

# STATS IN BRIEF

U.S. DEPARTMENT OF EDUCATION

MARCH 2015

NCES 2015-085

## Public Elementary and Secondary School Arts Education Instructors

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**Statistics in Brief** publications present descriptive data in tabular formats to provide useful information to a broad audience, including members of the general public. They address topical issues and questions. They do not investigate more complex hypotheses, account for inter-relationships among variables, or support causal inferences. We encourage readers who are interested in more complex questions and in-depth analysis to explore other NCES resources, including publications, online data tools, and public- and restricted-use datasets. See [nces.ed.gov](http://nces.ed.gov) and references noted in the body of this document for more information.

### Amid reports of decreased

instructional time in music and art in some districts (Heilig, Cole, and Aguilar 2010; McMurrer 2008; Rabkin and Hedberg 2011), researchers, policymakers, and practitioners have questioned the status of arts education in the United States (Sabol 2013). Evidence about how elementary and secondary schools staff their arts instruction would further inform the discussion regarding arts education in U.S. public schools. A recent National Center for Education Statistics (NCES) report detailed high levels of visual arts and music instruction in both the 1999–2000 and 2009–10 school years, while reporting drops in dance and drama/theatre instruction (Parsad and Spiegelman 2012). Additionally, a 2009 U.S. Government Accountability Office (GAO) study on arts education found that while most schools did not report decreased instructional time in arts education between the 2004–05 and 2006–07 school years, those that had high percentages of minority and low-income students and those labeled as in need of academic improvement reported reduced arts instructional time (U.S. GAO 2009).

This publication was prepared for NCES under Contract No. ED-IES-12-D-0002 with American Institutes for Research. Mention of trade names, commercial products, or organizations does not imply endorsement by the U.S. Government.

While previous NCES reports have examined the availability of arts education to students and the incorporation of arts education into the school day, both during a single school year and across school years,<sup>1</sup> this Statistics in Brief focuses on who teaches arts education in schools and how instructional staff varies by school characteristics and across school years in elementary and secondary school settings. Specifically, this report builds on the prior studies to explore the different types of school staff (i.e., full-time arts specialists, part-time arts specialists, and classroom teachers) used to provide arts instruction.<sup>2</sup> “Arts specialists” refer to education professionals with a teaching certificate in an arts discipline—such as visual arts or music—who provide separate instruction in that discipline. “Classroom teachers” refer to teachers of self-contained classrooms; these teachers could teach arts areas as separate subjects or incorporate arts areas into other subjects.

The analyses in this brief rely on data from surveys of school principals conducted through the NCES Fast Response Survey System (FRSS): the “Elementary School Arts Education Survey” and the “Secondary School Arts Education Survey,” conducted in the 1999–2000 and 2009–10 school years.<sup>3</sup> The elementary school survey asked principals whether various types of instructors—including arts specialists, classroom teachers, and other instructors—were available to teach arts subjects.<sup>4</sup> The secondary school survey asked principals how many full-time and part-time teachers taught courses in various arts subjects.

This Statistics in Brief reports data only for schools that offered instruction in visual arts or music. Schools that did not provide instruction specifically in the visual arts were excluded from the analyses of visual arts instructors, and those that did not provide instruction specifically in music were excluded from the analyses of music instructors.

Both music and visual arts instruction were widely available in the school years examined in this analysis. In both 1999–2000 and 2009–10, approximately 94 percent of public elementary schools offered instruction specifically in music. Meanwhile, visual arts instruction was offered by 87 percent of public elementary schools in 1999–2000 and by 83 percent in 2009–10. At the secondary level, 90 percent of schools offered music instruction in 1998–99, as did 91 percent in 2008–09. Specific to visual arts, 93 percent of public secondary schools offered instruction in 1998–99 and 89 percent offered instruction in 2008–09 (Parsad and Spiegelman 2012).

The findings reported in this brief are statistically significant at the  $p < .05$  level. No adjustments were made for multiple comparisons. For additional information about the data or methods used in this study, see the **Technical Notes** at the end of the brief.

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<sup>1</sup> See NCES 2011-078 and NCES 2012-014.

<sup>2</sup> Arts instruction refers to the study of creative works in music, visual arts, dance, or drama/theatre, and the process of producing such creative works. The percentage of schools offering instruction in dance and drama/theatre during the survey years was too small to permit statistical comparisons; thus analyses regarding dance and drama/theatre are not included in this brief.

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<sup>3</sup> The 1999–2000 and 2009–10 secondary school surveys asked whether various arts subjects were taught in the previous school year.

<sup>4</sup> In some elementary schools, it is possible that more than one educator provided arts instruction to students. Schools could report more than one type of instructor for a subject.

## STUDY QUESTIONS

1

Among public schools that offered instruction in visual arts and/or music, what percentage of elementary schools employed full-time arts specialists, part-time arts specialists, and classroom teachers in the 2009–10 school year; and what percentage of secondary school teachers were full-time or part-time arts instructors in the 2008–09 school year?

### Key Findings

- In the 2009–10 school year, higher percentages of elementary schools employed full-time arts specialists than part-time arts specialists or classroom teachers to teach both visual arts and music (figure 1).
- In the 2008–09 school year, public secondary schools reported that higher percentages of full-time staff than part-time staff provided instruction in both visual arts and music (figure 2).

2

How do schools' use of full-time and part-time arts specialists, and classroom teachers vary by selected school characteristics for elementary schools (school year 2009–10) and for secondary schools (school year 2008–09)?

### Key Findings

- In the 2009–10 school year, compared to the Northeast, Southeast, and Central regions, higher percentages of elementary schools in the West utilized classroom teachers to teach visual arts and to teach music (figure 4).
- In the 2008–09 school year, large public secondary schools reported higher percentages of full time staff who taught visual arts than did small and medium-sized public secondary schools (table A-4).

3

How has the use of full-time and part-time arts specialists and classroom teachers changed for elementary schools (from the 1999–2000 to the 2009–10 school year) and secondary schools (from the 1998–99 to the 2008–09 school year)?

### Key Findings

- Compared to 1999–2000, a higher percentage of public elementary schools reported the use of full-time specialists to teach visual arts in 2009–10 (figure 7).
- Compared to 1998–99, public secondary schools reported higher percentages of full-time staff who taught both visual arts and music in 2008–09 (figure 8).

## STUDY QUESTIONS—CONT'D

**4**

How has the use of full-time and part-time arts specialists and classroom teachers changed for elementary schools (from the 1999–2000 to the 2009–10 school years) and secondary schools (from the 1998–99 to the 2008–09 school years) by selected school characteristics?

### Key Findings

- The percentages of both low-minority and high-minority public elementary schools that reported the use of part-time visual arts specialists were higher in 2009–10 than they were in 1999–2000 (tables A-1 and A-2).
- From the 1998–99 to the 2008–09 school years, low-poverty secondary schools reported an increase in the use of full-time staff to teach music (tables A-3 and A-4).

**5**

What percentage of elementary schools report the use of facilities specifically dedicated to arts education and how, if at all, has this use changed from 1999–2000 to 2009–10?

### Key Finding

- From the 1999–2000 to the 2009–10 school years, elementary schools increased their use of dedicated rooms with special equipment to teach visual arts and to teach music (figure 11).

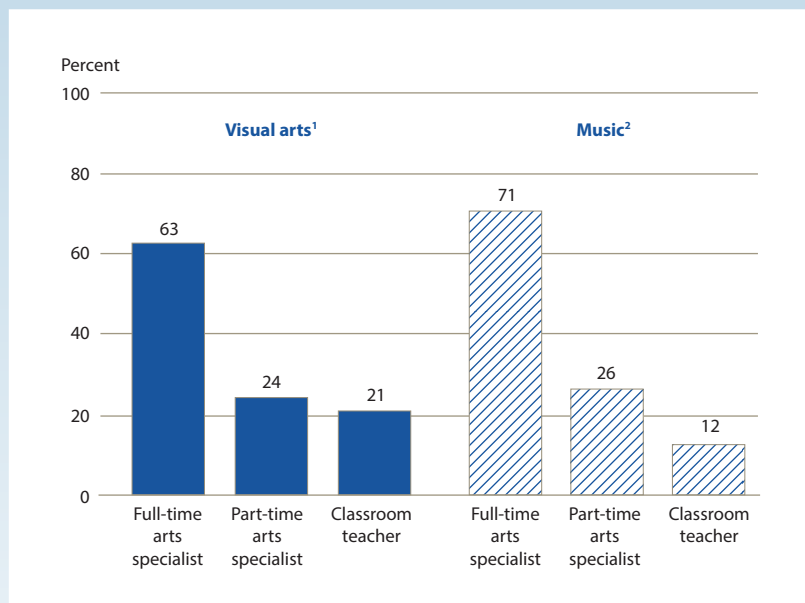
# 1

## Among public schools that offered instruction in visual arts and/or music, what percentage of elementary schools employed full-time arts specialists, part-time arts specialists, and classroom teachers in the 2009–10 school year; and what percentage of secondary school teachers were full-time or part-time arts instructors in the 2008–09 school year?

In 2009–10, higher percentages of elementary schools employed full-time arts specialists (63 percent in visual arts and 71 percent in music) than part-time arts specialists (24 percent in visual arts and 26 percent in music) or classroom teachers (21 percent in visual arts and 12 percent in music) to provide instruction in the arts (figure 1).

### FIGURE 1.

Among public elementary schools that offered instruction in visual arts and/or music, percent of schools reporting teachers on staff as arts instructors, by teaching status and subject: School year 2009–10



<sup>1</sup> Based on the 83 percent of public elementary schools offering instruction specifically designed for visual arts in 2009–10.

<sup>2</sup> Based on the 94 percent of public elementary schools offering instruction specifically designed for music in 2009–10.

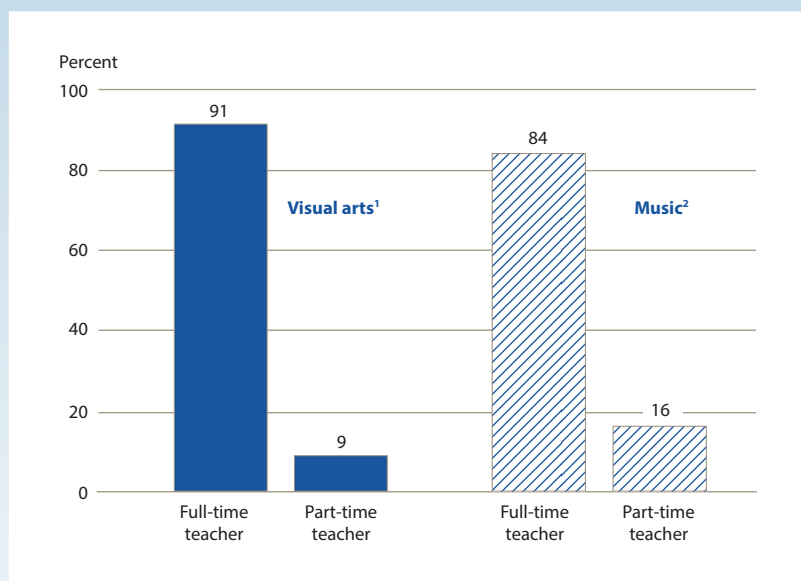
NOTE: Percentages for the various types of instructors employed to teach an arts subject do not sum to 100 because schools could report more than one type of instructor for the subject. Arts specialists are education professionals with a teaching certificate in an arts discipline who provide separate instruction in that discipline.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Elementary School Arts Education Survey: Fall 2009," FRSS 100, 2009–10.

In 2008–09, public secondary schools reported higher percentages of full-time staff (91 percent in visual arts and 84 percent in music) than part-time staff (9 percent in visual arts and 16 percent in music) to provide arts education (figure 2).

## FIGURE 2.

**Among public secondary schools that offered instruction in visual arts and/or music, percentage distribution of teachers on staff reported as arts instructors, by teaching status and subject: School year 2008–09**



<sup>1</sup> Based on the 89 percent of public secondary schools offering instruction specifically designed for visual arts in 2008–09.

<sup>2</sup> Based on the 91 percent of public secondary schools offering instruction specifically designed for music in 2008–09.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Secondary School Arts Education Survey: Fall 2009," FRSS 101, 2009–10.

## 2 How do schools' use of full-time and part-time arts specialists, and classroom teachers vary by selected school characteristics for elementary schools (school year 2009–10) and for secondary schools (school year 2008–09)?

Schools' use of full-time and part-time arts specialists and classroom teachers varied by a number of school characteristics. For example, in 2009–10, lower percentages of small elementary schools<sup>5</sup> and elementary schools in the West reported employing full-time arts specialists than did large schools or schools in other regions. Also, larger percentages of elementary schools with low-minority and low-poverty student enrollments employed part-time visual arts specialists than did high-minority and high-poverty schools, respectively.

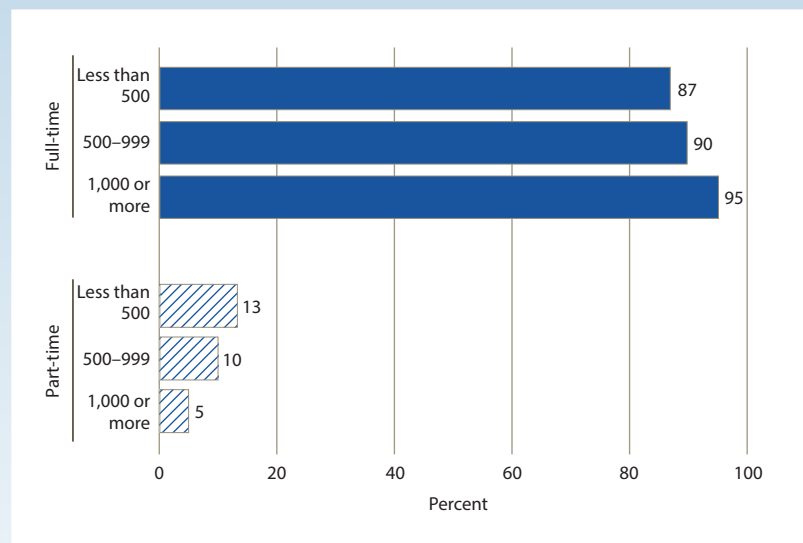
**School enrollment size.** In 2009–10, compared to smaller elementary schools, a higher percentage of large elementary schools reported that full-time arts specialists taught music or visual arts. For example, 73 percent of large elementary schools reported that full-time arts specialists taught visual arts, compared to 45 percent of small elementary schools. Further, 80 percent of large elementary schools reported that full-time arts specialists taught music, compared to 56 percent of small elementary schools (table A-2).

In 2008–09, compared to large secondary schools, small and medium-sized schools reported that lower

percentages of full-time staff and higher percentages of part-time staff taught visual arts (figure 3).

### FIGURE 3.

Percentage distribution of public secondary school teachers on staff reported as visual arts instructors, by teaching status and school enrollment size: School year 2008–09



NOTE: Based on the 89 percent of public secondary schools offering instruction specifically designed for visual arts in 2008–09.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Secondary School Arts Education Survey Fall 2009," FRSS 101, 2009–10.

<sup>5</sup>"Small elementary schools" have less than 300 students, "medium-sized elementary schools" have 300 to 499 students, and "large elementary schools" have 500 or more students. "Small secondary schools" have less than 500 students, "medium-sized secondary schools" have 500 to 999 students, and "large secondary schools" have 1,000 or more students.

**Region.** Comparisons between regions suggest that in the 2009–10 school year, generally, lower percentages of elementary schools in the West employed full-time specialists for visual arts or music instruction than did schools in any other region, while higher percentages utilized classroom teachers. For example, 48 percent of schools in the West used classroom teachers for visual arts instruction compared to 6 percent of schools in the Northeast (figure 4). No measurable differences were found by region for secondary schools (table A-4).

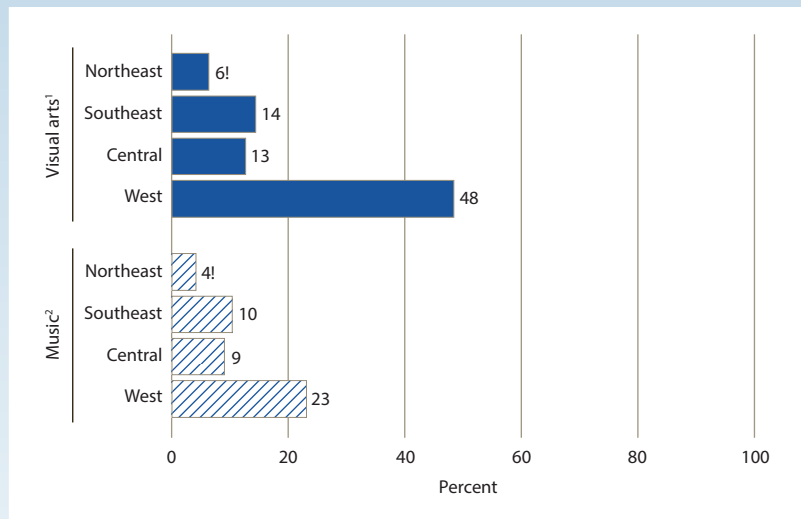
**Percent minority enrollment.** In 2009–10, low-minority and high-minority<sup>6</sup> elementary schools did not measurably differ from one another regarding their use of full-time arts specialists. Larger percentages of both types of schools used full-time arts specialists for arts instruction than used part-time or classroom teachers (table A-2). Regarding part-time specialists, there was a 16-percentage-point difference between the 36 percent of low-minority elementary schools and 20 percent of high-minority elementary schools that reported the use of part-time specialists for visual arts instruction (figure 5).<sup>7</sup> No measurable differences were found by percent minority enrollment for secondary schools (table A-4).

<sup>6</sup> “Low-minority schools” have less than 6 percent minority enrollment, and “high-minority schools” have 50 percent or more minority enrollment.

<sup>7</sup> There was no significant difference in the reported use of part-time specialists for music instruction by minority enrollment.

## FIGURE 4.

**Percent of public elementary schools offering arts instruction reporting that classroom teachers taught visual arts or music, by subject and region: School year 2009–10**



! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

<sup>1</sup> Based on the 83 percent of public elementary schools offering instruction specifically designed for visual arts in 2009–10.

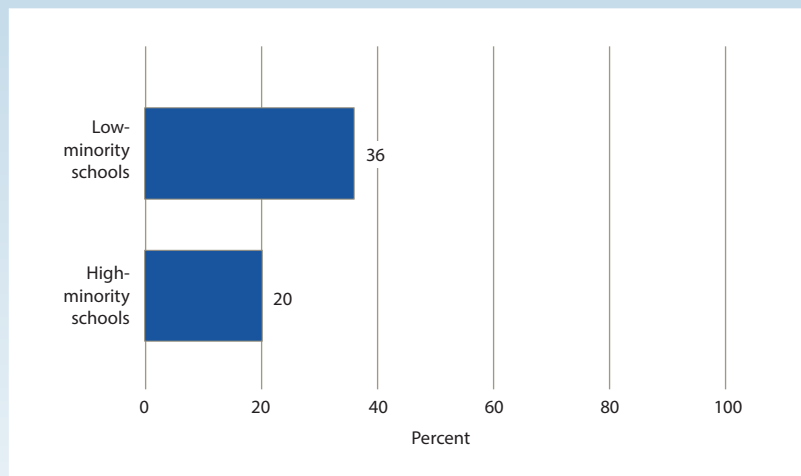
<sup>2</sup> Based on the 94 percent of public elementary schools offering instruction specifically designed for music in 2009–10.

NOTE: Arts specialists are education professionals with a teaching certificate in an arts discipline who provide separate instruction in that discipline.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Elementary School Arts Education Survey,” FRSS 100, 2009–10.

## FIGURE 5.

**Percent of public elementary schools reporting that part-time staff taught visual arts, by minority enrollment: School year 2009–10**



NOTE: Based on the 83 percent of public elementary schools offering instruction specifically designed for visual arts in 2009–10. Low minority schools are those with less than 6 percent minority enrollment and high-minority schools are those with 50 percent or more minority enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Elementary School Arts Education Survey,” FRSS 100, 2009–10.

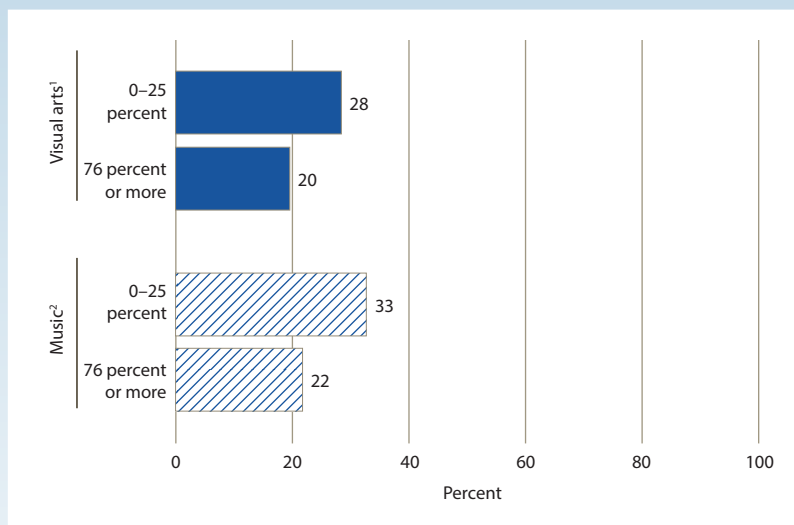


**School poverty level.** Using the percentage of students eligible for free or reduced-price school lunch as a measure of school poverty, no measurable differences were found between the percentages of low-poverty and high-poverty<sup>8</sup> elementary schools that employed full-time arts specialists in 2009–10 (table A-2). However, differences did exist in the use of part-time arts specialists. Specifically, compared to high-poverty schools, larger percentages of low-poverty elementary schools reported the use of part-time specialists for visual arts instruction (by 9 percentage points) and music instruction (by 11 percentage points) (figure 6). No measurable differences were found by school poverty for secondary schools (table A-4).

**Arts coursework graduation requirement.** Public secondary school principals provided data as to whether coursework in the arts was a graduation requirement. In 2008–09 there were no measurable differences between the percentage of full-time arts specialists employed by secondary schools that had an arts coursework graduation requirement and secondary schools that did not (table A-4).

**FIGURE 6.**

**Percent of public elementary schools offering arts instruction reporting part-time arts specialists taught visual arts or music, by subject and percent of students eligible for free or reduced-price school lunch: School year 2009–10**



<sup>1</sup> Based on the 83 percent of public elementary schools offering instruction specifically designed for visual arts in 2009–10.

<sup>2</sup> Based on the 94 percent of public elementary schools offering instruction specifically designed for music in 2009–10.

NOTE: Arts specialists are education professionals with a teaching certificate in an arts discipline who provide separate instruction in that discipline.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Elementary School Arts Education Survey,” FRSS 100, 2009–10.

<sup>8</sup> “Low-poverty schools” have 0 to 25 percent of students eligible for free or reduced-price school lunch, and in “high-poverty schools” 76 percent or more of the students are eligible.

# 3 How has the use of various types of arts educators changed for elementary schools (from the 1999–2000 to the 2009–10 school year) and secondary schools (from the 1998–99 to the 2008–09 school year)?

In general, among public elementary schools that offered visual arts education, higher percentages of schools in the 2009–10 school year than in the 1999–2000 school year employed arts specialists to provide instruction.

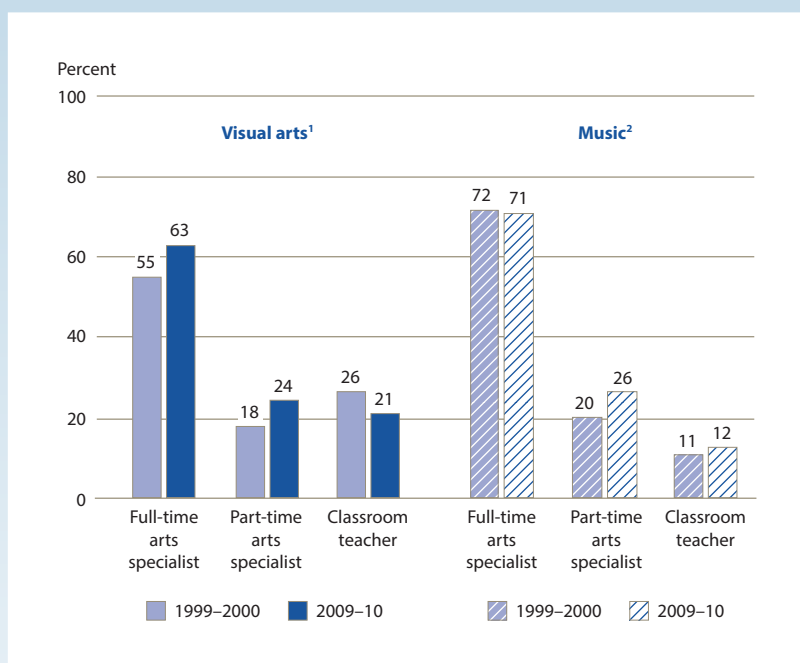
Among public secondary schools that offered visual arts or music education, higher percentages of full-time staff than part-time staff were employed to teach these subjects in both the 1998–99 and 2008–09 school years. Additionally, these schools employed higher percentages of full-time staff in 2008–09 than in 1998–99 for instruction in these subjects.

**Visual arts.** Among elementary schools that offered visual arts education, the percentage that employed full-time arts specialists to provide instruction was nearly 8 percentage points higher in 2009–10 than in 1999–2000 (63 vs. 55 percent) (figure 7). In both years, a larger percentage of schools employed full-time arts specialists than classroom teachers for visual arts instruction; however, the difference was 13 percentage points higher in 2009–10 than in 1999–2000.<sup>9</sup>

<sup>9</sup> The 13-percentage-point difference is the result of the difference between two differences. First, the percentage of schools in 1999–2000 that reported full-time arts specialists (54.9 percent) minus the percentage that reported classroom

## FIGURE 7.

Among public elementary schools that offered instruction in visual arts and/or music, percent of schools reporting teachers on staff as arts instructors, by subject and teaching status: School years 1999–2000 and 2009–10



<sup>1</sup> Based on the 87 percent of public elementary schools offering instruction specifically designed for visual arts in 1999–2000 and 83 percent in 2009–10.

<sup>2</sup> Based on the 94 percent of public elementary schools offering instruction specifically designed for music in 1999–2000 and 94 percent in 2009–10.

NOTE: Percentages for the various types of instructors employed to teach an arts subject do not sum to 100 because schools could report more than one type of instructor for the subject. Arts specialists are education professionals with a teaching certificate in an arts discipline who provide separate instruction in that discipline.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Elementary School Arts Education Survey," FRSS 67E, 1999–2000; and FRSS 100, 2009–10.

teachers (26.4 percent) yields a difference of 28.5 percentage points. Second, the same calculation for the 2009–10 estimates (62.8 percent for full-time teachers and 21.0 percent for classroom teachers) yields a difference of 41.8 percentage points. We tested these differences (41.8 and 28.5) for significance and found that they are significantly different from one another and yield a 13-percentage-point difference.

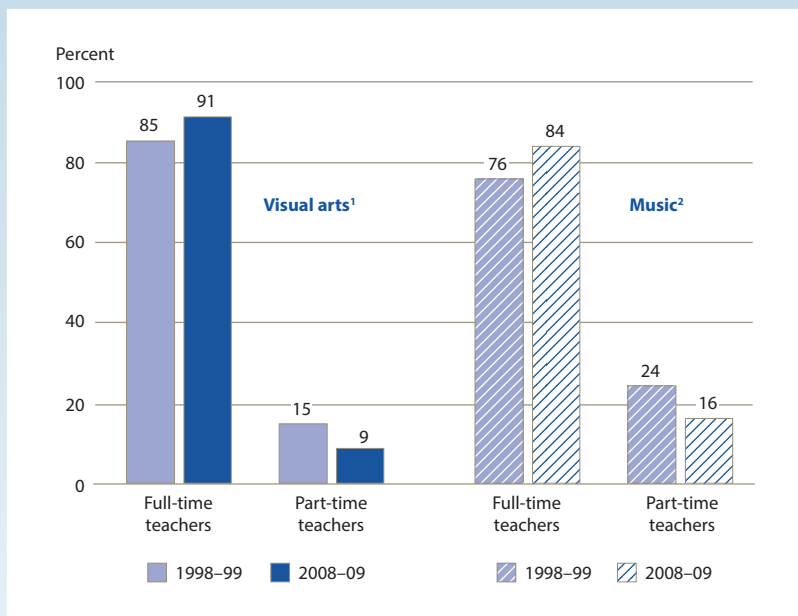
Secondary schools that offered visual arts instruction reported that 85 percent of visual arts instructors were employed full-time in 1998–99, compared to 91 percent in 2008–09 (figure 8).

**Music.** Among elementary schools that offered music education, 72 percent in 1999–2000 and 71 percent in 2009–10 provided instruction through full-time arts specialists. These percentages were not measurably different from each other, but they were significantly higher than the percentages of elementary schools that provided music instruction through classroom teachers (11 percent in 1999–2000 and 12 percent in 2009–10) (figure 7).

Among secondary schools that offered music education, about 76 percent of the schools’ instructors were employed full-time in 1998–99; this percentage increased to 84 percent in 2008–09 (figure 8).

## FIGURE 8.

**Among public secondary schools that offered instruction in visual arts and/or music, percentage distribution of teachers on staff reported as arts instructors, by subject and teaching status: School years 1998–99 and 2008–09**



<sup>1</sup> Based on the 93 percent of public secondary schools offering instruction specifically designed for visual arts in 1998–99 and 89 percent in 2008–09.

<sup>2</sup> Based on the 90 percent of public secondary schools offering instruction specifically designed for music in 1998–99 and 91 percent in 2008–09.

NOTE: The 1999–2000 and 2009–10 secondary school surveys asked whether various arts subjects were taught in the previous school year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Secondary School Arts Education Survey,” FRSS 675, 1999–2000; and FRSS 101, 2009–10.

# 4 How has the use of full-time and part-time arts specialists and classroom teachers changed for elementary schools (from the 1999–2000 to the 2009–10 school years) and secondary schools (from the 1998–99 to the 2008–09 school years) by selected school characteristics?

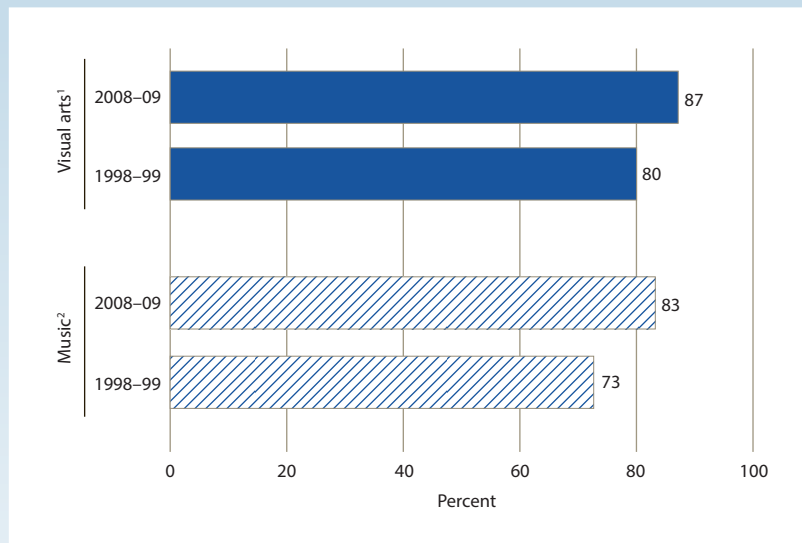
Over a 10-year period,<sup>10</sup> schools' use of full-time and part-time arts specialists and classroom teachers varied for elementary and secondary schools by school characteristics, including size, region, percent minority, and percent poverty enrollments.

**School enrollment size.** From 1999–2000 to 2009–10, the percentage of large elementary schools that reported employing full-time visual arts specialists rose 9 percentage points, from 64 to 73 percent. In addition, the percentage of medium-sized elementary schools that reported employing part-time music specialists rose 9 percentage points, from 18 to 27 percent (tables A-1 and A-2).

Regarding secondary schools that reported employing full-time staff for arts instruction, from 1998–99 to 2008–09, measureable differences existed for each category of school size in music and for small and large schools in visual arts. For example, small public secondary schools reported an 11-percentage-point increase in full-time staff employed to teach music, and a 7-percentage-point increase in full-time staff employed to teach visual arts (figure 9).<sup>11</sup>

**FIGURE 9.**

**Percent of public secondary school full-time teachers employed to teach visual arts or music at schools with less than 500 students: School years 1998–99 and 2008–09**



<sup>1</sup> Based on the 93 percent of public secondary schools offering instruction specifically designed for visual arts in 1998–99 and 89 percent in 2008–09.

<sup>2</sup> Based on the 90 percent of public secondary schools offering instruction specifically designed for music in 1998–99 and 91 percent in 2008–09.

NOTE: The 1999–2000 and 2009–10 secondary school surveys asked whether various arts subjects were taught in the previous school year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Secondary School Arts Education Survey," FRSS 67S, 1999–2000; and FRSS 101, 2009–10.

<sup>10</sup> Refers to 1999–2000 to 2009–10 for elementary schools and 1998–99 to 2008–09 for secondary schools.

<sup>11</sup> Differences were calculated using unrounded estimates.

**Region.** From 1999–2000 to 2009–10, reports from public elementary schools in the Southeast revealed a 20-percentage-point increase in the use of full-time specialists for visual arts instruction (55 vs. 75 percent); while, in the West, there was an increase of 13 percentage points over the period (26 vs. 39, tables A-1 and A-2). Reports from elementary schools in the West also revealed a 10-percentage-point increase in the use of part-time specialists for music instruction (20 vs. 30, tables A-1 and A-2), which was the only measurable difference by region for music (tables A-1 and A-2).

Public secondary schools in the West and Central regions reported higher percentages of full-time staff for music

and visual arts instruction in 2008–09 compared to 1998–99. For example, in the Central region, the percentage of full-time music instructors increased from 73 to 86 percent and the percentage of full-time visual arts instructors increased from 81 to 89 percent (tables A-3 and A-4).

**Percent minority enrollment.**

Compared to the 1999–2000 school year, there was a 15-percentage-point increase in the reported use of full-time arts specialists for visual arts instruction in elementary schools with 21–49 percent minority enrollment (46 vs. 61 percent).

Regarding part-time arts specialists, higher percentages of low-minority

and high-minority elementary schools reported use of these staff (low-minority: 24 vs. 36 percent; high-minority: 12 vs. 20 percent; tables A-1 and A-2), as did schools with 6–20 percent minority enrollment by 10 percentage points (16 to 26 percent). Over the same period, the reported use of classroom teachers for visual arts instruction changed by a 9-percentage-point decrease, from 20 to 11 percent.

There were no measurable differences between 1999–2000 and 2009–10 in elementary school use of full-time or part-time arts specialists or classroom teachers for music instruction by minority enrollment.

**School poverty level.** For three categories of school poverty, the use of arts specialists and classroom teachers varied over the 10-year time period. Higher percentages of elementary schools reported use of full-time and part-time specialists in visual arts, while lower percentages reported use of classroom teachers (figure 10). In 1999–2000, about 51 percent of schools with 26–50 percent poverty enrollment reported use of full-time arts specialists for visual arts instruction; this percentage increased to 65 percent by 2009–10. Meanwhile, a 21-percentage-point increase occurred for high-poverty elementary schools that reported use of full-time arts specialists in visual arts (44 vs. 65 percent).

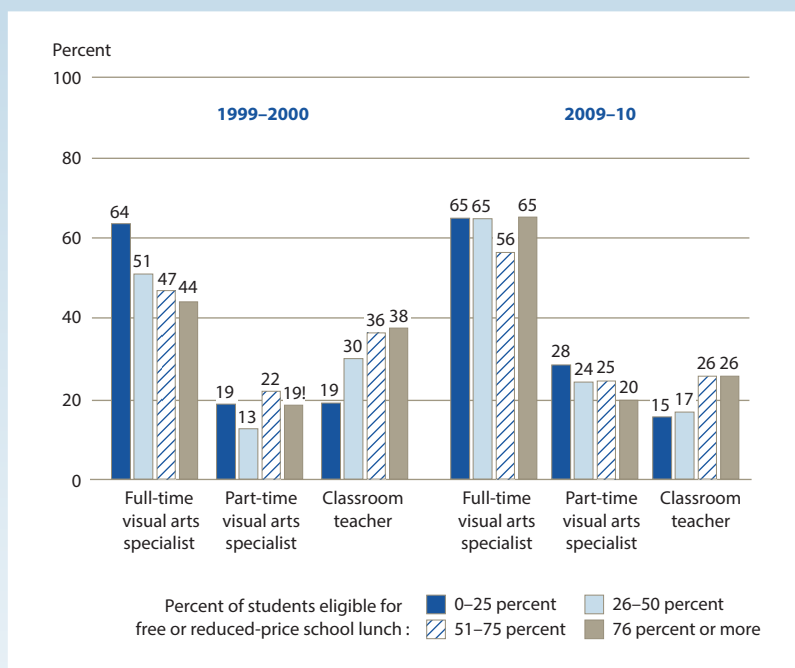
Regarding part-time specialists and classroom teachers, schools in the two lower categories of school poverty reported increases in part-time specialists (0–25 percent: 19 vs. 28 percent; 26–50 percent: 13 vs. 24 percent); and lower percentages of schools with poverty enrollment of 26–50 percent reported use of classroom teachers for visual arts instruction by 13 percentage points (30 vs. 17 percent). One measureable difference existed for music instruction by school poverty. About 22 percent of low-poverty schools reported use of part-time specialists for music in 1999–2000, compared to 33 percent in 2009–10 (tables A-1 and A-2).

From 1998–99 to 2008–09, changes for full-time staff in secondary schools occurred by poverty level (tables A-3 and A-4). For visual arts instruction, schools in the lowest two categories of poverty level had a 5-percentage-point increase in the use of full-time specialists over the 10-year period (0–25 percent category: 85 vs. 90

percent; 26–50 percent category: 87 vs. 92 percent). Meanwhile, the percentage of full-time instructors increased in music by 8 percentage points for the low-poverty schools (75 vs. 83 percent) and by 16 percentage points for schools with 51 to 75 percent poverty enrollment (69 vs. 85 percent).

## FIGURE 10.

**Among public elementary schools that offered instruction in visual arts, percent of schools reporting teachers on staff as visual arts instructors, by teaching status and school poverty level: School years 1999–2000 and 2009–10**



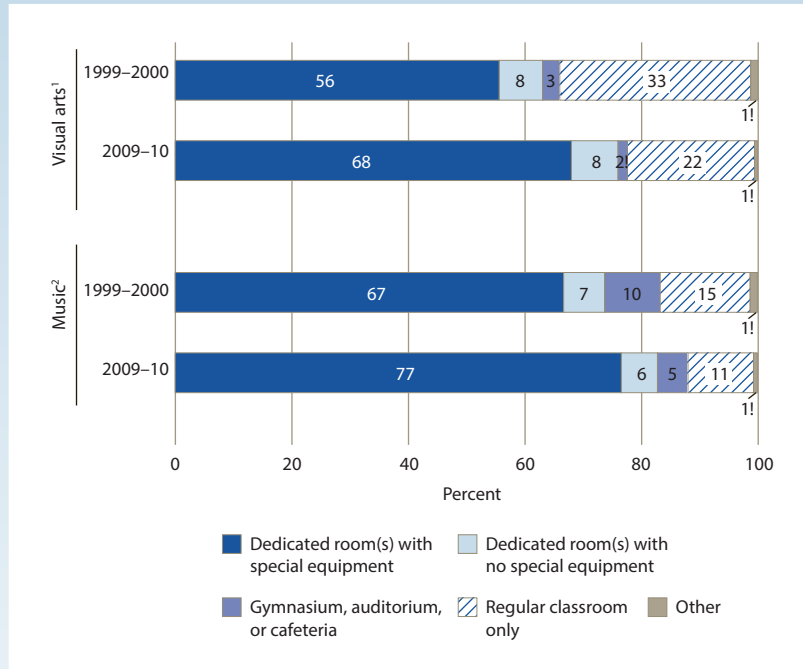
! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.  
 NOTE: Percentages for the various types of instructors employed to teach an arts subject do not sum to 100 because schools could report more than one type of instructor for the subject. Arts specialists are education professionals with a teaching certificate in an arts discipline who provide separate instruction in that discipline. Based on the 87 percent of public elementary schools offering instruction specifically designed for visual arts in 1999–2000 and 83 percent in 2009–10.  
 SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Elementary School Arts Education Survey," FRSS 67E, 1999–2000; and FRSS 100, 2009–10.

# 5 What percentage of elementary schools report the use of facilities specifically dedicated to arts education and how, if at all, has this use changed from 1999–2000 to 2009–10?

Among public elementary schools that offered instruction in visual arts, approximately 68 percent of schools had a dedicated room with special equipment in 2009–10, compared to 56 percent of schools in 1999–2000 (figure 11). Similarly, among public elementary schools that offered instruction in music, approximately 77 percent of schools had a dedicated room with special equipment in 2009–10, compared to 67 percent in 1999–2000. Conversely, the percentage of elementary schools that used only regular classrooms for visual arts and/or music instruction decreased. For example, 33 percent of elementary schools used only regular classrooms for visual arts instruction in 1999–2000, compared to 22 percent in 2009–10.

**FIGURE 11.**

**Among public elementary schools that offered instruction in visual arts and/or music, percentage distribution reporting the primary space used for instruction, by subject: School years 1999–2000 and 2009–10**



! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

<sup>1</sup> Based on the 87 percent of public elementary schools offering instruction specifically designed for visual arts in 1999–2000 and 83 percent in 2009–10.

<sup>2</sup> Based on the 94 percent of public elementary schools offering instruction specifically designed for music in 1999–2000 and 94 percent in 2009–10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Elementary School Arts Education Survey,” FRSS 67E, 1999–2000; and FRSS 100, 2009–10.

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Parsad, B., and Spiegelman, M. (2012). *Arts Education in Public Elementary and Secondary Schools: 1999–2000 and 2009–10* (NCES 2012-014). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Parsad, B., and Spiegelman, M. (2011). *A Snapshot of Arts Education in Public Elementary and Secondary Schools: 2009–10* (NCES 2011-078). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Carey, N., Kleiner, B., Porch, R., and Farris, E. (2002). *Arts Education in Public Elementary and Secondary Schools, 1999–2000* (NCES 2002-131). National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education. Washington, DC.

Carey, N., Farris, E., Sikes, M., Foy, R., and Carpenter, J. (1995). *Arts Education in Public Elementary and Secondary Schools* (NCES 95-082). National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education. Washington, DC.



## TECHNICAL NOTES

### *Fast Response Survey System*

The Fast Response Survey System (FRSS) was established in 1975 by the U.S. Department of Education's National Center for Education Statistics (NCES). The FRSS, which is designed to collect issue-oriented data within a relatively short time frame, collects data from state education agencies, local education agencies, public and private elementary and secondary schools, public school teachers, and public libraries. To ensure minimal burden on respondents, the surveys are generally limited to three pages of questions, with a response burden of about 30 minutes per respondent. Sample sizes are relatively small (usually about 1,000 to 1,500 respondents per survey) so that data collection can be completed quickly. Data are weighted to produce national estimates of the sampled education sector. The sample sizes are large enough to permit estimates by one variable with two or three categories, but are not large enough to support more detailed estimates. As the number of categories within any single analysis variable increases, the sample size within categories decreases, which results in larger sampling errors for the breakouts by classification variables.

### *Sample Design*

The sampling frames for the FRSS school surveys used in this analysis were based on regular public schools from the 2006–07 NCES Common Core of Data (CCD) Public School Universe file, which was the most current

file available at the time of sample selection. The sampling frame included 85,962 regular public schools. Of these schools, 52,807 were elementary schools, 31,133 were secondary schools, and 2,022 were combined schools. The frame included regular public elementary and secondary schools in the 50 states and the District of Columbia and excluded special education, vocational, home, adult education, private, and alternative/other schools; schools in the outlying U.S. territories; schools operated by the U.S. Department of Defense and Bureau of Indian Education; schools lacking any grade higher than kindergarten; and schools with only ungraded students. Charter schools were eligible for inclusion because they were classified as regular schools in the CCD. A school was defined as an elementary school if the lowest grade was lower than or equal to grade 6 and the highest grade was lower than or equal to grade 8. A secondary school was defined as having a lowest grade of 7 or greater and a highest grade equal to or greater than grade 7. Combined schools were defined as those having grades higher than grade 8 and lower than grade 7.

Separate stratified samples of public elementary and secondary schools were selected to receive the appropriate survey instrument for the FRSS school-level surveys. Combined schools were given a chance for selection for both the elementary and secondary surveys and, if selected, were asked to complete only the survey instrument

for which they were selected. The sampling frame was stratified by instructional level. Elementary and secondary schools were also stratified by school enrollment size. Within the primary strata, schools were sorted by geographic region; community type; percent combined enrollment of Black, Hispanic, Asian/Pacific Islander, or American Indian/Alaska Native students; and percent eligible for free or reduced-price lunch to produce additional implicit stratification.

### *Data Collection and Response Rates*

#### **1999–2000 Elementary and Secondary School Surveys**

Questionnaires and cover letters for the FRSS elementary and secondary school principal surveys were mailed in mid-September of 1999. The cover letters indicated that the surveys were designed to be completed by the school's principal.

Telephone follow-up for those who did not respond to the initial questionnaire mailing was conducted from mid-October 1999 through mid-February 2000 for secondary principals and through mid-March 2000 for elementary principals. Of the 755 secondary schools selected for the sample, 3 schools were found to be out of the scope of the survey, as were 18 of the 753 sampled elementary schools, leaving a total of 752 eligible secondary schools and 735 eligible elementary schools. Completed questionnaires were received from 686 secondary school principals and 640 elementary school principals. The weighted response rates were

91.7 percent for the secondary school survey and 87.8 percent for the elementary school survey.

### **2009–10 Elementary School Survey**

Study materials were mailed to elementary school principals in September 2009. Of the approximately 1,800 sampled public elementary schools, about 1,200 were selected to respond to the school survey. The study packages sent to these schools included a school survey and a cover letter indicating that the survey was designed to be completed by the school principal. Respondents were given the option of completing the survey online or on paper.

Telephone follow-up for those who did not respond to the initial questionnaire was conducted from October 2009 through June 2010. Of the approximately 1,200 elementary schools sampled for the school-level survey, about 40 schools were found to be out of scope for the study.

This left a total of approximately 1,160 schools eligible for the survey. Completed questionnaires were received from about 1,000 elementary school principals. The initial weighted response rate for the elementary school survey was 85 percent, and the unweighted response rate was also 85 percent.

### **2008–09 Secondary School Surveys**

Study materials were mailed to secondary school principals in September 2009. Of the approximately 1,600 sampled public secondary

schools, about 1,200 were selected to respond to the school survey. The survey packages sent to these schools included a school survey and a cover letter indicating that the survey was designed to be completed by the school principal. Respondents were given the option of completing the survey online or on paper.

Telephone follow-up for those who did not respond to the initial questionnaire was conducted from October 2009 through June 2010. Of the approximately 1,200 secondary schools that were sampled for the school-level survey, about 30 schools were found to be out of scope for the study. This left a total of approximately 1,170 secondary school principals eligible for the survey. Completed questionnaires were received from about 1,010 secondary school principals. The initial weighted response rate for the secondary school survey was 89 percent, and the unweighted response rate was 87 percent.

### ***Nonresponse Bias Analysis***

NCES statistical standards and guidelines require a nonresponse bias analysis if the unit response rate at any stage of data collection is less than 85 percent. Because all of the surveys used in this study have a response rate of greater than 85 percent, a nonresponse bias analysis was not required.

### ***Imputation for Item Nonresponse***

Although item nonresponse for key items was low for the various surveys, missing data were imputed

for the items with a response rate of less than 100 percent. The missing items included both numerical and categorical data such as whether full-time arts teachers were available to teach various arts subjects at the school. The missing data were imputed using a “hot-deck” approach to obtain a “donor” school from which the imputed values were derived (Ono and Miller 1969; U.S. Bureau of the Census 2002). Under the hot-deck approach, a donor school that matched selected characteristics of the school with missing data (the recipient) was identified. The matching characteristics included characteristics of the school such as categories of school enrollment size; locale; categories for percent combined enrollment of Black, Hispanic, Asian/Pacific Islander, or American Indian/Alaska Native students; and categories for the percentage of students in the school eligible for free or reduced-price lunch. In addition, relevant questionnaire items were used to form appropriate imputation groupings. Once a donor was found, it was used to obtain the imputed values for the school with missing data. For categorical items, the imputed value was simply the corresponding value from the donor school. For numerical items, an appropriate ratio (e.g., percentage of part-time music teachers who are specialists) was calculated for the donor school, and this ratio was applied to available data (e.g., number of part-time music specialists) for the recipient school to obtain the corresponding imputed value.

## Data reliability

Although the surveys on arts education in elementary and secondary schools were designed to account for sampling error and to minimize nonsampling error, estimates produced from the data collected are subject to both types of error. Sampling error occurs because the data are collected from a sample rather than a census of the population, and nonsampling errors are errors made during the collection and processing of the data.

## Sampling Errors

The responses to the surveys were weighted to produce national estimates. The weights were designed to adjust for the variable probabilities of sample selection and differential nonresponse. The findings in this report are estimates based on the sample selected and, consequently, are subject to sampling variability. General sampling theory was used to estimate the sampling variability of the estimates and to test for statistically significant differences between estimates. The standard error is a measure of the variability of an estimate due to sampling. It indicates the variability of a sample estimate that would be obtained from all possible samples of a given design and size. Standard errors are used as a measure of the precision expected from a particular sample. If all possible samples were surveyed under similar conditions, intervals of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the true population parameter being estimated in about 95 percent

of the samples. This is a 95 percent confidence interval. For example, the estimated percent of elementary schools that offered music instruction is 94.1 percent, and the standard error is 0.9 percent. The 95 percent confidence interval for the statistic extends from  $[94.1 - (0.9 \times 1.96)]$  to  $[94.1 + (0.9 \times 1.96)]$ , or from 92.3 to 95.9 percent. The 1.96 is the critical value for a statistical test at the .05 significance level (where .05 indicates the 5 percent of all possible samples that would be outside the range of the confidence interval).

Because the data from the FRSS school surveys were collected using a complex sampling design, the variances of the estimates from this survey (e.g., estimates of proportions) are typically different from what would be expected from data collected with a simple random sample. Not taking the complex sample design into account can lead to an underestimation of the standard errors associated with such estimates. To generate accurate standard errors for the estimates in this report, standard errors were computed using a technique known as jackknife replication. As with any replication method, jackknife replication involves constructing a number of subsamples (replicates) from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic. To construct the replications, 50 stratified subsamples of the full sample were created and then dropped one at a time to define 50 jackknife replicates.

All specific statements of comparisons made in this report have been tested for statistical significance at the .05 level using Student's *t* statistic to ensure that the differences are larger than those that might be expected due to sampling variation. Adjustments for multiple comparisons were not included. Student's *t* values were computed to test the difference between estimates with the following formula:

$$t = \frac{E_1 - E_2}{\sqrt{se_1^2 + se_2^2}}$$

where  $E_1$  and  $E_2$  are the estimates to be compared and  $se_1$  and  $se_2$  are their corresponding standard errors. Many of the variables examined are related to one another, and complex interactions and relationships have not been explored.

## Nonsampling Errors

*Nonsampling error* is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, differences in respondents' interpretations of the meaning of questions, response differences related to the particular time the survey was conducted, and mistakes made during data preparation. It is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. To minimize the potential for nonsampling error, this study used

a variety of procedures, including a pretest of the questionnaires with public elementary and secondary school principals and teachers. The pretest provided the opportunity to check for consistency of interpretation of questions and definitions and to eliminate ambiguous items. The questionnaires and instructions were also extensively reviewed by content experts in the arts education community. In addition, manual and machine editing of the questionnaire responses was conducted to check the data for accuracy and consistency. Cases with missing or inconsistent items were re-contacted by telephone to resolve problems. Data were keyed with 100 percent verification for surveys received by mail, fax, or telephone.

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## APPENDIX A: DATA TABLES

**Table A-1. Percent of public elementary schools offering arts instruction reporting various instructors employed to teach visual arts or music, by subject, type of instructor, and selected school characteristics: School year 1999–2000**

School characteristic	Visual arts <sup>1</sup>			Music <sup>2</sup>		
	Full-time arts specialists	Part-time arts specialists	Classroom teacher	Full-time arts specialists	Part-time arts specialists	Classroom teacher
All public elementary schools	54.9	17.7	26.4	71.6	20.0	10.6
<b>School enrollment size</b>						
Less than 300	39.4	24.4	33.9	55.0	29.9	11.8
300–499	56.8	20.1	21.0	78.1	18.0	5.7!
500 or more	63.9	11.0	26.0	77.1	14.9	14.0
<b>Region</b>						
Northeast	75.9	21.2	7.2!	80.1	24.5	2.5!
Southeast	55.1	24.7	19.0	70.0	21.4	6.8!
Central	69.9	17.6	14.0	84.7	15.7	‡
West	25.5	10.9	56.6	55.6	20.0	25.8
<b>Percent minority enrollment</b>						
Less than 6 percent	53.2	24.5	22.9	70.7	20.7	8.4!
6–20 percent	64.0	15.8	20.5	80.0	18.8	10.8!
21–49 percent	46.0	16.9	31.9	73.4	18.1	11.5
50 percent or more	55.4	12.3	31.6	63.1	22.3	12.4
<b>Percent of students eligible for free or reduced-price school lunch</b>						
0–25 percent	63.6	18.7	19.0	75.4	22.1	7.7
26–50 percent	51.1	12.6	30.1	74.6	15.0	13.4
51–75 percent	47.0	21.9	36.4	57.9	24.0	14.8
76 percent or more	44.2	18.5!	37.7	61.9	22.6	17.6

! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

‡ Reporting standards not met. The coefficient of variation for this estimate is 50 percent or greater or the sample size is less than 3.

<sup>1</sup> Based on the 87 percent of public elementary schools offering instruction specifically designed for visual arts in 1999–2000.

<sup>2</sup> Based on the 94 percent of public elementary schools offering instruction specifically designed for music in 1999–2000.

NOTE: Percentages for the various types of instructors employed to teach an arts subject do not sum to 100 because schools could report more than one type of instructor for the subject. Arts specialists are education professionals with a teaching certificate in an arts discipline who provide separate instruction in that discipline.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Elementary School Arts Education Survey,” FRSS 67E, 1999–2000.

**Table A-2. Percent of public elementary schools offering arts instruction reporting various instructors employed to teach visual arts or music, by subject, type of instructor, and selected school characteristics: School year 2009–10**

School characteristic	Visual arts <sup>1</sup>			Music <sup>2</sup>		
	Full-time arts specialists	Part-time arts specialists	Classroom teacher	Full-time arts specialists	Part-time arts specialists	Classroom teacher
All public elementary schools	62.8	24.2	20.9	70.8	26.3	12.5
<b>School enrollment size</b>						
Less than 300	44.6	35.9	28.3	55.6	34.3	20.0
300–499	65.2	24.5	16.5	71.8	27.5	8.6
500 or more	73.3	15.6	20.1	80.2	19.7	11.0
<b>Region</b>						
Northeast	67.6	33.2	6.3 !	69.1	33.6	4.1 !
Southeast	74.6	20.4	14.3	76.6	21.5	10.3
Central	71.8	24.8	12.6	78.3	21.3	9.0
West	38.7	19.3	48.1	59.9	30.0	23.0
<b>Percent minority enrollment</b>						
Less than 6 percent	55.4	36.0	18.8	65.3	30.5	12.7
6–20 percent	68.1	25.6	11.0	77.5	24.2	7.1
21–49 percent	61.3	18.1	26.4	68.3	25.6	16.6
50 percent or more	65.0	20.2	25.3	71.4	25.7	12.8
<b>Percent of students eligible for free or reduced-price school lunch</b>						
0–25 percent	65.0	28.5	15.5	74.6	32.8	8.9
26–50 percent	64.9	24.2	16.7	73.8	22.7	12.2
51–75 percent	56.5	24.5	25.6	68.1	27.9	12.7
76 percent or more	65.2	19.6	25.7	67.1	21.8	15.8

! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

<sup>1</sup> Based on the 83 percent of public elementary schools offering instruction specifically designed for visual arts in 2009–10.

<sup>2</sup> Based on the 94 percent of public elementary schools offering instruction specifically designed for music in 2009–10.

NOTE: Percentages for the various types of instructors employed to teach an arts subject do not sum to 100 because schools could report more than one type of instructor for the subject. Arts specialists are education professionals with a teaching certificate in an arts discipline who provide separate instruction in that discipline.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Elementary School Arts Education Survey,” FRSS 100, 2009–10.

**Table A-3. Percentage distribution of public secondary school teachers employed to teach visual arts or music, by subject and selected school characteristics: School year 1998–99**

School characteristic	Visual arts <sup>1</sup>		Music <sup>2</sup>	
	Full-time teachers	Part-time teachers	Full-time teachers	Part-time teachers
All public secondary schools	85.3	14.7	75.8	24.2
<b>School enrollment size</b>				
Less than 500	79.8	20.2	72.7	27.3
500–999	85.8	14.2	76.2	23.8
1,000 or more	89.1	10.9	78.0	22.0
<b>Region</b>				
Northeast	90.2	9.8	79.2	20.8
Southeast	88.6	11.4	78.5	21.5
Central	81.3	18.7	73.3	26.7
West	84.0	16.0	74.2	25.8
<b>Percent of students eligible for free or reduced-price school lunch</b>				
0–25 percent	85.1	14.9	75.0	25.0
26–50 percent	86.8	13.2	79.3	20.7
51–75 percent	80.9	19.1 !	69.1	30.9
76 percent or more	85.8	‡	74.2	25.8 !
<b>Art-specific requirement for graduation</b>				
Yes	86.8	13.2	76.8	23.2
No	83.2	16.8	74.5	25.5

! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

‡ Reporting standards not met. The coefficient of variation for this estimate is 50 percent or greater or the sample size is less than 3.

<sup>1</sup> Based on the 93 percent of public secondary schools offering instruction specifically designed for visual arts in 1998–99.

<sup>2</sup> Based on the 90 percent of public secondary schools offering instruction specifically designed for music in 1998–99.

NOTE: The 1999–2000 secondary school survey asked whether various arts subjects were taught in the previous school year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Secondary School Arts Education Survey,” FRSS 675, 1999–2000.

**Table A-4. Percentage distribution of public secondary school teachers employed to teach visual arts or music, by subject and selected school characteristics: School year 2008–09**

School characteristic	Visual arts <sup>1</sup>		Music <sup>2</sup>	
	Full-time teachers	Part-time teachers	Full-time teachers	Part-time teachers
All public secondary schools	91.3	8.7	83.9	16.1
<b>School enrollment size</b>				
Less than 500	86.9	13.1	83.3	16.7
500–999	90.1	9.9	82.2	17.8
1,000 or more	95.2	4.8	86.2	13.8
<b>Region</b>				
Northeast	91.5	8.5	84.6	15.4
Southeast	91.9	8.1	84.0	16.0
Central	88.9	11.1	85.7	14.3
West	93.1	6.9	81.5	18.5
<b>Percent of students eligible for free or reduced-price school lunch</b>				
0–25 percent	90.1	9.9	83.2	16.8
26–50 percent	92.1	7.9	83.8	16.2
51–75 percent	90.5	9.5	84.8	15.2
76 percent or more	95.1	4.9!	84.5	15.5
<b>Art-specific requirement for graduation</b>				
Yes	91.1	8.9	85.3	14.7
No	91.7	8.3	81.8	18.2

! Interpret data with caution; the coefficient of variation is greater than or equal to 30 percent.

<sup>1</sup> Based on the 89 percent of public secondary schools offering instruction specifically designed for visual arts in 2008–09.

<sup>2</sup> Based on the 91 percent of public secondary schools offering instruction specifically designed for music in 2008–09.

NOTE: The 2009–10 survey asked whether various arts subjects were taught in the previous school year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), “Secondary School Arts Education Survey,” FRSS 101, 2009–10.



## APPENDIX B: STANDARD ERROR TABLES

**Table B-1. Standard errors for table A-1: Percent of public elementary schools offering arts instruction reporting various instructors employed to teach visual arts or music, by subject, type of instructor, and selected school characteristics: School year 1999–2000**

School characteristic	Visual arts			Music		
	Full-time arts specialists	Part-time arts specialists	Classroom teacher	Full-time arts specialists	Part-time arts specialists	Classroom teacher
All public elementary schools	2.19	1.83	1.87	2.13	2.00	1.36
<b>School enrollment size</b>						
Less than 300	5.60	4.93	5.59	5.51	5.08	3.49
300–499	3.44	2.93	2.69	3.28	3.15	1.74
500 or more	2.27	1.68	2.07	2.51	2.41	1.50
<b>Region</b>						
Northeast	4.44	3.67	2.63	4.88	4.73	1.23
Southeast	5.15	4.38	4.56	3.82	3.88	2.19
Central	4.03	3.34	3.06	3.46	3.65	†
West	2.81	2.99	3.79	3.88	3.55	3.40
<b>Percent minority enrollment</b>						
Less than 6 percent	4.74	3.71	4.22	4.73	3.99	2.59
6–20 percent	4.24	2.85	3.83	4.31	3.67	3.27
21–49 percent	4.81	3.76	4.61	3.83	3.27	2.90
50 percent or more	4.43	2.89	4.12	4.07	3.29	2.47
<b>Percent of students eligible for free or reduced-price school lunch</b>						
0–25 percent	3.98	2.99	2.75	3.62	3.38	1.91
26–50 percent	4.34	3.33	4.02	4.14	3.18	2.98
51–75 percent	6.20	4.84	5.29	7.03	5.04	4.26
76 percent or more	6.64	6.96	7.30	6.94	6.56	4.97

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Elementary School Arts Education Survey," FRSS 67E, 1999–2000.

**Table B-2. Standard errors for table A-2: Percent of public elementary schools offering arts instruction reporting various instructors employed to teach visual arts or music, by subject, type of instructor, and selected school characteristics: School year 2009–10**

School characteristic	Visual arts			Music		
	Full-time arts specialists	Part-time arts specialists	Classroom teacher	Full-time arts specialists	Part-time arts specialists	Classroom teacher
All public elementary schools	2.14	1.56	1.67	1.52	1.44	1.21
<b>School enrollment size</b>						
Less than 300	3.45	3.35	4.31	3.43	3.05	3.15
300–499	2.93	2.40	2.27	2.66	2.59	1.64
500 or more	2.44	1.77	2.19	1.75	1.51	1.70
<b>Region</b>						
Northeast	4.01	4.05	2.38	3.77	4.13	1.50
Southeast	3.21	3.34	2.80	3.05	3.44	2.31
Central	3.34	3.03	2.28	3.02	3.03	2.19
West	4.23	3.16	3.85	3.47	3.01	2.48
<b>Percent minority enrollment</b>						
Less than 6 percent	4.29	3.65	3.28	3.65	3.40	2.85
6–20 percent	3.87	4.06	2.38	3.41	3.46	2.04
21–49 percent	3.64	2.62	3.86	3.07	2.75	2.52
50 percent or more	3.77	2.56	2.71	2.87	2.34	2.44
<b>Percent of students eligible for free or reduced-price school lunch</b>						
0–25 percent	3.12	3.34	2.88	2.81	3.17	2.14
26–50 percent	3.74	3.29	2.78	2.73	3.06	2.72
51–75 percent	3.42	2.82	3.12	2.82	2.67	2.16
76 percent or more	3.67	2.55	3.25	3.32	2.87	3.00

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Elementary School Arts Education Survey," FRSS 100, 2009–10.

**Table B-3. Standard errors for table A-3: Percentage distribution of public secondary school teachers employed to teach visual arts or music, by subject and selected school characteristics: School year 1998–99**

School characteristic	Visual arts		Music	
	Full-time teachers	Part-time teachers	Full-time teachers	Part-time teachers
All public secondary schools	1.31	1.31	1.22	1.22
<b>School enrollment size</b>				
Less than 500	2.83	2.83	3.01	3.01
500–999	2.51	2.51	1.85	1.85
1,000 or more	1.39	1.39	1.79	1.79
<b>Region</b>				
Northeast	1.73	1.73	2.41	2.41
Southeast	2.27	2.27	2.52	2.52
Central	2.77	2.77	2.37	2.37
West	2.52	2.52	2.65	2.65
<b>Percent of students eligible for free or reduced-price school lunch</b>				
0–25 percent	1.97	1.97	1.65	1.65
26–50 percent	2.19	2.19	2.22	2.22
51–75 percent	7.80	7.80	6.49	6.49
76 percent or more	9.36	†	8.48	8.48
<b>Art-specific requirement for graduation</b>				
Yes	1.75	1.75	1.62	1.62
No	1.62	1.62	1.70	1.70

† Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Secondary School Arts Education Survey," FRSS 67S, 1999–2000.

**Table B-4. Standard errors for table A-4: Percentage distribution of public secondary school teachers employed to teach visual arts or music, by subject and selected school characteristics: School year 2008–09**

School characteristic	Visual arts		Music	
	Full-time teachers	Part-time teachers	Full-time teachers	Part-time teachers
All public secondary schools	0.72	0.72	0.93	0.93
<b>School enrollment size</b>				
Less than 500	1.85	1.85	2.07	2.07
500–999	1.17	1.17	1.64	1.64
1,000 or more	0.76	0.76	1.27	1.27
<b>Region</b>				
Northeast	1.58	1.58	1.85	1.85
Southeast	1.66	1.66	1.98	1.98
Central	1.72	1.72	1.58	1.58
West	1.25	1.25	2.35	2.35
<b>Percent of students eligible for free or reduced-price school lunch</b>				
0–25 percent	1.19	1.19	1.60	1.60
26–50 percent	1.22	1.22	1.53	1.53
51–75 percent	1.66	1.66	1.93	1.93
76 percent or more	2.44	2.44	3.15	3.15
<b>Art-specific requirement for graduation</b>				
Yes	0.89	0.89	1.24	1.24
No	1.25	1.25	1.62	1.62

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Secondary School Arts Education Survey," FRSS 101, 2009–10.

**Table B-5. Standard errors for figure 11: Among public elementary schools that offered instruction in visual arts and/or music, percentage distribution reporting the primary space used for instruction, by subject: School years 1999–2000 and 2009–10**

Primary space used for instruction	Visual arts		Music	
	1999–2000	2009–10	1999–2000	2009–10
Dedicated room(s) with special equipment	2.34	1.74	2.14	1.59
Dedicated room(s) with no special equipment	1.41	1.02	1.12	0.94
Gymnasium, auditorium, or cafeteria	0.74	0.52	1.23	0.85
Regular classrooms only	2.25	1.73	1.52	1.25
Other	0.51	0.26	0.47	0.25

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System (FRSS), "Elementary School Arts Education Survey," FRSS 67E, 1999–2000; and FRSS 100, 2009–10.