

Understanding America's Human Capital Investment in Arts Education:  
Arts Educators in the Nation's Public Schools

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### ABSTRACT

This study presents a detailed demographic profile of the arts educators working in the public schools of the United States. Using data from the 2011-2012 wave of the National Center for Education Statistics *Schools and Staffing Survey*, a complete descriptive profile of arts educators overall and within the disciplines of visual art, music, dance, and theater was generated. Specifically, the study presents the profile of arts educators in terms of gender, race/ethnicity, marital status, age, years of experience in the classroom, educational attainment, state teacher certification status, route to teacher certification, National Board for Professional Teaching Standards certification status, full-time/part-time school employment status, and average/median salary. Comparisons among the arts disciplines and between arts and non-arts disciplines are presented as well as analyses for systematic differences in the profiles of arts educators working at differing kinds of schools.

Findings indicate that, generally, arts educators look similar to the corps of non-arts educators with a few key differences. These key differences include racial/ethnic diversity (arts educators are more racially homogenous than non-arts educators), gender (arts educators are more likely to be male, driven primarily by the number of male music educators at the high school level), and full-time/part-time status (arts educators are more likely to be employed part-time).

## EXECUTIVE SUMMARY

### Overview of the Study's Method

This study presents a comprehensive demographic profile of arts educators working in American public schools. Using the 2011-2012 wave of the National Center for Education Statistics *Schools and Staffing Survey* (SASS), we describe the nation's arts educators in terms of demographics like gender, race/ethnicity, teacher preparation route, state teacher certification status, age, years of experience, highest educational attainment, National Board for Professional Teaching Standards certification attainment, full- and part-time employment, and salary or earnings from school employment. We present complete profiles for arts educators as a whole and for the subsets of arts educators working as visual art, music, theater, and dance teachers. We compare each of these groups (arts educators as a whole and within disciplines) to public school teachers of other subjects. Finally, we explore whether there is “sorting” of arts educators—that is, differential demographic profiles of arts educators—based on school characteristics such as student socioeconomic status, school urbanicity, school grade level.

### Key Findings

In many important ways, the corps of arts educators in the United States looks quite similar to the American teacher workforce as a whole, though even with considerable similarity between arts and non-arts educators, there were also some important differences. Key findings of the present study are highlighted below:

- We estimate the size of the American public school arts educator workforce to be approximately 203,700 (as of 2011-2012), or roughly 6% of the public school teacher workforce in the United States. At an average salary of \$50,870, the total public

investment in arts educator salaries across the nation is estimated to be approximately \$10.3 billion.

- Arts educators worked in virtually all school contexts across the U.S.: in urban, suburban, and rural schools; in schools with high and low numbers of students of color, and in schools serving few to many students eligible for free- or reduced-price lunches.
- Arts educators were 66.36% female and 33.64% male, a split that is significantly different than the gender distribution of educators as a whole. Arts educators tended to have more males among their ranks than teachers of other subjects, and the increased number of males compared to non-arts educators was almost entirely due to the increased numbers of males teaching music at the high school level compared to teachers of other subjects or at other levels.
- Although the total teacher workforce lacks diversity overall when compared to the adult population of the United States, the arts educator workforce was significantly less diverse (and more White) than teachers as a whole. Compared to 82% of the total teacher workforce identifying as White (non-Hispanic), 90.69% of the arts educator workforce identified as White (non-Hispanic).
- Arts teachers are significantly less likely to be employed at their schools full-time than their non-arts colleagues. Nationally, 79.49% of arts educators were employed full-time in their arts education positions, compared to 93.95% of non-arts educators.
- There was a significant association between arts educator race/ethnicity and the socioeconomic status (SES) of the students at the schools in which arts educators worked. Fully 74.24% of Black or African American arts educators work at schools in the lowest SES quartile (that is, schools serving the highest proportion of students eligible for free-

or reduced-price lunch), and another 16.06% of Black or African American arts educators work at schools in the second lowest SES quartile. This means that fewer than 1-in-10 (just 9.70%) of arts educators identifying as Black or African American work at schools in the upper half of the school SES distribution.

- A similar, and likely related, association exists between school urbanicity and arts educator race/ethnicity. While arts educators identifying as White or Caucasian make up the clear majority of all arts educators, the majority of arts educators identifying as Black or African American (53.12%) work in urban schools, along with a plurality (37.8%) of those educators of Hispanic or Latino origin.

### **Conclusions and Next Steps**

Our finding that, generally, the arts educator workforce looks like the workforce of American public school teachers broadly defined has some important implications for education policy and practice. On the policy side, given the broad similarities between arts educators and educators of other subjects, it stands to reason that most policies aimed at somehow improving or changing the corps of teaching professionals will impact arts educators in ways like their non-arts peers. For example, changes to licensure requirements or other policy levers designed to restrict or limit the teaching profession to those persons most qualified to become teachers could be expected to have similar effects on the pool of potential arts educators as they have on the pool of potential teachers in other subjects.

However, the key findings of *dissimilarity* in this study related to race and ethnicity should also give education policymakers and those interested in the arts educator workforce some pause. Although the U.S. Department of Education has noted that the American teaching

workforce is “relatively homogenous racially” and has identified some key points in the pipeline at which the teacher corps becomes less diverse (U. S. Department of Education, 2016), we find here that the *arts* educator workforce is even more homogenous than the educator workforce writ large. It is possible that similar chokepoints in the preparation of arts educators (e.g., admission to college on the basis of a competitively adjudicated art portfolio or performing audition, for example) may intensify the effect for arts educators. Thus, increasing the diversity of the arts educator workforce may require additional intervention beyond those planned to increase the diversity of the non-arts educator workforce.

## INTRODUCTION & REVIEW OF RELATED RESEARCH

According to estimates from the National Center for Education Statistics (Parsad & Spiegelman, 2012), some type of formal arts education courses are offered at the overwhelming majority of American public elementary and secondary schools. Specifically, in the 2009-2010 school year, Parsad and colleagues (2012) report that formal music instruction was available at 94% of public elementary schools and 91% of public secondary schools and formal visual art instruction was available at 87% of elementary schools and 89% of secondary schools. The availability of theater and dance instruction lagged considerably behind that of music and visual art: formal theater instruction was offered at 4% of the nation's elementary school and 45% of American secondary schools; formal dance instruction was offered at 3% of elementary schools and 12% of secondary schools.

Though arts education researchers, practitioners, and policymakers can point to Parsad and Spiegelman's (2012) estimates as credible sources of the availability of arts education courses, there is little extant research examining the characteristics of the estimated 204,000 artists, musicians, actors/directors, and dancer/choreographers working as teachers delivering visual art, music, theater, and dance instruction in the nation's public elementary and secondary schools. Thus, the nature and extent of our nation's collective human capital investment in arts education remains a mystery to arts educators, arts organizations, and to cultural and educational policymakers.

In the broader field of education research—that is, beyond arts education—more is known about the makeup of the teacher workforce and teacher labor markets. There are an estimated 3.385 million teachers working in the nation's public schools as of 2011-2012, up from an estimated 3.25 million in 2003-2004 (Béteille & Loeb, 2009). Teachers as a whole have been

found to be roughly 75% female and 25% male (Béteille & Loeb, 2009), with greater proportions of male teachers working in high schools than in schools serving students in the lower grades. Teachers identify their race/ethnicity as roughly 82% White (non-Hispanic), 7% Black or African American (non-Hispanic), and 8% were of Hispanic or Latino origin (Goldring, Gray, Bitterman, & Broughman, 2013). Teacher demographics such as these have prompted research examining the relationship between “match” or “mismatch” of teacher-student race/ethnicity and student achievement (e.g., Jackson, 2009), on recruiting and retaining more teachers of color (e.g., Achinstein, Ogawa, Sexton, & Freitas, 2010), and whether there is differential “sorting” of teachers into certain kinds of schools based on teacher demographics {Lankford:2002vw} or teacher preferences (Reininger, 2012).

Despite the great deal of research attention on the population of teachers as a whole, there has been little systematic research on demographic characteristics of arts educators specifically. Our field’s lack of systematic knowledge about the demographic characteristics of the nation’s arts educators has been lamented within the professional literature of the various arts education disciplines for nearly two decades, if not longer—the National Art Education Association’s Commission on Research in Art Education, for example, identified the need for demographic research in visual art education as the most pressing priority in its report *Art Education: Creating a Visual Arts Research Agenda toward the 21<sup>st</sup> Century* (1996). In fact, the opening sentence of the introduction to that volume speaks to the importance of the need for demographic research in arts education: “Who teaches visual arts at the elementary, junior high, and secondary levels?” (p. 7). The next decade saw a reiteration of calls for demographic research but little progress on the matter in the visual arts; Galbraith and Grauer (2004) in their review of extant research found little extant demographic research on arts educators but urged that “despite a lack of baseline

data, developing a demographic picture (albeit broad) is a positive endeavor for art education” (p. 419).

The demographic profiles of educators are not much clearer in the other arts disciplines. In music, for example, there have been some studies using national data on music educators, but these are typically focused only on determining what institutional, contextual, and personal characteristics best predict which music educators are most likely to leave the profession (e.g., Gardner, 2010; Hancock, 2009). There are extant demographic profiles of music *students*, at least in the high schools (Elpus, 2014; Elpus & Abril, 2011), but no recently published research examines the profiles of practicing music educators. The closest artifact in the scientific record is a decade-old summary of an internal survey of members of the National Association for Music Education (NAfME), conducted when that organization was known as the Music Educators National Conference, reported briefly in a book chapter from the early 2000s (Pembroke & Craig, 2002) that was primarily focused on other issues related to teaching music as a profession. No such demographic work exists in the research literature of dance or theater education, though the National Dance Education Organization (NDEO) is currently analyzing the data from a recent demographic survey of their members ([www.ndeo.org/k12survey](http://www.ndeo.org/k12survey)).

There is clearly a need, then, for research to examine the demographic characteristics of the nation’s public school arts educators. This proposed research study seeks to address this glaring gap in the research literature through analyses of the most recent nationally representative data on the nation’s arts educators from the 2011-2012 *Schools and Staffing Survey* (SASS) and the related *Teacher Followup Study* (TFS).

The purpose of the present study was to develop a national demographic profile of the arts educators working in American public elementary and secondary schools. Understanding the

present makeup of the public school arts education workforce can illuminate potential issues in the pipeline from arts student to arts professional and help guide educational policies regarding the delivery of arts education instruction and the recruitment, preparation, and retention of arts educators. Comparisons between the population of teachers working in the arts and those working in other subject areas will help the profession understand whether arts educators are a distinct subset of the larger population of teachers or are similar in gender, race, ethnicity, educational attainment, salary, and other characteristics of their peers teaching other subject areas.

## DATA SET & RESEARCH QUESTIONS

### Research Questions Guiding the Study

For the present study, I generated a complete demographic profile of arts educators by answering the following research questions:

(1) What is the demographic profile of visual art, music, theater, and dance teachers in the United States? Specifically, what is the proportional distribution of arts' educators:

- (a) Gender
- (b) Race/ethnicity
- (c) Age
- (d) Years of experience in the classroom
- (e) Marital status
- (f) Educational attainment
- (g) State teacher certification status
- (h) National Board certification status
- (i) Full-time/part-time status
- (j) Salary/earnings from school employment

(2) Are there systematic differences in the proportional distribution of these demographic characteristics between arts educators serving high concentrations of students in poverty and arts educators serving students in low concentrations of poverty?

(3) Do these demographic characteristics of arts educators vary systematically with:

- (a) urbanicity of employing schools (i.e., urban, suburban, rural)

(b) school level (i.e., elementary, middle, or high school)

(c) arts area taught (i.e., visual art, music, theater, dance)

### **Data Source**

The data for this study come from the 2011-2012 Schools and Staffing Survey, or SASS. The SASS was a regularly recurring survey program of the National Center for Education Statistics (NCES) that gathered data from a nationally representative sample of teachers and other school employees working at public and private schools in the United States. The SASS surveys were conducted seven times in the years between 1987 and 2011. The 2011-2012 wave of SASS is the most recently collected national survey of school personnel; it has since been somewhat redesigned and given a new name—the National Teacher and Principal Survey (NTPS). This newest survey is, at present, being fielded and data will be made available to researchers at an as-yet-undetermined point in the future.

The 2011-2012 SASS data are a particularly rich source of information on the working conditions and demographics of the nation's teacher labor force. Importantly, as arts educators make up a fairly sizable portion of the nation's teachers, arts educators are included in the sample in sufficient numbers ( $N = 2,700$ ) to permit usable inferences about the entire population of arts educators. Music teachers make up roughly 56% of the arts educators included in the sample ( $N = 1,510$ ), followed by arts teachers at 37% of the arts educators in the sample ( $N = 1,000$ ). Dance ( $N = 60$ ) and theater ( $N = 130$ ) educators make up a considerably smaller portion of the arts educators included in the SASS sample. Due to the relatively small number of theater and dance educators included in the sample, caution should be exercised in interpreting the results we present concerning the population of theater and dance educators.

The SASS data were collected using mailed questionnaires. Separate SASS questionnaires were developed to gather information about school districts, individual schools, individual principals, individual teachers, and individual school media center/library staff. NCES used a multistage, or “cluster,” sampling procedure where schools were sampled first and then staff members from within those schools were selected for the sample.

For the present study, we employ the SASS data for public school teachers and do not use data for teachers in the private schools. We use this public school teacher data to make a complete demographic profile of teachers of visual art, music, dance, and theater working in the public elementary and secondary schools and to make useful comparisons between the populations of arts and non-arts educators working in the public schools. In general, we present descriptive estimates generated by taking into account the complex sampling method employed by the SASS surveys. When we compare demographics between arts and non-arts teachers or between teachers of certain arts disciplines and teachers of other subjects, we use appropriate, survey-adjusted nonparametric measures of association for categorical data (such as gender or highest educational attainment) and survey-adjusted regression for continuous data (such as age, salary, or years of experience). Our complete estimation and research methods are detailed in the appendix to this report.

## **RESULTS**

### **Demographic Profiles of Arts Teachers**

The first research question guiding this study asks about the demographic characteristics of the nation's teachers in the visual and performing arts. In this section of the report, we present the profiles of arts teachers by gender, race/ethnicity, marital status, years of experience in the classroom, age, educational attainment, state teacher certification status, National Board certification status, full- vs. part-time employment status, and the average of arts teachers' earnings from school employment. We first present these descriptive statistics for all arts teachers considered as a whole and then disaggregate arts teachers into the four disciplines of visual art, music, theater, and dance. Within each section, we compare each group of teachers to the population of teachers who do not teach that subject—so, for example, all arts teachers compared to all teachers of other subjects, all music teachers compared to all teachers who do not teach music. Within the comparisons for all four disciplines, we include teachers of other arts disciplines in the comparison group, so, for example, the comparison of music teachers to “non-music” teachers includes teachers of visual art in the “non-music” group, etc.

### **All Arts Teachers**

Nationally, we estimate that there were 203,700 arts teachers working in the nation's public schools during the 2011-2012 school year, the year for which the Schools and Staffing Survey data analyzed here were collected. Arts teachers worked in virtually all contexts present in the American public schooling system: urban schools, suburban schools, town schools, and rural schools. Arts teachers worked in schools serving the full range of racial and ethnic diversity, from schools serving virtually no students of color to schools serving virtually all

students of color, and the full range of school socioeconomic statuses, from schools serving virtually no students living in poverty to schools where virtually all students were living in poverty. That arts educators were pervasive across these types of schools is encouraging, particularly given extant NCES data suggesting that schools with no arts education are considerably more likely to serve students of color or be located in areas with highly concentrated poverty (Parsad & Spiegelman, 2012).

**Arts educator gender.** Nationally, arts educators identified as 66.36% female and 33.64% male. The imbalance toward females among arts educators is similar to the imbalance among the population of all arts and non-arts public school teachers, who are 76.32% female and 23.68% male. Non-arts teachers are 76.96% female and 23.04% male. The difference in the gender distributions of arts and non-arts teachers is statistically significant,  $F(1, 37500) = 61.23$ ,  $p < .001$ , which suggests that arts teachers are significantly *less* female than are teachers of other subjects. As we will discuss later in this report in the discipline- and grade-disaggregated profiles, the greater proportion of male arts teachers compared to non-arts teachers seems to be driven mostly by the proportion of males teaching music in secondary schools.

**Arts educator race/ethnicity.** As a whole, public school teachers tend to be more homogenous than the population of American adults, with 81.92% of public school teachers of any subject identifying as White or Caucasian (non-Hispanic), 6.88% of public school teachers identifying as Black or African American (non-Hispanic), and 7.80% of public school teachers identifying as having Hispanic or Latino origin. For comparison, in the 2010 Census (the Census most proximate to the SASS data analyzed here), only 63.7% of the population identified as White and not of Hispanic or Latino origin. Arts teachers, by contrast, are significantly *less* diverse than teachers as a whole,  $F(5, 186360) = 9.72$ ,  $p < .001$ , with a much higher proportion

of arts teachers (90.69%) identifying as White (non-Hispanic). The distribution of all teachers, all arts teachers, and all non-arts teachers are shown in Table 1.

Given that arts educators as a whole tend to be less diverse than the population of all teachers, it may be instructive to see if there is a different distribution of race and ethnicity among new teachers, defined here as teachers with three or few years of experience—typically, teachers who have not yet earned teacher tenure. As it happens, arts educators with three or few years of experience have a statistically significantly different racial/ethnic distribution than do arts educators with four or more years of experience,  $F(4, 149140) = 2.93, p = .02$ . New arts educators identify as White in a slightly smaller proportion than do more experienced arts educators (87.94% of new arts teachers identify as White while 91.03% of more experienced arts educators identify as White). Slightly more new arts educators are of Hispanic or Latino origin (4.84% of new arts educators vs. 3.43% of more experienced arts educators) and considerably more new arts educators identify as multiracial than do more experienced arts educators (3.30% of new arts educators vs. 0.57% of more experienced arts educators). This analysis provides some initial evidence that the arts educator workforce may be becoming more diverse, but more research in this area is warranted. Table 2 shows the complete distributions by race/ethnicity for newer and more experienced arts educators.

**Arts educator age.** The average age of all American educators was 42.41 years old ( $SD = 11.44$ ). Arts educators, were, on average 43.06 years old ( $SD = 12.78$ ), while non-arts educators were, on average, 42.37 years old ( $SD = 11.35$ ). A  $t$ -test suggests these average ages of arts and non-arts teachers are not significantly different from one another,  $t(37500) = 1.86, p = .06$ .

**Arts educator years of experience in the classroom.** On average, all teachers in the United States had 13.78 years of experience teaching ( $SD = 9.39$ ). Arts educators had  $M = 14.77$  years of experience ( $SD = 10.52$ ) and non-arts educators had  $M = 13.72$  years of experience ( $SD = 9.32$ ). A  $t$ -test suggests that the difference of 1.05 years in experience between arts and non-arts educators is significant,  $t(37500) = 3.67, p < .001$ .

**Arts educator marital status.** Arts educators reported their marital statuses as 67.95% married, 1.32% widowed, 2.25% separated, 8.97% divorced, 16.43% never married, and 3.09% living with a partner in a marriage-like relationship. The difference in the distributions of marital statuses between arts educators and non-arts educators was not significant,  $F(4, 165350) = 1.86, p = .10$ .

**Arts educator educational attainment.** Typically, becoming a certified teacher in American public schools requires holding a bachelor's degree and, under traditional teacher compensation schemes, teacher pay increases as the teacher earns postgraduate credits and degrees. Table 3 shows distribution of educational attainment for all teachers, for arts teachers, and non-arts teachers nationally. Given that arts and non-arts teachers face similar requirements for minimum educational attainment and similar incentives for advanced degree attainment, it is perhaps unsurprising that the distribution of highest degree earned does not differ between arts and non-arts teachers,  $F(4, 142920) = 2.23, p = .07$ .

**Arts educator state teacher certification status.** A clear majority of arts teachers—91.52%—hold a regular, standard, or advanced professional teaching certificate valid in their state. A further 2.73% of arts teachers will hold a regular certificate after the completion of an probationary or induction period on the job. A small portion of arts teachers (2.93%) hold a certificate which requires the satisfaction of a deficiency in state mandated coursework, student

teaching, or the passing of a teacher licensure exam. Just 1.48% of arts teachers hold a certificate issued to persons who must complete a certification program in order to continue teaching and only 1.34% do not hold a valid teaching certificate in the state where they are employed. (Note that some states do not have teacher certification requirements.) The distribution of certification statuses is not significantly different between arts educators and teachers of other subjects,  $F(4, 147580) = 1.55, p = .19$ .

**Alternate and regular routes to arts teacher certification.** In most states, the “regular” route to teacher certification involves pursuing an undergraduate college degree in a specific teacher preparation program, often linked to the subject content or age level the individual hopes to teach. In the arts, regular route to certification college majors include art education, music education, theater education, and dance education. However, adults who wish to become arts teachers after earning their college degree have options beyond returning to school for a complete undergraduate degree in the education of their field. For adults already holding a degree in the arts (such as a theater or music performance degree), these options include (1) returning for a postbaccalaureate degree or certificate from a university or college, which essentially involves taking just the “education” portions of the arts education degree they did not take as an arts major, or (2) pursuing their state’s “alternate route” to certification, which typically involves passing a teacher licensure examination and then working as a teacher with a temporary teaching certificate under the guidance of a mentor while simultaneously pursuing state-mandated professional development courses in areas such as pedagogy and human development. Nationally, 14.61% of teachers in all subjects entered teaching through an alternate route, while 85.39% of teachers were certified through the regular route. In the arts, alternate route approaches are somewhat rarer than in other subjects—only 10.36% of arts teachers came

to teaching through an alternate route, while 89.64% of arts teachers pursued the regular route to certification. The difference is statistically significant,  $F(1, 37500) = 13.77, p < .001$ .

**National Board Certified Teachers.** The National Board for Professional Teaching Standards offers experienced teachers across a range of school subjects the opportunity to earn a nationally recognized advanced credential by meeting testing, teaching demonstration, and writing requirements far in excess of most state licensure requirements. Teachers earning the credential are referred to as “National Board Certified Teachers” or NBCTs. At present, NBCT credentials are offered in the arts disciplines of visual art and music. Across all subjects, we found that 16.58% of teachers were NBCTs. This is statistically indistinguishable from the rate of arts teachers—16.80%—who were NBCTs,  $F(1, 37500) = 0.03, p = .85$ .

**Full-time/part-time employment status.** While the National Center for Education Statistics reports that the clear majority of elementary schools offer at least some arts education (Parsad & Spiegelman, 2012), a school is counted in that report as “offering” arts education even if elementary students receive as little as 15 minutes of instruction in the arts per week. This raises the question that arts educators may not be employed full-time at schools at the same rate as their non-arts peers. Indeed, we found that arts teachers are employed full-time at a significantly lower rate than as non-arts teachers. Nationally, 79.49% of arts teachers were full-time, compared to 93.95% of non-arts teachers. The difference is statistically significant,  $F(1, 37500) = 275.48, p < .001$ .

**Salary/earnings from school employment.** Across all teachers of all subjects, the national average school-based earnings for a public school teacher in 2011-2012 was an estimated \$54,250 ( $SD = \$17,320$ ); the median was \$50,000. For arts teachers, the average was \$53,000 ( $SD = \$19,550$ ) and the median was \$49,225. For non-arts teachers, the average was

\$54,325 ( $SD = \$17,170$ ) and the median was \$50,000. In order to determine whether the difference in school earnings between arts and non-arts teachers was significant, we regressed the natural log of teachers' total school earnings on arts vs. non-arts teacher status while controlling for a series of variables known to be related to teacher salaries. Specifically, we hold constant the teachers' years of experience, their highest degree earned, their sex, the percentage of students of color enrolled at the teacher's school, the percentage of students eligible for free- or reduced-price lunch in the teacher's school, the grade levels served by the school (primary, middle, high school, or combined), National Board Certification status, and full-time or part-time status. We also include a state fixed effect to account for geographical differences in the likelihood that the arts are offered and geographical variation in teacher salaries. Under these control variables, we find that teachers of the arts and teachers of other subjects are compensated similarly. The largest significant predictors of teacher earnings, regardless of arts or non-arts subject matter, were full-time vs. part-time status which accounted for a 28% difference in teacher earnings, and educational attainment, with master's degree holders earning about 10% more than bachelor's/associate's degree holders and doctoral degree holders earning about 17% more than bachelor's/associate's degree holders. Each year of experience was significantly associated with about a 1% increase in teacher earnings. These results are in line with what one would expect given the most prevalent methods of teacher compensation in the United States, which are not differentiated by subject matter but instead offer incentives for additional years of experience and increased educational attainment. Given our earlier findings in this report that arts teachers have similar levels of experience and educational attainment as their non-arts peers, it seems reasonable to conclude that the reason arts teachers have a lower reported average

income than non-arts teachers is the increased likelihood that arts teachers are not employed full-time by the schools. Full regression results for this analysis are reported in Table 4.

### **Visual Art Teachers**

Nationwide, we estimate that there were 71,300 visual art educators working in the nation's public schools during the 2011-2012 school year, the year during which our data were collected. Visual arts educators made up roughly 35% of the entire public school arts educator workforce. In this section of the report, we present the demographic characteristics of visual art teachers compared to teachers of all other subjects. Note that for these comparisons, we compare visual art teachers to other arts teachers *as well as* teachers of non-arts subject such as English or Social Studies. That is, music teachers, theater teachers, and dance teachers are all in the “non-visual arts teacher” group for comparison to the visual art teachers.

**Visual art teacher gender.** Visual arts teachers identified 79.14% female and 20.86% male, while teachers of subjects other than visual art (considered as a whole group) identified as 76.26% female and 23.74% male. The greater proportion of females among visual art teachers echoes the greater proportion among females in the total population of all teachers, and the slight difference in the gender ratio visual art teachers compared to teachers of other subjects is not statistically significant,  $F(1, 37500) = 2.13, p = .14$ . Recall from above that when considered as a group, all arts teachers are more male than all non-arts teachers. Clearly, the phenomenon of arts teachers being more male than non-arts teachers is not due to the number of male visual arts teachers.

**Visual art teacher race/ethnicity.** Similar to the entire population of arts teachers, visual art teachers are significantly less diverse than the general population of teachers. A clear

majority—90.64%—of visual arts teachers identify as white, compared to 81.73% of non-visual art teachers who identify as white. The distribution of visual art and non-visual art teachers by race and ethnicity is displayed in Table 5. The difference between visual art and non-visual art teacher race and ethnicity distributions is statistically significant,  $F(5, 198290) = 43.97, p = .002$ .

**Visual art teacher age.** The average age of visual art teachers was 44.65 ( $SD = 13.09$ ), while teachers of other subjects average 42.36 years old ( $SD = 11.40$ ). A  $t$ -test shows that the age difference of 2.29 years between visual art teachers and teachers of other subjects is statistically significant,  $t(37500) = 3.98, p < .001$ .

**Visual art teacher years of experience in the classroom.** Although art teachers are, on average, slightly but statistically significantly older than teachers of other subjects, their average years of experience in the classroom (14.53,  $SD = 10.57$ ) is not significantly greater than the average years of experience for non-visual art teachers (13.78,  $SD = 9.37$ ),  $t(37500) = 1.73, p = .08$ .

**Visual art educator marital status.** Visual arts educators reported their marital statuses as 64.85% married, 1.80% widowed, 3.57% separated, 11.09% divorced, 14.63% never married, and 4.06% living with a partner in a marriage-like relationship. The difference in distributions of marital statuses between visual art educators and teachers of other subjects was significant,  $F(4, 154250) = 3.01, p = .02$ . Comparisons between the visual art and non visual art distributions show fewer visual art teachers reporting that they were married (64.85% of visual art teachers vs. 69.86% of non-visual art teachers), and more reporting that they were separated (3.57% of visual art teachers vs. 1.36% of non-visual art teachers) or divorced (11.09% of visual art teachers vs. 9.82% of non-visual art teachers). Slightly more visual art educators (4.06%) than non-visual art educators (3.22%) reported that they were living with a partner in a marriage-like relationship.

**Visual art teacher educational attainment.** Educational attainment of visual arts teachers is detailed in Table 6. Rao-Scott  $\chi^2$  analysis showed that the distribution of educational attainment among visual arts teachers was not significantly different than that of their non-visual arts colleagues,  $F(4, 142190) = 0.24, p = .91$ .

**Visual art educator state teacher certification status.** Fully 92.16% of visual art educators hold a regular, standard, or advanced professional state teaching certificate. A further 2.11% will hold a regular certificate after completing a probationary period of teaching, 2.41% hold a certificate that requires satisfying deficiencies in testing, internship, or coursework requirements to be made permanent. Only 1.61% of visual art teachers hold a temporary certificate issued to those who must still complete a teacher certification program and 1.73% do not hold a valid teaching certificate in the state where they are employed, including those employed in states that do not require teacher licensure in visual art. The distribution of certification statuses is not significantly different between teachers of visual arts and teachers of other subjects,  $F(3, 98960) = 1.60, p = .19$ .

**Alternate and regular routes to visual art teacher certification.** Approximately 13.63% of visual art teachers obtained their teacher certification through “alternate route” programs outside of traditional teacher preparation undergraduate degrees. This is statistically indistinguishable from the 14.63% of teachers of other subjects who obtained licensure via an alternate route,  $F(1, 37500) = 0.28, p = .60$ .

**National Board Certified Teachers.** The National Board for Professional Teaching Standards offers two credentials in visual art—one for early childhood/elementary visual art teachers and one for teachers of visual art to students in early adolescence through young adulthood. Nationwide, 20.03% of visual art educators are National Board Certified Teachers

(NBCTs). This appears to be more than the 16.5% of teachers of other subjects who are NBCTs, but the difference is not statistically significant,  $F(1, 37500) = 3.25, p = .07$ , suggesting that sampling error may underlie the apparent difference in estimates.

**Full-time/part-time employment status.** As with the entire group of arts educators, visual art teachers are significantly more likely than teachers of other subjects to be employed in the schools part-time. Only 85.36% of visual art teachers are full-time in their schools, compared with 93.24% of teachers of other subjects. The difference is statistically significant,  $F(1, 37500) = 42.12, p < .001$ .

**Salary/earnings from school employment.** Average school earnings for visual art teachers (\$52,400,  $SD = \$19,500$ ; median = \$48,900) appear to be less than average school earnings for teachers of other subjects (\$54,300,  $SD = \$17,300$ ; median = \$50,000), but regression analyses similar to the analysis described above for all arts teachers considered together show the apparent differences are due more to differences in full-time/part-time status, degree attainment, and other factors known to be related to teacher compensation. Complete results of the regression analysis are reported in Table 7.

## **Music Teachers**

Across the entire United States, we estimate that there were 116,900 music educators working in the nation's public schools during the 2011-2012 school year when the data analyzed here were collected. Music educators made up more than half—a full 57%—of the nation's public school arts educator workforce, which likely reflects the wide availability of at least some music education in most of the nation's public schools, although schools without music are

significantly more likely to serve students of lower socioeconomic status (Parsad & Spiegelman, 2012).

**Music educator gender.** Music teachers identified as 57.32% female and 42.68% male. There is significantly greater representation of males among the population of American music teachers than there is in the population of American teachers at large. Teachers of subjects other than music were 77% female and 23% male. The striking difference in gender representation for music teachers compared to non-music teachers is statistically significant,  $F(1, 37500) = 112.09$ ,  $p < .001$ . Further investigation on the issue of gender and music teachers shows a clear relationship between music teacher gender and grade level of students taught. In the primary schools, music teachers were 69.01% female and 30.99% male; in middle schools, 52.74% female and 47.26% male; and in high schools 40.99% female and 59.01% male. The relationship between music teacher gender and grade level of students taught is statistically significant,  $F(2, 86680) = 13.96$ ,  $p < .0001$ . Interestingly, it appears as though the significant difference of male/female distribution of non-arts teachers and arts teachers across all four arts disciplines is entirely driven by the overrepresentation of males among high school music teachers and the close to 50-50 divide among male and female music teachers at the middle school level.

**Music educator race/ethnicity.** As with arts educators considered as a group, music teachers are considerably less diverse than the population of teachers as a whole, with teachers identifying as White significantly overrepresented among music teachers and corresponding underrepresentation among the music teacher workforce by teachers of color. This is particularly noteworthy given that teachers (arts or non-arts) as a group are considerably less diverse than the adult American population. Specifically, music teachers identified as 90.72% White (non-Hispanic), 4.05% Black or African American (non-Hispanic), 3.45% of Hispanic or Latino

origin, 0.93% two or more races, 0.64% Asian, 0.15% Pacific Islander, and 0.05% Native American or Alaska Native. The difference in racial/ethnic distribution of music teachers and non-music teachers was statistically significant,  $F(4, 147330) = 5.73, p < .001$ . Table 8 shows the complete distribution of music and non-music teachers by race/ethnicity.

New music teachers, that is, those with three or fewer years experience, seem to be somewhat more diverse than more experienced music educators. Those music teachers with three or fewer years of experience identified as 85.13% White (non-Hispanic) compared with 91.45% of more experienced music educators. New music teachers identified as 4.35% Black or African American (non-Hispanic), 1.31% Asian, 4.28% of Hispanic or Latino origin, 0.17% Native American or Alaska Native, 0.17% Pacific Islander, and 4.59% multiracial (compared to just 0.45% of more experienced music teachers identifying as two or more races). The difference in racial/ethnic distributions between newer and more experienced music teachers was statistically significant,  $F(4, 150200) = 3.76, p = .005$ . This suggests that the music teacher workforce may be becoming more diverse, however, more research to establish trend lines is needed. Complete distributions by race and ethnicity for newer and more experienced music teachers are shown in Table 9.

**Music educator age.** The average age of all music educators was 41.96 years ( $SD = 12.53$ ). This is statistically indistinguishable from the mean age of teachers of other subjects ( $M = 42.43$  years,  $SD = 11.40$ ),  $t(37500) = 0.95, p = .342$ .

**Music educator years of experience in the classroom.** Music teachers had an average of 15.03 years of experience in the classroom ( $SD = 10.66$ ), which was 1.29 years greater than the average of 13.74 years ( $SD = 9.35$ ) for teachers of other subjects. A  $t$ -test confirms the difference is statistically significant,  $t(37500) = 3.31, p = .001$ .

**Music educator marital status.** Music educators reported their marital statuses as 70.23% married, 1.10% widowed, 1.45% separated, 7.25% divorced, 17.82% never married, and 2.15% living with a partner in a marriage-like relationship. The distribution of marital statuses of music educators was not statistically different than the distribution of marital statuses among non-music teachers,  $F(5, 168600) = 2.08, p = .07$ .

**Music educator educational attainment.** The distribution of highest educational attainment for music teachers was not significantly different than that for non-music teachers,  $F(4, 142640) = 1.68, p = .15$ . A small portion of music teachers (3.85%) reported holding associate's degrees; 44.5% of music teachers held bachelor's degrees; 44.26% of music teachers had earned master's degrees, 5.94% of music teachers held a graduate certificate, and 1.44% of music teachers had earned doctoral degrees.

**Music educator state teacher certification status.** There was no significant difference in the distribution of certification statuses between music and non-music teachers,  $F(4, 138510) = 7.15, p = .49$ . The clear majority of music teachers, 91.38%, held a regular, standard, or advanced professional teaching certificate valid in their state of employment. An additional 3.35% will hold a regular certificate after the completion of an induction or probationary period of teaching employment, 2.90% hold a certificate that requires the remediation of deficiencies in college coursework, licensure examinations, or a student teaching internship. Only 1.44% of music teachers held a certificate requiring them to complete a certification program in order to maintain teaching employment, and only 0.92% of music teachers did not hold a teaching certificate of any kind valid for the state in which they worked.

**Alternative and regular routes to music teacher certification.** Music teachers were considerably, and statistically significantly, *less* likely to pursue alternative routes to teacher

licensure. A full 93.20% of music teachers earned their certification through the standard route of majoring in music education at a college or university, while only 6.80% pursued an alternate route to teacher certification. This is considerably smaller than the 14.89% of non-music teachers who came to teaching through alternate route programs, and the difference is not only practically but statistically significant,  $F(1, 37500) = 23.47, p < .001$ . This result is quite remarkable, and likely bears further research scrutiny. There are several possible reasons that fewer music teachers complete alternate routes to teacher certification. For example, it is possible that states are more interested in recruiting teachers of other subjects and so have created fewer alternate route programs designed to bring musicians into teaching.

**National Board Certified Teachers.** The National Board for Professional Teaching Standards offers two certifications for music teachers: one for teachers of music working with students in early and middle childhood and one to teachers of music working with students in early adolescence through young adulthood. Nationally, 15.13% of music teachers were National Board Certified. This proportion is statistically indistinguishable from the 16.63% of non-music teachers who are NBCTs,  $F(1, 37500) = 0.67, p = .41$ .

**Full-time/part-time employment status.** Of the four arts areas, public schools are most likely to offer their students some form of music education (Parsad & Spiegelman, 2012), however, music teachers in the public schools are considerably more likely than their non-music colleagues to be employed part-time. Just under one quarter of music teachers—24.4%—were employed only part-time in 2011-2012, compared to just 6.29% of teachers of other subjects who were not full-time. This considerable difference in proportions is statistically significant,  $F(1, 37500) = 236.62, p < .001$ .

**Salary/earnings from school employment.** We estimate the national average for music teachers' earnings from school employment was \$53,600 ( $SD = \$19,700$ ; median = \$49,300); this is only slightly less than the average \$54,300 ( $SD = \$17,200$ ; median = \$50,000) for non-music teacher salaries. Regression analyses show the difference in music and non-music teacher school earnings is entirely accounted for by factors such as full-time/part-time status, experience, highest educational attainment, and other factors unrelated to a music teacher's status as a teacher of music (as compared to teachers of other subjects.) The full regression analysis is presented in Table 10.

### **Theater Teachers**

Nationwide, we estimate that there were 10,900 theater or drama educators working in the nation's public schools during the 2011-2012 school year. Theater teachers made up 5.47% of the arts educator workforce. Some caution should be taken in interpolating the results presented in this section—the SASS data included an unweighted sample size of only approximately 130 theater teachers, which makes the statistical power for certain comparisons somewhat low.

**Theater educator gender.** Nationally, teachers of theater identified as 68.47% female and 31.53% male. While this appears slightly more balanced than the 76.34% female to 23.66% male split of non-theater teachers, the difference is not statistically significant,  $F(1, 37500) = 1.93, p = .16$ .

**Theater educator race/ethnicity.** Theater teachers identified 93.43% White or Caucasian (non-Hispanic), 4.59% Black or African American (non-Hispanic), 1.18% two or more races, and 0.80% reported being of Hispanic or Latino origin. Due to the relatively small

unweighted sample size of theater teachers, there were no theater teachers in the sample who identified as Asian, as Native American or Alaska Native, or as Pacific Islander. While it is doubtful that the population of theater teachers includes no people identifying in these groups, it is likely that the representation of these races among the theater teacher workforce is quite low. Given the low sample size and statistical power of the comparison, it is unsurprising that the distribution of races and ethnicities of theater teachers was not statistically significantly different from that of non-theater teachers,  $F(5, 187330) = 1.11, p = .35$ .

**Theater educator age.** The average age of theater teachers was 42.40 years ( $SD = 11.44$ ). A  $t$ -test showed this to be statistically indistinguishable from the mean age of non-theater teachers,  $t(37500) = 1.42, p = .15$ .

**Theater educator years of experience in the classroom.** Theater educators nationally had an average of 13.78 years of experience in the classroom ( $SD = 9.40$ ). This was statistically similar to the average for teachers of other subjects,  $t(37500) = 0.24, p = .81$ .

**Theater educator marital status.** Theater teachers reported their marital statuses as: 62.70% married, 0.91% widowed, 0.11% separated, 14.01% divorced, 15.14% never married, and 7.13% living with a partner in a marriage-like relationship. This was statistically similar to the proportions for teachers of other subjects,  $F(4, 134740) = 1.61, p = .17$ .

**Theater educator educational attainment.** Highest educational attainment for theater educators was as follows: 3.33% Associate's degree, 47.41% Bachelor's degree, 40.18% Master's degree, 8.77% graduate certificate, and 0.30% doctoral or professional degree. It should be noted that in many sub-disciplines of theater, such as acting and directing, the MFA (Master of Fine Arts)—although technically a “master's” degree is—the terminal degree. The difference

in the distributions of educational attainment between theater teachers and teachers of other subjects was not statistically significant,  $F(3, 99470) = 0.53, p = .64$ .

**Theater educator state teacher certification status.** As is true with the other arts disciplines, theater educators' certification statuses were not statistically significantly different than those of non-theater teachers,  $F(3, 96250) = 0.64, p = .56$ . Fully 93.71% of theater teachers held regular, standard, or advanced professional state teaching certificates, 1.32% held a certificate that only requires the completion of a probationary induction period of employment to be converted to a regular certificate, 3.82% hold a certificate for which deficiencies in coursework or student teaching to be satisfied, 0.89% hold a certificate requiring the completion of a teacher preparation program, and only 0.26% reported not holding a valid state teaching certificate for the state in which they were then employed.

**Alternative and regular routes to music teacher certification.** In contrast to music educators, who were significantly less likely than other teachers to have pursued alternate routes to teacher certification, at first glance it appears as though *more* teachers of theater may come to teaching through alternate route programs—nearly one quarter (24.05%) of theater educators report having taken alternate routes to certification, compared with 14.58% of non-theater teachers. Owing likely to the relatively small number of theater teachers included in the SASS data, the difference between theater and non-theater teachers was not statistically significant,  $F(1, 37500) = 3.17, p = .08$ .

**National Board Certified Teachers.** At present, there is no National Board Certification area specifically for theater; it may come as no surprise then that significantly fewer theater teachers (only 6.07%) than non-theater teachers (16.61%) are NBCTs,  $F(1, 37500) = 8.22, p = .004$ . It is possible that the 6% of theater teachers who do hold National Board Certification are

certified in English/Language Arts, but an analysis of this speculation is beyond the scope of the present study.

**Full-time/part-time employment status.** Nationally, 87.19% of theater teachers were full-time, compared to 12.81% of theater teachers who were employed part-time. This proportion is not significantly different than the full-time/part-time breakdown of non-theater teachers,  $F(1, 37500) = 3.49, p = .06$ .

**Salary/earnings from school employment.** The mean earnings from school employment for theater teachers was \$51,800 ( $SD = \$17,500$ ; median = \$50,000), while the mean total school earnings for teachers of other subject was \$54,250 ( $SD = \$17,320$ ; median = \$50,000). Similar to the analyses for the other disciplines, regression analyses showed this difference to be due to the factors typically associated with teacher earnings: years of experience, highest degree earned, and full-time/part-time status. The complete regression analysis is displayed in Table 11.

### **Dance Teachers**

As of 2011-2012, when the SASS data were collected, we estimate that there were only 4,600 dance educators working in the nation's K-12 public schools. This represents just 2.24% of the arts educator workforce, and clearly reflects the burgeoning nature of dance education as an area of study offered in the public schools. Given the relatively small number of dance educators who were in the SASS sample (approximately 60), statistical power for inferences about the population of dance teachers is quite low, and as such, some data presented should be interpreted with extreme caution. It will be a worthwhile research endeavor to determine if dance education is becoming more prevalent in the nation's public schools as newer data about arts education course offerings and arts educators are made available to researchers in the future.

**Dance educator gender.** Based on the SASS data, we estimate that dance teachers were 93.29% female and 6.71% male. This is the most imbalanced toward females of any of the arts disciplines, and the tilt toward females was significantly greater than that for teachers of other subjects,  $F(1, 37500) = 8.93, p = .003$ .

**Dance educator race/ethnicity.** Dance teachers identified as 83.99% White or Caucasian (non-Hispanic), 9.14% Black or African American (non-Hispanic), 1.40% two or more races, and 5.47% reported Hispanic or Latino origin. Possibly owing to the lower statistical power of these comparisons due to the low sample size of dance teachers in the SASS, the distribution of race/ethnicity was not statistically significantly different than for that of non-dance teachers,  $F(5, 195350) = 0.18, p = .97$ .

**Dance educator age.** The average age of dance educators was 42.40 years ( $SD = 13.30$ ), statistically and practically indistinguishable from the average age of non-dance educators ( $M = 42.41, SD = 11.44$ ),  $t(37500) = 0.00, p = .997$ .

**Dance educator years of experience in the classroom.** Dance teachers reported an average of 13.77 ( $SD = 9.15$ ) years of experience in the classroom, which was neither practically nor statistically different than the average of 13.78 ( $SD = 9.40$ ) average experience for teachers of non-dance subjects.

**Dance educator marital status.** Dance educators reported their marital statuses as 70.74% married, 7.18% separated, 7.94% divorced, 12.17% never married, and 2.24% living with a partner in a marriage-like relationship. This was not significantly different than the proportions for non-dance teachers,  $F(4, 153500) = 1.34, p = .25$ .

**Dance educator educational attainment.** The educational attainment of dance teachers did not significantly differ from that of non-dance teachers,  $F(3, 108570) = 1.60, p = .19$ . The

educational attainment breakdown for dance educators was 2.18% Associate's degree, 57.01% Bachelor's degree, 40.15% Master's degree, 0.66% graduate certificate, and 0% doctoral or professional degrees.

**Dance educator state teacher certification status.** The certification status distribution of dance teachers was significantly different than that of non-dance educators, with fewer dance teachers holding regular, standard, or advanced professional certificates and considerably more dance teachers holding a provisional or deficient certificate or not holding a valid state certificate,  $F(3, 119670) = 6.53, p < .001$ . This difference could be related to the relative newness of dance education in the public school curriculum, with state certification laws (as of 2011-2012 when these data were collected) possibly lagging behind the burgeoning inclusion of dance educators among the public school teacher workforce. The majority of dance teachers (79.83%) did hold a regular, standard or advanced professional certificate, though this is considerably fewer than the 91.27% of non-dance educators so certified. A further 9.89% of dance teachers held a certificate with some deficiencies in coursework or testing requirements, 1.85% held a certificate requiring the teacher to pursue a teacher certification program, and 8.43% did not hold a valid certificate for the state in which they were employed. The issue of dance teacher certification status is worthy of revisiting in future research, particularly with newer data as dance education becomes more available in the nation's public schools.

**Alternative and regular routes to dance teacher certification.** Although significantly more dance teachers hold a deficient (or no) state teacher certification than do teachers of other subjects, we find here that dance teachers do not pursue alternate routes to licensure at rates greater than their non-dance colleagues. Based on the SASS data, we estimate that 17.59% of

dance teachers pursued alternate routes to certification, somewhat—but not statistically significantly—more than teachers of other subjects (14.61%),  $F(1, 37500) = 0.21, p = .65$ .a

**National Board Certified Teachers.** As there is no appropriate National Board certification area for dance, we did not analyze the NBCT status of dance teachers.

**Full-time/part-time employment status.** Similar to their colleagues in the other arts disciplines, considerably—and statistically significantly—more dance teachers were employed part-time than were teachers of other subjects. Part-time dance teachers made up 30.92% of the dance teacher workforce, compared with just 6.89% of non-dance teachers. The striking difference is significant,  $F(1, 37500) = 20.76, p < .001$ .

**Salary/earnings from school employment.** The average total school earnings for dance teachers was \$51,250 ( $SD = \$18,800$ ; median = \$48,000). Although this was somewhat less than the average school earnings for non-dance teachers ( $M = \$54,250, SD = \$17,300$ ; median = \$50,000), regression analyses showed this apparent difference was due to other factors traditionally involved in teacher compensation, such as years of experience, educational attainment, and full-time status. The full regression analysis is presented in Table 12.

### **Arts Teacher Demographics in Context**

Having examined the demographic profiles of arts educators collectively and individually by discipline in comparison to teachers of other subjects, we now turn to understanding the demographic profiles of arts educators within the arts field. Specifically, in this section of the report, we examine whether there are systematic differences in the proportional distribution of demographic characteristics of arts educators based on the following characteristics: (a) the concentration of poverty among students in the schools where arts teachers work; (b) the

urbanicity of the schools in which the arts teachers work (i.e., urban, suburban, or rural); (c) the school level (i.e., elementary, middle, or high school); and (d) arts discipline.

### **Differences by Student Socioeconomic Status**

Although at least some arts education is available to the clear majority of schools in the United States, reports from the NCES suggest that the schools where arts education is absent are likely to serve poorer students and more students of color than schools that provide at least a minimal arts education curriculum (Parsad & Spiegelman, 2012). Research on the effects of student socioeconomic status on schools, on schooling, and on human development have been undertaken across many social science disciplines—sociology, psychology, economics, and education being some of the more prominent areas for this research. Underpinning much of the recent sociological research on socioeconomic status and education is the theory first proposed by Bourdieu (Bourdieu & Passeron, 1990) that social inequalities are “reproduced” from parents’ generation to their children’s generation through the transmission not only of monetary wealth but also by the transmission of “cultural capital.” Included among the concept of “cultural capital” are things like parent’s knowledge about the culture and values of schools as an organization and the understanding of how schools work and also the parent’s conscious choice to expose their children to the so-called “high culture” world of classical music, visual art, dance, and drama.

If we accept the premise, as most arts education advocates do, that arts education therefore represents an important element of human development, then it makes sense to understand whether schooling in America reserves the “best” arts education experiences for the children of families who already possess the cultural capital to see to it that their children receive

an education in the arts. In other words, it is possible that the highest quality arts education experiences are currently only afforded to those children whose parents demand it, and sociological research suggests that the parents most likely to demand high quality arts education are those with the most socioeconomic resources, and those who wish to transmit their cultural capital to their children. Although it is exceedingly difficult, if not impossible, to truly assess the quality of arts education on a national scale, the present study allows us a convenient if noisy proxy: the characteristics related to teacher preparation, certification, and educational attainment of teachers providing arts education in the nation's schools. In the present section of this report, we examine whether there is a clear "sorting" of teacher characteristics based on the socioeconomic status of the students served by those teachers. For completeness, we also examine whether there is arts teacher sorting based on demographic characteristics unrelated to teacher preparation, certification, or education (and therefore unrelated to arts education quality) such as gender, race/ethnicity, etc.

To determine whether there is an association between concentrated poverty and various arts teacher characteristics, we divide the schools represented in the SASS data into socioeconomic status (SES) quartiles. We use the proportion of the student body eligible for free- or reduced-price lunch under the National Student Lunch Program (NSLP) as a proxy for student socioeconomic status. Although NSLP participation is an imperfect measure of individual socioeconomic status (Harwell & LeBeau, 2010), it remains one of the most commonly used indicators of student SES in educational research. In the present study, schools in the lowest SES quartile had a minimum of 64.139%, a maximum of 100%, and a mean of 82.85% ( $SD = 10.02\%$ ) of students receiving free- or reduced price lunch (FRL). The second SES quartile included schools with a minimum of 43.19%, a maximum of 64.137%, and a mean

of 53.55% ( $SD = 6.09\%$ ) of students receiving FRL. The third SES quartile comprised schools with a minimum of 23.861%, a maximum of 43.15%, and a mean of 34.19% ( $SD = 6.22$ ) students receiving FRL. The fourth, and highest, SES quartile schools had a minimum of 0%, a maximum of 23.860%, and a mean of 11.12% ( $SD = 7.95\%$ ) of students receiving FRL.

**Arts educator gender.** We find no significant difference in the female-to-male ratios of arts educators across the four SES quartiles,  $F(3, 108390) = 0.58, p = .62$ . In all quartiles, the female-to-male ratio of arts educators clusters tightly around the approximately 66% female to 34% male average for all arts educators regardless of school SES.

**Arts educator race/ethnicity.** In contrast to gender, we find that there *is* a significant sorting of arts educator race and ethnicity by SES quartile,  $F(12, 466152) = 9.42, p < .001$ . While approximately one quarter of White or Caucasian (non-Hispanic) arts educators work in each of the SES quartiles, the majority of Hispanic, Native American, Black or African American (non-Hispanic) arts educators work in schools comprising the lowest SES quartile. Fully 74.24% of Black or African American arts educators work in the lowest SES quartile schools, and a further 16.06% of Black or African American arts educators work in the second SES quartile. This means fewer than 1 in 10 Black or African American arts educators (just 9.70%) work in schools in the upper half of the school SES distribution. For context, it is still important to remember the racial/ethnic imbalance among arts educators discussed earlier in the report; although 74.24% of Black or African American arts educators work in the lowest SES quartile schools, the distribution of arts educators within that lowest SES quartile is still 79.28% White or Caucasian (non-Hispanic) and 11.26% Black or African American (non-Hispanic). In other words, there are both relatively few Black or African American arts educators overall *and* those few Black or African American arts educators also disproportionately work in the schools

serving the nation's poorest students. Similar patterns emerge for arts educators of Hispanic or Latino origin, for Native American or Alaska Native arts educators, and for multiracial arts educators. Tables 13 and 14 present the racial/ethnic distributions of arts educators by SES quartile in two ways; in Table 13, looking at the distribution of each arts teacher race/ethnicity over school SES quartiles and in Table 14 looking at the breakdown within SES quartiles of arts educator race/ethnicity.

**Arts educator marital status.** There were no significant differences in the distribution of arts educator marital statuses by school SES quartile,  $F(12, 446940) = .82, p = .63$ .

**Arts educator experience.** There was a small trend for more experienced teachers to work in higher SES quartile schools. The average arts teacher experience in lowest SES quartile schools was 13.56 years, in the second SES quartile the average arts teacher experience was 14.87 years, in the third quartile average arts teacher experience was 15.21 years, and in the highest SES quartile the average teacher experience was 15.40 years. Overall, the differences were not statistically significant,  $F(3, 37420) = 2.33, p = .07$ .

**Arts educator age.** Similar to to teacher experience, there was no significant difference in average age by school SES quartile,  $F(3, 37420) = 0.38, p = .77$ .

**Arts educator educational attainment.** Unlike age and experience, there *was* a significant difference in the distribution of highest educational attainment by school SES quartile,  $F(10, 358450) = 3.76, p < .001$ . Fully 62.30% of arts educators with a doctorate worked in the highest SES quartile schools; while pluralities of those with master's degrees (30.91%) and graduate certificates 39.01%) also work in the highest SES quartile schools. Conversely, those arts educators holding only a bachelor's degree are *underrepresented* in the highest SES quartile schools, with only 20.16% of these arts teachers working in the highest SES quartile.

There are several possible mechanisms at work in this association that require further research:

(1) schools in the higher SES quartiles choose to employ teachers with higher educational attainment; or (2) schools in the higher SES quartiles have more generous graduate tuition reimbursement benefits easing the burden of earning advanced degrees for their teachers; or (3) the amount of salary increase for earning a higher degree may be relatively higher in higher SES quartile schools, which makes the incentive for increased educational attainment more appealing to teachers in those schools.

**Arts educator certification status.** There were no significant differences in the type of teacher certification held by arts educators across the various school SES quartiles,  $F(10, 363390) = 1.17, p = .31$ .

**National Board Certification.** There were no significant differences in the proportion of arts educators who had earned NBCT status by SES quartile, with roughly one quarter of arts NBCTs working in each SES quartile,  $F(3, 109310) = 0.69, p = .56$ .

**Full-time/part-time status.** There were no significant differences in the rates at which arts educators were employed full-time or part-time based on the SES quartile of the schools where arts educators were employed,  $F(3, 108070) = 2.43, p = .07$ .

**School earnings.** Although arts educators working in the highest SES quartile schools do, on average, earn about \$6,700 more per year than arts educators working in the lowest SES quartile schools, regression analyses (presented earlier) show that this difference is attributable to factors *other* than the concentration of poverty at the schools in which arts educators work.

### **Differences by School Urbanicity**

Arts educators work at schools located in all of the urbanities formally defined by the U.S. Department of Education—cities, suburbs, towns, and rural areas. The distribution of arts educators through the urbanities does not differ significantly from the distribution of teachers of non-arts subjects,  $F(3, 108230) = 2.58, p = .054$ . The distribution of arts educators among the urbanities was as follows: 25.09% of arts teachers worked in city schools, 32.52% of arts teachers worked in suburban schools, 12.38% of arts teachers worked at schools in towns, and 30.01% of arts teachers worked at schools located in rural areas.

**Arts educator gender.** There appears to be no evidence for arts educator sorting by gender. Arts educator gender was not related to school urbanicity,  $F(3, 108250) = 97.74, p = .40$ . Across all four urbanities, arts educator gender was relatively tightly clustered around the average 66.36% female/33.64% male overall split for arts educators.

**Arts educator race/ethnicity.** Similar to the finding presented earlier for SES, we find a significant association between arts educator race/ethnicity and the urbanicity of the school at which a teacher is employed,  $F(10, 379380) = 2.78, p = .002$ . While those arts educators identifying as White or Caucasian make up the clear majority of all arts teachers across all urbanities—90.69% overall, and 85.03% of urban arts educators, 89.97% of suburban arts educators, 95.08% of arts educators in towns, and 94.39% of rural arts educators—the majority of arts educators identifying as Black or African American (53.12%) work in urban schools. The plurality (37.8%) of arts educators of Hispanic or Latino origin also work in cities, though just over another third (37.43%) work in suburban schools. Most arts educators identifying as Native American or Alaska Native (76.37%) work in rural schools.

Interpreting the sorting of arts educator race/ethnicity by urbanicity is a complex affair. There is evidence in the literature that suggests teachers (as a whole, not just arts educators)

select into teaching as a career because, among other reasons, those who become teachers often express a desire to work close to where they grew up (Reininger, 2012). Research on a large dataset of preservice music educators {Elpus:2015ba} has shown that music teacher licensure candidates in music who identified as Black or African American, Asian or Asian American, or were of Hispanic or Latino origin were overrepresented among those expressed a desire to teach in urban schools, while those identifying as White or Asian were overrepresented among those desiring to work in the suburbs. Taken together, the Reininger (2012) and Elpus (2015) studies suggest that it is possible that arts educators prefer either to work in urbanities similar to those in which they were raised or will they will teach students who are racially or ethnically similar to themselves. This interpretation suggests that the sorting by race and ethnicity evident in the SASS data analyzed here may be more a function of broader trends in American demography than any other potential cause. The more nefarious possibility that hiring practices in non-urban schools may systematically disadvantage arts educators of color—who, it must be restated, already make up less than 1-in-10 of the nation’s arts educators—cannot be ruled out. Clearly more research is needed in this area.

**Arts educator age.** Arts educator age was not related to the urbanicity of schools in which arts educators worked,  $F(3, 37500) = 1.66, p = .17$ .

**Arts educator years of experience.** Years of experience was not related to the urbanicity of schools in which arts educators worked,  $F(3, 37500) = .05, p = .98$ .

**Arts educator educational attainment.** The highest degrees earned by arts educators *did* significantly differ by school urbanicity,  $F(10, 382250) = 2.71, p = .002$ . Suburban districts had the highest proportion of arts teachers with master’s degrees, graduate certificates, and doctoral or professional degrees, while rural districts had the highest proportion of arts educators with

bachelor's degrees. There are at least two possible mechanisms driving this result: (1) it is possible that suburban districts often greater incentives for earning advanced degrees and/or greater tuition reimbursement benefits leading a higher proportion of suburban teachers to earn higher degrees over time in the profession; or (2) it is also possible that suburban districts prefer to hire arts educators that have already earned advanced degrees. These are but two possible reasons to explain the result, and further research is warranted to tease out the probable cause.

### **Differences by Grade Level**

For the most part, at least some arts education in the United States is compulsory at the elementary school levels and becomes elective in the middle and high schools. The compulsory/elective divide often occurs right at sixth grade, as students move from the elementary to middle school years. In this section of the report, we examine whether there are systematic differences in the demographic characteristics of arts educators working in elementary, middle, high, or combined-level schools.

**Arts educator gender.** Following from the results regarding music teacher gender and school level above, we find evidence that school level and arts educator gender are associated,  $F(2, 87800) = 11.96, p < .001$ . Overall, arts educators are 66.36% female and 33.64% male. Fully 40.44% of male arts educators work at the high school level, while 43.8% of female arts educators work at the elementary level. The male/female breakdowns if arts teachers within levels are as follows: Elementary, 76.02% female and 23.98% male; Middle, 61.92% female and 38.08% male; High school 58.11% female and 41.89% male.

The results for arts teachers follow the same general trend observed in teachers as a whole, where school level and gender are similarly significantly associated,  $F(2, 83710) =$

598.48,  $p < .001$ . At the high school level, teachers overall are 58.3% female and 41.7% male, with 50% of all male teachers working at the high school level; at the elementary level, teachers overall are 89.27% female and 10.73% male; with 56.21% of all female teachers working at the elementary level. At middle schools, teachers of all subjects are 72.59% female and 27.41% male.

**Arts educator race/ethnicity.** We find no evidence that arts educator race/ethnicity was associated with school level,  $F(10, 387220) = 0.72, p = .71$ .

**Arts educator marital status.** Arts educator marital status was not significantly associated with school level,  $F(11, 420630) = 1.71, p = .06$ .

**Arts educator age.** Arts educator age was not significantly associated with school level,  $F(3, 37500) = 2.03, p = .11$ .

**Arts educator years of experience.** We find no evidence that arts educator years of experience was related to school level,  $F(3, 37500) = 0.58, p = .63$ .

**Arts educator educational attainment.** We find no evidence that arts educators' highest educational attainment was related to school level,  $F(8, 316240) = 0.94, p = .48$ .

### Differences by Arts Discipline

Finally, we turn to the possibility that demographic differences may exist within the population of arts educators by comparing the demographic profiles of teachers in each of the four arts education disciplines of visual art, dance, theater, and music.

**Arts educator gender.** The split of males and females working as educators within each arts discipline *did* significantly vary by discipline,  $F(3, 101760) = 24.76, p < .001$ . Males were overrepresented among music teachers and underrepresented in all other arts disciplines. Fully

72.82% of all male arts educators were music educators, while only 49.58% of female arts educators were music teachers. Only 21.7% of male arts educators worked in the visual arts, while 41.72% of female arts educators were visual art teachers. The complete gender breakdowns within each arts discipline are reported above in the demographic profiles section.

**Arts educator race/ethnicity.** Arts educator race/ethnicity did not significantly vary across the arts disciplines,  $F(13, 469150) = 0.65, p = .81$ .

**Arts educator marital status.** Arts educator marital status varied significantly by arts discipline,  $F(12, 437750) = 1.85, p = .03$ . The complete breakdown of marital statuses by arts discipline is presented in Table 17.

**Arts educator age.** Arts educator age was significantly related to arts discipline,  $F(3, 37500) = 4.64, p = .003$ . Regression analyses revealed that the mean age of music educators (41.96 years) was significantly younger than the mean age of visual art educators (44.65 years). There were no other significant differences among arts disciplines.

**Arts educator years of experience.** Years of experience was not related to arts discipline,  $F(3, 37500) = 0.57, p = .63$ .

**Arts educator education attainment.** The highest degree earned by arts educators was not related to arts discipline,  $F(9, 336630) = 0.59, p = .80$ .

## CONCLUSIONS AND NEXT STEPS

Our finding that, generally, the arts educator workforce looks similar to the workforce of American public school teachers broadly defined has some important implications for education policy and practice. On the policy side, given the broad similarities between arts educators and educators of other subjects, it stands to reason that most policies aimed at somehow improving or changing the corps of teaching professionals will impact arts educators in ways similar to their non-arts peers. For example, changes to licensure requirements or other policy levers designed to restrict or limit the teaching profession to those persons most qualified to become teachers could be expected to have similar effects on the pool of potential arts educators as they have on the pool of potential teachers in other subjects.

However, the key findings of *dissimilarity* in this study related to race and ethnicity should also give education policymakers and those interested in the arts educator workforce some pause. Although the U.S. Department of Education has noted that the American teaching workforce is “relatively homogenous racially” and has identified some key points in the pipeline at which the teacher corps becomes less diverse (U. S. Department of Education, 2016), we find here that the *arts* educator workforce is even more homogenous than the educator workforce writ large. It is possible that similar chokepoints in the preparation of arts educators (e.g., admission to college on the basis of a competitively adjudicated art portfolio or performing audition, for example) may intensify the effect for arts educators. Thus increasing the diversity of the arts educator workforce may require additional intervention beyond those planned to increase the diversity of the non-arts educator workforce. There is some work on the diversity of the preservice teaching workforce within the field of music education {Elpus:2015ba} and the diversity of the in-service visual art educator workforce (Galbraith & Grauer, 2004), but not

much yet in the way of concrete interventions aimed at helping the corps of arts educators look more like the increasingly diverse student populations they will serve. However, more research in this area is needed.

### **Implications for Policy**

Arts teacher education policy is generally subsumed by the broader education policy environment, particularly with key policy levers such as teacher licensure and professional development. However, many colleges preparing arts educators on the traditional route to teacher certification are accredited not only by the Council for the Accreditation of Educator Preparation (CAEP), which features a broad set of standards for the preparation of teachers, but are simultaneously accredited by the relevant member of the Council of Arts Accrediting Associations (CAAA)—that is, the National Association of Schools of Music (NASM), the National Association of Schools of Art and Design (NASAD), the National Association of Schools of Theater (NAST), or the National Association of Schools of Dance (NASD). Each of the arts accrediting councils promulgate a set of pertinent standards for educator preparation within the arts disciplines. Due in large part to the accrediting standards of the CAAA members, arts educator preparation tends to look very similar to the preparation of arts professionals—at least at the core. For example, NASM standards require preservice music educators to earn as many credits in music history and music theory as their music performance peers in addition to similar requirements for private applied lessons on a musical instrument and participation in large and small music ensembles; all of this prior to the requisite education and music pedagogy coursework one would consider vital to a preservice music teacher.

Given that the collegiate preparation of music *teachers* so closely mirrors the collegiate preparation of music *performers*, most colleges and universities hold their music education applicants to the same rigorous audition requirements and standards for future music performance majors. Thus, pre-collegiate preparation in the arts at a level meeting or exceeding that of future arts professionals—sufficient to pass an audition or portfolio review—may be one place at which the diversity of the arts educator workforce is limited, as Koza (2008) has suggested in the discipline of music. Policies which promote broader access to pre-collegiate arts preparation (at the level of “future arts majors”) then may be one important point at which the arts educator workforce could be diversified. Individual colleges and universities, too, may revisit the admission standards upon which potential arts educators are evaluated to determine if there is a way to increase college arts education major diversity while still promoting artistic excellence among preservice arts educators.

### **Implications for Future Research**

Given that the bulk of the present study is concerned with descriptive profiles of arts educators in the nation’s public schools, the results we present here could be thought of as posing nearly as many questions as they present answers. The U.S. Department of Education has already noted that there is relative homogeneity among the nation’s teacher workforce (U. S. Department of Education, 2016). In the present report, however, we find that the arts educator workforce is even more homogenous than the teacher workforce as a whole. Some research in music education (Elpus, 2013; 2015; Elpus & Abril, 2011) and in visual arts education (Galbraith & Grauer, 2004) has begun to explore similar questions of diversity, or the lack thereof, among students and teachers in the arts. It is perhaps unsurprising that the lack of diversity among, for

example, music students filters up and is magnified in the music educator workforce. But the present study and the extant literature still do not have a satisfying answer for why the homogeneity exists. Myriad speculations abound—the need for individual instruction in the arts (especially music) starting from a young age and the attendant family socioeconomic resources needed for pre-collegiate preparation, chiefly—but little definitive research has set about the task of helping us better understand the root causes of arts teacher homogeneity with an eye toward improving arts teacher diversity. Clearly, this is an area for future exploration.

Beyond the homogeneity problem faced by arts education, another area ready for increased research scrutiny is the delivery and quality of arts education programs nationally. We find here that arts educators are significantly more likely to be employed part-time than are teachers of other subjects. If arts teachers are not spending a full day teaching, how are they supplementing their income? Is lack of student interest and enrollment creating smaller programs which do not support full time teachers? Or, conversely, is increased student interest creating a demand for more than one full-time teacher in a school but not quite reaching the level needed for additional full-time equivalent employment? Or, are school administrators seeking to tighten budgets by offering at least some arts programs but not employing the teachers delivering arts programs full-time, potentially saving both on salary and health benefit expenditures? In other words, is the increased likelihood that an arts teacher is not working full-time an indicator that the arts are somehow valued less in American public education than other subjects, or is there some other causal mechanism? Hopefully, future research in both quantitative and qualitative paradigms can help answer these important questions.

**APPENDIX: RESEARCH METHODOLOGY DETAILS**

This appendix provides detailed information on the research methods used to carry out the present study. All data analyzed here were collected as part of the National Center for Education Statistics *Schools and Staffing Survey* (SASS), in that study's final wave during the 2011-2012 school year. SASS was a recurring project of the U.S. Department of Education's National Center for Education Statistics, a center within the Department's Institute of Education Sciences. SASS surveyed school districts, principals, and teachers selected through stratified sampling procedures designed to ensure that respondents were nationally and regionally representative. Though SASS had been a recurring project of NCEES, it was recently redesigned and renamed the National Teacher and Principal Survey (NTPS), and the first wave of NTPS data collection is underway at the time of this writing, making the 2011-2012 SASS the most recently available national data on arts teacher and teachers of other subjects. We used the restricted-use version of the SASS data set, under license from the Institute of Education Sciences, as the primary source of data we analyzed because the restricted-use version of the data provides more granularity in the kinds of information provided about SASS respondents.

We identified arts educators ( $N = 2,700$ ) from among the complete sample of public school teachers ( $N = 37,500$ ) based on the area of instruction each sample member reported in their survey, which is reported in the dataset as variable T0090 "Teaching Assignment." Using the sampling weights provided by NCEES, the 37,500 educators included in SASS are representative of the nation's 3.38 million public school teachers and the 2,700 arts educators in the sample are representative of the nation's approximately 203,700 public school arts educators. The overall response rate for public school teachers in SASS, taking into account all stages of sampling, was 61.8%.

**Demographic profiles.** All of our univariate descriptive statistics (percentages and proportions) were calculated using survey-sampling adjusted estimation which takes into account the multistage nature of the SASS sampling and the uneven probabilities that any one sample member would be included in the SASS.

**Comparisons of categorical data for arts and non-arts educators.** For comparisons involving the distributions of categorical data such as race/ethnicity, gender, etc. among arts and non-arts educators, we used the Rao-Scott adjusted  $\chi^2$ , a non-parametric test of association similar to the more familiar Pearson  $\chi^2$ , but which takes into account the stratification and uneven probabilities of being selected for a survey sample (Rao & Scott, 1984). The Rao-Scott adjusted  $\chi^2$  results are presented as *F* ratios.

**Comparisons of continuous data for arts and non-arts educators.** For comparisons involving continuous data such as salary, age, or years of experience, we employed survey-adjusted linear regression. Where no covariates are employed (as in the comparisons involving age), use the survey-adjusted linear regression as the source of the *t*-statistics we report. For the salary comparisons, we report a multiple linear regression involving covariates, but we first log-transform the salary variable by using the natural log (ln) of sample members' salaries as the outcome measure. The log transformation allows us to ensure the salary data have a more normal distribution. Coefficients from the regression, when multiplied by 100, can be interpreted as the percent change in salary arising from a unit change in each predictor variable entered into the regression.

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## TABLES

Table 1

*Race and Ethnicity Distribution of Public School Teachers in the United States*

	Arts teachers	Non-arts teachers	All teachers
White or Caucasian	90.69%	81.36%	81.92%
Black or African American	3.88%	7.07%	6.88%
Asian	0.61%	1.89%	1.81%
Hispanic or Latino	3.59%	8.07%	7.80%
Native American or Alaska Native	0.23%	0.51%	0.49%
Pacific Islander	0.13%	0.15%	0.15%
Two or more races	0.87%	0.95%	0.95%

*Note.* Persons of Hispanic or Latino origin may be of any race, however, in this table any person reporting Hispanic or Latino origin is listed solely in that category.

Table 2

*Race and Ethnicity Distribution of Public School Arts Educators by Experience Level*

	≤ 3 years experience	> 3 years experience
White or Caucasian	87.94%	91.03%
Black or African American	2.78%	4.01%
Asian	0.78%	0.59%
Hispanic or Latino	4.89%	3.43%
Native American or Alaska Native	0.21%	0.23%
Pacific Islander	0.10%	0.14%
Two or more races	3.30%	0.57%

*Note.* Rao-Scott  $\chi^2$  shows the distributions are significantly different,  $F(4, 149140) = 2.92, p = .02$ .

Table 3

*Educational attainment of Public School Teachers in the United States*

	Arts teachers	Non-arts teachers	All teachers
Associate's degree	3.84%	3.80%	3.79%
Bachelor's degree	43.94%	39.60%	39.87%
Master's degree	44.72%	47.86%	47.67%
Graduate certificate	6.32%	7.66%	7.58%
Doctoral or professional degree	1.18%	1.08%	1.09%

*Note.* Rao-Scott  $\chi^2$  shows the distributions do not differ significantly  $F(4, 142920) = 2.23, p = .07$ .

Table 4

*Regression of arts vs. non-arts subject teacher total school earnings*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Arts teacher	-0.01	0.01	-0.73	.466
Years of experience	0.01***	0.00	46.06	< .001
Highest Degree Earned				
Bachelor's degree	-0.02	0.02	-0.97	.332
Master's degree	0.10***	0.02	6.13	< .001
Graduate certificate	0.14***	0.02	7.46	< .001
Doctoral/Professional degree	0.17***	0.02	7.77	< .001
Male	0.05***	0.00	13.17	< .001
School Nonwhite Enrollment %	0.00***	0.00	14.1	< .001
School FRL %	-0.00***	0.00	-8.89	< .001
School Level				
Middle school	0.01*	0.00	2.15	.031
High school	0.01**	0.00	3.08	.002
Multilevel school	-0.06***	0.01	-9.51	< .001
Full-time teacher	0.28***	0.02	14.03	< .001
National Board Certified Teacher	0.00	0.01	0.16	.87
Constant	10.23***	0.03	345.9	< .001

*Notes.*  $R^2 = 0.50$ . The outcome variable (total school earnings) is log-transformed; coefficient amounts multiplied by 100 give the estimate of the percentage effect of a change in the predictor variable. Model includes State fixed effects and is robust to the complex sampling structure of the SASS data. Reference categories for categorical predictors: Degree earned vs. Associate's Degree, Male vs. Female, School Level vs. Elementary School, Full-time vs. Part-time. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 5

*Race and Ethnicity Distribution of Public School Visual Art Teachers in the United States*

	Visual art teachers	Teachers of other subjects
White or Caucasian	90.64%	81.73%
Black or African American	3.14%	6.96%
Asian	0.70%	1.83%
Hispanic or Latino	4.13%	7.88%
Native American or Alaska Native	0.57%	0.49%
Pacific Islander	0.14%	0.15%
Two or more races	0.69%	0.95%

*Note.* Persons of Hispanic or Latino origin may be of any race, however, in this table any person reporting Hispanic or Latino origin is listed solely in that category. Rao-Scott  $\chi^2$  indicates that the distributions of visual art teachers and teachers of other subjects are significantly different,  $F(5, 198290) = 43.97, p = .002$ .

Table 6

*Educational attainment of visual art teachers*

	Visual art teachers	Teachers of other subjects
Associate's degree	4.00%	3.79%
Bachelor's degree	41.65%	39.83%
Master's degree	46.46%	47.69%
Graduate certificate	6.94%	7.60%
Doctoral or professional degree	0.95%	1.09%

*Note.* Rao-Scott  $\chi^2$  shows the distributions do not differ significantly  $F(4, 142190) = 0.24, p = .91$ .

Table 7

*Regression of visual arts vs. non-visual arts teacher total school earnings*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Arts teacher	-0.02	(0.01)	-1.94	.052
Years of experience	0.01***	(0.00)	46.16	< .001
Highest Degree Earned				
Bachelor's degree	-0.02	(0.02)	-0.97	.330
Master's degree	0.10***	(0.02)	6.11	< .001
Graduate certificate	0.14***	(0.02)	7.44	< .001
Doctoral/Professional degree	0.17***	(0.02)	7.76	< .001
Male	0.05***	(0.00)	13.12	< .001
School Nonwhite Enrollment %	0.00***	(0.00)	14.11	< .001
School FRL %	-0.00***	(0.00)	-8.88	< .001
School Level				
Middle school	0.01*	(0.00)	2.15	.032
High school	0.01**	(0.00)	3.12	.002
Multilevel school	-0.06***	(0.01)	-9.49	< .001
Full-time teacher	0.28***	(0.02)	14.06	< .001
National Board Certified Teacher	0.00	(0.01)	0.19	.853
Constant	10.23***	(0.03)	343.43	< .001

*Notes.*  $R^2 = 0.50$ . The outcome variable (total school earnings) is log-transformed; coefficient amounts multiplied by 100 give the estimate of the percentage effect of a change in the predictor variable. Model includes State fixed effects and is robust to the complex sampling structure of the SASS data. Reference categories for categorical predictors: Degree earned vs. Associate's Degree, Male vs. Female, School Level vs. Elementary School, Full-time vs. Part-time. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 8

*Race and Ethnicity Distribution of Public School Music Educators*

	Music teachers	Non-music teachers
White or Caucasian	90.72%	81.61%
Black or African American	4.05%	6.98%
Asian	0.64%	1.85%
Hispanic or Latino	3.46%	7.96%
Native American or Alaska Native	0.05%	0.51%
Pacific Islander	0.15%	0.15%
Two or more races	0.93%	0.94%

*Note.* Rao-Scott  $\chi^2$  shows the distributions are significantly different,  $F(4, 147330) = 5.73, p < .001$ .

Table 9

*Race and Ethnicity Distribution of Public School Music Educators by Experience Level*

	$\leq 3$ years experience	$> 3$ years experience
White or Caucasian	85.13%	91.45%
Black or African American	4.35%	4.01%
Asian	1.31%	0.56%
Hispanic or Latino	4.28%	3.34%
Native American or Alaska Native	0.17%	0.04%
Pacific Islander	0.17%	0.15%
Two or more races	4.59%	0.45%

*Note.* Rao-Scott  $\chi^2$  shows the distributions are significantly different,  $F(4, 150200) = 3.76, p = .005$ .

Table 10

*Regression of music teacher vs. non-music teacher total earnings from school employment*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Music teacher	0.01	(0.01)	0.80	.423
Years of experience	0.01***	(0.00)	46.00	.000
Highest Degree Earned				
Bachelor's degree	-0.02	(0.02)	-0.98	.328
Master's degree	0.10***	(0.02)	6.12	.000
Graduate certificate	0.14***	(0.02)	7.46	.000
Doctoral/Professional degree	0.17***	(0.02)	7.76	.000
Male	0.05***	(0.00)	12.99	.000
School Nonwhite Enrollment %	0.00***	(0.00)	14.08	.000
School FRL %	-0.00***	(0.00)	-8.87	.000
School Level				
Middle school	0.01*	(0.00)	2.05	.041
High school	0.01**	(0.00)	3.06	.002
Multilevel school	-0.06***	(0.01)	-9.49	.000
Full-time teacher	0.28***	(0.02)	14.06	.000
National Board Certified Teacher	0.00	(0.01)	0.17	.865
Constant	10.22***	(0.03)	345.72	.000

*Notes.*  $R^2 = 0.50$ . The outcome variable (total school earnings) is log-transformed; coefficient amounts multiplied by 100 give the estimate of the percentage effect of a change in the predictor variable. Model includes State fixed effects and is robust to the complex sampling structure of the SASS data. Reference categories for categorical predictors: Degree earned vs. Associate's Degree, Male vs. Female, School Level vs. Elementary School, Full-time vs. Part-time. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 11

*Regression of theater teacher vs. non-theater teacher total earnings from school employment*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Music teacher	-0.10	(0.10)	-1.08	.282
Years of experience	0.01***	(0.00)	46.26	.000
Highest Degree Earned				
Bachelor's degree	-0.02	(0.02)	-0.97	.333
Master's degree	0.10***	(0.02)	6.12	.000
Graduate certificate	0.14***	(0.02)	7.45	.000
Doctoral/Professional degree	0.17***	(0.02)	7.75	.000
Male	0.05***	(0.00)	13.20	.000
School Nonwhite Enrollment %	0.00***	(0.00)	14.09	.000
School FRL %	-0.00***	(0.00)	-8.87	.000
School Level				
Middle school	0.01*	(0.00)	2.15	.032
High school	0.02**	(0.00)	3.26	.001
Multilevel school	-0.06***	(0.01)	-9.43	.000
Full-time teacher	0.28***	(0.02)	14.17	.000
National Board Certified Teacher	0.00	(0.01)	0.12	.907
Constant	10.23***	(0.03)	345.06	.000

*Notes.*  $R^2 = 0.50$ . The outcome variable (total school earnings) is log-transformed; coefficient amounts multiplied by 100 give the estimate of the percentage effect of a change in the predictor variable. Model includes State fixed effects and is robust to the complex sampling structure of the SASS data. Reference categories for categorical predictors: Degree earned vs. Associate's Degree, Male vs. Female, School Level vs. Elementary School, Full-time vs. Part-time. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 12

*Regression of dance teacher vs. non-dance teacher total earnings from school employment*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Dance teacher	0.04	(0.04)	1.00	.315
Years of experience	0.01***	(0.00)	46.17	.000
Highest Degree Earned				
Bachelor's degree	-0.02	(0.02)	-0.98	.328
Master's degree	0.10***	(0.02)	6.12	.000
Graduate certificate	0.14***	(0.02)	7.45	.000
Doctoral/Professional degree	0.17***	(0.02)	7.78	.000
Male	0.05***	(0.00)	13.19	.000
School Nonwhite Enrollment %	0.00***	(0.00)	14.10	.000
School FRL %	-0.00***	(0.00)	-8.87	.000
School Level				
Middle school	0.01*	(0.00)	2.08	.037
High school	0.01**	(0.00)	3.01	.003
Multilevel school	-0.06***	(0.01)	-9.54	.000
Full-time teacher	0.28***	(0.02)	14.11	.000
National Board Certified Teacher	0.00	(0.01)	0.15	.877
Constant	10.23***	(0.03)	344.09	.000

*Notes.*  $R^2 = 0.50$ . The outcome variable (total school earnings) is log-transformed; coefficient amounts multiplied by 100 give the estimate of the percentage effect of a change in the predictor variable. Model includes State fixed effects and is robust to the complex sampling structure of the SASS data. Reference categories for categorical predictors: Degree earned vs. Associate's Degree, Male vs. Female, School Level vs. Elementary School, Full-time vs. Part-time. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 13

*Distribution of Arts Educator Race/Ethnicity Over School SES Quartiles*

	White	Black or African American	Asian	Hispanic/Latino	Native American/AK Native	Pacific Islander	Multiracial
Lowest SES Quartile	22.06%	74.24%	22.79%	55.08%	67.74%	†	16.28%
Second SES Quartile	24.59%	16.06%	2.40%	17.70%	13.70%	81.73%	56.94%
Third SES Quartile	24.08%	4.37%	38.13%	15.88%	12.08%	16.11%	13.86%
Highest SES Quartile	29.27%	5.33%	36.68%	11.34%	6.48%	2.16%	12.92%

*Note.* The table is to be read as the proportion of arts educators identifying in each race or ethnicity who work in schools within each SES quartile, such that 74.24% of arts educators identifying as Black or African American work in the Lowest SES quartile schools, etc. Columns total to 100%, rows do not. Although persons of Hispanic or Latino origin may be of any race, arts educators reporting Hispanic or Latino origin are counted only in the “Hispanic/Latino” column. † = Rounds to zero.

Table 14

*Distribution of Arts Educator Race/Ethnicity Within School SES Quartiles*

	Lowest SES Quartile	Second SES Quartile	Third SES Quartile	Highest SES Quartile
White or Caucasian	79.28%	92.13%	95.06%	96.50%
Black or African American	11.26%	2.54%	0.73%	0.74%
Asian	0.55%	0.06%	1.02%	0.82%
Hispanic/Latino Origin	7.70%	2.58%	2.44%	1.46%
Native American/AK Native	0.63%	0.13%	0.12%	0.06%
Pacific Islander	†	0.46%	0.10%	0.01%
Multiracial	0.57%	2.09%	0.54%	0.42%

*Note.* The table is to be read as the proportion of arts educators within each SES quartile identifying as the race or ethnicity indicated, such that 79.28% of arts educators in the lowest SES quartile schools identify as White or Caucasian, etc. Columns total to 100%, rows do not. Although persons of Hispanic or Latino origin may be of any race, arts educators reporting Hispanic or Latino origin are counted only in the “Hispanic/Latino” row. † = Rounds to zero.

Table 15

*Distribution of Arts Educator Race/Ethnicity Over School Urbanicity*

	White	Black or African American	Asian	Hispanic/ Latino	Native American/ AK Native	Pacific Islander	Multiracial
Urban	23.53%	53.12%	18.72%	37.80%	15.34%	†	22.01%
Suburban	32.26%	31.52%	36.45%	37.43%	8.29%	18.72%	49.44%
Town	12.98%	4.28%	12.16%	6.06%	†	81.28%	4.82%
Rural	31.23%	11.07%	32.68%	18.71%	76.37%	†	23.73%

*Note.* The table is to be read as the proportion of arts educators identifying in each race or ethnicity who work in schools within each urbanicity, such that 53.12% of arts educators identifying as Black or African American work in urban schools, etc. Columns total to 100%, rows do not. Although persons of Hispanic or Latino origin may be of any race, arts educators reporting Hispanic or Latino origin are counted only in the “Hispanic/Latino” column. † = Rounds to zero.

Table 16

*Distribution of Arts Educator Race/Ethnicity Within School Urbanities*

	Urban	Suburban	Town	Rural
White or Caucasian	85.03%	89.97%	95.08%	94.39%
Black or African American	8.20%	3.76%	1.34%	1.43%
Asian	0.46%	0.69%	0.60%	0.67%
Hispanic/Latino Origin	5.41%	4.13%	1.76%	2.24%
Native American/AK Native	0.14%	0.05%	†	0.58%
Pacific Islander	†	0.08%	0.88%	†
Multiracial	0.76%	1.32%	0.34%	0.69%

*Note.* The table is to be read as the proportion of arts educators within each urbanicity identifying as the race or ethnicity indicated, such that 85.03% of arts educators in urban schools identify as White or Caucasian, etc. Columns total to 100%, rows do not. Although persons of Hispanic or Latino origin may be of any race, arts educators reporting Hispanic or Latino origin are counted only in the “Hispanic/Latino” row. † = Rounds to zero.

Table 17

*Distribution of Marital Statuses by Arts Discipline, Including Non-Arts Teachers*

	Non-Arts	Art	Dance	Drama	Music	Overall
Married	69.87%	64.85%	70.47%	62.70%	70.23%	69.76%
Widowed	1.37%	1.80%	0.00%	0.91%	1.11%	1.37%
Separate	1.36%	3.57%	7.18%	0.10%	1.45%	1.41%
Divorced	9.90%	11.09%	7.94%	14.01%	7.25%	9.84%
Never Married	14.26%	14.63%	12.17%	15.14%	17.82%	14.39%
Living with a partner in a marriage-like relationship	3.24%	4.06%	2.24%	7.13%	2.15%	3.23%