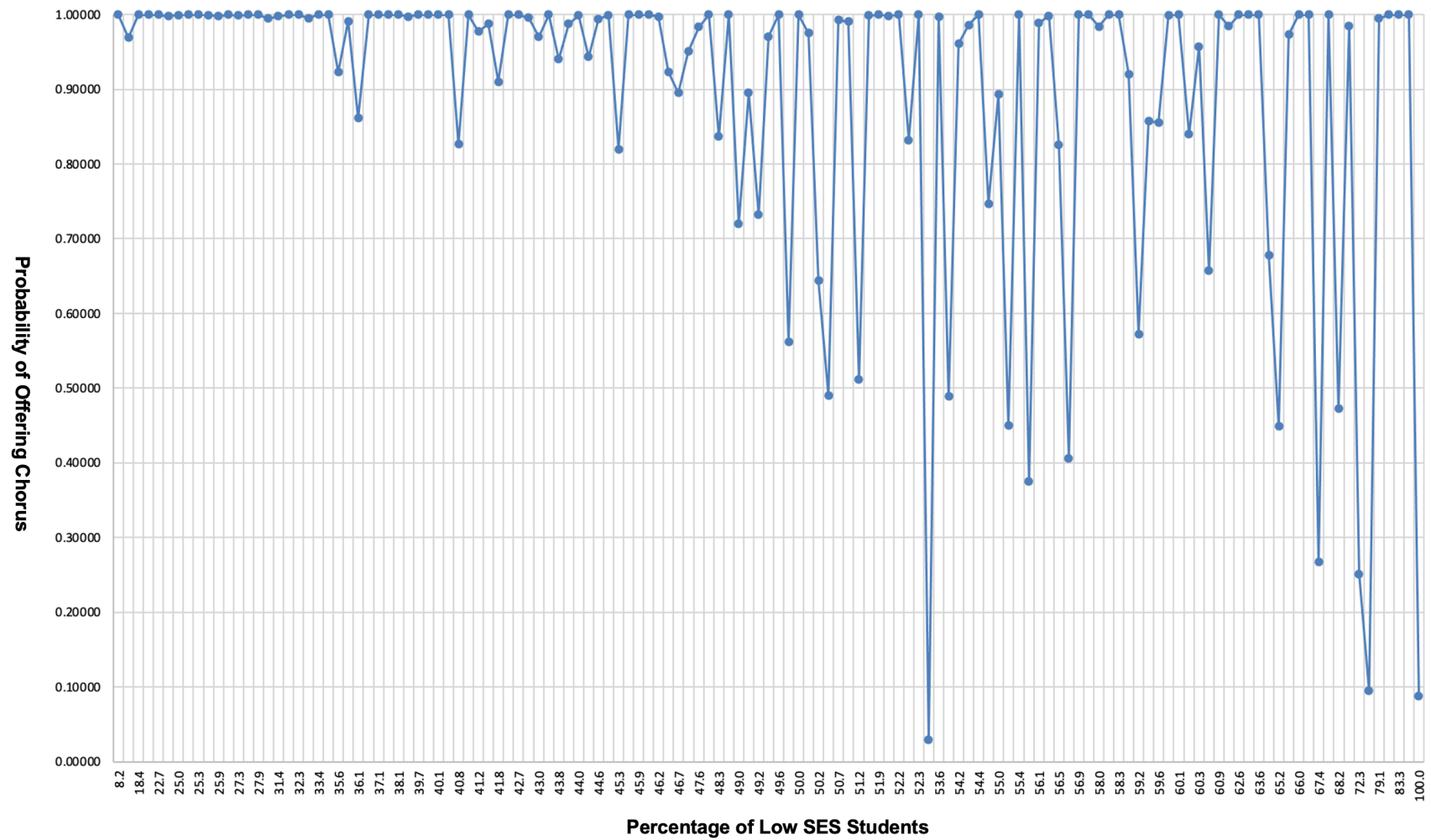
Binary Logistic Regression Predicting Offering Chorus in Virginia School Divisions from 14 Select Demographic Characteristics (N = 131)

Predictor Variable	<i>B</i>	Wald Chi-Square Test	<i>p</i>	$\exp(B)$	95% Confidence Interval for $\exp(B)$	
					Lower	Upper
Low Student SES	-.102	4.396	.036	.903	.821	.993
Constant	-545.052	.012	.912	.000		

Note: SES refers to socio-economic status.

Figure 271

Predicted by Low Student Socio-Economic Status Probability of Offering Chorus in Virginia School Divisions (N = 131)



However, only 14 out of 132 school divisions did not offer Chorus; additionally, the low student SES average (48.75%) and mean (49.6%) for Virginia school divisions were similar.

Therefore, this predictor was considered as artifactual.

Composition

A test of the full model (with the 14 predictor variables) compared to a null model was nonsignificant, $\chi^2(13) = 8.251, p = .827$. It was not possible to predict offering the course from the 14 demographics.

Guitar

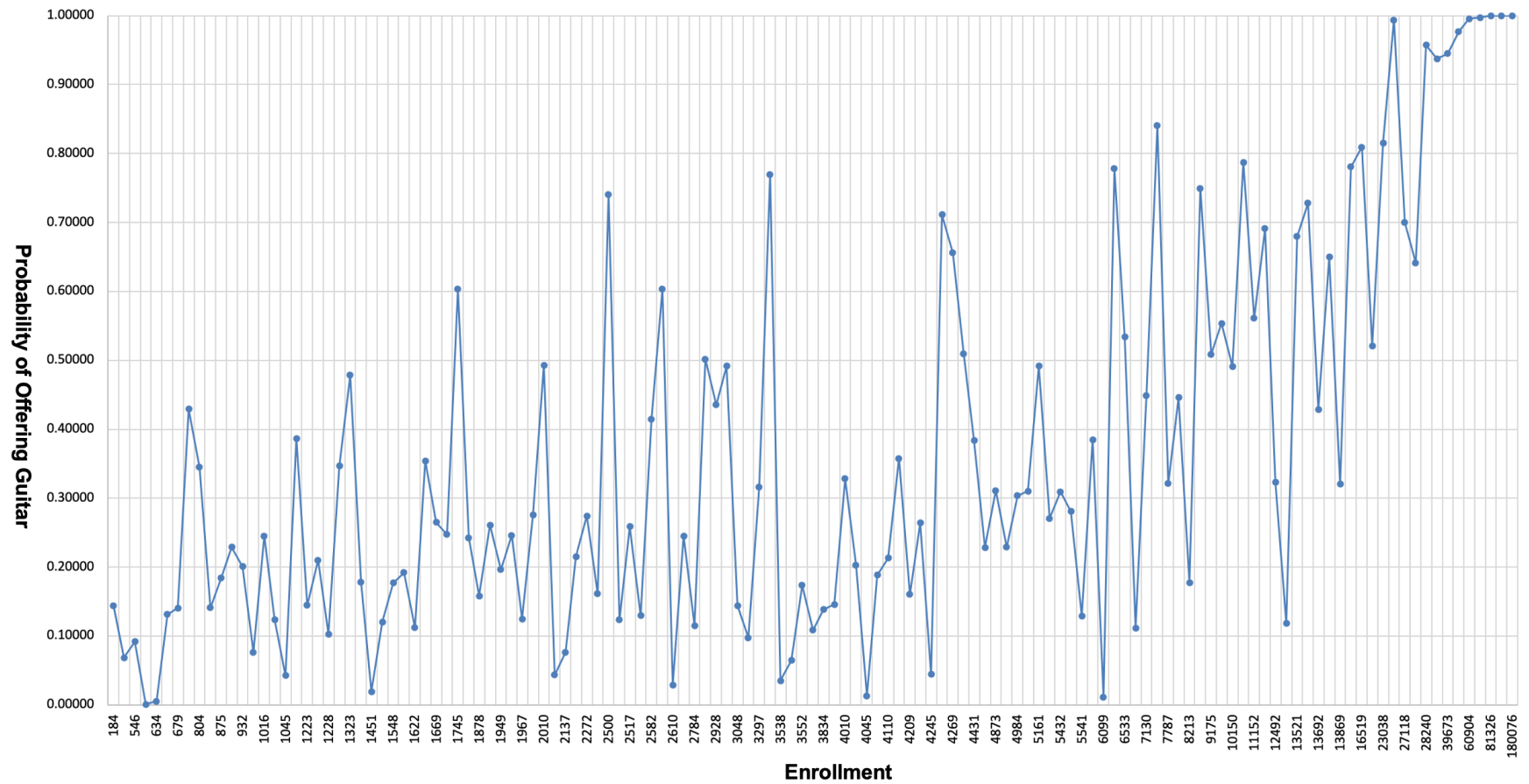
A test of the full model (with the 14 predictor variables) compared to a null model (without the predictors) was significant, $\chi^2(13) = 49.103, p < .001$. The Cox and Snell R^2 of .313 and the Nagelkerke R^2 of .427 indicated the association between the predictor variables combined and the odds of offering Guitar was moderate. Contribution of one predictor, enrollment, to the full model was statistically significant. The Wald ratio associated with enrollment was statistically significant, $B = .0001, \chi^2(1) = 6.333, p = .012$. $Exp(B)$ for enrollment was 1.0001. The 95% CIs for $exp(B)$ were as following: 1.000027 lower and 1.000218 upper. It was concluded with 74% accuracy that as enrollment increased, the odds of offering Guitar increased. The exponents B and $exp(B)$ and the CIs shown in Table 46 indicated marginal increase of odds of offering Guitar with enrollment increase; this was due to the span of 179,892 between minimum enrollment (184) and maximum enrollment (180,076). Figure 272 illustrated that predicted probabilities of offering Guitar (based on the 14 predictors) grew with enrollment increase.

Table 46*Binary Logistic Regression Predicting Offering Guitar in Virginia School Divisions from 14**Select Demographic Characteristics (N = 131)*

Predictor Variable	<i>B</i>	Wald Chi-Square Test	<i>p</i>	<i>exp(B)</i>	95% CI for <i>exp(B)</i>	
					Lower	Upper
Enrollment	.0001	4.396	.012	1.0001	1.000027	1.000218
Constant	-142.025	.212	.645	.000		

Figure 272

Predicted by Enrollment Probability of Offering Guitar in Virginia School Divisions (N = 131)



IB Music

A test of the full model (with the 14 predictor variables) compared to a null model (without the predictors) was significant, $\chi^2(13) = 46.484, p < .001$. The Cox and Snell R^2 of .299 and the Nagelkerke R^2 of .555 indicated that the association between the predictor variables combined and the odds of offering Guitar was moderate. Two predictor variables significantly contributed to the full model: enrollment and American Indian student population percentages. The Wald ratio associated with enrollment was statistically significant, $B = .0001, \chi^2(1) = 5.065, p = .024$. $Exp(B)$ for enrollment was 1.0001. The 95% CIs for $exp(B)$ were: 1.00001 lower and 1.0001 upper. It was concluded with 92.4% accuracy that as enrollment increased, the odds of offering IB Music increased. The Wald ratio associated with American Indian student population percentages was statistically significant, $B = -14.234, \chi^2(1) = 4.627, p = .031$. $Exp(B)$ for American Indian student population was 0.000001. The 95% CIs for $exp(B)$ were: 1.535E-12 lower and .282 upper. It was concluded with 92.4% accuracy that as percentages of American Indian students increased, the odds of offering IB Music decreased. Table 47 summarizes statistically significant coefficients in the model; predicted probabilities for each case (based on the 14 predictors) are plotted by increases on the two significant predictors in Figures 273-274.

Table 47

Binary Logistic Regression Predicting Offering International Baccalaureate Music in Virginia

School Divisions from 14 Select Demographic Characteristics (N = 131)

Predictor Variable	<i>B</i>	Wald Chi-Square Test	<i>p</i>	<i>exp(B)</i>	95% CI for <i>exp(B)</i>	
					Lower	Upper
Enrollment	0.0001	5.065	.024	1.0001	1.00001	1.0001
American Indian	-14.234	4.627	0.31	0.000001	1.535E-12	0.282
Constant	1033.197	3.351	.067			

Figure 273

Predicted by Enrollment Probability of Offering International Baccalaureate Music in Virginia School Divisions (N = 131)

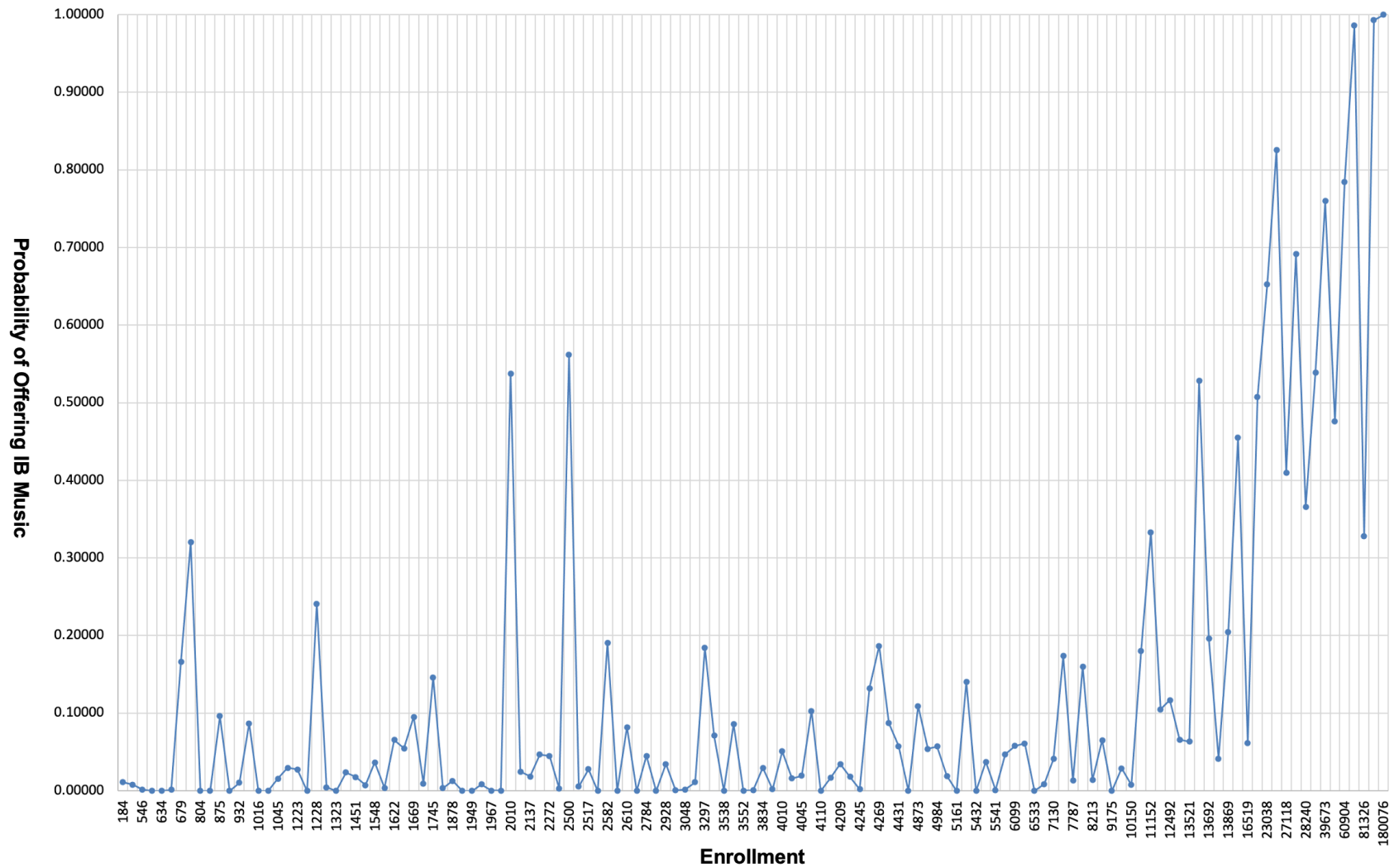
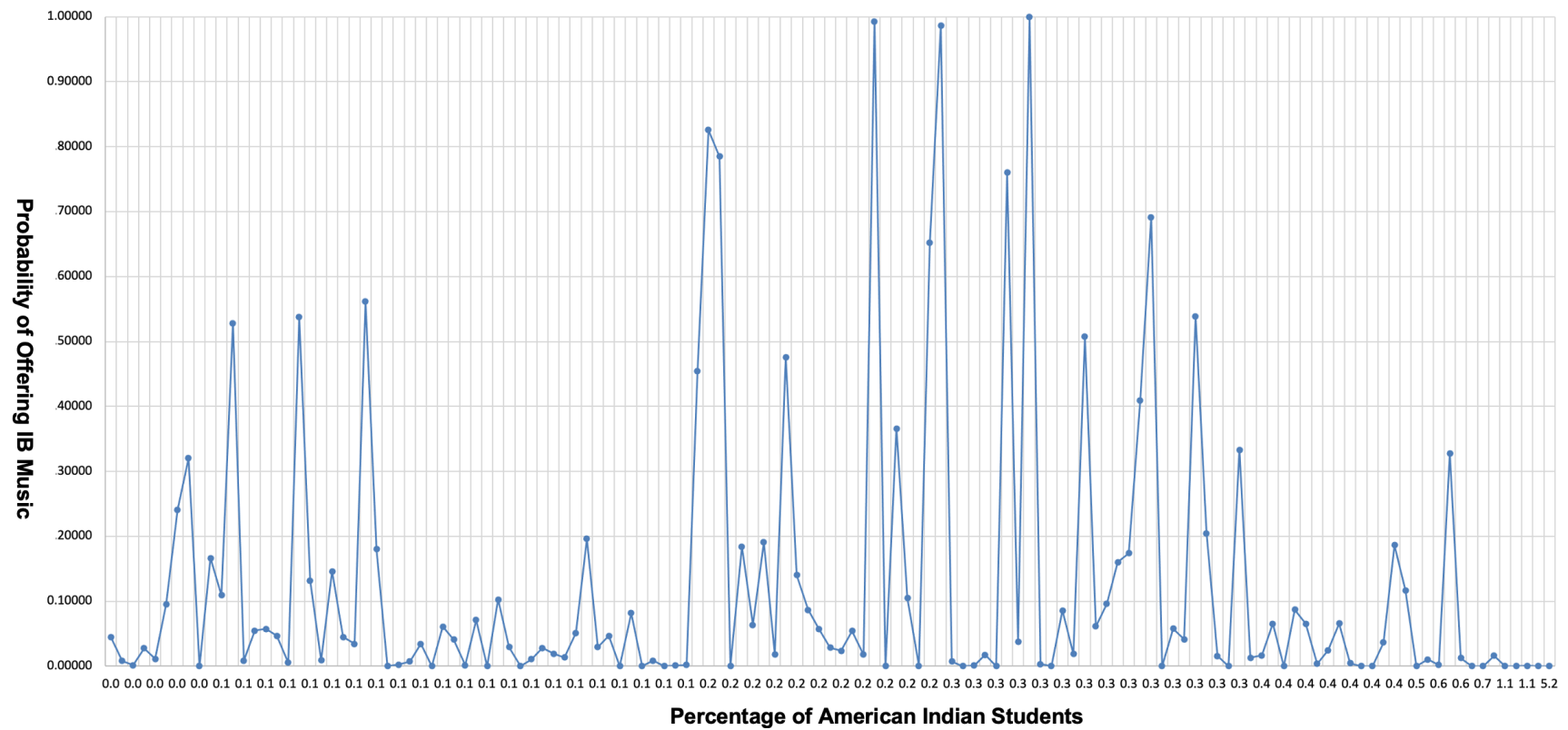


Figure 274

Predicted by American Indian Student Population Percentages Probability of Offering International Baccalaureate Music in Virginia School Divisions (N = 131)



However, one of the two significant predictors, percentages of American Indian students, was considered artifactual, as only 18 school divisions offered IB Music, and percentages of American Indian students in these school divisions ranged from 0.1-0.2%, which approximated the statewide average American Indian student enrollment of 0.26% (School Quality Profiles, n.d.).

Music Appreciation

A test of the full model (with the 14 predictor variables) compared to a null model (without the predictors) was significant, $\chi^2(13) = 27.756, p = .001$. The Cox and Snell R^2 of .191 and the Nagelkerke R^2 of .256 indicated that the association between the predictor variables combined and the odds of offering Music Appreciation was weak. Contribution of one predictor, LCI, to the full model was statistically significant. The Wald ratio associated with LCI was statistically significant, $B = -3.451, \chi^2(1) = 4.197, p = .041$. $Exp(B)$ for LCI was .032. The 95% CIs for $exp(B)$ were .001 (lower) and .861 (upper). It was concluded with 69.5% accuracy that as LCI increased, the odds of offering Music Appreciation decreased. Table 48 summarizes the statistically significant regression coefficients; Figure 275 illustrates decrease of predicted probabilities of offering Music Appreciation (based on the 14 predictors) with LCI increase.

Table 48

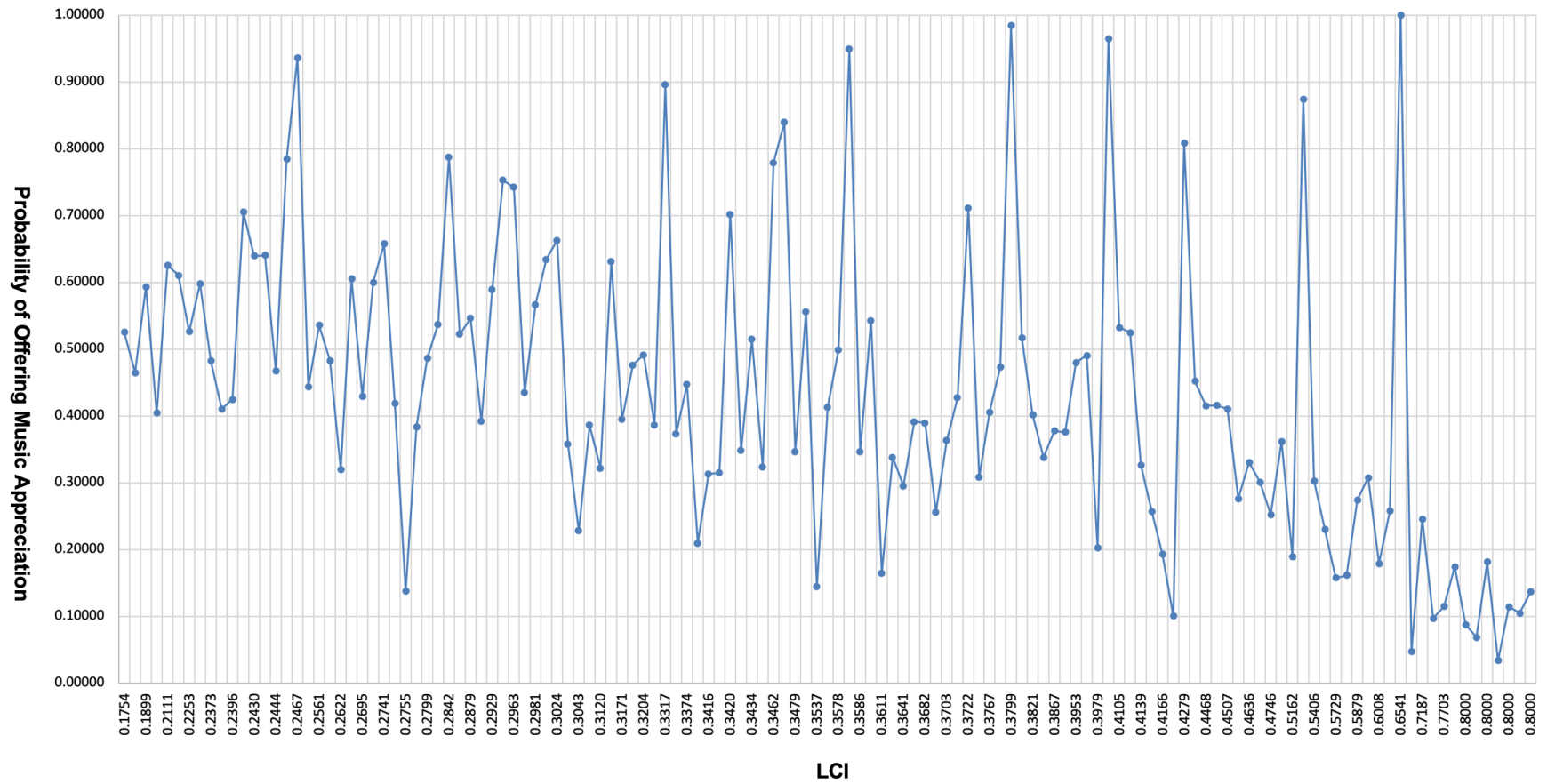
Binary Logistic Regression Predicting Offering Music Appreciation in Virginia School Divisions from 14 Select Demographic Characteristics (N = 131)

Predictor Variable	<i>B</i>	Wald Chi-Square Test	<i>p</i>	<i>exp(B)</i>	95% CI for <i>exp(B)</i>	
					Lower	Upper
LCI	-3.451	4.197	.041	.032	.821	.993
Constant	-12.981	.002	.962	.000002		

Note. LCI refers to local composite index.

Figure 275

Predicted by Local Composite Index Probability of Offering Music Appreciation in Virginia School Divisions (N = 131)



Music Technology

A test of the full model (with the 14 predictor variables) compared to a null model (without the predictors) was significant, $\chi^2(13) = 30.879, p = .004$. The Cox and Snell R^2 of .210 and the Nagelkerke R^2 of .426 indicated that the association between the predictor variables combined and the odds of offering Music Technology was moderate. Contribution of one predictor, enrollment, to the full model was statistically significant. The Wald ratio associated with enrollment was statistically significant, $B = .0001, \chi^2(1) = 8.841, p = .003$. $Exp(B)$ for enrollment was 1.0001. The 95% CIs for $exp(B)$ were: 1.00004 (lower) and 1.0002 (upper). It was concluded with 88.5% accuracy that as enrollment increased, the odds of offering Music Technology increased. Table 49 summarizes statistically significant regression coefficients; Figure 276 illustrates growth of predicted probabilities of offering Music Technology with enrollment increase.

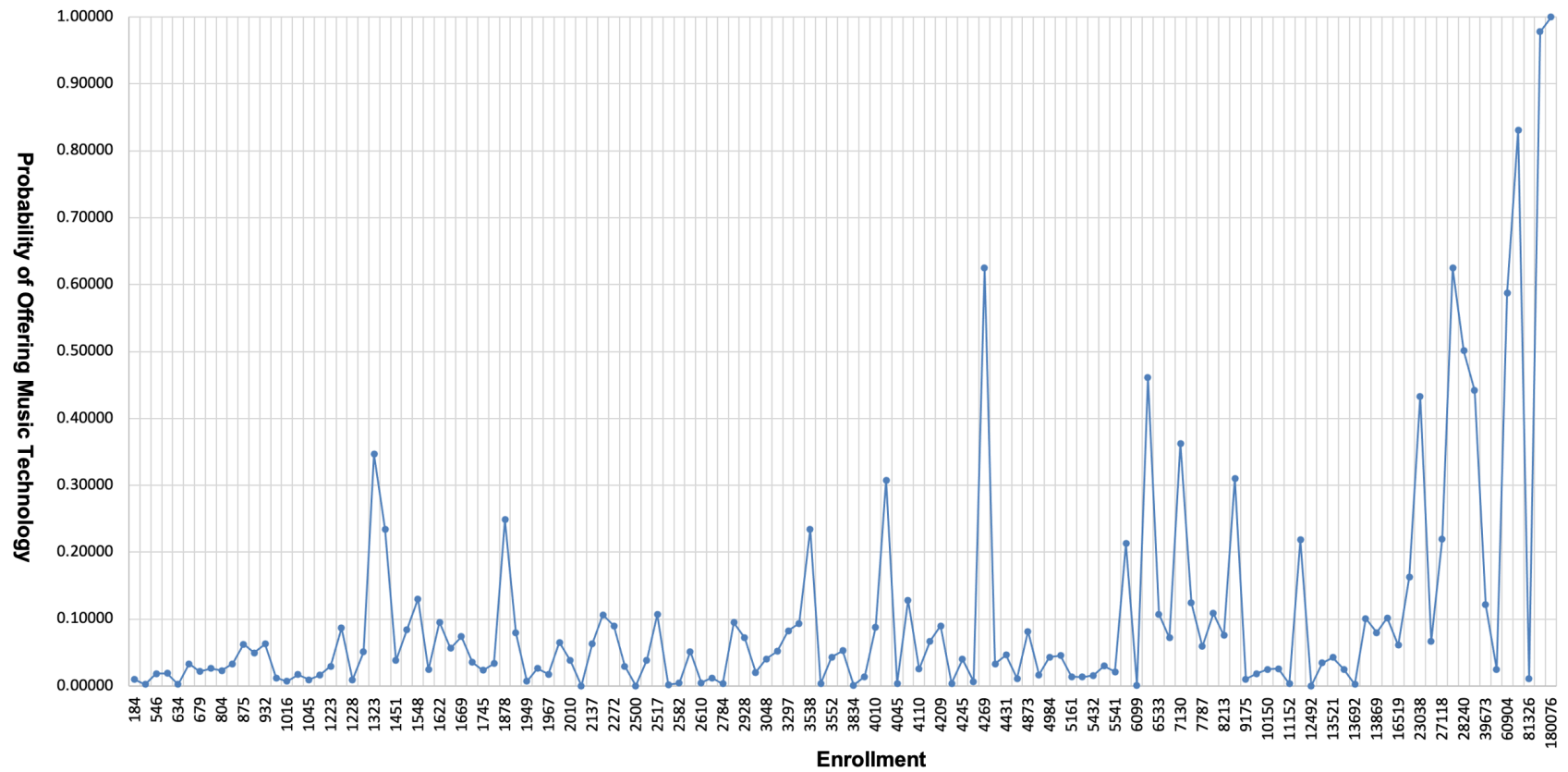
Table 49

Binary Logistic Regression Predicting Offering Music Technology in Virginia School Divisions from 14 Select Demographic Characteristics (N = 131)

Predictor Variable	B	Wald Chi-Square Test	p	exp(B)	95% CI for exp(B)	
					Lower	Upper
Enrollment	.0001	8.841	.003	1.0001	1.00004	1.0002
Constant	546.712	1.115	.291	2.761E+237		

Figure 276

Predicted by Enrollment Probability of Offering Music Technology in Virginia School Divisions (N = 131)



Music Theory

A test of the full model (with the 14 predictor variables) compared to a null model (without the predictors) was significant, $\chi^2(13) = 46.144, p < .001$. The Cox and Snell R^2 of .297 and the Nagelkerke R^2 of .398 indicate that the association between the predictor variables combined and the odds of offering Music Theory was moderate. Contribution of one predictor, enrollment, to the full model was statistically significant. The Wald ratio associated with enrollment was statistically significant, $B = .0002, \chi^2(1) = 6.979, p = .008$. $Exp(B)$ for enrollment was 1.0002. The 95% CIs for $exp(B)$ were 1.000052 (lower) and 1.000358 (upper). It was concluded with 77.9% accuracy that as enrollment increased, the odds of offering Music Theory increased. Table 50 summarizes statistically significant coefficients in the regression; Figure 277 illustrates growth of predicted probabilities with enrollment increase.

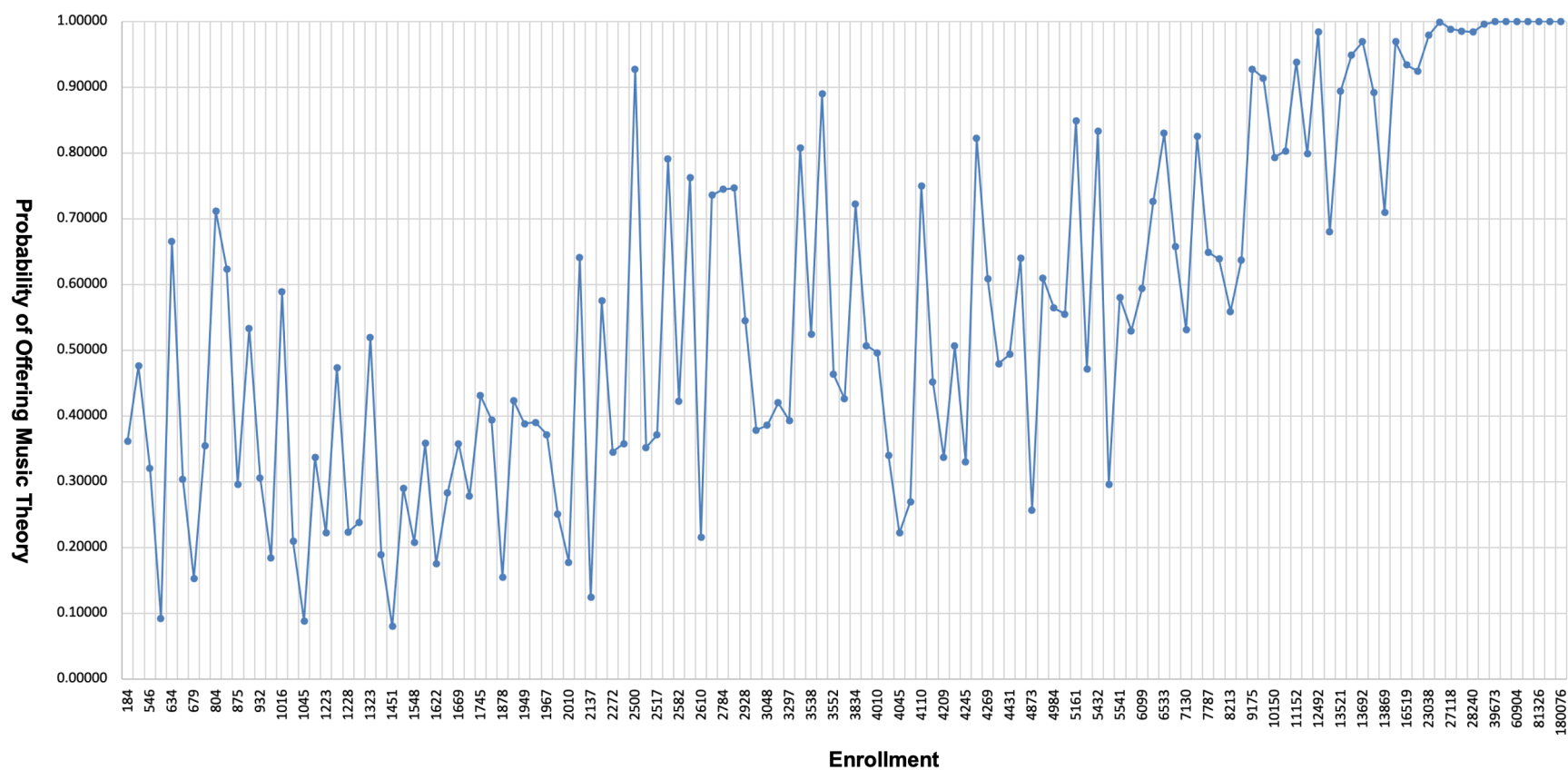
Table 50

Binary Logistic Regression Predicting Offering Music Theory in Virginia School Divisions from 14 Select Demographic Characteristics (N = 131)

Predictor Variable	B	Wald Chi-Square Test	p	exp(B)	95% CI for exp(B)	
					Lower	Upper
Enrollment	.0002	6.979	.008	1.0002	1.000052	1.000348
Constant	-.124.024	.174	.676	1.3705E-54		

Figure 277

Predicted by Enrollment Probability of Offering Music Theory in Virginia School Divisions (N = 131)



Orchestra

A test of the full model (with the 14 predictor variables) compared to a null model (without the predictors) was significant, $\chi^2(13) = 65.090, p < .001$. The Cox and Snell R^2 of .392 and the Nagelkerke R^2 of .556 indicate that the association between the predictor variables combined and the odds of offering Orchestra was moderate. Contribution of one predictor, enrollment, to the full model was statistically significant. The Wald ratio associated with enrollment was statistically significant, $B = .0003, \chi^2(1) = 12.568, p < .001$. $Exp(B)$ for enrollment was 1.0003. The 95% CIs for $exp(B)$ were: 1.000119 (lower) and 1.000414 (upper). It was concluded with 77.9% accuracy that as enrollment increased, the odds of offering Orchestra increased. Table 51 summarizes significant coefficients in the regression; Figure 278 illustrates growth of predicted probabilities of offering Orchestra with enrollment increase.

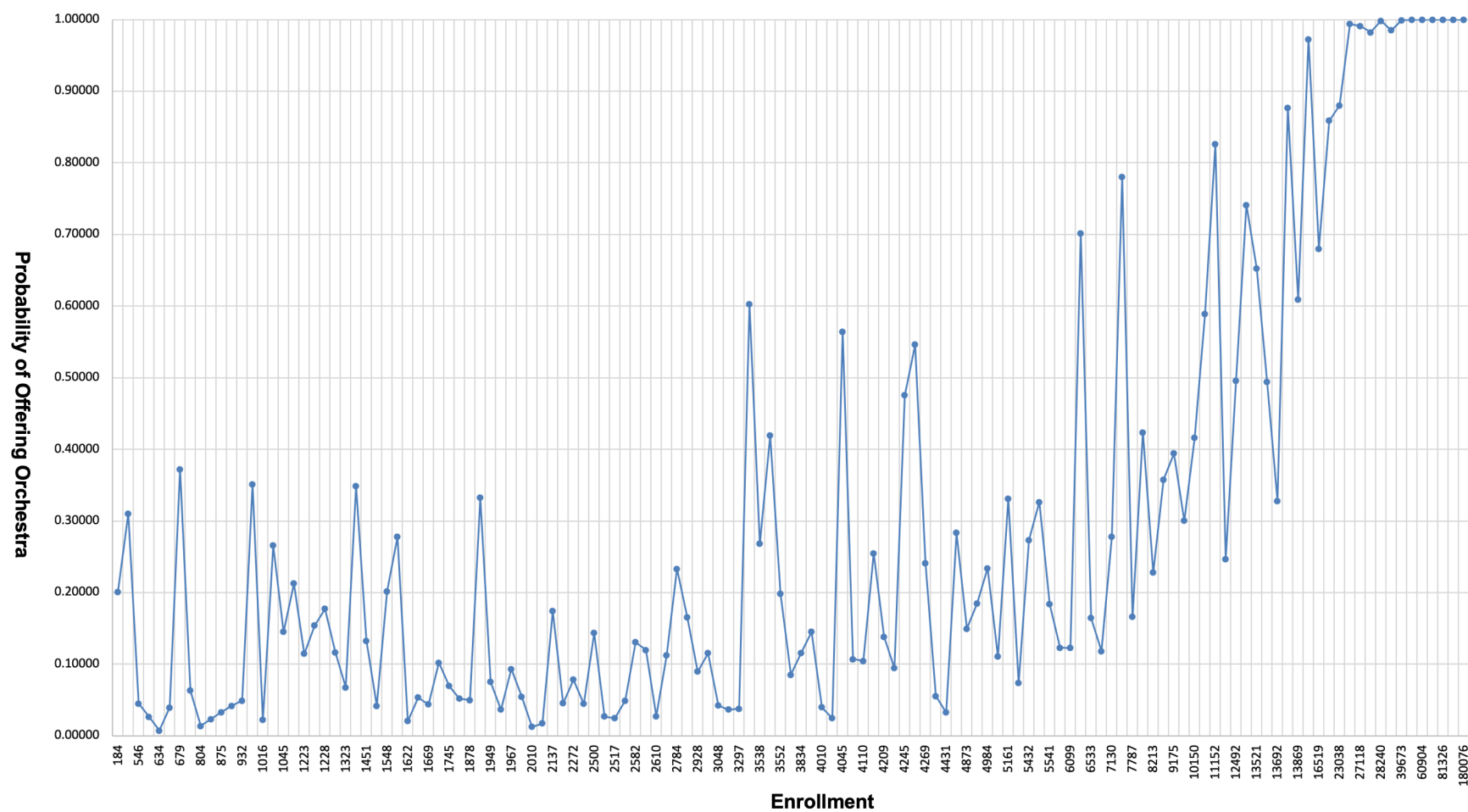
Table 51

Binary Logistic Regression Predicting Offering Orchestra in Virginia School Divisions from 14 Select Demographic Characteristics (N = 131)

Predictor Variable	B	Wald Chi-Square Test	p	exp(B)	95% CI for exp(B)	
					Lower	Upper
Enrollment	.0003	12.568	<.001	1.0003	1.000119	1.000414
Constant	-.773.750	3.587	.058	.000		

Figure 278

Predicted by Enrollment Probability of Offering Orchestra in Virginia School Divisions (N = 131)



Piano

A test of the full model (with the 14 predictor variables) compared to a null model was nonsignificant, $\chi^2(13) = 17.450, p = .180$. It was not possible to predict offering the course from the 14 demographics.

Summary of Answers to Research Question 2

Three high school music courses were offered among Virginia school divisions regardless of a school division's enrollment, LCI, locality, and student race/ethnicity: Band, Composition, and Piano. Offering seven out of ten high school music courses associated with Virginia school divisions' demographics. Four significant predictors were moderate. Larger school divisions were likely to offer Guitar, IB Music, Music Technology, Music Theory, and Orchestra. Two predictors, low SES for Chorus and higher percentages of American Indian students for IB Music, were artifactual. One significant predictor, LCI, was weak: school divisions with larger LCIs were less likely to offer Music Appreciation.

Research Question 3

The third research question was, "What formal and/or informal curriculum development approaches associate with offering of particular types of high school music courses in a representative sample of Virginia public school divisions?" To answer this question, I interviewed 14 Virginia school administrators responsible for division-level music programs. Respecting participants privacy and confidentiality, names, genders, and exact position titles of the pilot and of the study interview participants were not disclosed throughout the Chapter. I referred to all the participants as administrators, no matter whether they were division-wide directors of education or music supervisors. I also referred to the participants by interview order

numbers, such as Participant 1, Participant 2, etc., and at times by statewide average characteristics of the participants' school divisions, such as large city, small rural, and so forth.

Pilot Study

In November 2021, I conducted a pilot study with three administrators recruited by email. First, I conducted a Zoom interview with a large suburban school division administrator. The results showed that the interview questions needed revision for clarity and accessibility and that Google Meet needed to be used instead of Zoom. The second pilot study was conducted with a small rural school division administrator who responded to the interview questions and provided feedback in writing. I further revised my interview questions and sent them to the third pilot study participant, a large rural school division administrator. The administrator answered the interview questions in writing and confirmed that the questions were appropriate. I also asked the first two pilot study participants to review the revised questions. The finalized questions were:

1. What high school music courses, in terms of type, such as Band or Orchestra, and in terms of advancement levels, such as Intermediate, I, II, etc. are offered in your division?
2. Do all schools in the division offer all courses listed in the division-wide program of studies?
3. In your school division, what is the process for revising the division-wide high school music program of studies?
4. In your school division, in what manner, how frequently, and by whom are high school music instructional programs evaluated? Please tell me about an example of a decision on whether to offer or not to offer a course resulting from a formal evaluation if there is such an example.

5. How does your school division survey its students and parents regarding levels of satisfaction with, or growth potential for, the division-wide music program?
6. In your school division, do you encourage high school music teachers to develop new music courses for students? Can you give me specific examples? If not, why?
7. Does your school division incorporate the 2020 Music SOLs and the 2014 National Standards in the development of your high school program of studies for music education? If so, can you give me an example?
8. What role does the federal educational legislation ESSA play in your school division's decisions on what high school music courses to offer? Please describe a specific example of changes that came with the ESSA.
9. What other factors influence the development of music courses in your school division? Please give me specific examples.
10. What obstacles has your school division encountered to adding, revising, or removing high school music courses to/from the secondary school program of studies? If so, please give specific examples.
11. Has your school divisions' high school music program of studies change in the past two years? If so, how?
12. What changes to the music program of studies do you anticipate in the foreseeable future? Why do you anticipate those?

The three pilot interviews were not included in the qualitative analyses.

Participants. Between December 2021 and February 2022, via Google Meet, I interviewed 14 division-level administrators recruited by email. Six of them were from suburban school divisions, four were from rural school divisions, two were from town school divisions,

and two were from city school divisions. Eight participants were division-level fine arts administrators, and six participants were division-level educational administrators. School divisions of four participants offered some of the richest high school music programs in the state. Many codes and themes emerged from the interviews; to answer Research Question 3, I focused on analyzing formal and informal curriculum development approaches used by the participants.

Developing a High School Program of Studies

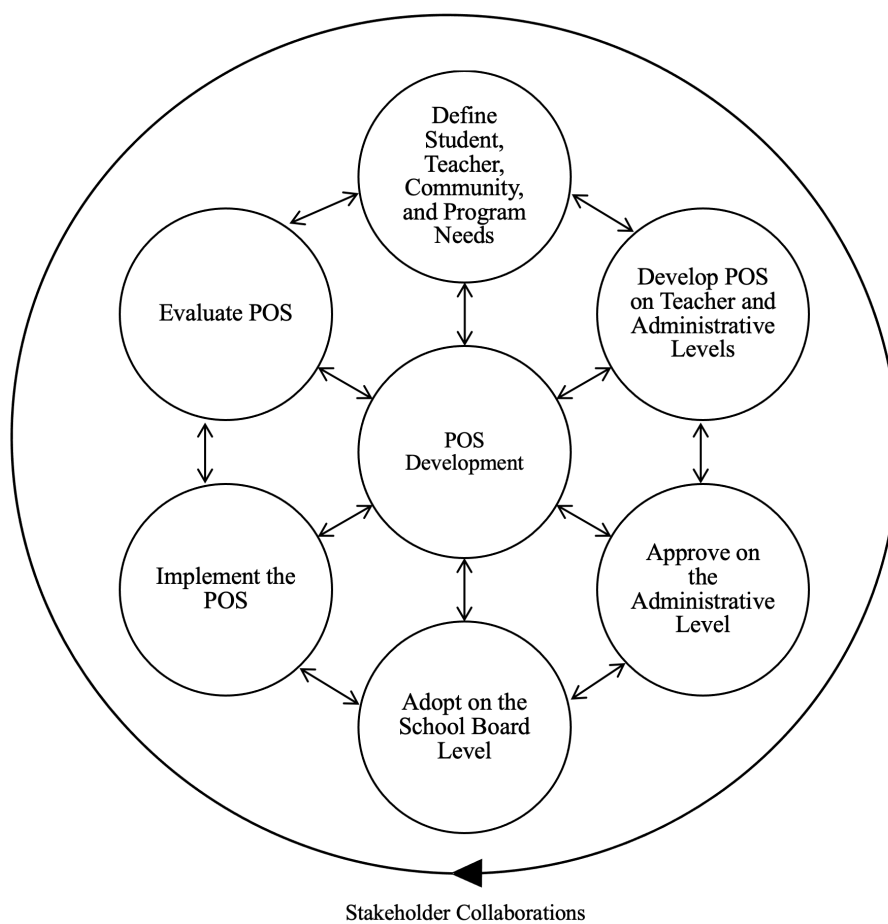
As defined in Chapters 1 and 2, formal and informal approaches to curriculum development are integrated in educational practice: pre-planned formal processes with stages are accompanied by continual informal stakeholder deliberations (Hewitt, 2006; Ornstein & Hunkins, 2013). My interview analyses revealed that each participant incorporated formal and informal approaches to developing a program of studies (POS) in a unique way, and all the participants utilized a POS development process that closely resembled the Taylor Model of System Curriculum Development and Saylor et al.'s (1981) Curriculum Planning Process which suggested devising objectives based on surveyed needs, conducting teacher professional development, implementing, evaluating, and revising (W. R. Gordon et al., 2019). The participants also exemplified various informal stakeholder deliberations occurring throughout the POS development process. Two informal curriculum models were traced in all the interview responses, the Macdonald's (1971) Responsible Curriculum Development Model that suggested providing all stakeholders involved in curriculum development opportunities to contribute and Sowell's (2005) Experiences Approach to Curriculum Development model that suggested considering teachers as major curriculum sources.

One POS development process emerged from the interview responses; this process was common to all the participants and included: survey of needs, collaborative development of

changes to POS by teachers and administrators, collaborative review of POS changes by school and central office administrators, school boards voting on POS approval, POS implementation, and POS evaluation. Figure 279 depicts this process. The two-sided arrows express that this process was recurring, nonsequential, and nonlinear; calls for changes to POS and POS development originated on various steps of the process. The circular arrow represents that such changes emerged as results of continual stakeholder deliberations.

Figure 279

High School Music Programs of Studies Development Process Practiced in 14 Select Virginia School Divisions



This POS process was evident in one large suburban school division's (Participant 2) POS development practices. While the school division clearly articulated a new course development process and designated POS decision-making to central office and school administrators, informal administrator/teacher collaborations and conversations continued throughout school year and extended to summer curriculum development meetings. Participant 2 described that after new course description with alignment to the state SOLs was in central office administrative approval stage:

We may circle back with some questions and have dialogue once, and I usually do a lot of groundwork. Then, I pass this on to my boss, and he'll ask question; they make sure with principals and other stakeholders. At that point, it will go to the Director of High Schools—that office would review it, and, if we've signed off on it, they will go with it. This example shows how formal and informal curriculum development approaches were blended and how opinions of multiple stakeholders were considered.

The POS Process. Two distinct POS development processes were identified among the participants. The first was POS reviews in which 13 of 14 participants regularly engaged in when reviewing entire sequences of courses; this process resembled the POS development process pictured in Figure 284. In 12 school divisions, POS reviews were either annual or at least somewhat regular, and five of these school divisions had POS review processes formally defined in division-wide policies.

Planning for stakeholder engagement in POS review differed among the participants' school divisions. For example, one suburban school division administrator (Participant 12) scheduled annual POS reviews with central office administrators, teachers, and department chairs. In contrast, another suburban school division (Participant 9) did not schedule any POS

reviews, as current course offerings tested over time were proven to work. All elements of the Goal-Based Curriculum Planning Model, identifying agencies involved in curriculum planning, developing data-driven goals and timelines, and assessing student needs with curriculum task forces, implementing, and evaluating, were evident in actions of both administrators (Glatthorn et al., 2019). However, Participant 12 recognized that classrooms and schools had unique priorities that contributed to organic curriculum development; this concept was suggested to be considered in curriculum development by Eisner's (2002) Curriculum Diffusion Concept and Elliott and Silverman's (2015) Practical Curriculum Development informal curriculum development models.

The POS Process Timelines and Stakeholder Deliberations. Timelines designated to POS processes as well reflected the participants' considerations for stakeholder engagement and formal and informal curriculum development choices. Six participants did not indicate that their school divisions designated formal timelines for POS development, while seven participants defined specific timelines allotted to certain stages of the POS process. Two town school divisions (Participants 3 and 4) practiced Oliva's Hierarchical Model of Levels and Sectors of Curriculum Development that designates teachers strictly instructional responsibilities: in these two school divisions, latest enrollment and current program state data were gathered ahead of fall POS review meetings, in which superintendents, central office administration, principals, and counseling chairs made decisions on what to offer next year.

In the rest four of the six school divisions practicing formal POS development timelines, processes of change were more organic and inclusive of teachers. In one small rural school division (Participant 6), the POS was reviewed on the central office level in December and January, while the entire fall was designated to teacher/student/counselor/administrator

collaborations on what works best for student post-secondary education and on the classroom level program development. In another small rural school division (Participant 7), principal/teacher conversations and teacher meetings on POS development regularly occurred until January, when school and central office administrators met on budget and students start scheduling next year courses. One large suburban school division offering one of the richest high school music programs in the state (Participant 14) designated almost the entire school year to continual deliberations among teachers, principals, and the central office fine arts administrator, and POS issues were discussed in spring/summer POS review meetings of school and central office administrators and counselors.

The New Course Development Process. In addition to the POS review process, 13 out of 14 participants' school divisions practiced new course development processes, which resembled the POS development process pictured in Figure 279. These new course development processes were less regular than POS reviews, as new courses were offered only as needed, and all 14 participants stayed away from offering too many courses. In all the participants' school divisions, an initiation of a new course development was influenced by changes to the Virginia Music SOLs, and/or major changes in the field of music education, and/or current needs. This approach resembled the Oliva's (2009) Hierarchical Model of Levels and Sectors of Curriculum Planning that considered state educational agencies as the highest hierarchy, which recommendations district and school curriculum committees were to continually monitor and incorporate in instructional programs.

In all the participants cases, building and central office administrators and teachers, in collaboration, initiated new course development. For example, in a large suburban school division (Participant 1), new course development started with teachers; they surveyed student

interest, obtained principal approval using a specific form, and proposed a course outline that included content for every quarter and shows alignment with state SOLs. Then, after administrative and school board approvals, the central office engaged in curriculum development. This process took at least 2 years:

We have that longer process deliberately, so that there is a careful review, so there is time to determine there is really interest, to make sure there is administrative approval at the school level, to make sure we have a thorough plan for what the course sequence, topics, content will be, and that give us a plenty of time to get approval from the school board, and to develop appropriate curriculum resources for the course before it is implemented.

Half of the participants (7) regarded teachers as major sources of curriculum development, as suggested in Sowell's (2005) Experiences Approach to Curriculum Development and Elliott and Silverman's (2015) Practical Curriculum Development, both informal approaches. These seven participants encouraged teacher experimentation and involvement in developing new programs more actively than the rest seven participants. For example, two small rural school division administrators (Participants 6 and 10) strongly encouraged teachers to develop new courses and established clear and accessible procedures for that. An administrator of a large city school division offering one of the richest high school music programs in the state (Participant 8) suggested administrative and teacher ownership in every POS decision was essential:

I am involved in every single way we can do it, and I always involve the teachers who are involved with this. After we come up with a course description, we look through budget implications, we send a packet up the chain of command, it is offered to the school board, and the school board votes on that.

In contrast, school divisions of seven participants mainly focused on developing what was currently offered and prioritized data-driven decision making discussed in the Goal-Based Curriculum Planning formal curriculum development model (Glatthorn et al., 2019). For example, the school division of a rural school division administrator (Participant 5) was less supportive of POS expansions:

We neither encourage nor discourage development of programs. If an issue or concern is presented, we're more reactive. But music teachers are free to express recommendations for new courses at any time, it's not like we are restricting or trying to stifle growth or change in our music programs, we just don't have a formal process. If a new course is introduced, students would really just make a choice to do the new program; they're taken from the other program that they may be involved, so, you're really kind of hurting yourself when new programs are introduced, because of our small population and the many options for students. From all of the options that our kids have, anything new that's introduced it's just removing kids from another program instead of really growing programs.

These examples show how school and central office administrators charted the course for POS development by selecting what formal and informal curriculum development approaches to utilize. Next, I will further discuss frequency of POS considerations and updates, stakeholders involved in POS development, nature of stakeholder collaborations, and various formal and informal approaches to POS development observed among the participants. Importantly, while I will present the findings sequentially addressing the POS process steps, what administrators did daily in search for what works was not necessarily sequential.

Considering Needs

The needs the participants considered in POS development were classified into four categories: student, teacher, community, and program. These types of needs closely resembled needs enumerated in three formal curriculum development models. The first two were Tyler's (2013) Curriculum Development Model and Taba's (1962) Order for Development of a Dynamic Curriculum that suggested creating educational objectives from: needs of students obtained from observations, conversations, and assessments; needs of society; and subject matter analyses. The third was Oliva's (2009) Model for Curriculum Development that suggested examining not only social, psychological, educational, and developmental student needs but also community influences and latest developments in the field.

Student Needs and Interests. All the participants prioritized music education needs and interests of students in POS development. As a suburban school administrator (Participant 9) suggested, "It is really what is needed and what is best for music education of the students in our system." Two types of student needs and interests were identified by the participants: educational and socio-emotional. The participants formally examined student needs by considering latest field developments and informally surveyed more specific student and classroom needs through conversation with teachers; these needs were addressed through development of formal course offerings and through informal adjustments to classroom curricula (Eisner, 2002; Elliot & Silverman, 2015; Oliva, 2009; Ornstein & Hunkins, 2013; Saylor et al., 1981; Sowell, 2005).

Educational Needs and Interests of Students. All the participants developed high school educational programs based on the highest educational hierarchy guidelines, Virginia Music SOLs (Board of Education, Commonwealth of Virginia, 2020; Oliva, 2019). However, three of the participants went beyond the SOLs. For example, a large suburban school division

(Participant 14) established Guitar and Music Technology programs before these courses were included in the state SOLs. The administrator shared that the rationale for offering Guitar was based on student post-secondary education needs: not all students continued playing in ensembles after high school and offering an instrument that students would continue playing individually after high school graduation was beneficial. The school division of Participant 14 developed Music Technology based on student needs and interests and on the latest developments in the field of music education:

Recognizing that there are careers in the field of music technology, in composition and film score creation, and animate video game music writing, we wanted to develop a course where we could give kids skills and get them excited about that field of study, that field of knowledge.

The administrator shared, “I think that our courses informed the standards, because we are in the field, and it is easy for us to be more innovative at the local level. I feel very strongly about this.”

Eight participants surveyed educational needs of students through offering flexible courses that allowed to customize classroom instruction to student needs, extra-curricular activities based on student choice, and enrichment of existing course content. School divisions of two suburban administrators (Participants 2 and 9) offered Instrumental Methods course that allowed teachers to customize instruction and enabled student to select instruments. One of these administrators (Participant 2) provided teachers with a course code and encouraged devising course titles to fit student needs. One large suburban school division (Participant 2) and one small town school division (Participant 3) offered extra-curricular enrichment programs with a variety of music courses that help to survey student interest. Another large suburban school division (Participant 1) and a city school division (Participant 11) did not offer separate

Composition courses but encouraged teachers to incorporate composition in performance course curricula. These approaches to surveying student needs reflected Eisner's (2002) Curriculum Diffusion Concept, Walker's (2003) Practical Reason Approach to Curriculum Development, and Elliott and Silverman's (2015) Practical Curriculum Development models that suggested interpreting roles of music courses with consideration for current teaching situations situated in particular contexts and qualifications of teachers.

These examples demonstrated that educational needs of students served as primary considerations in POS development in the participants' school divisions, and that these needs were surveyed through a blend of formal and informal curriculum development approaches.

Socio-Emotional Needs and Interests of Students. Socio-emotional needs of students were mentioned by four of the participants; three of these participants' school divisions offered courses and extra-curricular activities that highlighted student cultural legacies and that helped students to adapt. For example, one large suburban school division (Participant 2) offered culturally relevant ensembles:

In one of our schools, they have a high Asian population, so they've had some extra ensembles they liked. They had a Japanese taiko drum ensemble, which was pretty cool. They do meet as a class using that course code I told you about, the Instrumental Methods. This gentleman is brilliant, and not all of them are able to speak English, and but you'll find them doing a variety of songs, and he actually took this group on tours the last two years before COVID. He took these students to some colleges and universities in the region and far, to let them perform. At another high school, which has a very diverse student body, they've got a group that that changes every year, based on student interest. These are students that are not in our traditional programs.

This school division (Participant 2) also developed its secondary POS aiming to help students whose first language is not English to acclimate:

They [teachers] were wanting a specialized music class just for those students, like English Language Learner Guitar, and I questioned that, because we're separating those students out. We have had conversations with our folks; I said that's the opposite of what we want to do. We want to engage their students in with their peers and not separate them out. And we actually did not approve that separated that class, because it did not align with the other content areas and with what the division is doing.

A city school division administrator (Participant 8) as well emphasized the importance of cultural sensitivity in considering what courses to offer:

One year a teacher wanted to do a Mariachi band as a course, and I saw a lot of positives of that, especially in certain locations. The thought was it was a Hispanic music style, and we had a lot of Hispanic students. What the teachers didn't understand was that our Hispanic students were not Mexican, and Mariachi is very Mexican, so, I didn't think it would have had quite the impact they thought it would, especially, because a lot of our students were all Salvadorians, and Salvadorians and Mexicans don't get along usually.

The participants surveyed socio-emotional student needs using various formal and informal approaches. For example, one suburban school division administrator (Participant 13) mentioned the importance of addressing socio-emotional needs of military student population in music courses informally, by “keeping open doors and possibilities for these students.” One large suburban school division (Participant 2) formally offered extra-curricular music activities based on cultural tradition of its student populations.

Formal and Informal Approaches to Surveying Student Needs and Interests. Ten participants considered formal examinations of student enrollment in music programs as a primary measure of student interest. This data-driven approach exemplified Glatthorn et al.'s (2019) Goal-Based Curriculum Planning Model that suggested identifying stakeholders involved in curriculum planning, analyzing relationships among these stakeholders, developing data-driven goals and deadlines, and developing and implementing curriculum based on needs of students. For example, two town school division administrators (Participants 3 and 4) faced current enrollment struggles in high school music classes. One school division (Participant 4) combined the Advanced Symphonic Band with the Advanced Jazz Band. The other school division (Participant 3) did not yet cancel any courses, taking upcoming middle school student talent into consideration:

We're afraid to tweak it too much; we've got a good group of kids from middle school.

So, we don't want to upset those kids with a new schedule or a new sort of offering. We are probably leaning on leaving it like it is and seeing how our numbers increase when the middle school kids come up.

Acting on low enrollment in Music Appreciation, a large suburban school division (Participant 2) successfully facilitated restructuring of the course:

Generated from the course request from, we highlighted the need and the concept of a dual enrollment Music Appreciation class. We partnered with community colleges, we had many meetings with them, went back and forth, and came up with a pilot. Whereas before we only had eight or ten kids to sign up at the most for a Music Appreciation class, we had 30 in that section in that pilot school for the first year, and, I would say

most, if not all, of those students were not enrolled in our ensemble classes and other music program areas. Now, I think we have four or five schools offering that.

Nine participants shared that they surveyed student needs through continual informal deliberations among teachers, counselors, and administrators. Macdonald's (19781) Responsible Curriculum Development Model and Noyé's (1994) Phases of Deliberation suggested that curriculum development is shaped by interactions of multiple stakeholders who deliberate on publicly shared problems and work toward consensus. A small rural school division administrator (Participant 6) acknowledged this approach was very effective:

Our school counselors are very collaborative working with all of our department heads, our music teacher is a department head, and they do a lot of communicating with students about what they need to achieve and what their post high school goals look like. And if there is a need identified that we're not filling at the high school, the counselors are really good advocates for that. If we had some students who wanted to go into a postsecondary music program or music education program, and it would look great in their applications to have a Music Theory course, or if there was something specific that they felt like they needed for after high school, our counselors would be the ones that would help to influence that in collaboration with the music educator.

One rural, one city, and one suburban school division administrator (Participants 5, 11, and 12) each considered informal teacher/administrator conversations as exceptionally valuable in examining student needs and interests. From informal conversations with teachers, a city school administrator (Participant 11) learned that a Music Theory course was not popular with students; the course was replaced with more relevant to students Electronic Music, and enrollment increased:

It has been through relationships and conversations of what is going on, national trends, et cetera, things like that. We are a technology-forward school system, we use it in all, Band, Chorus, and Guitar, classes, but it is much more focused on the creative process in that regard. That is how we have changed things over 10 years plus.

A town school division administrator (Participant 4) used a more formal approach to surveying student needs and interests, required teachers to develop student interest surveys and to report these survey results to building administrators via a faculty management system:

It's more of a general survey, but teachers can add and ask more specific ones if they want. For example, when I used to teach, I used to ask specific content questions - do you like that or what you'd like to see. I know that for example, the addition of the Guitar and the Piano classes came from student interest generated from these surveys. These surveys are a part of teachers' TalentEd requirements. Teachers are to summarize what they got in the survey, and then it goes into the TalentEd, and their supervising administrator is supposed to review it and act on it.

Thus, the participants primarily examined student needs using enrollment data, conversation with teachers and counselors, and examinations of student cultural traditions.

The concept of considering technicalities in curriculum development was discussed in the formal Oliva's (2009) Model for Curriculum Development that suggested curriculum developers to consider not only what students could learn, but also how this could be applicable across multiple programs offered, and in the formal Brown and Green's (2015) Instructional Design Model that implied that curriculum developers must prioritize changes. All the participants experienced barriers to developing educational experiences that serve student needs, and all the participants viewed difficulties with student scheduling as one of the major challenges to POS

expansion. For example, administrators of a small rural school division (Participant 5) continually reviewed how current courses served student interests and exercised flexibility in balancing schedules:

We have career and technical education programs, we have music programs, we have academic programs that children can choose to pursue; you can't do them all. We have children who tend to choose the academic pathways versus the music pathways, which is a challenge to really grow the music program. So, we are looking for ways to grow the programs, make them interesting, and hopefully allow children to take the other courses they want to take as well. Just finding that balance is the challenge...So, that is a problem that we're facing, how to manage student schedules so that they are able to take the music courses if they would like to. At this point, they really have to make a choice between the Governor's School or a Career and Technical Education program, such as horticulture or agriculture; it's difficult to do music and another pathway. The music teachers, the band teachers, would love to see their kids taking music or taking band all four years that they're in high school, but they may not be able to, because of other courses that meet other diploma requirements. For example, the Governor's School classes are offered only the first two blocks of the day, so, the children only have the third block and the fourth block remaining, and they typically have to take a diploma required course and maybe something else for graduation and they may not have a spot to take the band. So, the four blocks schedule creates a challenge of having a spot to put band that fits a high school child's course of study.

Another small rural school division administrator (Participant 6) also shared that it was challenging to fit all desirable courses into student schedules, and that the school division practiced a flexible approach to student and teacher scheduling:

Our real challenge with scheduling is that advanced courses only offered at certain times, it's not like we have several sections of say Advanced Placement English or Dual Enrollment History. Those are only offered in what we call a singleton block; if that conflicts with one of the music courses, generally, our students are going to select the advanced academic course if that's going to fulfill a need for their postsecondary plans. So, it's unfortunate, but if push comes to shove, and that's the only time that they can get their Calculus or their Biology Lab, sometimes they have to make a really hard decision to not to take the particular music class that they may want. But we've found some workarounds to that, and part of that credit is to be given to the instructor who will let students come in an alternate class period to work or do an independent study if they need to. And the teacher has also let students participate in Marching Band if are able to take the Band. So, we try to accommodate that as best as we can, but in a small school, it's the same kids who are in the band, playing the sports, and in the clubs; there's just not a single focus or a single pathway with most of our students, which is one of the great things about being in a small school. It's hard to have kids who are laser focus just on music when there are so many other opportunities, and they're just in high school, they're just figuring out what they want to do, and, although we have some that are very-very talented and want pursue music or music education as a career, that's usually not the only thing that they're doing.

Therefore, both formal and informal approaches to surveying and accommodating student needs worked for the participants in addressing student scheduling conflicts. The practices used by the participants included a blend of formal pre-planned actions and trusting teacher expertise: offering extra-curricular music programs, offering flexible course titles, expanding current course curricula, encouraging teachers to survey how instruction could be customized to accommodate student needs.

Teacher Qualifications, Interests, and Quality. The second type of needs considered by the participants in POS development pertained to teachers. Several informal curriculum development proponents, Elliott and Silverman (2015), Sowell (2005), Macdonald (1971), and Dillon-Krass and Straub (1991) implied that the role of teacher in curriculum development was central not only in terms of surveying what real students in real classrooms need, but also in creating and developing instructional programs. Teacher qualifications, professional interests, and quality were determining factors in POS development in all the participants' school divisions. For example, a small rural school division (Participant 6) established an Orchestra program because of a teacher professional interest: "There is no Strings at the middle school...But the new teacher did have an interest in that, and the kids have been really responsive to it and have enjoyed having that opportunity." As another small rural school division administrator (Participant 7) underlined, "Really, it's the comfort level of the person we have hired."

In all the participants' school divisions, what was taught was what teachers could teach. For example, one large suburban school division (Participant 12) offered two categories of high school music courses, standard courses offered in all schools and optional courses offered based on teacher expertise:

We have quite a robust optional setting for all our other classes. It depends on the staff that's at the school. So, your band teacher may be well versed in Music Theory, and so they offer Music Theory. Or maybe the chorus teacher wants to teach a Piano class, or the orchestra teacher is teaching Guitar class, or there's a full-time guitar teacher but he or she would like to teach AP Music Theory.

Teachers with multiple endorsements were in demand in the participants' school divisions. In one small rural school division (Participant 5), a Piano program used to exist only because a teacher was qualified, interested in teaching it, and went through the course development process; after the teacher retired, Piano courses discontinued. In one large suburban school division (Participant 14), Music Technology and Guitar courses were initiated by teachers. In one town school division (Participant 4), Guitar and Piano programs were established only because teachers came to their principal and offered to teach these courses. One large suburban school division (Participant 2) struggled with a shortage of qualified AP Music Theory teachers in all schools. One small rural school division (Participant 6) did not offer a Musical Theater course because of a shortage of teachers with multiple endorsements:

At one point, we had a Musical Theater course, but had to discontinue that one because the state endorsement that was required was Drama and not Music; they wouldn't let us use a teacher with an Instrumental or Vocal music endorsement to teach it. To hire a teacher with a Drama endorsement required to have five classes; or, for a teacher to obtain the Drama endorsement, it was to take a lot of credits. It was a lot of extra effort for one elective course.

Teacher quality was another important POS development consideration. One town school division administrator (Participant 4) acknowledged that what was offered in the school division

was not only what the teachers are qualified to teach, but also how experienced they were and how well they ran their programs:

One of our schools has had a very well-developed program for years and years; they have two or three teachers. And then, we have one in which the teacher is only the second year the school, and they've had literally four band teachers in the last five years; he is working with almost nothing at the middle school, really building his program. His students are at such a different level.

In a small town school division (Participant 3), the administrators were not satisfied with the music teacher quality and performance and worked with the music teacher on growing the program and making the program visible in the community.

Therefore, teacher qualifications, professional interests, and instructional qualities were important POS development considerations in the participants' school divisions.

Encouraging Teacher Initiative. In general, teacher experimentation and initiative were encouraged in POS planning among the participants' school divisions, but seven participants did so in a greater extent than the rest of the administrators. A large suburban school division offering one of the richest in the state secondary POS (Participant 1) focused on expanding learning opportunities within current courses and did not overly encourage teachers to experiment:

I would not go so far as to say that we encourage them continually to develop new courses. No. Because our goal is to offer a slate of courses that meet the needs. Through our own evaluation of the curriculum and the development of curriculum resources, not to wait for teachers to come up with ideas of how to meet the needs. Our goal is to rather collaborate proactively with teachers. So, I would consider it a problem if every year I

was getting dozens of course proposals from teachers. That would suggest to me that our current slate of offerings is woefully insufficient to meet the needs of the students. So, we have that process in place so that if there is a really unique and great idea for a course that we essentially did not identify, it can still be considered. But our goal is to be responsive enough to the needs of our schools and our students, so that teachers do not routinely feel it is necessary for them to come up with the ideas for new courses. And honestly, we tended to have the reverse problem, not to the one that proposing new courses would solve – we have had too many courses, we had a lot of courses that are sitting in our course file that nobody actually offers.

A city school administrator (Participant 11) practiced a similar, more conservative, approach; the administrator shared how teacher initiative to expand learning opportunities for students was channeled to formats of what is currently offered:

Teachers came to me three years ago, just before the pandemic, and they said, “You know, the new are SOLs coming out and they say Creative Process and Innovation in the Arts. While we do a great job with applying our learning experiences with learning instruments, singing, and the Electronic Music, etc., in the general music classes, when do the students write music?” And I said, “I understand what you are saying; we don’t do that directly.” And I am a firm believer in reading and writing, I think that is the way it works in music, but it always seems like, that is for somebody else to do. So, we decided, with all their collaboration and input, on a performance-based assessment for K-2, 3-5, 6-8, and in case with 9-12 for Band, Chorus, and Guitar, for students to write compositions in the fourth nine weeks. And we created parameters for it. It is done throughout the nine weeks and can lead to public performances.

In contrast, a rural school division (Participant 10) actively encouraged high school music teachers to continually partner with general education teachers to create fusion courses that fulfill teacher interests and talents in each building: “If they have a strength and they want to focus on that, then, I think we need to open, to help, to work for them to be able to teach their strengths.” Similarly, a large suburban school division offering one of the richest high school music programs in the state (Participant 14) insisted on active encouragement of teacher experimentation with new courses:

We do that because I think that teachers have that connection with kids, they know what kids are interested in, they also know the trends. I'd like to think that myself as an Arts Supervisor that I also know the trends, but I think it's important that we listen to our teachers, and we get a sense right from them. And when it comes from the ground up, when it comes from the teachers, there's also a sense of ownership. So, if the teachers are saying we need a course, then, they're excited about offering the course, it doesn't look like it's coming from the Central Office, and they have to teach this course; there's much more the ownership and excitement over the course.

Therefore, while all the participants surveyed teacher needs and considered teacher qualifications and quality of instruction in POS development, half of the participants (7) made changes to POS with caution, utilizing more, data-driven curriculum development approach.

Community Expectations. The third type of needs considered in POS development among the participants' school divisions was community expectations. All the participants mentioned consideration for their communities and cared about community feedback and input. Seven participants mentioned respect for community values, cultural roots, and traditions of

excellence in making decisions on what high school music courses to offer. For example, a small rural school division (Participant 6) administrator shared:

To some degree, there's a community influence, because oftentimes, our students in the Concert Band also serve in our community orchestra and participate in the pit orchestra for our community theater group. And the Marching Band and the halftime shows draw a lot of community interest at the football games. I would say we want to uphold that community expectation that we will have strong music programs that also engages with community organizations and present outwardly, not just within the school. In any case, we would maintain a Marching Band and a Concert Band or Orchestra, because those would be groups of our music students who contribute outside of the high school. . . . I could foresee that it would be a challenge with students, parents, and community if we were to discontinue say Chorus and offer only Band, or take away our Marching Band program and focus on Concert Band, or something like that, because there is a heavy tradition here in our music program, and people have certain expectations of what we should be offering.

A small town school division administrator (Participant 3) shared that a music program of a neighboring school division strongly reflected cultural roots of the community:

In this part of Virginia, we're influenced by bluegrass music and old-time music. I know the division next door to us has their school band as a bluegrass band, not your traditional woodwinds and drums, but banjos, guitars, and fiddles. But we leave that up to the neighboring division; we try to stay more traditional as far as a marching band or a performing band. It's just so hard right now to make a lot of changes; but, if there were changes, I'm sure that it would be something similar to what they're doing next door.

All the participants gathered community feedback through formal and informal surveys of community expectations.

Gathering Community Input. Three ways to gather community input emerged from the interviews. First, all the participants surveyed community needs and expectations informally, through practical conversations with parents, students, and teachers. This suggested that the participants were responsive to what was relevant to stakeholders and considered organic rather than imposed from above changes (Eisner, 2002). The second way of surveying community was more formal. School divisions of 8 participants administered formal division-wide community satisfaction surveys, general climate surveys with multiple choice and open-ended questions. The third way of surveying community needs was a blend of pre-planned processes and opportunities for deliberation. Three of the participants worked on establishing formal community liaisons that informed POS development; one city school division and two suburban school divisions (Participants 8, 9, and 14) facilitated stakeholder advisory committees. In one of these suburban school divisions (Participant 9), student and parent advisory councils regularly gathered to discuss current schoolwide issues. A city administrator (Participant 8) shared:

In my previous school division, I had an Advisory Board of people in the arts and organizations in the arts. I ran it for about three years. I set it up about three years before I left. I had people on there from the local concert hall, and from the local orchestra, and I had people on there from dance studios, etc. to get their opinions and get their understanding from a different way of thinking about it. And we would have teacher liaisons to that, I didn't want to keep my teachers in this pod and my industry people in this pod, I wanted them to have some chances to understand each other, and that changed some things. For example, we changed the name of our dance class. It had been a kind of

a world dance class, but my dance people were like, “Yeah, that's not a good way of framing it, instead, let's think about doing a contemporary dance class, it might have both modern dance and also dance from some other specific areas, look at it a little bit more clearly.” That is a good example, small example but a good one. I would say it's been really great for me, because sometimes, there is a disagreement between myself and people, a different background.

However, while considerations for community needs existed in POS development of the participants’ school divisions, none of the participants shared examples of how community feedback led to major POS revisions or to creation of new high school music courses. All the participants listened to their communities but none of the participants intentionally gathered specific feedback on high school music programs.

Program Needs. The fourth type of needs the participants considered in POS development were the needs of current music programs. All the participants used the formal and data-driven approach that involved considering specific goals, timelines, and implementation means (Glatthorn et al., 2019; Oliva, 2009; Saylor et al., 1981). All the participants relayed that limited music education financing was one of the major obstacles to music program development. Nine participants shared that it was very challenging to build robust and well-sequenced music programs because of staffing shortages, student and teacher scheduling conflicts, and low student enrollment. With limited finances, hiring itinerant teachers to work in multiple schools and/or hiring full-time teachers to teach multiple music subjects in one school were the only POS expansion options the participants had. A city school division administrator (Participant 8) exemplified:

Half of the schools in my previous district had theater teachers, and the other half had dance teachers, and I was like, no, you have to offer dance and theater at every school.

And that was hard, because you can't find many people that are qualified to do both. So, we had to find people that could move from one school to the next, and then, if you get enough numbers, you're trying to get full time people. And where does that staffing going to come from? That that staffing is by far the biggest hurdle, partly because of money.

Two large suburban school divisions administrators considered hiring itinerants or employing full-time teachers of multiple subjects very undesirable. A large suburban school division administrator (Participant 1) shared:

In one school, we have one teacher teaches all the band and all the orchestra courses, because these programs as not big as they are in other schools; so, one role I would have is advising that principal if they decide at some point that they wanted to change that.

Another large suburban school division administrator (Participant 2) expressed that he was careful to overexpand the POS:

I am careful as not to undermine the things that we do have, so, I don't want to put something in place, and then all of a sudden not having kids enrolled in orchestra. And then I have itinerant orchestra teachers teaching at three high schools, that's not what I want. I want full robust programs, and so I try, so that kids can have a full experience and access to that teacher. We've had that before; this is program has grown, so, I don't want to revert back to that.

A rural school division (Participant 10) faced challenges with finding and scheduling orchestra teachers to establish a high school orchestra program:

I would love to see string programs in our high schools, or at least in one of my high schools, so if its students want to take a string program, they have an option to. We have had several after school and during school programs offered in our area, but we can't find teachers for them. We have a college nearby with a fabulous music program, but their orchestras rehearse during our after-school hours. A neighboring school division does have a string program, but they are a small and tied with another nearby university; so, I have looked into all of it, and we have tried figuring out ways to make it happen, and it just it's just not happening right now. I would love to see it happen, but not right now. I tried to set up some elementary after school violin lessons, group lessons, and things like that, and we did have some of that happening in just a few of our schools, we have between 10 and 20 elementary schools. And you can't just do it for one and not try to make it work for all, and it was just something that had to go on the back burner for a while, maybe it'll be resurrected, I hope so.

These examples show how difficult it was for the participants, regardless of locality, to build a high school music program with a variety of course offerings taught by highly qualified full-time teachers. Nevertheless, the participants continually worked on finding creative solutions to staffing shortages.

Flexible Course Options. Eight of the participants used less formal practices: incorporating new course ideas into existing courses and offering flexible course options. For example, a large suburban school division offering one of the richest secondary POSs in the state (Participant 1) embedded instruction on composition into existing ensemble courses:

We already had our sequence built out. So, there is not a need for us to be able to introduce a bunch of additional courses to meet some unmet need. For, example, we do

not have a separate composition course, but music notation is a major component of the curriculum in music theory and in all the performance-based courses and they are important to music theory. And, I would say, on top of all of that, we do have a Performing Arts school that has a music technology course that heavily incorporates composition into the coursework. While we do not call our music technology and advanced music technology composition courses, but they really are, that is what the kids are doing, they are using technology to compose and create original works.

In another suburban school division (Participant 9), the flexible course option played an important role in POS development:

In the early 2000s, there was a cut made to the Guitar class that was offered at each of the high schools; there was a lot of extra instructors in our county, and the program was cut, taken from the curriculum. I've not been able to have anyone tell me specifically why that was done, that was almost 20 years ago. I have asked and asked folks why it was cut, I don't believe there was a lack of interest. I believe it had to do with equipment and the amount of money being spent, seemed like there was more at one particular school and less at others, and, for some reason it was deemed necessary to do. There has been talk in our school system that the powers that govern my job said it was OK to use Instrumental Ensemble as a Guitar class, and that's how we've been able to do it. But a Guitar class isn't offered in our curriculum, it's not offered in our registration guide; however, if music teachers will say they have students come to them and say, I would really like to take a Guitar class and if he gets enough people to make the class, enough students to sign up for it, then they offer Guitar class under the Instrumental Ensemble class. And right now that's working for us, I've asked that it be changed, and I've had my boss said no, why do

we need to change it, it's fine. Right now, Guitar class as Instrumental Ensemble is being offered in one school; however, that same Instrumental Ensemble class some directors have used as a Percussion class.

These examples show how due to limited financing, the participants had to reserve to expanding music programs realistically and used a blend of formal and informal curriculum development approaches: formal offering of flexible courses and informal teacher-led extensions of current course curricula.

Music Program Equity and Sustainability. The concept of designing equitable educational programs, discussed in the formal curriculum development models of Brown and Green (2015), Oliva (2009), and Tyler (2013) emerged across all the interviews. All the participants mentioned that courses included in a POS must be designed to be accessible to all students in all schools. A suburban school division administrator (Participant 2) believed that high school music courses must not be overly specialized:

One of the variables I consider is the long-term sustainability of a course request, and if it can be offered in all schools. If the course is so specialized that only the requesting teacher would ever be the person teaching the course, then that is a problem, especially, because teachers come and go. If a teacher moves or leaves, we want to make sure that the course can still be taught.

Another suburban school administrator (Participant 14) had a similar view:

When you deviate too far from school to school, the community starts asking, why does this school have Musical Theater, and this one doesn't. And so, it becomes a philosophical issue. And we've done a good job in our school division of trying to keep

our program and studies tight enough that the majority of our schools can offer everything, and our kids get a consistent experience.

School divisions of four participants offered specialized high school arts programs and embraced and advocate for these programs, and one of the participants desired to open a special arts school. However, two of the participants considered such programs either as not essential or as difficult to open and sustain. One large suburban school division administrator (Participant 2) spoke against specialized schools as applied to this participant's school division:

In urban planning, magnet schools historically started out in Houston, to resolve issues in inner city populations. Well, we're a wealthy suburb, my thing has been, why would we offer something for some students if it's that good, and why would not we make it available to all students...I would say it doesn't make sense to me to have a special program that requires kids to go from the whole community and spend part of the school day on the bus. In our case, they would give up two blocks a day for travel out of the school day to get something. If it's that good, they should be getting in the first place. If there's something we can't give every kid and every school, then I will concede that it's time to find a place to make that available for those kids.

One rural school division (Participant 10) faced logistical issues with opening a high school fine arts program:

We have several high schools, and it would be nice if one of them was more Fine Arts centered, we have talked about that. But we are a huge county too; so, it's like how do you make sure kids get to our technical center and all these other things?

As evident from these examples, building a rich in course offerings and equitable high school music program was challenging for the participants due to limited financing, logistical issues, and teacher availability.

Program Size. Music program size was another participants' formal POS development consideration that involved logistics, technicalities, and data-driven approaches (Glatthorn et al., 2019; Ornstein & Hunkins, 2013). All the participants discussed impacts of student enrollment in current high school music programs on POS development. While student enrollment situations differed among the participants, all the participants expressed that steady enrollment was necessary to support their programs. For example, a large suburban school division administrator (Participant 2) had a sufficient enrollment to support current basic ensemble courses and worked on expanding nonperformance courses:

I could see a day when classes that aren't the ensemble classes might be available for more students regardless to where they are. Let's say, Music Theory, we have Music Theory and AP Music Theory, but not in all our schools...If it's student really needs it, I see the potential of a student taking that AP music class virtually with another school, plus, there's AP Music Theory at the Virtual Virginia.

In contrast, a small town school division (Participant 3) was cautious to develop new courses. The administrator suggested that steady enrollment should be consistent for years adding new courses:

We're not going to develop new music courses right now, because the numbers are so low; if we spread it anymore, we won't have any kind of program. There are only so many students at the school...If we could get a sustained program for a few years, we might consider adding some courses, but we just don't have that luxury right now.

A small rural school division administrator (Participant 6) shared that it was difficult to expand the POS because of the high school student body size:

I'd say adding courses can be challenging because even if there's an idea and a really great course proposal that even goes in the program of studies, it may not have sufficient enrollment to justify offering the new course when you're only graduating about 75 kids in a class. We've maintained all our traditional courses, and I could foresee that it would be a challenge.

Therefore, current student enrollment in music programs and school division size were major considerations in POS development among the participants. Larger school divisions had more potential for POS expansion, while smaller school divisions struggled to support current programs with student numbers.

Scheduling Multiple Programs. Developing a schedule that would support program continuity and growth was another big curriculum development logistic concern among the participants, as all of them communicated they were facing the challenge of fitting too many opportunities in student schedules, particularly smaller school divisions. A small town school division administrator (Participant 3) shared:

We do try to accommodate the kids schedule every chance we can. If they want to take band, we try to accommodate that. The problem is, in middle school, if you decide to take band at that early age, then you give up classes like the robotics or the family and consumer sciences because there's no room in your schedule. And that's a flaw in our schedule. As we try to accommodate the band program and get kids involved, the families also see the bigger picture: they are going to have to give up exploring other options in our elective rotation, and that's pretty troublesome, but we live with.

A small rural school division administrator (Participant 5) struggled with a similar problem:

Honestly, the one thing that drives our schedule is our Governor's School, the Governor's School really limits what we can and can't offer as a part of the day, because we have so many kids that are in the Governor's School who are also our band students, so, it actually ends up hurting our music program in the end.

Thus, scheduling challenges created additional obstacles to current growth of current music programs in the participants' school divisions, particularly in the smaller school divisions.

Budgeting and Staffing. All the participants implied that budget deficits and staffing shortages were the two major barriers to POS expansion, as offering a new course involved allotting space, purchasing materials, and hiring teachers. This once again exemplified the participants' considerations of formal, data-driven, approach to curriculum development (Ornstein & Hunkins, 2013). A small rural school division administrator (Participant 6) shared:

It really depends on staffing and then finances. To supply all the equipment, and the sheet music, and all the things needed to keep those programs going, as small as our music program is, it's a pretty hefty budget line item for a single classroom.

A large suburban school administrator (Participant 2) dealt with a lack of space:

We have a severe lack of space. A half of our high schools was built prior to the orchestra program. So, we've added an entire guitar program, which has about 2,500 students in it and an orchestra program of about 1,500 students. We've added several thousand students plus growth to our school programs, but there is no space, there's no orchestra room, there's only a traditional band and a chorus room. We actually worked in the past year with our facilities folks, and it became a school board issue that came from parents - some parents wanting to add on schools, add storage for musical instruments, and this

became a political discussion and manifested in an initiative, a several-million-dollar effort to expand the storage just for music programs in all our schools. It has all started for all middle and high schools. It's going to take years for that to come to fruition, and it could happen at a few schools at a time. So, I say that this is not just what you would like to have, there's the reality of the logistics, where would you put it, and what comes out. At the end of the day, when the rubber meets the road you have to have a place to house things.

A town school division administrator (Participant 4) suggested that budget, staffing, and student interest go hand in hand:

I think it always comes back to student interest, staffing, and if we can afford it. We had someone who wanted to donate several electric pianos, which worked out perfectly, because we're getting ready to start the Piano class. If we wanted to offer an Opera class for chorus students, we'd have to have somebody trained in that. But, if we had 20 students saying, I really want to take Opera, maybe we would look at getting somebody for that; so, it's again student interest and then staffing availability... While there may be interest in higher level music courses, we maybe just don't have the staff available to offer that. When principals are doing their staffing, they can't offer a class only for five people. Difficult choices have to be made, as state funding, federal funding, and local funding also play into that the teacher shortage. Even just finding qualified teachers can also be an obstacle, and sometimes, we would love to have a part time teacher, but then, you can't find a part time teacher.

The interview responses revealed that the only sources of financing available to the participants were set by the school divisions budgets. None of the participants could use the

ESSA funds for new course development and for allocating salaries to teachers of general student population, as the ESSA funds were designated by law to education of low SES students. The only example of obtaining resources for new programs emerged from the interviews was from a large city school division administrator (Participant 8) who shared that developing political alliances to build stakeholder support for a new program was one of the steps planned to be taken:

We don't currently have elementary instrumental at all. So, to me, that's a problem.

Though to get that fixed, I have to look at the financial side of that, which is daunting.

There are other things I'm fixing that I can fix without a huge financial investment, but staffing is the hardest part to get around. Instruments, you can buy them slowly, it's nice to have them all the ones you need right away, but you don't have to. But you need a person, and, even if you're splitting a person between two schools to start with, that's a significant amount of money. So, really, I'm going to have to go to the school board and argue my case...I need to find allies within my school division, I know I have a bunch already, but I have to talk to all my principals and say, hey, this is the positives, or what this will do for you, however, I know this is going to impact your schedule, so can you start thinking about this and give me your thoughts. So, I can put those forth to the school board and really come in with a stellar argument.

With limited finances, low student enrollment, student and staff scheduling conflicts, qualified staff shortages, and potential educational equity issues, the participants could only explore limited and less formal POS expansion options: teaching multiple music subjects in the same class, expanding current classroom curricula, and building political alliances to attempt to justify financial support.

Developing Collaboratively

When moving educational organizations through change, collaborative approaches are prioritized, while innovation for the sole purpose of innovation and strictly hierarchical approaches are undesirable leadership practices (DiPaola & Wagner, 2018; Fullan, 2001). This notion could be applied to K-12 curriculum development as following: while formal curriculum development approaches suggest assigning fixed responsibilities to every level of educational hierarchy, informal curriculum development approaches oppose that and suggest that true organizational changes are developed on all levels organically, through continual deliberations (Ornstein & Hunkins, 2013).

Organic Change. One of the major themes emerged was organic POS development, a blend of formal and informal curriculum development approaches: gradual, collaborative, and continual work on addressing real needs of current students, teachers, and programs, such this was done at a large suburban school division of Participant 14:

I go back to the teachers each year and say, are there any courses that we want to look at adding, are there any courses that we need to refresh in terms of the description or where they're offered. Over the last 15 years, we've added Guitar into our program studies, same is with Music Technology. So, I reach out to the teachers and we kind of have some conversation. They also do that in their school sites with their principals. And then, from there, we decide. And often I get the final say. If a principal says to me, we want to offer this course; then, I look at it, and I may give it the name, because if it can't be offered in every school, if they're staffing considerations, or text resource implications, budget implications, there are a lot of things that we consider when new courses are proposed. I have my own process, but there also is a meeting where the principals, the counselors,

people from my Department of Instruction, and the person who supervises the high schools review new requests. From there, the draft of the program of studies is developed, and, if that course is approved through each of those levels so far, then it goes to our School Board for approval, and our School Board actually approves our division's program of studies.

In another suburban school division (Participant 9), teachers were encouraged to develop new programs and to collaborate with administrators on developing new programs, and changes were officially reviewed and adapted on the central office and on the school board levels. In a small town school division (Participant 3), the superintendent, the director of instruction, middle and high school principals, and lead counselors annually participated in the POS development process, while work with teachers was continual. In another town school division (Participant 4), principals gathered teacher suggestions on POS development and brought them to annual central office discussions:

The principals and the guidance counselors meet, and we all come together to meet with the Department of Instruction. The principals bring forth suggestions based on conversations with their teachers; for example, the addition of the Guitar and the Piano came as a result of the music teachers coming to their principal at one school and saying, we'd really like to add this. Then, we look at it, we've had a discussion about what would that do, what would it require, adding more teachers or such. And then, we make a decision. Then, we present it to the School Board.

These examples illustrated the organic POS development approach practiced by all the participants: POS changes did not solely emerge from the top of the school divisions' hierarchies in forms of unilateral mandates but rather grew gradually, through collaborative inputs of

multiple stakeholders, particularly teachers and administrators. However, there were some differences among the participants' approaches to organic POS development, and I will discuss these next.

Innovation With Caution. Two distinct approaches to teacher experimentation were evident in the participants' responses. The proponents of the first approach were more skeptical of the use of teacher-led initiative in developing new courses and used more formal, data-driven and technical curriculum development approach (Glatthorn et al., 2019; Oliva, 2009). Six participants mentioned that they did not blindly encourage teachers to create new courses but instead strongly encouraged experimentation within limits of current courses. For example, when advising teachers and building administrators in developing new courses, the administrator of a large suburban school division offering one of the richest high school music POSs in the state (Participant 1) preferred helping teachers to infuse innovative practices into existing courses prior to adding new courses and risking course over-saturation. Another suburban school division (Participant 2) also did not overly encourage creating new courses; given financial limitations, the focus was on improvement of instruction:

I don't spend a lot of time encouraging new things. What I do is I spend time encouraging good instruction, teaching, giving the students a meaningful experience. I encourage flexibility. I try to model that with them. I encourage experimentation - don't be afraid to take risks and try something. So, sometimes, the changes in programming can occur with how you approach teaching orchestra or your band, maybe it's the literature you choose, maybe it's some additional ensembles student centered ensembles. I've encouraged our folks, for example folks within orchestra, to really promote small student ensembles, quartets, trios, duets. I think those are powerful teaching tools, and those can be done

within the confines of what we have. I encourage music teachers to excel and grow in what they're doing. I think we're comfortable with what we have. I try to keep open line communication; we have a lot of smart people. We have a course program that we can request to be reviewed, but it wouldn't be helpful for me. Let's say I have a one pizza in my fridge and invite 20 people over the Super Bowl party. Something has to come out, or somebody has to give up something. So, what maybe can be done in certain situations, but not across the board, we look for things. If something became clearly evident to the stakeholders and to the division, if that it's something we need to be offering, that's what the new course approval process is for. But I just don't have a rationale to say, let's add six more classes, because I have to support that, there's to be a place to teach, it has to be people.

School administrators in a town school division (Participant 4) as well highly valued teacher opinions but did not actively encourage development of new courses:

I would say we don't necessarily encourage it, but we don't discourage it either. We are just adding two new courses and that is because it was teacher input. They came and said, we want this. They did not use the SOLs to present it; it's more just the assumption that once they're teaching the class, they will incorporate the SOLs. They had to write up a little description, and it went over pretty well. I know as a history teacher, when we tried to do that, it was nearly that easy. But I think when you come and you know that you've got students wanting this, the worst-case scenario we put it into the program of study so that we can offer it, and then we see how many students sign up for it. I would say music is different than other subjects; there's more autonomy in our music departments than there is in say like our history department, where they're kind of the same things. The

Fine Arts definitely have greater autonomy, because it's not an SOL tested course, because it is an elective, because really it depends on what your teachers are qualified for. A small rural school division (Participant 5) was also careful of overexpanding the music program and focused on growing existing programs. And so did a large city school division administrator (Participant 8):

Because we have a good variety already, if you add too many courses, you run the risk of having courses be too small for them to run well, and that can be a problem. If you have the numbers, it's great to have more options, and there, again, you need to have those basic options. On top of that, there might be specific needs. For example, I'm always as much as I want to support the playing students, the singing students, and performing students, I also am wanting to give options for students that love music but don't see themselves as performers. We have a lot of students in both my last district and this district where they might really be interested in a more media arts approach to music, so, we have tons of kids these days that love mixing music or composing an electronic music, and they don't necessarily want to learn an instrument. Or they may play an instrument, but they don't want to have that be the main thing they do. They connect to music a different way, so, I have in multiple situations encouraged that course to be offered. I've talked to teachers and said, hey you know, this is something, what are your thoughts on it? And if they say, oh yes, I would love to do something like that, I'm like, how can I help you make that happen? But I don't encourage just any class. Also, if there is a need, like in my in my last school division, we were looking at students that did not have the financial background to have had private lessons and may or may not have had met many opportunities in middle or elementary school to be part of a band or an

orchestra. So, we did a beginning strings class for people that had never touched a stringed instrument before, and that course was specifically because hey, we see a need for this, we want all our kids to have options for this, and we can do it. We looked at how that would affect the schedule, and we thought, OK, we could do at this level a pre-level one. If you want a course alongside this other course, and that would still make sense, we can work around that. So, in those cases I do encourage it, but I don't have a blanket encouragement of it. And I would say that for any of the arts, just because we really have to be strategic about how we do those things. But I've also been very open to any teacher ever coming to talk to me about something that they want to do, and there's only been a couple times where I've said I don't think this is a good idea.

As evident from these examples, choosing this careful approach to innovation, the participants considered various issues mentioned in the formal curriculum development approaches of Glatthorn et al. (2019), Oliva (2009), and Ornstein and Hunkins (2013): potential financial limitations, threats to growth of current programs, satisfaction with the current program state, risk of course over-saturation, and teacher capability to extend current classroom curricula.

Strong Encouragement for Teacher Experimentation. The proponents of the second approach to POS experimentations practiced the true informal curriculum development approach: they were more supportive of teacher input, they involved teachers in POS decisions and provided opportunities for teacher deliberations throughout the POS development process (Eisner, 2002; Sowell, 2005; Elliott & Silverman, 2015). Six participants welcomed and highly supported teacher experimentation with developing new courses. For example, one small rural school division (Participant 6) strongly encouraged teacher experimentation. All changes usually

started with teacher, who then consulted with counselors, and then solicited administrative approval on the school and the central office levels:

We are often recruiting music teachers; we have had a high level of turnover in our music department and have become somewhat of a training ground for newer instructors who are coming out of college programs. In the last 10 years, we've really tried to help them to grow as professionals and to keep them happy and keep them with us because we've had some really great talent that we've wanted to hold onto. So, they're allowed to develop their own courses, and they're encouraged to do things that are of a high interest or innovative. That's something that we can offer to our teachers, a high level of autonomy and a bit of flexibility that you may not find in some larger divisions. We really try to allow them to cultivate courses that they want to teach, because that adds some value to their career here and it's certainly a benefit to our students if they can have something that is new, and the teachers are excited.

Another rural school division (Participant 7) as well strongly encouraged teachers to develop new courses. In this school division, teacher opinion was at the top of program growth considerations:

We do encourage our high school music teachers to develop new courses that they see that there is a need for, and some of that data in research and survey coming from parents and students. A specific example would probably be the latest Guitar Lab. That really changed in the past 4-5 years. That was brought to us by a band instructor...If [teachers] see that there is a need or there is a trend in their professional organizations, then, we are going to listen to our teachers first and foremost. If our instructors bring us a concern or something to change the program of studies, we will assemble all the instructors in the

division together along with central office personnel, and we will sit down and see what some relevant offerings could be and what we could do to change our program of studies to better serve our music department. In our small division, we see our teachers daily, they know us by name, and we all know them by name. So, we're in the buildings weekly, we're readily accessible. Honestly, some of it just starts with a conversation or an email about, "You know, I'd like to see this may be changed in the course offerings," or us to move something from one curriculum over to another curriculum.

Another rural school division (Participant 10) also actively encouraged teachers to develop new courses, and the fine arts administrator was in constant contact and collaboration with teachers:

I absolutely encourage it. A lot of this depends on if there is shifting enrollment in our programs, and we also have a very diverse population of students that keeps changing, and we need to meet the needs of all these students. I'm 100% behind Modern Band, especially at the middle school level. I would like to see more of that being offered to students who are not drawn to be in a traditional Band setting, or a traditional Orchestra setting, or a traditional Choir setting, but really want to make music. So, I've encouraged that a lot of fusion classes with all arts forms and content. That's like where that [fusion] Geography course came from, and we're looking at several opportunities in that area, Adapted Art and Music classes are out there. I'm always open to any kind of opportunity we can offer to our students and to change.

The administrator is continually looked for innovative ways of expanding the POS, and teachers were always actively involved:

One thing is this process is ongoing, we sit down and talk, "Oh, let's do this"; it is not a systematic thing, it's more of an organic thing. This is very interesting and so different

across the school divisions in the state, and I tend to look at things differently than maybe another administrator would. I think that's interesting to certain personalities, certain ways of thinking with their people and supporting them. And then, of course, there's always budget. It happened before—there would be no money for some course that was developed. Looking in the future, I think we are really, desperately in need of Digital Sound Production, Composition, those types of things, where students do other than just playing an instrument or singing, and I can't get my head wrapped around it because my people aren't comfortable with it.

A large suburban school division administrator (Participant 12) as well actively engaged teachers in POS development:

We usually hire curriculum team of teachers that are interested in the summer, and we work on the program of studies, trying to find alignments, gaps, what we want to keep, and what hasn't worked in the last 7 years. So, we do hire teachers to work on the on the program studies. Then, that school year, we start to revise some of the wording, we have our stakeholders, our department chairs, to take a look at the drafts that were created in the summer. And then, the second summer, we finalize everything. I finalize it all, read it and make sure it's an alignment across all the disciplines, to make sure that we're giving the same message, no matter what it is, Guitar, Orchestra, or Chorus, giving the same message across, making sure we are in alignment. And then, we publish it.

Another suburban school division administrator (Participant 13) also strongly encouraged teachers to develop new courses:

If somebody is interested in adding a course, they will make a proposal. We usually have a yearly survey that will go out to the high school teachers through their principals,

saying if your teachers are interested in proposing a course. The survey basically describes how to gather a course proposal, gives a break down what the course entails, costs, how curriculum would be written, and how this course would be beneficial to the school system, etc. The teachers would put a file together. Then, we bring it to the Program of Studies Committee; we discuss. In that committee, we have principals, we have staff from the central office, as well counselors. There are probably 20-25 people in there. And we all discuss the needs of the school division. If there are additional questions, we will come back to the second session to discuss those and answer those questions. And then, after a vote, the course is then added or not... There are some schools in the area that have been putting together some programs, and I talking to them about classes on producing recording and electronic music, that is something that we might be looking at in the future. I think these are great opportunities for students who want to learn this, and I hope that we can develop those in the future.

A large suburban school division administrator (Participant 14) as well actively supported teacher experimentation.

Therefore, while both formal and informal approaches to POS development were evident in the practices of all the participants, how the informal curriculum development approach was utilized, particularly, the extent of teacher involvement, differed. While the six administrators who stayed careful of overexpanding, encouraged teachers to think within limits of current course offerings, the six administrators who highly supported teacher experimentation encouraged teachers to be more creative and think beyond current courses. In the six school divisions encouraging teacher experimentation with POS, teacher opinions were continually

solicited by the administrators through informal conversations and then regularly considered in formal curriculum development meetings.

Professional Opinions of Administrators. All the participants were exceptionally supportive of growth of their music programs and provided multiple examples of such support coming from central office leadership and superintendents. This suggests that not only teachers, but also administrators of the participants' school divisions were actively involved in informal curriculum development: engaged in deliberations and sought consensus (Macdonald, 1971; Noyé's, 1994). One small rural school administrator (Participant 6) who used to take music classes in high school actively advocated for value and improvement of music education in the school division. The superintendent of a rural school division of Participant 10 strongly encouraged teachers to innovate and to think out of the box; teacher experimentations were extremely welcomed and frequently resulted in new course development:

Our division's superintendent and assistant superintendents are very open to change and encourage offering courses that will create more problem solving and connections to the world other than just, "Oh I can play a flute, and this is how I play it," but to also be able to understand how music interacts with or cultures throughout the world. For example, the fusion 9th Grade Geography and Music course actually didn't come from me or anybody at the central office, it came from a teacher and her relationship with one of the ninth grade Geography teachers. 9th grade Geography is a required coursework for all 9th graders, and the music teacher she spoke with the geography teacher about connecting music to this course, which I think is really cool. Now, I don't know how successful it's been, I haven't gotten a lot of feedback, but it's going, and it's working. We have visual art teachers that are also interested in doing a fusion class, pairing American History

along with Crafts, like the craftsmanship that came out of American history. So, we're looking at some of those things.

Several participants shared how professional opinions of administrators could not only positively but also adversely affect high school music POS development. For example, a large suburban's and a large city school division's administrators (Participants 2 and 8) faced principals' resistance to establishing Honors programs for high school music courses. One of the administrators (Participant 2) shared:

With the Honors level classes, that process that was challenging, because there were some principals who were very resistant and felt that you couldn't have Honors level music class, that it wasn't up to that level; so, I took some heat for that, but I'm OK with it, it was worth it.

These examples showed how important the roles of school and central office administrators was in POS development; once again, how building-level and central office administrators played the curriculum development game is what channeled the POS development process.

Therefore, changes and improvements to music programs in the participants' school divisions grew organically, in collaborations on what worked for a school division, and teachers and school and central office administrators played very important roles in these processes.

While a half of the participants there were administrators who chose to take risks and supported teachers in POS innovations and improvements, the other half chose to stay more cautious of overexpanding programs.

Building School Board Partnerships

School boards of all the participants were engaged in POS development of all the participants mostly formally, by approving POSs as an adopted division-wide policy (F. C.

Fowler, 2013; Saylor et al., 1981). In eight of the participants' school divisions, school boards formally voted on every new proposed course, while with two of the participants, school boards formally considered only entirely new programs. In one rural school division (Participant 5), any POS change had to undergo the school board approval. In one large suburban school division (Participant 1), the school board approved only completely new courses. In another large suburban school division (Participant 2), only new programs were brought to the school board:

The school board will come in when somebody is wanting to propose a whole big program that has huge budget costs; that's a much more robust process. But just for a single course, we don't have to report each change to the school board; they delegate that to us.

Five participants shared that their school board members took interest in informal POS deliberation by expressing their opinions and engaging in public debates (Macdonald, 1971; Noyé, 1994; Walker, 1971). School board officials of these school divisions attended music program concerts and communicated their perceptions to school administrators. For example, in a town school division (Participant 3), school board members attended music program functions and provided administrators with feedback; the administrator shared: "I'm pretty worried about our band program right now, and it caught the attention of the of the school board members that have been at a function not long ago." Some school board members even requested administrative reviews of programs. For instance, a large suburban school division school board (Participant 2) could request to conduct a climate survey. Another large suburban school division administrator (Participant 14) shared that a request for a program evaluation could come even from a single school board member.

Two participants found that advocating for new courses to school boards was a daunting process. A large city school division administrator (Participant 8) gave an example:

The school board did not want to add anymore Honors options. But we eventually were able to show them the equity of it; like, hey you have Honors courses for kids who excel and these things, but not these things, how is that fair to the student. Eventually, we got enough data involved and we were able to show them (and also the school board changed) this is actually a valid thing to do, and it's something that is going to help these kids, not just our programs. And they were eventually able to get that changed.

In one large suburban school division offering one of the richest high school music programs in the state (Participant 14), the school board fostered an exceptional board/community partnership that surveyed and advocated for music programs:

In our school division, we have a group, a School Board advisory committee called the Fine and Performing Arts Advisory Committee. It serves at the pleasure of the School Board...The Advisory Committee are essentially community members, stakeholders who are vested in arts education. They have to resign locally, it could be parents, students, community members, even be staff members. People have to apply to the Committee, and the School Board approved their appointments. The Committee has about 13 people this year. One of the Committee members is on the School Board. The Committee also geographically represents the county, so there are people from each of the voting districts who serve on the Committee. My role on this Committee to serve as a liaison, to develop agenda, etc. The Committee meets four to six times throughout the year and develops sort of a plan. The Committee report to the School Board at the end of the school year, there is a formal report given. We're the only people who have one, so, it's kind of cool.

Therefore, school boards of the participants' school divisions were actively involved in POS development processes not only by formally approving changes to POSs, but by making informed decisions while being participants in informal deliberations on improvement of music education. The two of the participants' examples of challenges encountered in convincing school boards to approve and finance new courses and one participant's example of a rare school board advocacy story show how vital and powerful the roles of division-level administrators and principals are in developing high school music programs.

Implementing

When it comes to curriculum implementation, formal curriculum development approach proponents designated instruction and assessment to the classroom level and development of local curriculum guides, teacher evaluation, and developing recommendations for improvements to the school administration and the central office levels of educational hierarchy (Glatthorn et al., 2019; W. R. Gordon et al., 2019; Oliva, 2009). In contrast, informal curriculum development approach proponents suggested that it is the teacher, the teacher's instructional adjustments to student needs, and solo and group teacher/administrator deliberations responding to student needs must be involved in curriculum implementation (Eisner, 2002; Macdonald, 1971; Noyé, 1994; Sowell, 2005; Walker, 1971). Both approaches were evident in practices of the study participants. Ten participants mentioned that they were responsible for developing course curricula, instructional resources, and assessments and for teacher professional development. Additionally, all the participants continually informally surveyed teachers on progress and on potential curriculum changes needed.

Local Curriculum Guides or Teacher-Developed Curricula. All the participants either formally sequenced or expected their high school music teachers to sequence local course

curricula based on the state SOLs, with some reference to the National Standards. Seven participants mentioned existence of division-wide (local) curriculum guides. A suburban school division administrator (Participant 2) shared:

Our curriculum guide was outdated, and we did a different model presentation, so that you can see what the progression of learning from Grades 6 to 12 for each standard was. Things were just sheerly by grade level. If you wanted to see what was in Grade 7, you had to go to it, or Grade 10, you had to go to a different document. And now, we have everything in one document, and you can clearly see what's supposed to be taught at each level, we're also building this out to show the alignment with the Profile of a Graduate, the 5Cs. So, it was a lot just to get this done. As we go through into next summer, I plan to bring folks together again, to build this out some more, to more clearly articulate where those things intersect.

Six participants did not mention local curriculum guides in the interviews. One participant, a town school division administrator (Participant 4) suggested that it was challenging to develop unified division-wide curriculum guides for music courses:

[Teachers] are required to put the Virginia SOLs into their lesson plans. They have the course with the course description, and then, once they begin the classes, they'll be doing the lesson planning. We do not have division-wide pacing guides or curriculum guides for music...And we're trying to work on that. The problem is that it's very unique to the schools.

The interviews revealed the following tendency: participants working in smaller school divisions tended to designate teachers to sequence instruction, whereas the participants working in larger school divisions with multiple high schools were tasked with developing and

implementing local curriculum guides. This suggested that the participants (the central office level administrators) and school level administrators in their school divisions selected formal and informal curriculum development processes based on unique circumstances (such as the number of schools in a school division and teacher effectiveness).

Balancing Schedules. All the participants oversaw scheduling music programs and scheduling teachers. Scheduling was one of the major challenges all the participants faced in POS implementation, because of student scheduling conflicts caused by specialized high school programs and/or class enrollment situations. For example, one suburban school division (Participant 2) recently opened a specialized school for sciences, and it became very difficult to schedule music students who attended this school:

Very high performing students in the sciences are often engaged in our programs, maybe even All State Band. But, in this school, the way we do it is they go to that school every other day; they are still in their home school. Now, students who have normally been in your top performing orchestra, your top violist in the county or the region, is now in the Beginning or in Intermediate Orchestra if he wants to be in orchestra, that's his only option. So, we have barriers like that, the scheduling challenges has been one of the hardest things for me in this job and is frustrating for teachers. Somehow, very creative people come up with solutions sometimes, but it's a moving target each time.

One town school division administrator (Participant 4) also worked on resolving scheduling conflicts with specialized programs:

That is a problem that we're facing, how to manage student schedules so that they are able to take the music courses if they would like to. At this point, they really have to make a choice between the Governor's School or a Career and Technical Education

program, such as horticulture or agriculture; it's difficult to do music and another pathway. The music teachers, the band teachers, would love to see their kids taking music or taking band all four years that they're in high school, but they may not be able to, because of other courses that meet other diploma requirements. For example, the Governor's School classes are offered only the first two blocks of the day, so, the children only have the third block and the fourth block remaining, and they typically have to take a diploma required course and maybe something else for graduation and they may not have a spot to take the band. So, the four blocks schedule creates a challenge of having a spot to put band that fits a high school child's course of study.

One small rural school division administrator (Participant 6) found that an informal collaborative approach was effective in resolving scheduling conflicts; that approach involved teachers in scheduling decisions:

Our real challenge with scheduling is that advanced courses only offered at certain times, it's not like we have several sections of say Advanced Placement English or Dual Enrollment History. Those are only offered in what we call a singleton block; if that conflicts with one of the music courses, generally, our students are going to select the advanced academic course if that's going to fulfill a need for their postsecondary plans. So, it's unfortunate, but if push comes to shove, and that's the only time that they can get their Calculus or their Biology Lab, sometimes they have to make a really hard decision to not to take the particular music class that they may want. But we've found some workarounds to that, and part of that credit is to be given to the instructor who will let students come in an alternate class period to work or do an independent study if they need to. And the teacher has also let students participate in Marching Band if are able to take

the Band. So, we try to accommodate that as best as we can, but in a small school, it's the same kids who are in the band, playing the sports, and in the clubs; there's just not a single focus or a single pathway with most of our students, which is one of the great things about being in a small school. It's hard to have kids who are laser focus just on music when there are so many other opportunities, and they're just in high school, they're just figuring out what they want to do, and, although we have some that are very-very talented and want pursue music or music education as a career, that's usually not the only thing that they're doing.”

The administrator shared that utilizing this flexible approach, the school division was careful of teacher overloading and worked on limiting teacher schedule interruptions.

Thus, with threats to POS expansion posed by specialized programs and enrollment deficits, all the participants had to continually search for creative solutions to scheduling challenges. Working solutions included formal schedule changes and informal work with teachers: placing students in classes not corresponding to student abilities, trusting teachers to differentiate, and using free time in teacher schedule and after school time to schedule independent practices.

Financial Constraints. Securing curriculum implementation means and supports in a pre-planned fashion was discussed in the formal curriculum development models of Glatthorn et al. (2019), Oliva (2009), and Saylor et al. (1981). On the other hand, several informal curriculum development proponents suggested influencing decision makers and obtaining financial supports for implementation by collaborating on best solutions for resources needed (Dillon-Krass & Straub, 1991; Walker, 1981). Battling limited financing of music programs was a major theme emerged from the interviews, and the participants. Ten participants indicated they faced real

challenges in implementing new courses because of financing issues. For example, one suburban school division administrator (Participant 14) shared: “it took us several years to get our Music Technology course up and running, because when you're talking about building a lab, workstations, that requires money.”

Financial allocations to music programs set by school budgets were the only pre-planned formal resources the participants could operate with. Therefore, the participants continually engaged in informal deliberations, searching for additional funds for music programs. One informal approach solution mentioned in the interviews included proactively working with community. One town school division (Participant 5) accepted public instrument donations toward music program costs; the administrator shared: “We have been able to purchase sheet music and instruments, we've been able to upgrade auditoriums to improve performances.” Five participants were formally able to justify spending the ESSA funds to cover VMEA assessment fees, purchase materials and equipment, and finance after school activities for low SES students. For instance, a city school division (Participant 8) shared successful allocations of the ESSA funds toward music programs:

One thing that we were able to do was to pay for with the Title IV grants for a before or after school Piano and Strings small groups. We were able to pay our teachers stipend to stay before or after school for an hour to work with a group of like 15 kids each day, so they'd have a different group each day. And they would work with a fairly small group, four or five students at a time, they would all be either working on piano, we bought them keyboards for that, the decent ones, or they'd be working on with violins, which they already had from being in a Strings class. That that was a really great example of how that has helped us. I have received money federal funds for STEAM [science, technology,

engineering, arts, and math] programs in my previous divisions and other neighboring divisions also received it...Another example, we've been paying for the [VMEA] Assessments...I will say though that our assessments are treated a little bit more seriously as far as being on the calendar. It used to be the SOLs we're on the calendar, and teachers weren't allowed to pull you out those days. Now, the state music Assessments are on the calendar for our high schools, and those same rules apply to them. So, that is partially due to the ESSA, not fully. I would say that at least part of that has changed to making arts part of the core, a slight attitude change.

Therefore, it was clear from the interviews that with current financial limitations, there was not much the administrators could do in terms of searching for official formal solutions or in terms of engaging stakeholders in deliberations to increase music program budgets set by the school divisions. Public donations and the ESSA funds designated to support education of low SES students could only be used occasionally, and these funding options could not be applied toward the largest music programs' expenses, salaries of general student population high school music teachers.

Staffing and Equity. Financial constraints that the participants' school divisions endured contributed to shortages of qualified instructors. Eleven participants noted it was challenging to offer the same courses across in all high schools in one division. Teacher qualifications and teacher shortages were the reasons: what was offered at a high school depended on teacher endorsements and skills, and course offerings changed with changing instructors. One suburban school division administrator (Participant 14) shared:

Staffing is of course another aspect that we look at. That's one of the reasons that the school that offers Music Technology doesn't offer Guitar - we only have three music

teachers in that school site, and we may be unable to offer the entire program of studies like we would like to.

Nevertheless, one large suburban school division (Participant 12) embraced the staffing challenge. The school division offered standard performance and nonperformance courses in all high schools and welcomed optional courses that served diverse population needs:

Our standard courses that are offered by all high schools are: three levels of Band, three levels of Orchestra, and three levels of Chorus. We also offer Guitar, Music Theory, and Jazz Band in every school. And we have quite a robust optional setting for all our other classes. It depends on the staff that's at the school. So, your band teacher may be well versed in Music Theory, and so they offer Music Theory. Or maybe the chorus teacher wants to teach a Piano class, or the orchestra teacher is teaching Guitar class, or there's a full-time guitar teacher but he or she would like to teach AP Music Theory. As far as going outside the realm of the standard course offerings, we have Show Choir – if some teachers want to do a Show Choir, so we do have a Show Choir course offering. A lot of times, in addition to the levels of instrumental in choral music, you'll see all the specialized classes: a lot of schools have jazz bands, a lot of schools have show choirs outside of that standard course offering, and we see a lot more theory classes too, that have been added if they don't have a Guitar class. So, we kind of have a little bit of everything, but there's usually something that's not one of the three standard course offering classes, and it's a little bit different; so, it depends on the county, and it depends on the specialty of the teacher and the staff. Most of our schools have anywhere from three to eight music teachers, depending on how large a school is, and what they're offering...Our county is so diverse, we have many high schools in a large geographic

area; so, we have to be able to offer something for each community, and that is really done at the school level. My role in evaluating the course is to make sure that the teachers are following the course materials and the program, so if a student moves anywhere in the county, they're still receive the same instruction.

The interview results showed how challenging it was to offer rich-in-course-variety and instructionally robust high school music programs in the 14 school divisions. Financial limitations allowed the participants to employ only so many teachers, while employing only so many teachers in one school meant only so many qualifications allowing to teach so many music subjects. Additionally, it was challenging to sustain student enrollment, as new academic program developments drew students away from music courses. Relying on limited budgets, the participants had to explore alternative avenues to finance program implementation, and such solutions were not permanent.

Evaluating

Formal curriculum development models of Brown and Green (2015), W. R. Gordon et al. (2019), Glatthorn et al. (2019), Oliva (2009), Saylor et al. (1981), Ornstein and Hunkins (2013), and Tyler (2013) suggested evaluating curriculum implementation with specific pre-planned evaluation methods and strategies, such as pre-designed logical evaluation models. Informal curriculum development models of Sowell (2005) and Elliott and Silverman (2015) insisted that evaluation of student progress toward general educational purposes should be descriptive and interpretive, such as attending performances, discussing pluses and minuses, and making decisions based on such interpretations. From what emerged from the interview participants' responses, not all the participants conducted evaluations designated specifically to POSs. Eleven participants conducted regular or somewhat regular POS evaluations, and three participants did

not conduct any. For example, two suburban school division administrators (Participants 2 and 14) conducted informal POS evaluations from time to time, as this was needed. In contrast, a small town school division (Participant 3) did not evaluate POS, and a suburban school division administrator (Participant 9) shared that there was no need to evaluate the high school music POS: “There isn’t any set evaluation process for our music programs. There are performance-based ensembles, and of course there are instructional classes, such as Music Theory and Jazz Ensemble. They have been pretty set for the last 20 some years.”

In the school divisions of the eleven of the participants evaluating POS, formal and informal approaches to POS evaluation were blended. For example, in one suburban school division (Participant 14), POS evaluation was undertaken in both formal and informal collaborative evaluation cycles:

In our division, there is no set process for evaluating particular courses, whether music, or science, or math. If a concern is posed, for example, if the question is asked, why do we offer this course if we only have five kids every year who want to take the course, that something that comes back to me, and whoever it came from, it could have come from a principal, a School Board member, or a community member. I would review that with my team of teachers, the art teachers and the music teachers, and we would take a look at that and determine if that course is still viable or not. One thing that I will say that we have done as an internal group is every 3–4 years, and there’s no set cycle but sometimes just comes a wave, we will review a whole host of the courses. We review the whole sequence to determine if we wanted to shift on any of our courses, or the titles, or the descriptions. We just did this in visual art this year, we did a whole overview of that for the art folks. But there is no formal process that happens every so many years for any of

our content areas. My internal group typically includes teachers; could there be a principal, yes, but it has never been my experience.

This blended evaluation approach that incorporated various combinations of formal and informal building and central office levels administrator/teacher collaborations and formal and informal central office POS evaluation could be traced among the interviews of eleven participants engaging in POS evaluation. Next, I will further explore contrasts and similarities among the participants' approaches to POS evaluation.

Evaluation Methods Practiced by the Participants. Four POS evaluation types emerged from the interviews: (a) through site-based administrative administrator/teacher collaborations in formal teacher evaluation cycles; (b) central office evaluations—through enrollment, student performance, literature levels performed by ensembles, and conversations with stakeholders; (c) division-wide climate surveys; and (d) outside agency evaluations.

Site-Based POS Evaluation by Administrators and Teachers. Eight participants expressed that POS evaluations in their school divisions were conducted through continual formal and informal administrator/teacher collaborations during formal teacher evaluation cycles. For example, in one rural school division (Participant 6), all academic programs were evaluated on the school level through teacher observations, reflections on music program enrollment, and administrator/teacher collaborations:

The principal and the assistant principal conduct the teacher evaluations and also the program evaluation on general instructional effectiveness and student response to the courses measured through registration and engagement in any extracurricular opportunities. But I would say that is also more of an informal iterative process conducted through teacher goal setting the program—that could be a mechanism for the

principal and the assistant principal to help the teacher to evaluate the program. While goals could be documented, it's not specifically a formal evaluation requirement...As a part of our teacher performance evaluation program, there are template student and parent surveys. Every 3 years, when the teachers are going through their formal evaluation cycle, they use those student and parents' surveys as part of their data collection process to present to their evaluating administrator about their performance. And oftentimes, teachers will do that off cycle, just to gather feedback to help develop their programs. We have questions already created in the templates in our teacher performance evaluation process document; however, a teacher can modify those. We have the templates suggestions done by level, we have a K-2, a 3-5, a middle school, and high school templates; they're quite general in nature, and oftentimes the teachers do customize those a bit, so that they can get a little bit more specific feedback or something that is more directly related to their content.

In another rural school division (Participant 7), principals evaluated teachers and acted on deficits; enrollment was one of major evaluation parameters:

Evaluating course offerings, first, we look at enrollment, that's what we're doing now, we're looking at our course enrollment for this current year and then last year. And then, we look at previous years. If we see any trends or data in course enrollments going up or down from a central office standpoint, we can't really defend or practice having less than 10 students in a class, it becomes a budgetary concern. Now, in music, we will go a little bit less than 10, but it won't go much below 10. We don't want to lose the program for those eight or nine kids, we have a little bit of wiggle room. But the first thing we'll do is we'll look at how many students are enrolled.

One city school division administrator (Participant 8) suggested that central office/principal collaborations during formal teacher evaluation cycles were essential. The participant shared that site-based evaluations did not always reach central office and that this precluded music administrators from participation in decision-making:

Teacher evaluation is in general handled by the principal now, and I will say that that some principals are better than others about including me in the process. I have been in situations in my last district where I had a strong objection to it, and I wasn't brought into the process till the very end and couldn't do much about it at that point. It happened twice to me over seven years; it was the same principal.

These examples show how important the school principal role in POS evaluation was in the participants' school divisions; continual principal/teacher collaborative POS evaluations occurring through observations and in informal conversations served as starting points for making decisions on what music courses to offer.

Central Office POS Evaluation. The second POS evaluation method emerged from interviews was the central office level evaluation, less formal in terms of set procedures and public reporting and more holistic evaluation that included various combinations of: course reviews during curriculum development/revision cycles, reviews of student enrollment data, analyses of results of adjudicated VMEA events, and reflections on conversations with stakeholders. One large suburban school division administrator (Participant 1) shared:

I would not say that we have a formal program comprehensive regular program evaluation process that we implement, where we review all the courses and consider whether they need to be removed. We do that continually and more informally. As far as me being able to point at a report that is submitted on a regular basis based on some king

of a really formal evaluation process—I could not really say we do that. However, I do think that our processes...of regularly updating the curriculum, taking in the account the evaluation and the effectiveness of programs. We do look at yearly student enrollment data on a regular basis; we do look at the results of the yearly assessments that the school music programs...participate in. We look at how well our students do when they audition to and compete in district, regional, and state level contests and other opportunities for student recognition. We take all that information together and we make decisions about our programs based on that.

One rural school division (Participant 10) practiced a similar approach:

It is very organic, there is no system in place to say, hey, every 2 years we're going to sit down and talk to the band directors or the choral directors and discuss needs and things, it's more of an as need-based, as we go through things, and just professional development communities talking with each other. So, there is no systematic format in place for this. We're [a] very small school division, and the communication is pretty fluid here, there isn't a separation of me from my programs, like I think sometimes in big school divisions. I know my people inside and out and what their strengths are because we're small enough.

Another suburban school division administrator (Participant 2) used a similar evaluation method:

We don't evaluate programs in the same way you could evaluate a teacher, but we have lots of anecdotal evidence that we take into consideration. For example, we have an expectation that programs participate in the annual VMEA assessments in the spring, that they're actively providing opportunities for the students, and I look at that. I look at the number of students I look at the demographics, who's enrolled in our programs. I look at

attrition rates. When I first came in, I brought this topic up with our staff and showed them the numbers; immediately, the next year, our numbers started going up significantly because people started paying attention to that attrition. I look at a number of criteria; if there's an issue, I have to work through principals, and a principal has to see it as an issue to be addressed. But as for programs as a whole, if we see a deficit somewhere, we work through it. I have an example. We have a growing orchestra program. When I came in, it had 22 students, it was new. We now have over 4,000, and that's happened since 2007. When the program started, there were some growing pains; like, there were some schools where there was clearly a deficit instruction, based on what you hear coming out of the students' instruments—intonation was horrid in a couple examples. So, as a supervisor, in a positive constructive ways, I encouraged collaboration, bringing people to begin to collaborate and organized professional development that was interesting. All those are the evaluation, it is what I see both in anecdotally, with my own observation eyes and ears, and what I see on paper. We just had district auditions, and I looked at the district audition data. One school had one student in, and another school had 46. This goes back to instruction of the teacher. Again, we look at the teachers themselves; there are very strong programs as a result of very effective teaching. I don't ever look at anything singularly with one criterion; I look at a pattern of things, the whole ghost of things that portray that that person's instruction, how they relate to students, and how that program is from a healthy standpoint.

One rural school division administrator (Participant 5) evaluated the POS only informally:

I guess you would say we look at things that's happening on a day-to-day basis, month to month, semester to semester, year to year, and make decisions as they come up. So, we

do not have a formal process, it's just conversations, discussions with teachers, parents, students, and administration, that would guide our choices for our music program courses.

A large city school division administrator (Participant 8) evaluated the entire music program with a combination of the program operation, teacher and student performance, how the program served the needs of all students, and a variety of courses offered:

I look at a number of factors, as to how a program is operating. I do care somewhat about how it's operating when looking at the Virginia Band and Orchestra Directors Association scores and stuff like that, but, honestly, that's only a very small picture of what a program is doing. Really, what I want to see is how it's serving the students that are in that school, and while that the Virginia Band and Orchestra Directors Association Assessment speaks to excellence in performance, it doesn't necessarily speak to excellence and how well-rounded that students are. One thing that really speaks to me is someone who has a big heart for our lower income kids, and for our kids that don't have as many options...Personally, I start out with my core beliefs which are research based, they're not just my personal...My core beliefs are that every child deserves a well-rounded Arts education. And that starts in elementary school, and it goes all the way up. They deserve to have a wide variety of choices, so, to me, the first thing I have to think about is: if I look at a school and don't see a wide variety of choices, say, they only have Chorus or they only have Chorus and Band (which is a more likely such situation), I really want to know why there wouldn't be an Orchestra there. We know that kids come to music from different ways. We also know the power of music not just for the kids that are going to be performers and that are going to have a lifelong relationship as a musical

performer or a musician, but people that are going to appreciate music or people that are going to be playing, but playing for fun or playing for satisfaction, people that are learning different things from music. Because music is not just a discipline, it's a way of thinking, and that way of thinking informs you about so many other things, including mathematical ways of thinking, including linguistic ways of thinking, so, to me, those three are kind of pillars, and if they're not there, I want it, there's got to be a really good explanation.

POS evaluation in a city school division (Participant 11) was also organic. One of successful evaluation methods shared by the administrator included a collaboratively developed division-wide performance rubric:

We look at organization, management, music, and atmosphere...It does say, in organization, here are all the things to look for in your preparation before the concert occurs. Management is the night of—what happened. Music—we use a standard music rubric on the quality of the performance: tone, balance, intonation, et cetera. Resulting atmosphere – that is probably the most subjective aspect of it, I do not know if you say, “it was well attended.” I was asked to do that many years ago; we wanted this to be uniform across the school division...It is 1, 2, 3, 4 scale, and we were working to get all the schools on the side of a 3, any 3 or higher is outstanding...We publish these at the beginning of the school year. And it leads us to much like a tiered system, Tier 1, Tier 2, Tier 3, with how to improve those programs and target supports. And this led to a lot of systemic positive changes in the division as a result. The key to developing that was getting teachers to write that, to make it themselves...So, it is a holistic rubric, not a kind of “got you” document, and some teachers went, “I am going to need more support,

because I am on a tier 2”, and I was like, “yes, we are going to get you to a Tier 3 by doing X, Y, and Z, and you are going to have more targeted support.” And that is the program as a whole, not individual classes necessarily... The teachers’ names are not directly attached to that, but we understand they are indirectly attached to it. Anything above 3, ideal or acceptable, is perfectly fine. Its where we look for these improvements for unacceptable programs. And at no time would that lead to a program being cut at no time would that occur.

These examples show that POS evaluation occurred in the participants’ school divisions on the central office level. While site-based administrators monitored local program performance, central office administrators provided overview to the big picture of the entire music program. The participants working in smaller school divisions tended to utilize more informal evaluation methods, conversations with teachers, whereas the participants working in larger suburban school divisions utilized more statistical data on student demographics and student and teacher performance results. However, in all the participants’ school divisions, the evaluation methods used were those that worked in current and real situations.

Division-Wide Surveys of Stakeholder Satisfaction. The third POS evaluation method used among the participants’ school divisions included formal generalized surveys of stakeholder satisfaction. In the central office of one suburban school division (Participant 1), there was a separate department that handled division-wide program evaluation:

If I wanted to engage in a really systemic and statistically valid evaluation of our program data, I would probably enlist the help of this office to do that. They survey the parents every year on satisfaction about all our school programs. They do not necessarily every year go into a great detail on satisfaction about every curriculum area. They do survey the

parents on the number of things, but they do try to make these surveys accessible to the parents, so that [parents] would actually fill them out. We have a wide variety of programs and curricula that we teach, and if we would ask extensive questions about every curriculum that we offer, it is quite possible we would not get a rate response on those surveys. They do not specifically evaluate the level of satisfaction with our music programs, but they do evaluate satisfaction with schools, their overall programs, academics, activities, and opportunities to enrichments and advancement that are offered.

Another suburban school division (Participant 2) sent a similar climate survey:

This survey goes out across the entire division, students, parents, teachers, and administrators, and includes climate questions but also things on programming. The things that have come out of that survey were parent concerns not related to music programs. I feel like we have a lot of support for their music from the community on our program, and the most helpful thing is when a teacher has a good relationship with the students and parents and is a good communicator and it's doing a great job.

One city school division (Participant 8) sent home subject-nonspecific surveys:

There are usually no content questions on those, it's more about things like, do you feel your student is being respected, do you feel that there is enough social-emotional support and academic support in general; there are places to write in, and, I will say, that I frequently get a low email from those. The survey administering people were saying, hey, just thought you should know, I got these six people in their comments mentioned how great the arts programs were or the offerings and you know so that that is great, and we love that. But these were not really built around content specifically.

One suburban school division (Participant 12) sent a generalized survey to all stakeholders: “they send them to teachers, students, parents, communities; so, they do collect the data, and I guess if there was a problem, they would tell us.”

While all the suburban and all the city participants’ school divisions sent these formal surveys, the rural and the town participants’ school divisions used a more informal approach. They either did not send division-wide surveys at all or surveyed parental and student satisfaction in buildings, such as one town school division (Participant 3). In another town school division (Participant 4), there was no program evaluation department and no survey sent home, but parents brought concerns directly to schools; the POS evaluation was informal: “it’s almost like a yearly process, where we think, OK this is what we’re teaching, this is working and will continue on. Then, if we want to add something, that happens through the program of studies process.” Only one rural school division administrator (Participant 5) shared every spring the school division distributed a parental survey asking for general feedback on student experience; the survey includes open-ended questions.

Therefore, as discussed above in multiple examples, regardless of a school division locality and size, the most helpful to the participants division-wide stakeholder satisfaction evaluation methods were not formally administered surveys but conversations with teachers, parents, and community members, enrollment data, and reflections on student performance at the VMEA events. Division-wide surveys administered by the participants’ central offices were not geared to gather stakeholder input on specifics of high school music POSs; even the participants whose larger school divisions had program evaluation departments did not choose to use such departments’ services to create stakeholder surveys of high school music programs and preferred to gather program performance data with less formal methods.

Outside Agency Evaluation. The fourth type of POS evaluation emerged in only one interview: in a small rural school division (Participant 6) an entire school division evaluation conducted once by an outside evaluation team, and the music program was a part of that evaluation as well; the administrator did not provide any more information on that evaluation results and subsequent steps taken by the school division.

As evident from this discussion, the teacher, the principal, and the central office level administrator roles in POS evaluation were very important. According to the participants' responses, the most effective evaluation method was the informal teacher/principal/central office administrator collaboration on examining of what worked best for current students. It was not the official division-wide formal survey of stakeholder satisfaction but the central office administrator who set the division-wide POS evaluation parameters and administered evaluations: solicited feedback from teachers and school administrators, gathered division-wide student performance data, and surveyed parents. However, none of the participants used any formal research-based program evaluation methods, such as defined by Fitzpatrick et al. (2011) logic models used to evaluate program inputs, endeavors, products, and short- and long-term impacts to determine whether program goals are met.

Summary of the Qualitative Investigation

As evident from this discussion, the participants faced many challenges to POS development. Teacher shortage, lack of teacher qualification, low enrollment, scheduling conflicts, and financial deficits were only few of many barriers. The formal and the informal POS development processes the participants discussed were designed to move organizations to achievable dreams; these processes were more organic rather than sequential, and decision-making involved is more collaborative than unilateral and hierarchical. This investigation

highlighted the roles administrators and teachers played in the POS development game: it was the administrator who set the tone and the pace to POS development and engaged right stakeholders at the right time, and it was the teacher who determined and fulfilled the true and the real student needs; thus, this administrator/teacher collaboration was vital in POS development (see Figure 280).

Figure 280

Formal and Informal High School Music Program of Studies Development Processes Practiced in 14 Select Virginia School Divisions

POS Development Stages	POS Development Considerations	POS Development Processes		Stakeholders Involved
		Formal	Informal	
Defining Needs	Student needs: educational and socio-emotional	Examining state Music SOLs and developments in the field Considering POS expansion beyond the state SOLs Offering courses with flexible titles Offering courses and extra-curricular activities that highlighted cultural legacies of students Examining enrollment numbers Requiring teachers to survey students on POS changes Examining potential scheduling challenges	Teacher examination of possible extensions to classroom curricula based on student educational and socio-emotional needs Informal conversations and deliberations among teachers, counselors, and administrators	School and central office administrators Teachers Counselors Students
	Teacher interests and qualifications	Examining teacher qualifications, interests, and quality of instruction	Informal survey of teacher needs	School and central office administrators and teachers
	Community expectations	Establishing formal community liaisons to inform POS development Sending surveys of satisfaction to communities Establishing community liaisons	Examining community traditions and values through informal conversations with parents, students, and teachers	School and central office administrators and teachers
	Program needs: financing, staffing, scheduling, equity, and sustainability	Hiring teachers with particular qualifications Offering flexible course options Using the ESSA funds to expand extra-curricular activities for students in need Building community and administrative support for potential new programs	Encouraging teachers to examine how to incorporate new course ideas into existing courses	School and central office administrators and teachers
Developing Collaboratively	Experimenting with new courses	Encouraging teachers to develop new courses	Expanding existing course curricula	School and central office administrators and teachers
School Board Partnerships	Soliciting school board approval of POS	School boards officially vote on POSs School board official community liaisons	School board members attend concerts and provide administrators with feedback	School board members and school and central office administrators
Implementation	Developing and implementing courses	Developing local curriculum guides based on the state SOLs Balancing student schedules Offering courses that teachers are qualified to teach	Teacher-sequenced instruction Independent studies – utilizing free time in teacher schedules Soliciting instrument donations	School and central office administrators and teachers
Evaluation	Evaluating how POS serves the needs of students	Site-based evaluation of teacher by school administrators Scheduling POS reviews during curriculum development cycles Central office administrative evaluation of enrollment, student performance, and teacher performance Division-wide climate surveys Outside agency evaluations	Reviewing occasional questions and concerns with teachers	School and central office administrators and teachers

Note. POS refers to program of studies; SOL refers to standards of learning; ESSA refers to Every Student Succeeds Act.

Integration of Quantitative and Qualitative Analyses

In the final stage of the data analysis, I searched for trends in my responses to the Research Questions and for connections among the results of the QUAN analysis and the qual analysis. Specifically, I explored connections among statistically significant answers to Research Question 1 and Research Question 2 and then searched for explanations to these connections among major themes emerged in answering Research Question 3. Three major explanations of the QUAN analysis with the qual analysis emerged, and I will discuss these next.

Organic Program Development

The first major inference derived from the results of the overall investigation was that the current course offerings are developed over long periods of time, through careful consideration of what worked for current needs of students, teachers, communities, and programs. The reason that Band and Chorus were the only courses offered in Virginia at significantly high rates was that these courses have traditionally been regarded as basic high school music course offerings and were prioritized across the interview participants' school divisions. As it was evident from the interviews, everything else was developed and offered only as needed and as possible, with considerations for student needs, teacher qualifications and interests, community traditions, and program needs. Figure 281 presents select QUAN analysis findings and qual analysis explanations and quotes that support this argument.

Figure 281

Organic Program Development: Basic Versus Optional Courses

Organic program development Gradual, collaborative, and continual development of courses that fit needs of current students, communities, programs, and teachers.		
Band was offered at a significantly high rate.	$\chi^2(1, N = 131) = 123.12, p < 0.001$	Band and Chorus have been regarded as basic and major high school music courses. Everything else is offered based on student interests and needs, program needs, and teacher qualifications. It was customary among the participants to incorporate nonperformance course instruction into existing basic performance course curricula.
Intermediate Band was offered at a significantly high rate.	$\chi^2(1, N = 131) = 30.30, p < 0.001$	
Advanced Band was offered at a significantly high rate.	$\chi^2(1, N = 131) = 63.21, p < 0.001$	
Chorus was offered at a significantly high rate.	$\chi^2(1, N = 131) = 80.99, p < 0.001$	“I could foresee that it would be a challenge with students, parents, and community if we were to discontinue say Chorus and offer only Band, or take away our Marching Band program and focus on Concert Band, or something like that, because there is a heavy tradition here in our music program, and people have certain expectations of what we should be offering” (Participant 6, a small rural school division administrator).
Intermediate Chorus was offered at a significantly high rate.	$\chi^2(1, N = 131) = 26.57, p < 0.001$	
Advanced Chorus was offered at a significantly high rate.	$\chi^2(1, N = 131) = 11.61, p < 0.001$	
Offering Band was moderately associated with offering Chorus.	$\Phi = 0.36, p < .001$	“We're not going to develop new music courses right now, because the numbers are so low; if we spread it anymore, we won't have any kind of program. There are only so many students at the school...If we could get a sustained program for a few years, we might consider adding some courses, but we just don't have that luxury right now” (Participant 3, a small town school division administrator).
Composition was offered at a significantly low rate.	$\chi^2(1, N = 131) = 104.496, p < 0.001$	
Guitar was offered at a significantly low rate.	$\chi^2(1, N = 131) = 9.35, p < 0.05$	
IB Music was offered at a significantly low rate.	IB Music, $\chi^2(1, N = 131) = 71.824$	“I don't spend a lot of time encouraging new things. What I do is I spend time encouraging good instruction, teaching, giving the students a meaningful experience...Sometimes, the changes in programming can occur with how you approach teaching orchestra or your band, maybe it's the literature you choose, maybe it's some additional ensembles student centered ensembles” (Participant 2, a large suburban school division administrator).
Music Technology was offered at a significantly low rate.	$\chi^2(1, N = 131) = 80.985, p < 0.001$	
Orchestra was offered at a significantly low rate.	$\chi^2(1, N = 131) = 21.44$	
Piano was offered at a significantly low rate.	$\chi^2(1, N = 131) = 30.298, p < 0.001$	“Our standard courses that are offered by all high schools are: three levels of Band, three levels of Orchestra, and three levels of Chorus. We also offer Guitar, Music Theory, and Jazz Band in every school. And we have quite a robust optional setting for all our other classes. It depends on the staff that's at the school...We usually hire curriculum team of teachers that are interested in the summer, and we work on the program of studies, trying to find alignments, gaps, what we want to keep, and what hasn't worked” (Participant 12, a large suburban school division administrator).
Offering Orchestra was moderately associated with offering IB Music.	$\Phi = 0.44, p < .001$	
Offering Music Technology is moderately associated with offering IB Music.	$\Phi = 0.31, p < .001$	

Larger City and Suburban School Divisions Offer More Variety of Courses

The second major inference was that Virginia smaller school divisions and school divisions located in rural and town areas of the state faced more challenges to developing rich-in-course-variety high school music programs as compared to larger school divisions located in cities and suburbs. The regression analyses showed that joint impacts of the four predictors, enrollment, student SES, locality, and LCI were significant for seven out of 10 high school music courses: Chorus, Guitar, IB Music, Music Appreciation, Music Technology, Music Theory, and Orchestra. Additionally, multiple correlations and Chi-square tests confirmed that school divisions located in cities and suburbs, larger school divisions, and more diverse school divisions offered richer high school music programs.

The qual analysis explained that budget limitations, teacher shortages, limited teacher qualifications, low enrollment, and scheduling difficulties were the causes. As teacher salaries consumed most of school divisions' budgets, a school division could employ only so many high school music teachers with so many qualifications to teach so many subjects. Thus, smaller school divisions, particularly those with one high school often were limited to one music teacher whose endorsements and interests determined what is offered, were at a disadvantage. Additionally, smaller school divisions enrolled only so many high school students who were interested in and could schedule only so many music courses. Moreover, it was difficult to find and keep quality high school music teachers with multiple endorsements and interests. Figure 282 represents select statistically significant quantitative results supported by major themes emerged from the qualitative investigation.

Figure 282

High School Music Programs of Virginia's Larger City and Suburban School Divisions Versus Smaller Rural and Town School Divisions

Budget and staffing shortages, scheduling challenges, and low enrollment were major barriers to development of programs of studies. Budgets allowed to employ only so many teachers with only so many qualifications which means teaching only so many music subjects. There was a shortage of qualified teachers. Thus, city and suburban school divisions, that are large and more diverse, were more capable of offering richer programs of studies: Virginia cities offered the most variety of courses, followed by suburban and rural school divisions; towns offered the least variety of courses.		
Suburbs offered significantly more levels of Band than town school divisions.	$r = 2.98, MD = 35.11, p = 0.017$	“We have career and technical education programs, we have music programs, we have academic programs that children can choose to pursue; you can't do them all. We have children who tend to choose the academic pathways versus the music pathways, which is a challenge to really grow the music program” (Participant 5, a small rural school division administrator)
City school divisions offered significantly more levels of Band than towns.	$r = 3.83, MD = 46.49, p < .0001$	
City and rural school divisions offered Intermediate Band significantly more frequently.	$\chi^2(3) = 10.29, p < 0.05, V = 0.28$	
Towns offered Advanced Band significantly less frequently.	$\chi^2(3) = 12.89, p = 0.05, V = 0.31$	
Larger school divisions offered Beginning Band (weak correlation).	$r_{pb}(131) = 0.20, p < 0.05, r^2 = 0.04$	
Larger school divisions offered Intermediate Band (weak correlation).	$r_{pb}(131) = 0.22, p < 0.05, r^2 = 0.05$	
School divisions offering Intermediate Band enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.23, p < 0.01, r^2 = 0.05$	
School divisions offering Artist Band enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.19, p < 0.05, r^2 = 0.04$	
School divisions offering Intermediate Band enrolled more Hispanic students (weak correlation).	$r_{pb}(131) = 0.20, p < 0.05, r^2 = 0.04$	
The predictor variables combined moderately impacted offering Chorus.	$\chi^2(13) = 46.436, p < .001$	
Chorus was offered significantly disproportionally across localities (small effect size).	$H(3) = 13.45, N = 131, p = 0.004, \epsilon^2 = .1035$	“At one point, we had a Musical Theater course, but had to discontinue that one because the state endorsement that was required was Drama and not Music; they wouldn't let us use a teacher with an Instrumental or Vocal music endorsement to teach it. To hire a
Suburbs offered significantly more levels of Chorus than town school divisions.	$r = 2.66, MD = 31.71, p = 0.048$	
Rural school divisions offered significantly less levels of Chorus than suburbs.	$r = -2.88, MD = -27.71, p < 0.024$	
Suburbs offered Beginning Chorus significantly more frequently (moderate association).	$\chi^2(3) = 11.89, p < 0.05, V = 0.30$	
Cities offered Intermediate Chorus significantly more frequently (moderate association).	$\chi^2(3) = 8.13, p < 0.05, V = 0.25$	
Larger school divisions offered Beginning Chorus (weak correlation).	$r_{pb}(131) = 0.25, p < 0.01, r^2 = 0.06$	
Larger school divisions offered Intermediate Chorus (weak correlation).	$r_{pb}(131) = 0.21, p < 0.05, r^2 = 0.05$	
Larger school divisions offered Advanced Chorus (weak correlation).	$r_{pb}(131) = 0.25, p < 0.01, r^2 = 0.06$	
Larger school divisions offered Artist Chorus (weak correlation).	$r_{pb}(131) = 0.22, p < 0.05, r^2 = 0.05$	
School divisions offering Beginning Chorus enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.21, p < 0.05, r^2 = 0.05$	
School divisions offering Intermediate Chorus enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.19, p < 0.05, r^2 = 0.04$	
School divisions offering Advanced Chorus enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.21, p < 0.05, r^2 = 0.04$	
School divisions offering Artist Chorus enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.26, p < 0.01, r^2 = 0.07$	
School divisions offering Chorus enrolled more Hispanic students (weak correlation).	$r_{pb}(131) = 0.22, p < 0.05, r^2 = 0.05$	

The predictor variables combined moderately impacted offering Guitar; higher enrollment is the significant predictor.	$\chi^2(13) = 49.103, p < .001$	teacher with a Drama endorsement required to have five classes; or, for a teacher to obtain the Drama endorsement, it was to take a lot of credits” (Participant 6, a small rural school division administrator)
Guitar was offered significantly disproportionally across localities (small effect size).	$H_{(3)} = 15.13, N = 131, p = 0.002, \epsilon^2 = .1164$	
Rural school divisions offered significantly less levels of Guitar than suburbs.	$r = -2.89, MD = -24.51, p = 0.023$	
City school divisions offered significantly more levels of Guitar than rural school divisions.	$r = 3.89, MD = 26.66, p = 0.016$	
Larger school divisions offered Guitar (moderate correlation).	$r_{pb}(131) = 0.35, p < 0.01, r^2 = 0.12$	
School divisions offering Guitar enrolled more Asian students (moderate correlation).	$r_{pb}(131) = 0.34, p < 0.01, r^2 = 0.12$	
School divisions offering Guitar enrolled more Hispanic students (moderate correlation).	$r_{pb}(131) = 0.35, p < 0.01, r^2 = 0.12$	
School divisions offering Guitar enrolled more Multiple Races students (weak correlation).	$r_{pb}(131) = 0.19, p < 0.05, r^2 = 0.04$	
IB Music was offered significantly disproportionally across localities (small effect size).	$H_{(3)} = 16.10, N = 131, p < 0.001, \epsilon^2 = .1238$	
The predictor variables combined moderately impacted offering IB Music; higher enrollment was one of significant predictors.	$\chi^2(13) = 46.484, p < .001$	“I would love to see string programs in our high schools, or at least in one of my high schools, so if its students want to take a string program, they have an option to. We have had several after school and during school programs offered in our area, but we can't find teachers for them” (Participant 10, a rural school division administrator)
Rural school divisions offered significantly less levels of IB Music than suburbs.	$r = -3.02, MD = -17.49, p = 0.015$	
Cities offered significantly more levels of IB Music than rural school divisions.	$r = 3.38, MD = 32.65, p = 0.004$	
Larger school divisions offered IB Music (moderate correlation).	$r_{pb}(131) = 0.50, p < 0.01, r^2 = 0.25$	
School divisions offering IB Music enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.22, p < 0.05, r^2 = 0.05$	
The predictor variables combined weakly impacted offering Music Appreciation.	$\chi^2(13) = 30.879, p = .004$	
Larger school division offered Music Appreciation (weak correlation).	$r_{pb}(131) = 0.23, p < 0.01, r^2 = 0.05$	
School divisions offering Music Appreciation enrolled more Native Hawaiian students (weak correlation).	$r_{pb}(131) = 0.19, p < 0.05, r^2 = 0.04$	
The predictor variables combined moderately impacted offering Music Theory, and enrollment as the significant positive predictor.	$\chi^2(13) = 46.144, p < .001$	“I have to look at the financial side of that, which is daunting. There are other things I'm fixing that I can fix without a huge financial investment, but staffing is the hardest part to get around. Instruments, you can buy them slowly, it's nice to have
Music Theory was offered disproportionally across localities (small effect size).	$H_{(3)} = 19.51, N = 131, p < 0.001, \epsilon^2 = .1501$	
Rural school divisions offered significantly less levels of Music Theory than suburbs.	$r = -3.39, MD = -31.23, p = 0.004$	
Cities offered significantly more levels of Music Theory than rural school divisions.	$r = 3.38, MD = 32.65, p = 0.004$	
Rural school divisions offered Music Theory I less frequently; suburbs did more frequently.	$\chi^2(3) = 9.31, p < 0.05, V = 0.27$	
Larger school divisions offered Music Theory (weak correlation).	$r_{pb}(131) = 0.28, p < 0.01, r^2 = 0.8$	
School divisions offering Music Theory enrolled more Asian students (moderate correlation).	$r_{pb}(131) = 0.31, p < 0.01, r^2 = 0.09$	
School divisions offering Music Theory enrolled more Hispanic students (weak correlation).	$r_{pb}(131) = 0.22, p < 0.05, r^2 = 0.05$	
School divisions offering Music Theory II enrolled more Native Hawaiian students (weak correlation).	$r_{pb}(131) = 0.18, p < 0.05, r^2 = 0.03$	
The predictors combined impacted offering Music Technology; enrollment was the significant predictor.	$\chi^2(13) = 30.879, p = .004$	
Larger school divisions offered Music Technology (moderate correlation).	$r_{pb}(131) = 0.40, p < 0.01, r^2 = 0.16$	

School divisions offering Music Technology enrolled more Asian students (weak correlation).	$R_{pb}(131) = 0.20, p < 0.05, r^2 = 0.04$	them all the ones you need right away, but you don't have to. But, you need a person, and, even if you're splitting a person between two schools to start with, that's a significant amount of money” (Participant 8, a city school division administrator)
School divisions offering Music Technology enrolled more Hispanic students (weak correlation).	$r_{pb}(131) = 0.26, p < 0.01, r^2 = 0.07$	
The predictor variables combined moderately impacted offering Orchestra; enrollment was the significant positive predictor.	$\chi^2(13) = 65.090, p < .001$	
Orchestra was offered significantly disproportionally across localities (medium effect size).	$H(3) = 32.61, N = 131, p < 0.001, \epsilon^2 = .2508$	
Suburbs offered significantly more levels of Orchestra than towns.	$r = 3.54, MD = 35.22, p = 0.002$	
Cities offered significantly more levels of Orchestra than towns.	$r = 3.89, MD = 39.93, p = 0.001$	
Rural school divisions offered significantly less levels of Orchestra than suburbs.	$r = -3.95, MD = -31.72, p < 0.001$	
Cities offered significantly more levels of Orchestra than rural school divisions.	$r = 4.33, MD = 36.43, p < 0.01$	
Cities and suburbs offered Beginning Orchestra significantly more frequently, while rural school divisions offered the course significantly less frequently (moderate association).	$\chi^2(3) = 29.35, p < 0.01, V = 0.47$	
Cities and suburbs offered Intermediate Orchestra significantly more frequently, while rural and town school divisions offered the course less frequently (moderate association).	$\chi^2(3) = 36.13, p < 0.01, V = 0.53$	
Cities and suburbs offered Advanced Orchestra significantly more frequently, while rural and town school divisions offered the course less frequently (moderate association).	$\chi^2(3) = 28.72, p < 0.01, V = 0.47$	
Suburbs offered Artist Orchestra significantly more frequently, while rural school divisions offered the course significantly less frequently (moderate association).	$\chi^2(3) = 17.59, p < 0.01, V = 0.37$	
Cities and suburbs offered Orchestra significantly more frequently, while rural school divisions offered Orchestra significantly less frequently (moderate association).	$\chi^2(3) = 27.12, p < 0.01, V = 0.46$	
Larger school divisions offered Orchestra (moderate correlation).	$r_{pb}(131) = 0.44, p < 0.01, r^2 = 0.20$	
School divisions offering Orchestra enrolled more Asian students (moderate correlation).	$r_{pb}(131) = 0.40, p < 0.01, r^2 = 0.16$	
School divisions offering Orchestra enrolled more Black students (weak correlation).	$r_{pb}(131) = 0.17, p < 0.05, r^2 = 0.03$	
School divisions offering Orchestra enrolled more Hispanic students (moderate correlation).	$r_{pb}(131) = 0.35, p < 0.01, r^2 = 0.12$	
Virginia city school divisions offered Piano II more frequently than expected.	$\chi^2(3) = 8.04, p < 0.05, V = 0.25$	
Larger school divisions offered Piano (weak correlation).	$r_{pb}(131) = 0.26, p < 0.01, r^2 = 0.07$	
School divisions offering Piano enrolled more Asian students (weak correlation).	$r_{pb}(131) = 0.23, p < 0.01, r^2 = 0.05$	
School divisions offering Piano enrolled more Hispanic students (weak correlation).	$r_{pb}(131) = 0.22, p < 0.05, r^2 = 0.05$	

Administrators Set the Tone and the Pace for POS Development

The third inference from integrating the QUAN analysis and the qual analysis results was that what was offered in Virginia school divisions depended on how central office administrators and principals approached POS development. One of the major themes that emerged during the qualitative investigation was that the participants, central office administrators, approached POS development differently; some encouraged teachers to develop new courses more than others, and some did not even have formal new course proposal processes that teachers could utilize. As the QUAN analysis results revealed, school divisions' LCIs did not associate with offering seven out of 10 high school music courses, Band, Chorus, Composition, Guitar, Music Technology, Orchestra, and Piano, and only weakly associated with offering IB Music, Music Appreciation, and Music Theory. Additionally, low student SES did not associate with offering Band, Composition, Music Technology, Orchestra, and Piano and only weakly associated with offering Chorus and Guitar. Moreover, not all cities and suburbs offered every one of 10 high school music courses in equal measure; only 4 Virginia school divisions offered all 10 high school music course types, three suburban and one city, and all of these were large school divisions. Therefore, it was the central office administrator and the principal who influenced POS challenges, encouraging and challenging teachers to make improvements to current program state (see Figure 283).

Figure 283

Influences of Building and Central Office Administrators on Development of High School Music Programs of Studies

How central office and school administrators established formal and informal processes for POS development made a difference. Not all larger and more diverse city and suburban school divisions (as compared to rural and town) offered all 10 high school music courses.	
LCIs did not associate with offering Band, Chorus, Composition, Guitar, Music Technology, Orchestra, and Piano and only weekly associated with offering IB Music ($r_{pb}(131) = 0.22, p < 0.05, r^2 = 0.05$), Music Appreciation ($r_{pb}(131) = 0.23, p < 0.01, r^2 = 0.05$), and Music Theory ($r_{pb}(131) = -0.19, p < 0.04, r^2 = 0.03$).	“I am involved in every single way we can do it, and I always involve the teachers...After we come up with a course description, we look through budget implications, we send a packet up the chain of command” (Participant 8, a city school division administrator).
Low student SES did not associate with offering Band, Composition, Music Technology, Orchestra, and Piano.	“If an issue or concern is presented, we're more reactive. But music teachers are free to express recommendations for new courses at any time, it's not like we are restricting or trying to stifle growth or change in our music programs, we just don't have a formal process. If a new course is introduced, students would really just make a choice to do the new program...so, you're really kind of hurting yourself when new programs are introduced, because of our small population and the many options for students” (Participant 5, a rural school division administrator).
School divisions with more low SES students were less likely to offer Chorus $r_{pb}(131) = -0.27, p < 0.01, r^2 = 0.07$ (weak correlation).	
School divisions with more low SES students were less likely to offer Guitar $r_{pb}(131) = -0.26, p < 0.01, r^2 = 0.07$ (weak correlation).	“If we had some students who wanted to go into a postsecondary music program or music education program, and it would look great in their applications to have a Music Theory course, or if there was something specific that they felt like they needed for after high school, our counselors would be the ones that would help to influence that in collaboration with the music educator” (Participant 6, a small rural school division administrator).
12.5% of city, 5.2% of rural, 5.6% of suburban, and 0% of town school divisions offered Composition.	
62.5% of city, 28.6% of rural, 55.6% of suburban, and 30% of town school divisions offered Guitar.	“I go back to the teachers each year and say, are there any courses that we want to look at adding, are there any courses that we need to refresh in terms of the description or where they're offered...They also do that in their school sites with their principals. And then, from there, we decide. And often I get the final say...I have my own process, but there also is a meeting where the principals, the counselors, people from my Department of Instruction, and the person who supervises the high schools review new requests. From there, the draft of the program of studies is developed, and, if that course is approved through each of those levels so far, then it goes to our School Board for approval” (Participant 14, a large suburban school division administrator).
31.3% of cities, 31.1% of suburbs, 7.88% of rural areas, and 0% of towns offered IB Music.	
37.5% of cities, 40.3% of rural areas, 50% of suburbs, and 55% of towns offered Music Appreciation.	“This process is ongoing, we sit down and talk, “Oh, let's do this”; it is not a systematic thing, it's more of an organic thing. This is very interesting and so different across the school divisions in the state, and I tend to look at things differently than maybe another administrator would. I think that's interesting to certain personalities, certain ways of thinking with their people and supporting them” (Participant 10, a rural school division administrator).
25% of cities, 7.8% of rural areas, 16.7% of suburbs, and 14% of towns offered Music Technology.	
81.3% of cities, 83.3% of suburbs, 42.9% of rural areas, and 65% of towns offered Music Theory.	
68.8% of city, 18.2% of rural areas, 28.3% of suburbs, and 15% of towns offered Orchestra	
43.8% of city, 23.4% of rural, 38.9% of suburban, and 10% of town school divisions offered Piano.	

Note. IB refers to International Baccalaureate; POS refers to program of studies; SOL refers to standards of learning; ESSA refers to Every Student Succeeds Act.

Summary of Findings

The quantitative findings that emerged in the first part of the study were and explained with the qualitative investigation. Three findings emerged from this integration.

Organic Program Development

The QUAN analysis revealed that 29 performance and nonperformance high school music courses of were offered on various levels among Virginia school divisions. Performance courses were on average twice more frequently offered than nonperformance courses. Every Virginia school division, except for one, offered at least one high school music course. Band and Chorus were the only two courses offered at significantly high rates, while Orchestra, Piano, IB Music, and Music Technology courses were offered at significantly low rates. The qual analysis explained that these patterns occurred because Band and Chorus have historically been traditional courses, and that other courses were developed and offered as it worked for school divisions.

Advantages of Larger School Divisions Located in Cities and Suburbs

The first part of the QUAN analysis revealed that all high school music courses were offered among school divisions in each locality, except for towns not offering IB Music. City and suburban school divisions offering significantly more variety of courses as compared to rural and town school divisions. Every course on every level was offered among cities. All multi-level courses, except for one, were offered at least significantly disproportionately among Virginia localities. Suburban school divisions offered significantly more levels of Band, Chorus, Orchestra than town school divisions. Suburban school divisions offered significantly more levels of Chorus, Orchestra, Guitar, IB Music, Music Theory than rural school divisions. City school divisions offered significantly more levels of Band, Orchestra, Guitar, IB Music, Music Theory than rural school divisions. City school divisions offered more levels of Band and

Orchestra than town school divisions. Band and IB Music were offered significantly more frequently among city and suburban school divisions than among town and rural school divisions. Towns did not offer Composition, IB Music, Guitar III and IV, Music Theory II, Artist Orchestra, Piano III, and Piano IV. Rural school divisions do not offer Guitar III and Guitar IV.

Larger and wealthier Virginia school divisions were likely to offer more high school music courses. Larger Virginia school divisions were likely to offer Band, Chorus, Guitar, IB Music, Music Appreciation, Music Technology, Music Theory, Orchestra, and Piano. School divisions that offer Band, Chorus, Guitar, IB Music, Music Theory, Orchestra, and Piano have higher than the statewide average LCIs. School divisions that offer Band, Chorus, Guitar, IB Music, Music Technology, Music Theory, Orchestra, and Piano (8 out of 10 high school music course types) had lower than the statewide average percentages of low SES students.

Virginia school divisions with more diverse student racial/ethnic compositions offered more high school music course types. School divisions with larger Asian student populations offered Intermediate Band, Artist Band, Chorus, Guitar, IB Music, Music Technology, Music Theory, Orchestra, and Piano. School divisions with larger Hispanic student populations offered Intermediate Band, Guitar, Chorus, IB Music, Music Technology, Music Theory, Orchestra, and Piano. School divisions with larger Native Hawaiian student populations offered Music Appreciation. School divisions with significantly lower Multiple Races student populations offered Advanced Band and at least one level of Band. School divisions with significantly higher Multiple Races student populations offered Guitar. School divisions with significantly lower American Indian student populations offered Chorus. School divisions with significantly lower Black student populations offered Chorus. School divisions with significantly higher Black

student populations offered Orchestra. School divisions with significantly lower White student populations offered Guitar, Music Technology, and Orchestra.

Virginia school divisions' demographics influence what was offered. The results of the logistic regressions showed that three high school music courses were offered regardless of enrollment, LCI, locality, or student race/ethnicity: Band, Composition, and Piano. Offering seven out of ten high school music courses was associated with Virginia school divisions' demographics. Four significant predictors were moderate. Larger school divisions were likely to offer Guitar, IB Music, Music Technology, Music Theory, and Orchestra. School divisions with larger low student SES populations were less likely to offer Chorus. School divisions with larger American Indian student populations were less likely to offer IB Music. One significant predictor was weak: school divisions with larger LCIs were less likely to offer Music Appreciation.

The qualitative investigation explained that these patterns of prevalence occurred because of budget limitations, teacher shortages, and enrollment: larger school divisions located in Virginia cities and suburbs were capable of employing more teachers with more qualifications as compared to smaller school divisions located in towns and rural areas.

School Administrators and POS Development

A Virginia school division's ability to finance public education did not associate with offering seven out of 10 high school music courses: Band, Chorus, Composition, Guitar, Music Technology, Orchestra, and Piano and only weakly associated with offering IB Music, Music Appreciation, and Music Theory. Plus, low student SES did not associate with offering Band, Composition, Music Technology, Orchestra, and Piano and only weakly associated with offering Chorus and Guitar. The qualitative investigation explained that what was offered depends on how school and central office administrators engaged stakeholders in POS development.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This explanatory sequential mixed methods study revealed what high school music courses were offered in Virginia high schools; examined how a school division's locality, student race/ethnicity, enrollment, and SES demographics correlated with what high school music courses were offered; and surveyed formal and informal POS development processes practiced in a representative sample of Virginia school divisions contributed to what high school music courses were offered in these school divisions. This chapter discussed the study findings in terms of the conceptual framework of the study and related extant literature and implications of the results to music education policy, practice, and research.

Discussion of Findings

This study yielded in multiple qualitative and quantitative findings and in three major findings emerged from integration of QUAN and qual analyses. The first major finding was that Band and Chorus were the only two courses offered in Virginia high schools at significantly high rates because they were historically considered as basic high school music course offerings and because what was offered in Virginia school divisions was what worked, as course offerings were developed organically, over long periods of time, and with consideration of current and real needs of particular school divisions, their students, their teachers, and their communities. The second major finding was that larger school divisions located in Virginia cities and suburbs offered wider varieties of high school music courses as compared to smaller town and rural school divisions because a larger school division could employ more high school music teachers

with overall more qualifications and professional interests and offer more courses. The third major finding was that Virginia school divisions' LCIs and percentages of low SES students did not majorly influence what high school music courses were offered; how principals and central office music administrators approached POS development was what contributed to what high school music course were offered. Next, I will further discuss these three findings in terms of related literature.

Organic Program Development

The first major finding revealed that high school music programs in Virginia were in their current state is because they were what was currently needed and could be afforded. The QUAN analysis results revealed that Band and Chorus were the only courses offered across Virginia at significantly high rates, and the qualitative investigation explained that this current pattern of prevalence existed because it was developed over a long period of time, Band and Chorus were always a priority.

Band and Chorus have been regarded in the US as basic high school music subjects. In 1865, chorus and general music became first widespread compulsory music subjects in many US cities (Gary, 1954; Humphreys, 2017; Keene, 1982; Wilson et al., 1988). The rise of popularity of school bands began in the 1920s; after the World War I, large number of military band musicians returned to teaching and performing, and this contributed to the growth of high school bands and college band teacher education nationwide (Labuta & Smith, 1997; Martin, 1999).

Additionally, in the 1920s, with the inventions of radio and phonograph and proliferation of jazz bands, interest in town bands lessened, and school bands became the source of musical entertainment to families and communities (Humphreys, 1989).

In the late 19th century, from the inception of first US professional music educators' associations and from the beginnings of the rich American tradition of school music performance exhibitions, choral and band performances were held as extremely valuable. For example, in 1869, at the Gilmore's National Peace Festival in the Boston Coliseum, at the Boston annual Music Exhibitions opening, 6,000 high and grammar school children sang music from all over the world (Howe, 1992). In 1897, in the state of New York, 4,000 Buffalo Public Schools children sang at the 31st Encampment of the Grand Army of the Republic (Volk, 1988). In 1873, the first public school music teacher in Virginia was hired in Petersburg Public Schools; that teacher was a vocal music teacher (Ruffner, 1873). Successful performances of 20 school bands took place at the 1923 National Band Contest, a national exhibition of school band performances (Fay, 1925). By the 1940s, almost every US high school had a band program, and the marching band became an important attribute of high school music education programs (Mark & Gary, 1992 Whitehill, 1969). By the 1970s, 7,000 orchestras and 50,000 bands were estimated to be established in the US (Whitehill, 1969).

In the 1920s, the Virginia State Board of Education (1938) published a list of suitable for high school music experiences: singing at school assemblies, glee clubs, vocal ensembles, chorus, orchestra, band, music theory, general music, and other vocal and instrumental music classes (S. B. Hall, 1940; Hart, 1921; State Board of Education, 1934). In the 1930s, glee clubs, chorus, music appreciation, operettas, band, orchestra, instrumental ensembles, and music study courses were offered among Virginia school divisions (S. B. Hall, 1937, 1940). The list of high school music courses suggested by the VDOE in 1970 included: chorus, band, orchestra, music literature, music theory, vocal and instrumental ensembles, stage band, and dance band (Music Education Service, Division of Secondary Education, State Department of Education, 1970).

The latest version of the Virginia Music SOLs included similar courses: four levels of choral and instrumental ensembles, general music, music theory, other instrumental ensembles, and music technology (Board of Education, Commonwealth of Virginia, 2020). Most recently, the VODE collected school division enrollment data for courses developed based on the Virginia Music SOLs: beginning, intermediate, advanced, and artist levels of each band, chorus, and orchestra; small and chamber instrumental ensembles; piano; four levels of guitar; three levels of vocal chamber ensembles and small vocal ensemble; general music; advanced placement music theory; international baccalaureate music; four levels of music recording and production; four levels of technology and electronic music; music composition; music history; music appreciation; and workplace music experience (Board of Education, Commonwealth of Virginia, 2020; VDOE Office of Data Services, personal communication, May 21, 2021). This study revealed that 29 high school music courses of ten types were most recently offered in various combinations among Virginia school divisions; however, the number of courses offered in one school division ranged 0-28. Figure 284 compares the course offerings that were listed in the first VDOE formal POS development guidelines, the current 2020 Virginia Music SOLs, the courses that VDOE gathers data for, the 2014 National Core Arts Standards guidelines, and the study results (Board of Education, Commonwealth of Virginia, 2020; National Coalition for Core Arts Standards, 2014; Virginia State Board of Education, 1938).

Figure 284

High School Music Courses Included in Virginia Music SOLs and Most Recently Offered

The 1920s-1930s VDOE POS Development Guidelines	Courses Mentioned in the 2020 Music SOLs	Courses Listed in the Current VDOE Reporting System	What is Currently Offered in Virginia School Divisions (the Study Results)
<ul style="list-style-type: none"> • Band • Chorus • Orchestra • Music Theory • General Music • Other Vocal and Instrumental Music Classes • Singing at School Assemblies • Glee Clubs • Vocal Ensembles 	<ul style="list-style-type: none"> • 4 levels of Choral and Instrumental Music • Music (applicable to Music Technology, Music Appreciation, Music History/Literature, and Independent Study) • Music Theory (including Composition) 	<ul style="list-style-type: none"> • 4 levels of each: Band, Chorus, Orchestra, Guitar, and Piano • Small and Chamber Instrumental Ensembles • 3 levels of Vocal Chamber Ensembles and Small Vocal Ensembles • General Music • Advanced Placement Music Theory • IB Music • 4 levels of Music Recording and Production • 4 levels of Technology and Electronic Music • Composition • Music History • Music Appreciation • Workplace Music Experience 	<ul style="list-style-type: none"> • 4 levels of each: Band, Chorus, Orchestra, Guitar, and Piano • Composition • IB Music I and II • Music Appreciation • Music Technology I and II • Music Theory I and II • Advanced Placement Music Theory • (Vocal and Instrumental Ensembles were not included in the study, as their explanations differed in school divisions' POS descriptions and therefore were not possible to classify for use in the QUAN analysis)

Note. POS refers to program of studies. VDOE refers to Virginia Department of Education. IB refers to International Baccalaureate. SOL refers to Standards of Learning. QUAN refers to quantitative.

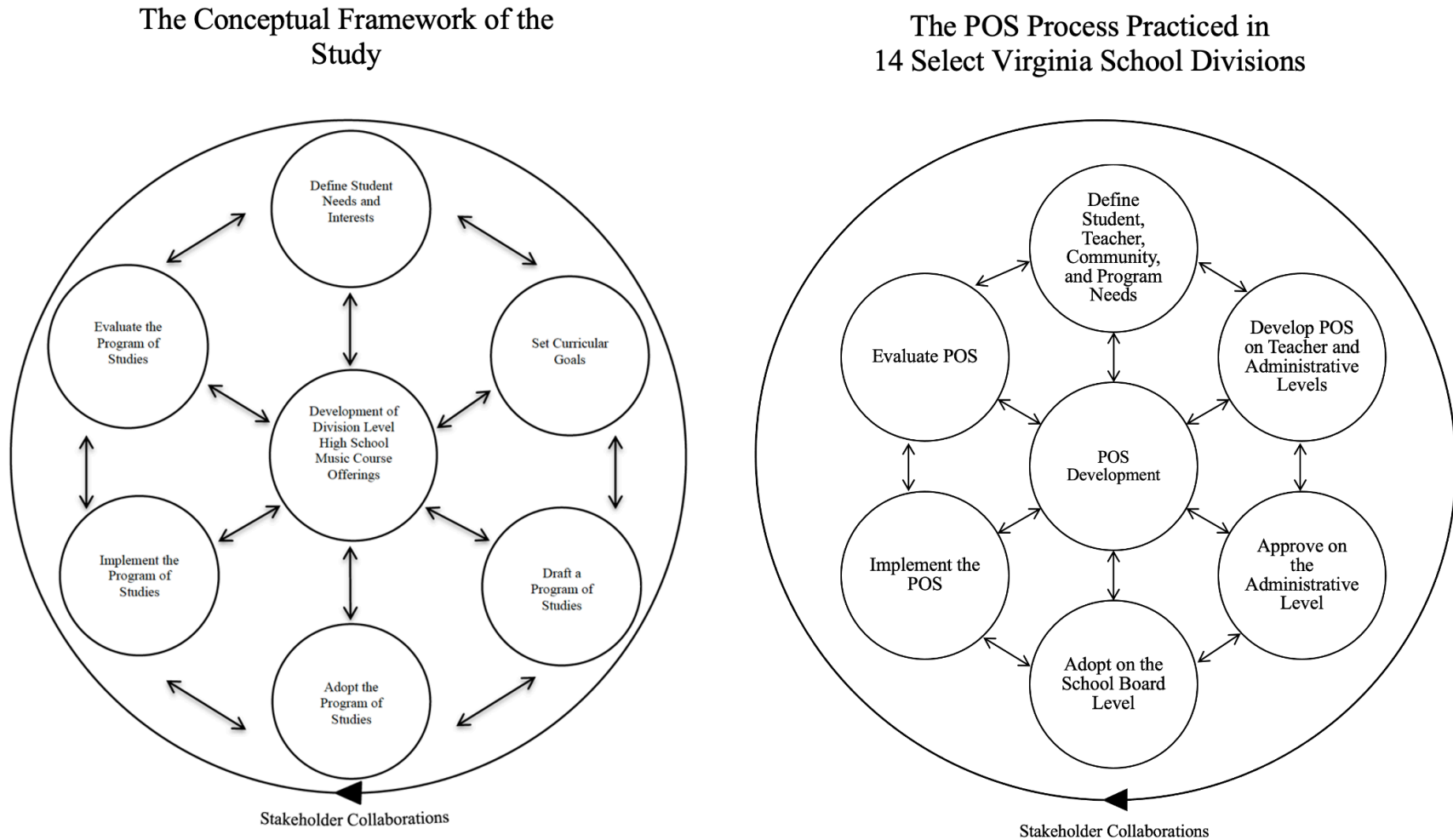
The qual analysis unveiled that high school music courses offered in Virginia public school divisions were courses that work for particular school divisions and have been developed gradually and collaboratively, based on current needs of students, teachers, programs, and communities. The POS development processes in these 14 Virginia school divisions were similar to the stages of the conceptual framework of the study based on the notion of blending formal and informal curriculum development approach (Hewitt, 2006; Ornstein & Hunkins, 2015).

Formal POS development processes in the participants' school divisions resembled the six-step educational policy process defined by F. C. Fowler (2013): (a) policy definition; (b) agenda setting; (c) policy formulation; (d) policy adaptation; (e) policy implementation; and (f) policy evaluation. Additionally, various informal stakeholder collaborations accompanied formal

POS development stages. In POS definition, the participants used various formal and informal ways of involving multiple stakeholders in considering needs; POS development examples emerged from all the interviews were: collaborations among teachers, parents, communities, students, and administrators. POS agenda and goals were established in teacher and administrator collaborations. The participants' POSs were formulated in drafts developed collaboratively by teachers and school and central office administrators and finalized on administrative levels in committee discussions. POSs were adopted by school boards. Program implementation was accompanied by continual administrative evaluation through both formal and data analyses and informal stakeholder conversations. Figure 285 depicts a comparison of the study conceptual framework and the POS development process practiced in the participants' school divisions. The directionality of arrows in both models suggest that POS development processes were not linear and sequential; calls for redesign and change could be initiated on any step of the process.

Figure 285

A Comparison of the Conceptual Framework of the Study and Program of Studies Development Practiced in 14 Select Virginia School Divisions



Blending Formal and Informal POS Development

Various formal and informal curriculum development approaches discussed in educational research were traced in the participants' POS development practices.

Continual Survey of POS Needs. The participants continually monitored POS development needs using a variety of formal and informal approaches. Tyler's (2013) Curriculum Development Model and Taba's (1962) Order for Development of a Dynamic Curriculum, both formal approaches, suggested examining curricular needs via observations of student learning, student and family interviews, examinations of needs of society, and subject matter nature and trends. The participants surveyed student educational and socio-emotional needs via formal analyses of the state Music SOLs and formally surveyed student interest via enrollment and student questionnaires. Teacher qualifications and interests were formally examined to determine what could be offered. The participants established formal community liaisons and send formal surveys to survey community expectations. Informal POS development approaches practiced by the participants resembled Eisner's (2002) Curriculum Diffusion Concept based on the notion that curriculum development happens on all levels, as students and teachers in each building have unique needs and priorities and that innovations enter school programs as needed. The participants continually surveyed community, student, program, and teacher needs by fostering informal conversations among students, teachers, counselors, and administrators.

Formal and Informal POS Development. The participants approached POS development by blending both formal and informal approaches. The Gordon Taylor Model of Curriculum System Development, the Goal-Based Curriculum Planning Model, and the Hierarchical Model of Levels and Sectors of Curriculum Planning, all formal models, proposed

assigning specific curriculum development responsibilities to each level of education hierarchy: developing curricula based on state standards, implementing on the classroom level, adopting on the higher hierarchy levels, implementing in the classroom, and conducting formal administrative evaluations (Glatthorn et al., 2019; W. R. Gordon et al., 2019; Oliva, 2009). All these steps were evident in all the participants' POS development practices: POSs were formally developed based on the state Music SOLs, course implementation was formally evaluated by building-level administrators, and POS changes had to be formally approved by building and central office administrators and adopted as formal policies on the school board level.

At the same time, the participants continually utilized the Practical Curriculum Development model of Elliott and Silverman (2015) who called for making curricular changes based on real needs of teachers and students. The participants encouraged teacher innovation in expansion of existing course curricula; and, while teachers were officially evaluated via division-level formal evaluations, the participants encouraged teachers to express needs, questions, and concerns in informal conversations with administrators. Macdonald's (1971) Responsible Curriculum Development Model, which suggested that curriculum is continually developed on multiple stakeholder levels and shaped in stakeholder integrations, could be traced among the participants approaches to POS adaption. For example, while school board members officially decided on POS approvals, they were continually participating in informal conversations with administrators and built informal community liaisons.

The participants' approaches to POS development also resembled Sowell's (2015) Concerns-Based Adoption Model, an informal curriculum development model that recognized the notion that change is a collaborative process and suggested facilitating change using three parameters: (a) configuring major components of an innovative practice; (b) gathering feedback

from implementers of this practice; and (c) determining level of engagement of implementers with the program and selecting appropriate interventions. For example, all the participants mentioned that scheduling was one of the major POS development barriers; interventions chosen to address scheduling issues included: involving teachers in informal POS development, encouraging teachers to survey students, and designing flexible course offerings, extra-curricular practices, and independent studies that fit student needs.

Sowell (2005) suggested that characteristics of particular societies must be considered by curriculum development, that decisions made at the building level could only be effective if they accommodated needs of communities that schools served to, that building level administrators should be actively participating in curriculum development decisions, and that this site-based curriculum decision making could work well in both formal and informal curriculum development approaches. Community influence historically played an important role in development of music programs in Virginia. In his Second Annual Report 150 years ago, the first Virginia's Superintendent of Public Instruction Ruffner (1872) suggested that community should make decisions on what to offer. This respect for community expectations existed in the participants' school divisions; according to the participants, community opinion was an important POS development consideration. Analyses revealed that this was not the central-office-developed community surveys but continual informal stakeholder input that initiated changes to the participants' POSs.

Therefore, decision-making involved in the participants' POS development was shared rather than unilateral and hierarchical (Hoy & Tarter, 2008). Collaborative efforts of teachers, principals, and central office administrators played key roles in the POS development. All the participants' school divisions blended formal and informal approaches to POS development. All

the participants formally referred to the state Music SOLs when deciding what courses to offer, stayed attuned to informal stakeholder opinions, and developed POSs that fulfilled current needs of students, teachers, and communities.

Demographics and Course Prevalence Patterns

The second major finding of this study was that Virginia larger and more racially/ethnically diverse city and suburban school divisions were likely to offer more variety of high school music courses as compared to rural and town school divisions because larger school divisions could employ more teachers, and more teachers meant more teacher endorsements, qualifications, interests, and courses that served more students. The QUAN analysis results supporting this finding are shown in Figure 286.

Figure 286

The QUAN Analysis Results Confirming Impacts of Enrollment, Student Race/Ethnicity, and Locality on POS Development

Course Types	Outcomes of Logistic Regressions	Enrollment	Student Race/Ethnicity	Locality
Band	Nonsignificant	Larger school divisions are likely to offer Intermediate Band.	School divisions offering Band enroll more Asian, more Hispanic, less Multiple Races and less Native Hawaiian students.	Suburbs and cities offer significantly more levels of Band than towns. Cities and rural areas offer Intermediate Band significantly more frequently than expected. Towns offer Advanced Band significantly less frequently than expected.
Chorus	Moderate association. School divisions with more low SES students are less likely to offer Chorus.	Larger school divisions are likely to offer Chorus.	School divisions offering Chorus enroll more Asian and Hispanic and less American Indian and Black students.	Suburbs offer significantly more levels of Chorus than town school divisions. Cities offer Chorus significantly more frequently than expected.
Composition	Nonsignificant	No impact	No impact	Town school divisions do not offer Composition.
Guitar	Moderate association. Larger school divisions are likely to offer Guitar.	Larger school divisions are likely to offer Guitar.	School divisions offering Guitar enroll more Asian, Hispanic and Multiple Races and less White students.	Guitar is more frequently offered in cities and suburbs than in rural areas and towns.
IB Music	Moderate association. Larger school divisions that enroll less American Indian students offer IB Music.	Larger school divisions are likely to offer IB Music.	School divisions offering IB Music enroll more Asian and Hispanic and less White students.	Rural areas offer significantly less levels of IB Music than suburbs. Towns do not offer IB Music.
Music Appreciation	Weak association. School divisions with larger LCIs are less likely to offer Music Appreciation.	Larger school divisions are likely to offer Music Appreciation.	School divisions offering Music Appreciation enroll more Native Hawaiian students.	No impact
Music Technology	Moderate association. Larger school divisions are more likely to offer Music Technology.	Larger school divisions are likely to offer Music Technology.	School divisions with more Asian and Hispanic and less White students are likely to offer Music Technology.	25% of cities, 7.8% of rural areas, 16.7% of suburbs, and 14% of towns offer Music Technology. Towns do not offer Music Technology II.
Music Theory	Moderate association. Larger school divisions are likely to offer Music Theory.	Larger school divisions are likely to offer Music Theory.	School divisions offering Music Theory enroll more Asian, Hispanic, and Native Hawaiian students.	Music Theory is more frequently offered in cities and suburbs than in rural areas. Towns do not offer Music Theory II.
Orchestra	Moderate association. Larger school divisions are likely to offer Orchestra.	Larger school divisions are likely to offer Orchestra.	School divisions offering Orchestra enroll more Asian, Black, and Hispanic and less White students.	Likely to be offered in Virginia cities and suburbs than in rural areas and towns.
Piano	Nonsignificant	Larger school divisions are likely to offer Piano.	School divisions offering Piano enroll more Asian and Hispanic students.	More likely to be offered in cities and suburbs than in towns and rural areas. Towns do not offer Piano III and Piano IV.

Note. IB refers to International Baccalaureate. LCI refers to local composite index. POS refers to program of studies. QUAN refers to quantitative.

Such inequalities are not new to Virginia. More than 100 years ago, collected taxes were insufficient to support public education in rural schools (Buchanan, 1888; Stearnes, 1916). In the early 1900s, music in rural Virginia schools was taught by general music teachers, and families had to pay for instrumental instruction (Eggleston, 1908; Humphreys, 1989, 2017). In the 1920s, high school music was required as an elective subject in only in Virginia city and urbanized high schools and rural school divisions were relieved from offering high school elective courses (Hart, 2021). In the 1930s, Virginia high school children who lived in rural and remote areas were still deprived from high school music (S. B. Hall, 1932). This study revealed that in the 2020s, still, smaller Virginia school divisions located in rural areas and towns were at a disadvantage as compared to larger cities and suburbs. According to the participants, budget limitations and teacher shortages were the biggest barriers to POS expansion.

Budgetary Constraints. All the study participants considered budget limitations as one of major obstacles to developing and adding new high school music courses. The reason was that it was very expensive to hire new teachers to teach new courses, as teacher salaries constituted the major spending that could take over 90% of a school division budget (York County School Division, 2019). And there was not much that division-level and building-level administrators could do to grow school budgets. Virginia school divisions were primarily financed by state, federal, and local governments (F. C. Fowler, 2013; W. R. Gordon et al., 2019; VDOE School Quality Profiles, n.d.). The VDOE (2022b, 2022e) determined a school division's ability to pay for education listed in the Standards of Quality by calculating an LCI for every school division and used LCIs to distribute state funding to each school divisions. These revenue categories were the only permanent solutions for financing teacher salaries and instruction. Fiduciary funds that could be received from donations, fundraisers, or income from site-based sales or services could

not finance teacher salaries or any lasting instructional needs (Sorenson & Goldsmith, 2018). There were nonprofit associations in the US that focused on financial help to school music programs. For example, The Mr. Holland's Opus Foundation (2022) and the Save the Music Foundation (2019) provide instrument and equipment grants to schools. However, such organizations provided one-time support that could not be extended to funding teacher salaries.

Federal grants most recently available for Virginia school divisions as well could not become permanent financial solutions for establishing new high school music programs. The 2015 ESSA aimed for opening new opportunities for high school music education, alleviating stringent testing requirements, focusing on well-rounded child education, articulating music, in row with reading and math, as an important subject, and discouraging removal students from fine arts classrooms for remediation (NAfME, 2015). However, according to the participants, the bill did not yet materialize in the form of financial assistance for all students. The participants could only use the ESSA fund to pay for select music expenses, such as assessment fees, instruments, auditorium repairs, and after school extra-curricular activities for low SES students. The federal 2021 Elementary and Secondary School Education Relief Fund (ESSER), a one-time financial assistance aiming on addressing the impact of the COVID-19 pandemic on student learning loss, was reported as used by music educators around the country to mostly purchase instructional materials (Give a Note Foundation, 2021; NAfME, n.d.-c). Additionally, according to all 14 participants, the COVID-19 pandemic did not affect their school divisions' POSs; what was offered prior to the pandemic was still offered in the 2021-2022 school year.

Therefore, the main source of high school music program financing in Virginia was the division-level allocation. When it came to offering a rich course offering high school music POS, smaller rural and town Virginia school divisions were at a disadvantage as compared to larger

school divisions located in cities and suburbs. A smaller school division's budget allowed to hire only so many teachers who would have only so many qualifications to offer only so many courses. Plus, it was challenging to fit a wide variety of music courses and other electives in schedules of smaller number of students.

Teacher Shortages. Music teacher shortage was another major obstacle to building rich-in-course variety high school music programs in Virginia public schools. Music teacher shortage was not new to the state, as it long persisted as a burning nationwide concern. In 1953, the Research Divisions of the National Education Association reported a growing shortage of qualified music teachers and lack of well-developed music programs nationwide (Maul, 1953). In 2003, the Music Educators National Conference President reported that 11,000 new teachers were needed nationwide to replace leaving educators and only 5,500 new teachers were entering jobs (Hill, 2003). As all 14 participants of this study confirmed, in the school year of 2021-2022, there was still a shortage of certified public music teachers in Virginia.

Throughout the history of music education in Virginia, the VDOE, higher education institutions, and school divisions have made attempts to confront teacher shortage. The VDOE has established policies and partnerships that attempted to alleviate music teacher shortage. In the 1930s, when it was found that Virginia children living in rural and remote areas were deprived from music education, the VDOE designated funds to support music education for children at such a disadvantage (S. B. Hall, 1932, 1937, 1938). In 1948, the VDOE partnered with Radford University to address music program development in rural areas (G. T. Miller, 1949). In the 1990s, Gregory (1995) surveyed 155 school divisions nationwide on K-12/university teacher preparation program collaborations, and 41 respondents being from the Southeastern Region of the US; the study revealed that the participating universities conducted such collaborations

mostly for: providing practicum experiences to college students, recruiting, assisting with music education programs, helping with music exhibitions, presenting, organizing joint performances, running music camps, private teaching, and guest conducting. A 21st century example of successful US school/university partnership was described by Soto et al. (2009); collaborative efforts of university professors, graduate students, and a rural school district administrators and teachers led to establishment of a teacher preparation residency program for college undergraduates who were engaged in seven-day residency programs that allowed to work with English language learners from underrepresented communities. However, my Internet and educational database searches did not result in any research studies on music education rural or any kind of school division/university music education partnerships in Virginia.

Music teacher shortages were also attempted to alleviate through creating additional options for teacher preparation. One example was the National String Project Consortium (2022), a non-profit organization created in 1998. The project allocated funding to universities to provide local communities free of charge music classes taught by undergraduate students under master teacher supervision. This grant opportunity was taken only by one higher education institution in the state, Virginia Polytechnic Institute and State University (2022b) established the Virginia Tech String Project in 2007. Another example was the Kansas State University's (2021) 3-year curriculum for the Music Teacher Apprenticeship Program designed for high Grades 10-12 students interested in becoming music teachers; such programs were implemented by high school music teachers in the state (Burrack, 2009). Virginia offered a similar initiative, the Virginia Teachers for Tomorrow program, developed by the VDOE for Grades 10-12 students who were interested in exploring careers in education (Virtual Virginia, n.d.). In this program, public school teachers introduced students to careers in education through observations, readings,

reflections, and practicum experiences (Fairfax County Public Schools, 2022; Roanoke Technical Education Center, 2022). There was no current published evaluation of the efficacy of the Virginia Teachers for Tomorrow program available on the Internet.

Most recently, 36 Virginia colleges and universities had accredited teacher preparation programs (VDOE, 2022g). After examining websites of all the 36 colleges and universities, I found that only 19 of them have music education programs leading to licensure: Bridgewater College (n.d.), Christopher Newport University (n.d.), Eastern Mennonite University (2022), George Mason University (2022), Hampton University (2022), James Madison University (2022), Liberty University (2022), Longwood University (n.d.), Norfolk State University (n.d.), Old Dominion University (n.d.), Radford University (2022), Randolph-Macon College (n.d.), Shenandoah University (2022), University of Lynchburg (n.d.), University of Mary Washington (2022), Virginia Commonwealth University (2021), Virginia Polytechnic Institute and State University (2022a), and Washington and Lee University (2020). In addition to teacher preparation programs, there was an alternative route to Virginia teaching license: five Virginia colleges offered career switcher programs that recruit and train future teachers (VDOE, 2022a). However, only three of these universities, Old Dominion University, Shenandoah University, and Virginia Commonwealth University, had music education departments that provided music education training necessary to obtain a teaching license with a music endorsement.

To be able to obtain a teaching license to work in a Virginia public school division, graduates of these universities and career switcher programs must pass the Praxis II test Music: Content Knowledge (5113), designed to assess content knowledge of both, vocal and instrumental music (ETS, 2022). However, even recently, most college undergraduate music education students majored in and planned to teach either vocal or instrumental music; such lack

of preparation for being certified in both areas caused high rates of failure on this Praxis test and only exacerbated teacher shortages in Virginia (N. Klein, personal communication, December 19, 2022). This study found that in Virginia, the statewide enrollment average for public school divisions was 9,560 and that in 104 out of 132 school divisions, enrollments were 184-9,175. The study also found that in Virginia, out of 132 school divisions, 77 are rural and 20 are town. Then, three questions arose. First, did 19 music education programs and 5 music education career switcher programs offered in Virginia higher education institutions produce graduates so that they could work only in a few larger city and suburban school divisions? Second, were Virginia undergraduate music education graduates and career switchers adequately prepared to real life challenges of small and rural school music teachers? Isbell (2005) enumerated multiple essential qualities and qualifications of rural music teachers; among these are: teaching in multiple areas of music (not only vocal and instrumental), teaching K-12, teaching multi-generational ensembles that combine various instruments and voices, rearranging music to fit ensemble needs, and advocating for their programs in the school and in the community. And third, did 21st century Virginia music teacher preparation program education students and graduates majoring in either vocal or instrumental music plan on teaching only in a few city and suburban school divisions that could afford hiring multiple teachers with limited qualifications?

Therefore, Virginia public school divisions' recruiting field was limited to attracting applicants from music education programs and searching for teachers in other school divisions. And Virginia smaller rural and town school divisions were at a disadvantage as compared to larger cities and suburbs. As study participants who worked in small rural school divisions expressed, there were only so many students in a small rural high school, plus, school budgets

allowed to hire only so many teachers. Thus, current teacher shortage made it even more difficult for smaller rural and town Virginia school divisions to find teachers with multiple endorsements.

The Roles of the Principal and the Central Office Music Administrator in POS Development

The third major finding of the study was that this was not a Virginia school division's capability to finance public education and this was not how many low SES students were enrolled in a school division that affected what high school music courses were offered. These were the principal and the central office music administrator who made the difference by how they set forth POS development processes, specifically, by how they structured POS development collaborations.

The QUAN analysis results revealed that it was not possible to conclude that LCI and low student SES influenced offering of all high school music courses. Whereas the logistic regressions results showed that the investigated demographics jointly significantly influenced offering seven courses (all but Band, Composition, and Piano), the correlation analyses performed to answer Research Question 1 revealed that only school divisions offering IB Music were more capable of financing public education and enroll less low SES students. Neither low student SES or LCI influenced offering Band, Composition, Music Technology, and Piano. LCI only associated with offering Music Appreciation (negative correlation) and Orchestra, while low student SES was associated with offering only Chorus, Guitar, and Music Theory (see Figure 287).

Figure 287

The QUAN Analysis Results Showing Impacts of LCI and Low Student SES on POS Development

Course Types	Outcomes of Logistic Regressions	LCI	Low Student SES
Band	Nonsignificant	LCI does not associated with offering Band.	Low student SES does not associate with offering Band.
Chorus	Moderate association. School divisions with more low SES students are less likely to offer Chorus.	LCI does not associate with offering Chorus.	School divisions with more low SES students are less likely to offer Chorus.
Composition	Nonsignificant	LCI does not associate with offering Composition.	Low student SES does not associate with offering Composition.
Guitar	Moderate association. Larger school divisions are likely to offer Guitar.	LCI does not associate with offering Guitar.	School divisions offering Guitar enroll less low SES students.
IB Music	Moderate association. Larger school divisions that enroll less American Indian students offer IB Music.	School divisions offering IB Music are more capable of financing public education.	School divisions offering IB Music enroll less low SES students.
Music Appreciation	Weak association. School divisions with larger LCIs are less likely to offer Music Appreciation.	School divisions with lesser ability to finance public education are likely to offer Music Appreciation.	Low student SES does not associate with offering Music Appreciation.
Music Technology	Moderate association. Larger school divisions are more likely to offer Music Technology.	LCI does not associate with offering Music Technology.	Low student SES does not associate with offering Music Technology.
Music Theory	Moderate association. Larger school divisions are likely to offer Music Theory.	LCI does not associate with offering Music Theory.	School divisions with less low SES students are likely to offer Music Theory.
Orchestra	Moderate association. Larger school divisions are likely to offer Orchestra.	School divisions offering Orchestra are more capable of financing public education.	Low student SES does not associate with offering Orchestra.
Piano	Nonsignificant	LCI does not associate with offering Piano.	Low student SES does not associate with offering Piano.

Note. IB refers to International Baccalaureate. LCI refers to local composite index. POS refers to program of studies. SES refers to socio-economic status.

There was not much research available on how administrators affect POS development. Major's (2013) case study was the only study on how school and central office administrator actions could impact music programs: effective decision making, exploration of alternative financing methods for music programs, cutting costs of other programs, prioritizing expenses, building school spirit by recognizing effective teaching practices, and music advocacy efforts of Michigan's Lekbery School District administrators saved music programs from cuts during the early 2000s economic recession. These are the kinds of things that Virginia district level administrators and school principals would do to change the current situation.

As discussed earlier, the qual analysis established that the participants utilized a variety of formal and informal approaches that led to establishing POSs that worked for their school divisions. All the participants had at least somewhat regular and defined formal POS development process, and other formal and informal curriculum approaches defined earlier were used. In general, participants approached the POS development from the learning leader perspective that suggested that school leaders should not be reserved to administrative and hierarchical tasks but should: learn along with organizations, instill the culture of openness and nonjudgment, promote ownership in innovation, provide opportunities for collaborative learning, and practice shared decision-making (DiPaola & Wagner, 2018; Fullan, 2001). However, stakeholder engagement approaches differed among the participants, specifically, different in terms of the extent of teacher engagement in POS development.

Multiple decision-making models were published to assist school leaders in selecting appropriate ways for stakeholder engagement. For example, Hoy and Tarter's (2008) shared decision-making model suggested school leaders to consider stakeholder expertise, decide if stakeholders could participate in decision making, determine the extent of stakeholder

involvement, structure outcomes of collaborations from consensus to unilateral, and choose administrative behaviors. Seemingly, the teacher as a stakeholder possessing expertise should be involved in POS development and the administrator should be acting as an integrator of teacher opinions. Still, I could observe active teacher engagement in POS development only in half of the participants' practices. While seven participants encouraged teacher experimentation in creating new courses and trusted and embraced diverse teacher qualifications and interests, seven participants were more cautious with innovations and were more concerned about course oversaturation and offering same courses in all high schools.

All the participants' school divisions had defined formal POS development processes, but timelines of these processes differed. For example, an administrator of one large suburban school division offering one of the richest high school music POSs in the state (Participant 14) acted as an integrator of stakeholder consensus and involved teachers and school administrators in POS development deliberations through entire school year. In contrast, two town school division administrators (Participants 3 and 4) acted as educators in supervisory roles, as all POS decisions for the next year were made by administrators in the fall.

Contrasting approaches to shared decision making were also evident in cases of two small rural school division administrators. One small rural school division administrator (Participant 5) considered teacher personal stake in POS development as marginal, occasionally solicited teacher opinions, but mostly stayed neutral to encouraging teacher development of new courses. Another small rural school division administrator (Participant 6) treated the same situation as democratic, embraced the talents and skills of the music teacher, acted as an integrator of professional opinions of teachers and counselors, sought consensus, and involved

the teacher in decision making on course offering by encouraging providing informal independent study options for students.

The concepts of shared leadership, learning leadership, and shared vision, widely discussed in research on educational administration, suggested that organizational commitment does not originate from compliance, that truly shared organizational visions are developed daily, in collaborative searches for solutions to daily obstacles, that educational leaders must act as facilitators of collaborative learning, and that school leaders must trust teacher expertise where it needs to be trusted and structure collaborative learning in ways that allow everyone to become a leader (DiPaola & Wagner, 2018; Fullan, 2001; Senge, 2006; Senge et al., 2012; Tschannen-Moran, 2014). While the qual analysis revealed the differences in the participants' considerations regarding teacher involvement in POS development, none of the administrators practiced strictly hierarchical and bureaucratic approach to deciding what high school music courses should be offered. Additionally, this study was designed to survey current practices and not to identify and classify characteristics of successful POS development approaches. Certainly, the participants who practiced more conservative attitude toward teacher role in POS development had other reasons for such choices.

Therefore, it was the principal and the central music administrator who set the tone and the pace for POS development and made the difference by encouraging, structuring, and facilitating stakeholder collaborations. And in the most recent situation in Virginia public schools, where only Band and Chorus were offered at significantly high rates and all Orchestra, Piano, IB Music, and Music Technology courses were offered at significantly low rates and where smaller rural and town school divisions were at a disadvantage, the time for change is now. The benefits of high school music education were long research proven and broad-based,

and no high school child in Virginia should be deprived from quality music education, and no Virginia high school should be left without a quality music education program.

Implications

This study surveyed courses offered in Virginia school divisions, impacts of school divisions' select demographics on offering these courses, and processes involved in POS development in select Virginia school divisions. The study revealed multiple disproportionalities that I hope could lead to conversations among policymakers and practitioners: (a) only two courses (Band and Chorus) were offered across Virginia at significantly high rates; (b) seven courses (Band, Chorus, Guitar, IB Music, Music Theory, Orchestra, and Piano) were offered disproportionately across Virginia localities, with smaller school divisions and school divisions located in rural areas and in towns being at a disadvantage because of budget limitations and teacher shortages; and (c) how administrators structured stakeholder involvement in POS development determined what was offered in a school division. Next, I will discuss potential implications of these findings to policy, practice, and research.

Policy

This study revealed that because of financial deficits and teacher shortages, smaller school divisions in Virginia and school divisions located in towns and rural areas are at a disadvantage when it comes to high school music education. Other than school division allocations, there were no other permanent financial supports for financing of high school music programs in the state. As shared by the participants, the ESSA funds were used to pay for only select instructional needs, such as VMEA assessments and extra-curricular activities for low SES students. A school division could not use a private or a non-profit organization's donation to permanently fund teacher salaries. Therefore, there is the time to address financial struggles of

smaller rural and town school divisions. Virginia lawmakers, members of the House of Delegates Education Committee and members of the Senate Education and Health committee should further investigate solutions and develop financial incentive programs for small and remote school divisions (Virginia General Assembly, 2022; Virginia's Legislative Information System, n.d.-d). For example, multiple federal legislations recently authorized the U.S. Department of Education (n.d.) to provide several financial assistance programs to small rural school divisions. One such program, the Small, Rural School Achievement Program, could disburse funds to small rural districts to purchase instruments for school band and orchestra programs (U.S. Department of Education, 2022). It is time for this type of assistance programs in Virginia.

Multiple quantitative analyses were performed to examine whether a school division's LCI is associated with what high school music courses are offered division wide. Significant correlations results were only weak and positive. Significant logistic regressions showed that while LCI combined with the rest of the predictor variables impacted offering seven course types, LCI emerged as a negative predictor for offering Music Appreciation, a course offered in about a half of Virginia school divisions. These findings showed that other measures should be considered to more accurately determine a school division's ability to finance public education. Baugh et al. (2015) as well explored how accurately an LCI predicts a true ability of a school division to finance education and found that although generally LCI did its job with predicting such an ability, other measures of other financial capabilities of school districts and not only the three sources of local revenue factored in LCI calculations, property value weighed at 50%, adjusted gross income weighed at 40%, and local sale tax weighed at 10%, should be considered (VDOE, 2022b, 2022e).

According to the study results, teacher shortage negatively impacted Virginia high school music programs. There must be a policy solution to this problem. For example, the Idaho State Board of Education (n.d.) developed the Rural and Underserved Educator Incentive program that provided benefits to educators working in rural and/or underserved districts: repayment of educational loans, financing advanced degrees, and covering other educational expenses. VDOE could partner with higher education institutions to develop similar educational incentive programs for teachers willing to work in rural, town, and smaller Virginia school divisions. Additionally, the VDOE could finance a study on music teacher shortage in the state and examine multiple sides of the issues: teacher perspectives, funding options, and ways to engage stakeholders in resolving the situation. The 2020 report of the Economic Policy Institute suggested studying multiple factors causing teacher shortage, coordinating efforts of multiple stakeholders in addressing the issue, increasing educational financing, and trusting teacher professionalism (García & Weiss, 2020).

Another implication of this study was a call for changes to current division-level policy practices. Virginia school administrators should reconsider processes involved in budget planning to give high school music education programs more considerations and to invite music educators and administrators to budget conversations. The Sorenson-Goldsmith Integrated Budget Model could serve as an excellent starting point; the model suggested approaching budget development collaboratively, by creating a school improvement committee (and including a music teacher on that committee) and engaging this committee in ongoing discussions and evaluations of stakeholders to involve, data, priorities, goals, and implementation (Sorenson & Goldsmith, 2018).

Practice

The study results could be beneficial for division-level and state-level music education administrators as a source for a complete picture for high school education in Virginia and could also serve as a point of discussion in the VDOE Fine Arts Steering Committee meetings (VDOE, 2022c). Music teachers and music educators' associations of the national level (NAfME) and on the state level (VMEA) could use the results of this study as an advocacy source, to bring more attention from legislators and administrators to high school music education. Additionally, music teachers could utilize effective informal curriculum development processes discussed by the participants, such as enriching classroom curricula with valuable musical activities, offering more extra-curricular activities that would lead to POS growth and development, engaging parents and community in helping to enrich high school students' music education experiences, and continuing collegial conversations on improving high school music programs.

The study revealed that smaller school divisions and school divisions located in rural areas and in towns employ less high school music teachers; therefore, to provide a variety of music education experiences to high school children, it was desirable for these school divisions to employ teachers with both vocal and instrumental music endorsements. Only 12% of Virginia school divisions are city and only 14% are suburban; thus, shortages of qualified teachers in 74% of school divisions in the state are more acute. This is the time for the VDOE to partner with Virginia colleges and establish financial supports for music teachers willing to obtain multiple music education endorsements and work in rural and remote school divisions. Virginia higher education institutions should also work on alleviating music teacher shortage by partnering with school divisions in developing programs that attract potential teacher candidates to music teacher

preparation programs. Additionally, Virginia future music teachers could consider obtaining dual vocal and instrumental music teacher licensure certifications.

Multiple successful POS development practices were shared by the study participants; particularly, clearly defined formal POS development processes combined with successful informal POS development practices. Shared by the participants successful practices of enriching basic music courses with additional learning experiences, involving teachers in POS development, organizing departmental collaborations, and building community partnerships could certainly be successfully replicated or at least considered in school divisions across the state and nationwide. As the study revealed, building and the central office administrators played decisive roles in the POS development game: they decided on who, when, and how to involve in POS development. Successful POS development practices described in this study should inspire some changes to current POS development game practices of principals and central office administrators responsible for music education.

Recommendations for Future Research

Multiple research studies have examined the status of music education in the US on the state level. For example, Klein (1986) traced historical roots of music education in Kentucky, established what courses were offered in 47% of Kentucky school districts in 1984, and described curricula and textbooks used by these districts. Surveying 234 music educators, D. S. Miller et al. (2021) examined instrumental music course offerings across North Carolina, demographics of instrumental music teachers in the state, teacher responsibilities, and funding. This study comprehensively surveyed the overall status of high school music education in Virginia and division-level approaches to curriculum development that led to the current music programs in select school divisions. Now, more in-depth qualitative research studies

(phenomenological, historical, or case studies) on how smaller and remote school divisions in Virginia or nationwide are financed and operate and what challenges to administering music programs they encounter could provide more insight on the current situation and determine what could be done to help improve quality of high school music education in these school divisions. What high school enrollment size is enough for offering comprehensive music programs? Such studies could also be conducted on high school music programs that are more comprehensive, to identify successful POS development practices. Additionally, the design and the instrumentation used in this study could be replicated in an examination of secondary school music education programs in another state.

While formal and informal approaches to POS development were blended in all the participants' school divisions, some administrators encouraged POS development more than others. Respecting teacher autonomy and trusting teacher expertise was an important topic of discussion in research on school administration (Tschannen-Moran, 2014). The topic of administrative approaches to music POS development and the topic of teacher involvement in music POS development could be further explored in future research studies.

This study certainly calls for further examination of music teacher shortage in Virginia: the reasons for this shortage, why teachers leave, and why Virginia teacher preparation programs do not produce enough graduates to fill open positions. The topic of music teacher shortage in the US has already received attention. Scheib (2004) surveyed eight instrumental music teachers who were leaving the profession to identify their reasons for leaving and established that overworking, overburdening with large classes, low pay, low respect for teacher as a profession, and lack of attention for school music programs from school administrators were the explanations. Linderman (2004) developed and presented to the National Association of School

of Music a set of strategies for higher education institutions to help alleviate teacher shortage; among the recommendations were reexamination of teacher salaries, doubling the number of college music education students, advocating for music education, making music education careers more accessible, and more. A scientific investigation that uses appropriate research instruments is needed to establish whether there is something specific and unique to teacher shortage in Virginia.

Conclusion

The importance of high school music education must not be underestimated. This study attempted to examine the status of high school music education in Virginia, where music education is not required by the state law. The investigation uncovered multiple disparities in course offerings and drastic differences in administrative POS development approaches across the state. According to the study results, Band and Chorus were the most prevalent high school music courses in Virginia, while everything else was offered as budgets and schedules allowed and as fit perceived and expressed needs of students, teachers, programs, and communities. Additionally, the study found that it was very challenging to offer a rich-in-course-variety high school music program in Virginia, particularly in smaller rural and town school divisions, because of budgetary restrictions, low student enrollment, and shortages of qualified teachers. The study also revealed that building and school division level administrators could make a difference in what courses are offered by exercising effective stakeholder engagement practices. It is my sincere hope that the results of this study are considered in policy conversations and in POS development practices of Virginia school divisions and that quality high school music education becomes available to all children in the state, regardless of a school division's size and locality and student SES and race/ethnicity.

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APPENDIX A

INTERVIEW PROTOCOL

Project: An examination of high school music programs in Virginia: A mixed methods study.

Time of Interview:

Date:

Place:

Interviewer: Natalia Goodloe

Interviewee:

Position Title of Interviewee: Music Supervisor or a Curriculum Development Administrator at _____ School Division.

Interviewee's Responsibilities in the School Division:

Interviewee's Responsibilities in Regard to Secondary Music Curriculum:

Number of Years in the Position:

Education, Training, and/or Experience with Music Education, Including Music Curriculum:

Other Relevant Demographic Information:

The purpose of this study is to examine high school music programs in Virginia public schools through quantitative analyses of division-level high school instructional music programs of studies and 45-minute-long interviews with 12 music supervisors. Thank you for giving your consent to interview by signing the consent form. I already tested my recording devices and will start recording now.

Interview Questions

1. What high school music courses, in terms of type, such as Band or Orchestra, and advancement levels, such as Intermediate, I, II, etc. are offered in your division?
2. Why does your school division offer these types of music courses? Please describe for me the processes by which your current high school music program of studies (music) came into being.
3. How closely do high schools in your division follow your current division-wide program of studies in terms of offering particular music courses? Do all schools in the division offer all courses listed in the division-wide program of studies? Have there been any instances when a course that is not listed in the program of studies was offered in a school building?

4. How frequently does your school division revise the division-wide high school music program of studies? How long is the revision process?
5. In your school division, what is the process for identification of high school student needs when developing high school course offerings, namely with regard to music offerings?
6. In your school division, who is involved in the process of revision of the division-wide high school music program of studies? Please give me specific examples of the ways that stakeholders such as, parents, students, teachers, administrators, community members, etc., involved in making decisions on high school music course offerings. What is their role in a given school year? Please tell me about the time when each type of the stakeholders was involved? If they are not involved, why?
7. What has been the role of music advocacy, efforts that engage teachers, students, parents, musicians, and other stakeholders in justifying the value of music to legislators and to the lay audience, in the division's decisions regarding high school music course offerings in your division? Can you give me specific examples of how administrators, teachers, families, and community members advocated for including particular music courses in the program of studies?
8. What is the role of the 2020 Music SOLs and the 2014 National Standards in the development of high school program of studies for music education? Can you give me an example of how you utilized the State and the National Standards?
9. What latest field development in terms of course offerings, such as technology and multi-cultural music, were incorporated in your high school music program of studies? Can you give me specific examples?
10. In your school division, do you encourage high school music teachers to develop new music courses for students? Can you give me specific examples? If not, why?
11. What other factors influence the development of music courses in your school division? Please give me specific examples.
12. What role does the federal educational legislation ESSA play in your school division's decisions on what high school music courses to offer? Please describe a specific example of changes that came with the ESSA.
13. In your school division, in what manner, how frequently, and by whom are high school music courses evaluated? Please tell me about an example of a decision on whether to offer or not to offer a course resulted from a formal evaluation if there is such an example.
14. What obstacles has your school division encountered to adding, revising, or removing high school music courses to/from the secondary school program of studies? If so, please give specific examples.
15. As a school leader, what decision-making strategies and leadership styles do you consider as helpful when developing the division-wide high school music program of studies?
16. How did your school division's high school program of studies change in the past two years?

17. What changes to the music program of studies do you anticipate in the foreseeable future? Why do you anticipate those? Can you describe for me the process by which the music POS will change in the foreseeable future?

Thank the individual for his cooperation and participation in this interview. Assure him or her that he or she will see the final research product and of the potential for future interviews.

Revised Interview Questions Emailed Ahead of the Interviews

1. What high school music courses, in terms of type, such as Band or Orchestra, and in terms of advancement levels, such as Intermediate, I, II, etc. are offered in your division?
2. Do all schools in the division offer all courses listed in the division-wide program of studies?
3. In your school division, what is the process for revising the division-wide high school music program of studies?
4. In your school division, in what manner, how frequently, and by whom are high school music instructional programs evaluated? Please tell me about an example of a decision on whether to offer or not to offer a course resulting from a formal evaluation if there is such an example.
5. How does your school division survey its students and parents regarding levels of satisfaction with, or growth potential for, the division-wide music program?
6. In your school division, do you encourage high school music teachers to develop new music courses for students? Can you give me specific examples? If not, why?
7. Does your school division incorporate the 2020 Music SOLs and the 2014 National Standards in the development of your high school program of studies for music education? If so, can you give me an example?
8. What role does the federal educational legislation ESSA play in your school division's decisions on what high school music courses to offer? Please describe a specific example of changes that came with the ESSA.
9. What other factors influence the development of music courses in your school division? Please give me specific examples.
10. What obstacles has your school division encountered to adding, revising, or removing high school music courses to/from the secondary school program of studies? If so, please give specific examples.
11. Has your school divisions' high school music program of studies change in the past two years? If so, how?
12. What changes to the music program of studies do you anticipate in the foreseeable future? Why do you anticipate those?

APPENDIX B

RESEARCH PARTICIPATION CONSENT FORM

Study Purpose

This dissertation study, entitled *An Examination of High School Music Course Offerings in Virginia: A Mixed Methods Study*, is exploring the status of high school music education in Virginia.

Why Your Participation is Important

Interviewing school administrators responsible for high school music curriculum will help me to underline successful practices in public music education. This study fulfills one of the requirements for my doctoral degree.

Participants Selection Process

12 public school administrators who are knowledgeable about high school music curriculum development, represent school divisions with various demographic characteristics, and represent typical cases were invited to participate in the study.

Study Timeline

Data collection will last from October to November of 2021. One interview will be conducted with each participant within this time frame. Following each interview and at least once throughout the study, the researcher will check interview transcriptions and interpretations.

What is Asked from You

- One 45-minute interview via phone or a Web-based conferencing tool will be conducted.
- Following your interview, the researcher will email you a summary of the interview interpretations and understandings of what you shared. The researcher will ask for your revisions of the summary, so that your opinion is accurately represented.

Additional Information

- Your participation in this study is voluntary.
- There is no compensation for participation in this study.
- Benefits of your participation in this study could include contribution to the advancement of the field of music education and your own professional growth.
- There are no projected risks that could result from participation in this study.
- Confidentiality of your personal information will be protected to the maximum extent allowable by law.
- Your name and other identifying information will be known only to the researcher through the information that you provide. Neither your name nor any other personally identifying information will be used in any presentation or published work without prior written consent.
- Verbatim transcripts of responses will be kept private.
- Your responses will not be identified with your school division; however, they will be identified with the following demographic characteristics of your school division: approximate racial/ethnic composition, approximate percentage of students on free and reduced lunch, approximate LCI, and the geographic location (as city, town, rural, or suburban).
- The recording of your interview will be erased immediately after the completion of the study.

- You may terminate your participation in this study at any time during the study by simply informing the interviewer of your intention. This action will not be penalized anyhow.
- You may refuse to answer any question(s) during the interview, if you would like.
- Any refusal or termination of your participation in the study will not result in any consequences with The College of William and Mary or your school division.
- The results of the study will be available to you by an email request.

Contact Information

If you have questions or concerns about this study, please contact the researcher Natalia Goodloe at npgoodloe@email.wm.edu, The College of William and Mary, Williamsburg, Virginia (757) 376-2109 or her Dissertation Chair Dr. Christopher Gareis at crgare@wm.edu or (757) 221-2319. If you have additional questions or concerns regarding your rights as a study participant or are dissatisfied at any time with any aspect of this study, you may contact, anonymously if you wish, Dr. Tom Ward at tjward@wm.edu or (757) 221-2358 or Dr. Ray McCoy at (757) 221-2783 or rwmcco@wm.edu, the chairs of The College of William and Mary Committee that supervise the treatment of study participants.

By signing and dating this form electronically using Adobe Acrobat Reader Fill and Sign option that can be found under the Tools tab or drop window, you will indicate your voluntarily agreement to participate in this study and confirm that you are at least 18 years of age.

A copy of this consent form will be emailed to you to keep.

SIGNATURES:

Participant: _____ Date: _____

Researcher: _____ Date: _____

APPENDIX C

TABLE OF SPECIFICATIONS FOR THE INTERVIEW QUESTIONS

Interview Question	Associated Research Question (RQ)	Associated Curriculum Development Approach(es)
What high school music courses, in terms of type, such as Band or Orchestra, and advancement levels, such as Intermediate, I, II, etc. are offered in your division?	RQ 1 RQ 2	Not applicable (N/A)
Why does your school division offer these types of music courses? Please describe for me the processes by which your current high school music program of studies (music) came into being.	RQ 3	Formal Informal
How closely do high schools in your division follow your current division-wide program of studies in terms of offering particular music courses? Do all schools in the division offer all courses listed in the division-wide program of studies? Have there been any instances when a course that is not listed in the program of studies was offered in a school building?	RQ 1 RQ 3	Formal Informal
How frequently does your school division revise the division-wide high school music program of studies? How long is the revision process?	RQ 3	Formal Informal
In your school division, what is the process for identification of high school student needs when developing high school course offerings, namely with regard to music offerings?	RQ 3	Formal Informal
In your school division, who is involved in the process of revision of the division-wide high school music program of studies? Please give me specific examples of the ways that stakeholders such as, parents, students, teachers, administrators, community members, etc., involved in making decisions on high school music course offerings. What is their role in a given school year? Please tell me about the time when each type of the stakeholders was involved? If they are not involved, why?	RQ 3	Formal Informal

**APPENDIX C, TABLE OF SPECIFICATIONS FOR THE INTERVIEW QUESTIONS
(CONTINUED)**

Interview Question	Associated Research Question (RQ)	Associated Curriculum Development Approach(es)
What has been the role of music advocacy, efforts that engage teachers, students, parents, musicians, and other stakeholders in justifying the value of music to legislators and to the lay audience, in the division's decisions regarding high school music course offerings in your division? Can you give me specific examples of how administrators, teachers, families, and community members advocated for including particular music courses in the program of studies?	RQ 3	Formal Informal
What is the role of the 2020 Music SOLs and the 2014 National Standards in the development of high school program of studies for music education? Can you give me an example of how you utilized the State and the National Standards?	RQ 1 RQ 2	Formal
What latest field development in terms of course offerings, such as technology and multi-cultural music, were incorporated in your high school music program of studies? Can you give me specific examples?	RQ 1 RQ 3	Formal Informal
In your school division, do you encourage high school music teachers to develop new music courses for students? Can you give me specific examples? If not, why?	RQ 3	Informal
What other factors influence the development of music courses in your school division? Please give me specific examples.	RQ 3	Formal Informal

**APPENDIX C, TABLE OF SPECIFICATIONS FOR THE INTERVIEW QUESTIONS
(CONTINUED)**

Interview Question	Associated Research Question (RQ)	Associated Curriculum Development Approach(es)
What role does the federal educational legislation ESSA play in your school division's decisions on what high school music courses to offer? Please describe a specific example of changes that came with the ESSA.	RQ 3	Formal Informal
In your school division, in what manner, how frequently, and by whom are high school music courses evaluated? Please tell me about an example of a decision on whether to offer or not to offer a course resulted from a formal evaluation if there is such an example.	RQ 3	Formal
What obstacles has your school division encountered to adding, revising, or removing high school music courses to/from the secondary school program of studies? If so, please give specific examples.	RQ 3	Formal Informal
As a school leader, what decision-making strategies and leadership styles do you consider as helpful when developing the division-wide high school music program of studies?	RQ 3	Formal Informal
How did your school division's high school program of studies change in the past two years?	RQ 1 RQ 2 RQ 3	Formal Informal
What changes to the music program of studies do you anticipate in the foreseeable future? Why do you anticipate those? Can you describe for me the process by which the music POS will change in the foreseeable future?	RQ 1 RQ 2 RQ 3	Formal Informal

APPENDIX D

PROGRAMS OF STUDIES EXAMINED

Division	Programs of Studies Dates and Availability
Accomack County	2021-2022 https://ahs.accomack.k12.va.us/pdf/2021-2022-Course-Offering-Guide.pdf
Albemarle County	2021-2022 https://resources.finalsite.net/images/v1611093654/k12albemarleorg/cotprfatue63uuljasmz/POS2021-22Combined.pdf
Alexandria City	2021-2022 https://acps.cleancatalog.net/high-school-courses
Alleghany County	2019-2020 http://p9cdn4static.sharpschool.com/UserFiles/Servers/Server_9128/File/Guidance/AHS%20Program%20of%20Studies%202019-2020.pdf (or https://docs.google.com/document/d/1jeNQaMmIt5TYkUnoSprKanLwK09D-vG_esb-xHNZUIM/edit)
Amelia County	2021-2022 http://hs.amelia.k12.va.us/UserFiles/Servers/Server_60890/File/WebMaster/For%20Parents/Course%20Offering%20Book%202021-2022%20.pdf
Amherst County	2021-2022 https://p12cdn4static.sharpschool.com/UserFiles/Servers/Server_12380906/File/Administration/Academics/Supervisor%20of%20Assessment%20Support/Program_of_studies_21-22.pdf
Appomattox County	The list of 2021-2022 courses was obtained by phone in October 2021.
Arlington County	2019-2020 https://www.apsva.us/wp-content/uploads/2018/12/HS-PROGRAM-OF-STUDIES-2019-20-FINAL.pdf
Augusta County	Riverheads HS 2021-2022 https://docs.google.com/document/d/1tvNGK3X5zfDOO3SrFwML8TgqZLXIPb5piUbDyjcfwWY/edit Fort Defiance HS 2021-2022 https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/1044160/Course_Guide_and_Graduation_Requirements_Handbook_2021-2022.pdf Buffalo Gap HS 2021-2022 https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/1033910/Course_Guide.pdf Stuarts Draft HS 2021-2022 https://docs.google.com/document/d/1VmbNqe-0WKidlGXiXoJICQHJiENbXeJ-XRWsIoL7J4/edit#bookmark=id.5ehlso2egp5v
Bath County	2021-2022 Bath County HS ^a http://www.bath.k12.va.us/bchs/wp-content/uploads/sites/20/Unorganized/BCHS-Program-of-Study-2020-21.pdf
Bedford County	2021-2022 https://p2cdn4static.sharpschool.com/UserFiles/Servers/Server_1057178/File/Parents_Student_s/POS/2021_2022%20Program%20of%20Studies%20Updated%205-17-21.pdf
Bland County	2021-2022 ^a https://www.bland.k12.va.us/pdf/Program%20of%20Studies%2012032013.pdf
Botetourt County	2021-2022 POS https://p16cdn4static.sharpschool.com/UserFiles/Servers/Server_76767/File/Parents/Resource_s/Registration%20Guide/BCPS%20Program%20of%20Studies%202021-22%20%207.6.21.pdf

APPENDIX D, PROGRAMS OF STUDIES EXAMINED (CONTINUED)

Division	Programs of Studies Dates and Availability
Bristol City	2021-2022 Virginia HS ^a https://1.cdn.edl.io/gM6zdOIIIFdiFfh6rti53UKR3M552kbJHWQFQiYujNSkYyw8L.pdf
Brunswick County	Brunswick HS 2021-2022 ^a https://bhs.brun.k12.va.us/pdf/Course%20Offerings.pdf
Buchanan County	2021-2022 ^a https://drive.google.com/drive/folders/18xzU6Ec1VZDCgc7kdNVY35dIMmD-eUJt
Buckingham County	2020-2021 Buckingham HS https://drive.google.com/file/d/1UJnLH-F8fD54Qmuwf8oojEiqfI4VJ28m/view
Buena Vista City	2019-2020 Parry McCluer HS https://drive.google.com/file/d/1eJA_3HqOfL_-FX0EAOovWj6eL6WvNXok/view
Campbell County	2019-2020 https://drive.google.com/file/d/11v8t0jSBXrkBsMvd0j6cY_Dxstuj7cv1/view?ts=5cd443c0
Caroline County	2021-2022 https://ccpsprogramofstudies.weebly.com/art.html
Carroll County	2021-2022 https://www.ccpd.k12.va.us/en-US/programs-of-studies-9f943b94/secondary-program-of-studies-b22526f9
Charles City County	2019-2021 https://echalk-slate-prod.s3.amazonaws.com/private/groups/74330/resources/c8a58d26-840f-4c3b-91d7-c58e69c1d495?AWSAccessKeyId=AKIAJSZKIBPXGFLSZTYQ&Expires=1877950917&response-cache-control=private%2C%20max-age%3D31536000&response-content-disposition=%3Bfilename%3D%22Charles-City-Public-Schools-Secondary-Program-of-Studies-2019-2021.pdf%22&response-content-type=application%2Fpdf&Signature=YYULx60AuN2qQZ1YshAbHjzxOk%3D
Charlottesville City	2019-2020 http://charlottesvilleschools.org/wp-content/uploads/2019/07/2019-20-Program-of-Study-FINAL-1.pdf
Charlotte County	2021-2022 Randolph-Henry HS https://drive.google.com/file/d/1cMmwnLuNjF03WrgkU-GTQuCNHrugMofL/view
Chesapeake Public Schools	2019-2020 https://cpschools.com/guidance-school-counseling/wp-content/uploads/sites/40/2019/01/HIGH-SCHOOL-CATALOG-adacompliant-2019-2020.pdf
Chesterfield County	2021-2022 https://mychesterfieldschools.com/curriculum/
Clarke County	2021-2022 Clarke County HS https://drive.google.com/file/d/1qjPedzRWHGCTCQb91Oxd8f2XH8dP9MDx/view https://sites.google.com/clarke.k12.va.us/cchs-program-of-studies-2018/fine-arts?authuser=0
Colonial Beach	2021-2022 Colonial Beach HS http://cbschoolshs.sharpschool.net/news/what_s_new/odysseyware_course_catalog
Colonial Heights City	2021-2022 Colonial Heights HS https://drive.google.com/file/d/1iSZBaP-3VFebAXqjxzReookL3--4ndTT/view
Covington City	2021-2022 Covington HS ^a https://chs.covington.k12.va.us/UserFiles/Servers/Server_179053/File/Guidance%20Services/Registration%20Guide/2018-2019%20CHS%20Registration%20Guide.pdf
Craig County	2021-2022 Craig County HS https://sites.google.com/a/craig.k12.va.us/cchs-course-handbook/home/fine-arts
Culpepper County	2021-2022 https://docs.google.com/document/d/1CHFIDmeo9Zm66f03QsmdwAxJP12H6OeTmG4vrrnkTw/edit

APPENDIX D, PROGRAMS OF STUDIES EXAMINED (CONTINUED)

Division	Programs of Studies Dates and Availability
Cumberland County	2019-2020 https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/407688/Program_of_Studies.pdf
Danville City Dickenson County	The list of 2021-2022 courses was obtained by phone in October 2021. 2021-2022 ^a https://www.dcps.k12.va.us/parents_students/academic_planning/course_descriptions-https://cdn5-ss5.sharpschool.com/UserFiles/Servers/Server_5990008/File/Central%20Office/Parents_Stuents/Academic%20Planning/Course_Descriptions%2018-19.pdf
Dinwiddie County	2021-2022 https://hs.dinwiddie.k12.va.us/information/secondary-course-guide/#MUSIC
Essex County	2021-2022 https://docs.google.com/document/d/1cpV_WL9Lah4MXqYD96mCqY52g0rBkUCqkYcoaA3adsE/edit
Fairfax County	2021-2022 https://insys.fcps.edu/CourseCatOnline/reportPanel/1041/3/0/0/0/1;title=reportPanelSideNav
Falls Church City	2021-2022 Meridian HS https://sites.google.com/fccps.org/mhspos/home
Fauquier County	2021-2022 https://www.fcps1.org/domain/1081
Floyd County	2021-2022 https://www.floyd.k12.va.us/domain/2218
Fluvanna County	2021-2022 Fluvanna County High School http://flucoschoolcounseling.weebly.com/uploads/1/6/6/4/16649960/program_of_studies_21-22.pdf
Franklin City	2021-2022 Franklin HS ^a https://fhs-fcpsva.entest.org/Course%20Offering%20Guide%202020-21%20_1_.pdf
Franklin County	2021-2022 Franklin County HS https://docs.google.com/a/frco.k12.va.us/viewer?a=v&pid=sites&srcid=ZnJby5rMTIudmEudXN8ZmNocy1ndWlkYW5jZXxneDoxZmZmZjQxZDVjYjI1ZmFh
Frederick County	2021-2022 https://www.frederickcountyschoolsva.net/Page/1696
Fredericksburg County	2021-2022 James Monroe HS https://resources.finalsite.net/images/v1589996998/cityschoolscom/rsw9uxvfp4ydnpoivqlf/JMHSCourseCatalog2020-2021.pdf
Galax City	2021-2022 Galax HS https://drive.google.com/file/d/16avCPJcz6_bG1V7HmCw5fBbYApCbJr5B/view
Giles County	2021-2022 Narrows HS https://guidanceatnhs.weebly.com/course-directory.html
Gloucester County	2019-2020 https://gets.gc.k12.va.us/theme/files/Families/Current%20POS%20(1).pdf
Goochland County	2021-2022 Goochland HS https://sites.google.com/a/glnd.k12.va.us/courseguide/benefits/course-registration-guide-1/fine-art-courses
Grayson County	2021-2022 Grayson County HS https://docs.google.com/document/d/1j5FnUoNVI_eZ-17KHLvjksHShLhM4UpQB2C-zbRT7YY/edit
Greene County	2021-2022 William Monroe HS https://docs.google.com/document/d/1nr0EgKw8ZpjLhNyfifXnPqumC9cq5MEb6zqrgUQfr2I/edit

APPENDIX D, PROGRAMS OF STUDIES EXAMINED (CONTINUED)

Division	Programs of Studies Dates and Availability
Greenville County Halifax County Hampton City	High school music course offerings from the 2021-2022 program of studies were available by research request. 2021-2022 Halifax County HS https://www.boardpolicyonline.com/?b=halifaxcounty&s=562103 2019-2020 https://sites.google.com/hampton.k12.va.us/hcscourseofferings/visual-and-performing-arts?authuser=0
Hanover County	2021-2022 http://hcps.us/parents_students/program_of_studies/high_school_courses/high_school_courses_guides/high_school_courses_guide_g-p
Harrisonburg City	2021-2022 https://docs.google.com/document/d/1ZnkN45nQbGqtDCs3IP1LfaidYk1T4MesNXnr2CEh-xs/edit linked here: https://harrisonburg.k12.va.us/hhs/Department/75-HHS-Counseling-Department
Henrico County Henry County	2021-2022 https://academicplanningguide.henricoschools.us/high-school-courses/ 2019-2020 https://www.henry.k12.va.us/cms/lib/VA01000023/Centricity/Domain/1865/HSPOS%2019-20%20English.pdf
Highland County	2021-2022 Highland HS https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/1359678/Program_of_Studies_booklet_16-17.pdf linked here: https://www.highland.k12.va.us/page/academic-and-career-planning
Hopewell City	2019-2020 Hopewell HS POS https://4.files.edl.io/3fed/08/19/19/173933-9d67e7f7-0d71-4513-afdb-7c5052d158e2.pdf
Isle of Wight County	2021-2022 https://www.iwcs.k12.va.us/apps/pages/index.jsp?uREC_ID=1046393&type=d&pREC_ID=1333163
King and Queen County King George County	Information on the 2021-2022 high school music course offerings was obtained by phone in October 2021. King George HS https://p19cdn4static.sharpschool.com/UserFiles/Servers/Server_2822194/File/Counseling/Course%20Offerings%20Guide%2021-22%20Final.pdf
King William County Lancaster County	The 2021-2022 list of course offerings was obtained by email in October 2021. 2021-2022 Lancaster HS https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/1097307/Final_2021-2022_LHS_Course_Catalog.docx.pdf
Lee County Loudon County	The 2019-2020 program of studies was shared by an email request. 2019-2020 https://www.lcps.org/cms/lib/VA01000195/Centricity/Domain/30558/2019-20%20Program%20of%20Studies%20Final.pdf
Louisa County	2021-2022 Louisa County HS https://docs.google.com/a/lcps.k12.va.us/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnsb3Vpc2FsaW9uc2NvdW5zZWxpbnmd8Z3g6MjhYWNhYTg4NzdmOWQxNw
Lunenburg County Lynchburg City	2021-2022 Central HS https://drive.google.com/file/d/1xuDqmI1yIo2C46ujHizJgbofKZGiW7SZ/view 2019-2020 POS https://www.lcsedu.net/sites/default/files/pdfs/curriculum/hs_program_of_studies_2019-20.pdf

APPENDIX D, PROGRAMS OF STUDIES EXAMINED (CONTINUED)

Division	Programs of Studies Dates and Availability
Madison County	2019-2020 Madison HS https://www2.madisonschools.k12.va.us/cms/lib/VA02207963/Centricity/Domain/8/Course%20of%20Studies.pdf
Manassas City	2021-2022 Osborn HS https://www.mcpsva.org/site/handlers/filedownload.ashx?moduleinstanceid=6428&dataid=24192&FileName=OHS%20Course%20Catalog%202-6-21.pdf
Manassas Park City	2021-2022 Manassas Park HS https://sites.google.com/mpcs4learning.com/mphs-course-catalog/home
Martinsville City	2021-2022 Martinsville HS https://www.martinsville.k12.va.us/content/martinsville/uploads/PDF/students/program_of_study_mhs_2017_18.pdf
Mathews County	The list of high school music course offerings was obtained by email in October 2021.
Mecklenburg County	2019-2020 https://mcpsweb.org/wp-content/uploads/2019/07/HIGH-SCHOOL-POS-Final-2019-2020.pdf
Middlesex County	2021-2022 ^a https://drive.google.com/file/d/1m-zcB4By7BipdMtc2BoGxCdx4sLuSyCW/edit
Montgomery County	2021-2022 https://p7cdn4static.sharpschool.com/UserFiles/Servers/Server_92164/File/MCPS%20HS%20Program%20of%20Studies%202021-22%20-%20FINAL%20APPROVED%20Revised%204%2012%2021%20Grad%20Req.pdf
Nelson County	2021-2022 Nelson County HS https://docs.google.com/document/d/1EWpcSkVg3gnLQom-BSrcxVlFOW23IFaEDZIC4-FYJYU/edit
New Kent County	2021-2022 New Kent HS http://p6cdn4static.sharpschool.com/UserFiles/Servers/Server_20922/File/Program%20of%20Study%20PDF%202021-2022.pdf
Newport News City	2021-2022 http://sbo.nn.k12.va.us/counseling/doc/HScourses.pdf
Norfolk City	2019-2020 https://www.npsk12.com/cms/lib/VA02208074/Centricity/Domain/757/HighSchool_Course%20description%20as%20of%20Sept2019.pdf
Northampton County	2019-2020 Northampton HS https://drive.google.com/file/d/1s875LFgGm3SU7z-IBAkKE0s_rGi_7nB/view
Northumberland County	2019-2020 http://nucps.ss5.sharpschool.com/common/pages/DisplayFile.aspx?itemId=69283935
Norton City	2021-2022 http://jibcounseling.weebly.com/uploads/6/1/9/7/61971065/course_descriptions.pdf
Nottoway County	2019-2020 Nottoway HS https://p16cdn4static.sharpschool.com/UserFiles/Servers/Server_320007/File/schools/Nottoway%20High/Nottoway%20Course%20Catalog%202019-20.pdf
Orange County	2021-2022 ^a Orange County HS https://drive.google.com/file/d/11b5LzrIBP7F4kx6qSo8gZJf_oFNvP1TR/view
Page County	2021-2022 https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/744590/HS_POS_21-22.pdf
Patrick County	2019-2020 https://p6cdn4static.sharpschool.com/UserFiles/Servers/Server_16561/File/PCHS/2019-2020%20PCHS%20Program%20of%20Studies%20-%20APPROVED%20Copy.pdf

APPENDIX D, PROGRAMS OF STUDIES EXAMINED (CONTINUED)

Division	Programs of Studies Dates and Availability
Petersburg City	2021-2022 https://www.petersburg.k12.va.us/site/handlers/filedownload.ashx?moduleinstanceid=2499&dataid=17596&FileName=PCPS%20Secondary%20Course%20Catalog.pdf
Pittsylvania County	2019-2020 https://p18cdn4static.sharpschool.com/UserFiles/Servers/Server_83467/File/Departments/Instruction/Assessment%20and%20Accountability/PCS-Course-Guide-2019-2020.pdf
Poquoson City	2021-2022 https://www.poquoson.k12.va.us/cms/lib/VA02205104/Centricity/Domain/28/Program%20of%20Studies%20%202021-2022%20FINAL.pdf
Portsmouth City	2021-2022 ^a https://p3cdn4static.sharpschool.com/UserFiles/Servers/Server_794494/File/Course%20of%20Study%20Guide%20-%2020-21%20Final%20Post.pdf
Powhatan County	2021-2022 https://echalk-slate-prod.s3.amazonaws.com/private/groups/66645/site/fileLinks/efa6326b-6a0c-42dc-b592-9e4ff70c369a?AWSAccessKeyId=AKIAJSZKIBPXGFLSZTYQ&Expires=1946252573&response-cache-control=private%2C%20max-age%3D31536000&response-content-disposition=%3Bfilename%3D%222021-2022%2520PCPS%2520Course%2520Guide%2520-%25201%252014%252021.pdf%22&response-content-type=application%2Fpdf&Signature=%2Buwp0DwVcmVBAo5DhjwZUf8e4SQ%3D
Prince Edward County	2019-2020 http://p8cdn4static.sharpschool.com/UserFiles/Servers/Server_1139640/File/kinne/Program%20of%20Studies%202019-2020_Final.pdf
Prince George County	2021-2022 http://clements.pgs.k12.va.us/ourpages/auto/2021/3/24/79226470072487139479/REGISTRATION%20GUIDE%202021%20-%202022.pdf
Prince William County	2021-2022 https://p9cdn4static.sharpschool.com/UserFiles/Servers/Server_340140/File/Student%20Learning/PWCS_Course_Catalog_PrintOnly.pdf
Pulaski	2021-2022 https://core-docs.s3.amazonaws.com/documents/asset/uploaded_file/1429085/pchs-course-catalog-2021-2022-v2.pdf
Radford City	2021-2022 Radford HS https://drive.google.com/file/d/1jYklzkRq8oEK7O2GdnuO7cTGP712qVqd/view
Rappahannock County	2019-2020 Rappahannock County HS http://images.pcmac.org/Uploads/RappahannockCountySD/RappahannockCountySD/Sites/DocumentsCategories/Documents/2019-2020%20RCHS%20Program%20of%20Studies-MG.docx%281%29%7BSIS68BB31190A6B%7D.pdf
Richmond City	2019-2020 https://www.rvaschools.net/site/handlers/filedownload.ashx?moduleinstanceid=8791&dataid=333875&FileName=Final%20-SY19-20%20RPS%20Program%20of%20Studies%20.pdf
Richmond County	2021-2022 Rappahannock HS ^a https://www.richmond-county.k12.va.us/userfiles/14/my%20files/2020-2021courseguide.pdf?id=316
Roanoke City	2019-2020 https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiO0eG_sOnyAhVrElkFHarFB-0QFnoECBUQAQ&url=http%3A%2F%2Froanokerotec.ss7.sharpschool.com%2FUserFiles%2FServers%2FServer_472539%2FFile%2F2019-2020%2520Program%2520of%2520Studies%2520Final.rtf&usg=AOvVaw28MixnkSx5_ewoE6iLgDX0

APPENDIX D, PROGRAMS OF STUDIES EXAMINED (CONTINUED)

Division	Programs of Studies Dates and Availability
Roanoke County	2021-2022 https://www.rcps.us/cms/lib/VA01818713/Centricity/Domain/135/2021-22RegGuide-acc.pdf
Rockbridge County	2021-2022 https://drive.google.com/file/d/1ojeYVPrc8Yy7_nekd-TD5DqSVMIAZGHe/view
Rockingham County	2019-2020 https://drive.google.com/drive/folders/1Xz_hJyIVF-plS2EbxYQ0nQAAUPtBAOj4
Russell County	The list of high school course offerings was obtained by an email in October 2021.
Salem City	2021-2022 https://content.schoolinsites.com/api/documents/5850e97e1a9847ec8e9da80578d825ab.pdf
Scott County	2021-2022 Gate City HS https://p16cdn4static.sharpschool.com/UserFiles/Servers/Server_257510/File/2021%20-%202022%20Curriculum%20Book%20Single%20Page.pdf 2021-2022 Twin Springs HS http://p16cdn4static.sharpschool.com/UserFiles/Servers/Server_258854/File/Guidance-images/Courses_Ordered.pdf
Shenandoah County	2021-2022 https://sites.google.com/shenandoah.k12.va.us/scps-secondary-program-of-stud/fine-arts?authuser=0
Smyth County	2021-2022 https://4.files.edl.io/7c72/08/27/21/203303-2bd24efc-36df-4cad-908d-626c3c578f70.pdf
Southampton County	2019-2020 https://www.southampton.k12.va.us/cms/lib/VA02208188/Centricity/Domain/358/SHS%202019-2020%20Registration%20SHS.pdf
Spotsylvania County	2021-2022 https://www.spotsylvania.k12.va.us/site/handlers/filedownload.ashx?moduleinstanceid=679&dataid=16798&FileName=Course%20Pathways%20for%20MS%20HS%202122%2005.05.21.pdf
Stafford County	2019-2020 https://www.staffordschools.net/domain/3406
Staunton City	2019-2020 https://www.staunton.k12.va.us/cms/lib/VA01000591/Centricity/Domain/222/2019-2020%20SCS%20Program%20Of%20Studies%20v4_25.pdf
Suffolk City	2019-2020 POS https://p14cdn4static.sharpschool.com/UserFiles/Servers/Server_285949/File/Departments/Instruction%20&%20Curriculum/High%20School/SUFFOLK_Program_of_Studies_2019-20_final_FINAL-s.pdf
Surry County	2021-2022 Surry County HS https://docs.google.com/document/d/1EY-KTQhHptuDhGcKVPuIyfuqP7wS0R2uLs25HEVYOBg/edit
Sussex County	2021-2022 https://www.sussex.k12.va.us/site/handlers/filedownload.ashx?moduleinstanceid=671&dataid=727&FileName=Program_of_Studies_2020.pdf
Tazewell County	2019-2020 https://4.files.edl.io/5443/05/05/20/145403-a5918986-59d0-434d-9131-87a497d1f79e.pdf
Virginia Beach City	2019-2020 https://www.vbschools.com/common/pages/DisplayFile.aspx?itemId=22223736
Warren County	2021-2022 https://www.wcps.k12.va.us/images/DOCUMENTS/Students/POS_21-22AlphaAlphaPost2021_05_24.pdf

APPENDIX D, PROGRAMS OF STUDIES EXAMINED (CONTINUED)

Division	Programs of Studies Dates and Availability
Washington County	2019-2020 https://4.files.edl.io/ec07/11/04/19/192710-fbc2975a-770f-47fe-a08c-25e5aa84a33f.pdf
Waynesboro City	2019-2020 Waynesboro HS http://p9cdn4static.sharpschool.com/UserFiles/Servers/Server_215122/File/Administration/Office%20of%20Instruction/Programs%20of%20Studies/Program%20of%20Study%20WHS%202019-20%20-%20Draft%207_16_19%20for%20website%20No%20SCED%20codes%20(1).pdf
West Point	2021-2022 https://drive.google.com/file/d/1e1R7E6ogtKG4XhH32iOTf14ZlP23-/view
Westmoreland County	2019-2020 http://wl.wmlcps.org/uploads/1/0/0/3/10036060/wl_program_of_studies_2019-2020.pdf
Williamsburg-James City County	2019-2020 Secondary POS https://wjccschools.org/wp-content/uploads/2019/08/2019-20-Program-of-Studies.pdf
Winchester	2019-2020 John Handley HS https://www.wps.k12.va.us/cms/lib/VA02201702/Centricity/Domain/1526/2019_2020_JHHS_POS.pdf
Wise County	The 2021-2022 lists of high school music course offerings for each high school were obtained by phone and email in October 2021.
Wythe County	2021-2022 ^a https://p16cdn4static.sharpschool.com/UserFiles/Servers/Server_433895/File/20-21%20Documents%20and%20Files/WCPS%202020%20-%202021%20ProgramofStudies_FINAL.pdf
York County	2021-2022 https://yorkcountyschools.org/docs/ProgramofStudies.pdf

Note. ^aA program of studies that is undated or dated by an earlier school year but is listed as current on a school division or a school website, and, therefore, is notated here as current.

VITA
Natalia P. Goodloe

Education:

Ph.D., Educational Policy, Planning, and Leadership, Spring 2023, The College of William and Mary
Master of Music Education August 2006, Old Dominion University
Bachelor of Music Education, August 2003, Old Dominion University
Bachelor of Music and Master of Music, Violin Performance, the Ural State Conservatory, Russia, 1992-1997 and the Krasnoturinskoye Musical College, Russia, 1986-1997
Post-graduate professional development in Music and Music Education: George Mason University, Harvard University, Old Dominion University, Peabody Conservatory, and Regent University.

Licenses and certifications:

Virginia Postgraduate Teaching License, Administration and Supervision PreK-12, Instrumental Music PreK-12
National Board Certification for Professional Teaching Standards Music, Early Adolescence through Young Adulthood, Orchestra, since 2016

Work experience:

Professional development apprentice, Virginia Beach City Public Schools and the ODU T-TAC, 2020
Scorer, National Board for Professional Teaching Standards, 2017-2019
Test content reviewer and content validation reviewer for the Music Standards, National Board for Professional Teaching Standards, 2018
Lesson plan writer for the WHRO, 2018
Benchmarking committee member, National Board for Professional Teaching Standards, 2017
Standard setting panel member, National Board for Professional Teaching Standards, Pearson, Chicago, IL, 2017
Adjunct faculty, violin and viola, Tidewater Community College, since 2010
Violinist, the Hardwick Chamber Ensemble, since August 2010
Orchestra violinist, Todi Music Festival, Portsmouth, VA, 2007 and 2008
Orchestra director, Virginia Beach Public Schools, since 2006
Orchestra director, Greenbrier Christian Academy, Chesapeake, VA, 2003-2006
Violinist, Moscow State Chamber Orchestra The Seasons, 1998-2000
Violinist, Moscow State Theater Helikon Opera, 1997-1999
Private violin and viola teacher, since 1991
Violin teacher, Serov Music School, Russia, Yekaterinburg Region, 1991-1993

Select professional honors and contributions:

Served on the citywide curriculum development committees, Virginia Beach City Public Schools, 2019-2021
Scholarship to attend the Harvard University Summer Institute with Yo Yo Ma, 2016
Virginia Beach Education Foundation Emilie Tilley Scholarship, 2016-2017
Kappa Delta Pi Honor Society, 2016
Christopher Wren Association Scholarship, The College of William and Mary, 2015-2016
Grants from the Tidewater Community College for writing Zero Textbook courses, 2013
Fully funded participation at the Virginia Center of Excellence in Teaching, 2014
US Citizenship as “an alien of exceptional ability in arts, science, and education”, 2014
Old Dominion University International Student Leadership Award, 2002-2003
Dean’s List, Old Dominion University, Spring and Fall 2002
Performed in Europe, Asia, and Russia as a violinist of the Moscow State Chamber Orchestra “The Seasons” and “Helikon Opera”: played concerts at prominent halls as the Chiang Kai Shek National Concert Hall in Taipei (Taiwan), the Great Hall of Moscow Conservatory, and the Tchaikovsky Concert Hall (Russia). Recorded compact discs at the “Mosfilm” studio. Played on the stages of the Tchaikovsky’s Concert Hall, the Bolshoi Theater, and the Stanislavsky Theater.
Organized children’s concerts at the Chesapeake Cancer Treatment Center, assisted living facilities, and in the Hampton Roads area community, since 2004
Performed solo concerts at assisted living facilities, Hampton Roads area, VA, 2004-2006
The College of William and Mary, Educational Review Journal – reviewer, 2016 and 2020
American String Teacher journal editorial committee, 2022-2024