
THE NATIONAL CENTER FOR EDUCATION STATISTICS



NAEP FACTS

Vol. 4 No. 2

December 1999

Student Subgroup Achievement on the NAEP 1997 Arts Assessment

Abstract: Data from the National Assessment of Educational Progress (NAEP) 1997 Arts Assessment for eighth-grade students show that female students outperformed male students in every category of assessment for all three art forms assessed—music, theatre, and visual arts. In contrast to assessments in other subjects, nonpublic school students rarely outperformed public school students. Asian and white students had higher scores than black and Hispanic students in many but not all categories of the assessment.

In 1997, the National Center for Education Statistics (NCES) assessed art education in the United States, for the first time in almost 20 years.¹ This *NAEPfact* will discuss achievement of student subgroups for all three arts assessed—music, theatre, and visual arts. (A planned assessment of dance was not possible because the number of schools offering a significant program in dance was so small that NCES could not identify a sample large enough to produce statistically valid results.) Analysis of student subgroup achievement compares achievement by gender, race/ethnicity, and type of school attended (public or nonpublic).

The NAEP Arts Assessment

The NAEP arts assessment measured students' ability to create and perform works of art as well as to respond to existing works. For each art form, students were assessed on at least two of the three arts processes: *Creating*, *Performing*, and *Responding*. In the arts assessment framework,

- *creating* refers to expressing ideas and feelings in the form of an original work of art, for example, a

piece of music, a dramatic improvisation, or a sculpture;

- *performing* refers to performing an existing work, a process that calls upon the interpretive or re-creative skills of the student; and
- *responding* refers to observing, describing, analyzing, and evaluating works of art.

In order to capture all three processes, the arts assessment exercises included *Creating* and *Performing* tasks, in addition to standard paper-and-pencil tasks. The *Creating* and *Performing* tasks, among other things, asked students to sing, create music, act in theatrical improvisations, work with various media to create works of visual art, and to perform and improvise dances.² In these tasks, students were also asked to evaluate their own work in written form. The *Responding* tasks, which used the paper-and-pencil format, asked students to describe, analyze, interpret, and evaluate works of art, both by writing short statements and essays and by answering multiple-choice questions. Students were given a series of related tasks (*Creating*, *Responding*, or *Performing*), arranged in blocks from 25 to 50 minutes in length.

The Student Samples

The NAEP 1997 Arts Assessment was conducted nationally at grade 8. For music and visual arts, representative samples of public and nonpublic school students were assessed. Students were assessed regardless of whether they had any training in music or the visual arts. In theatre, on the other hand, NCES used a targeted

sample, confined to students who had accumulated 30 hours of theatre classes by the end of the 1996–97 school year and who were attending schools offering at least 44 classroom hours of a theatre course per semester and offering courses including more than the history or literature of theatre.

The decision to assess a targeted sample of students for theatre was made based on the results of the 1995 NAEP field tests at grades 4 and 8. Field test data indicated that small percentages of students were exposed to comprehensive theatre programs in the nation’s schools. A general or untargeted assessment would not assess enough students with significant instruction in theatre to provide statistically significant results. NCES decided to use a targeted assessment for theatre in order to obtain meaningful data on the full range of student performance in theatre. The music sample consisted of 2,275 students, while the visual arts sample had 2,999 students, and the theatre sample, 1,386 students.

The reader should keep in mind the fact that the theatre sample was not a random national sample when making comparisons between the theatre results and the music and visual arts results. To underscore the differences in samples, theatre results are presented after music and visual arts results.

Student Achievement

Student performance on the arts assessment is presented in several ways. The overall summaries of results treat each of the three processes—*Creating*, *Performing*, and *Responding*—separately. *Responding* results within music, theatre, and visual arts are summarized on a scale ranging from 0 to 300.

Creating and *Performing* results are not summarized using a standard NAEP scale. Instead of a scale, *Creating* and *Performing* results are presented as average percents of the maximum possible score on tasks. These average scores represent the overall mean percentage students earned of the possible number of points for the components of *Creating* and *Performing* tasks. For example, if the maximum possible score on the *Creating* tasks in the visual arts assessment was 129, and the average student had a combined score of 43, then the average percent would be 33 (i.e., 43 is 33 percent of 129).

The NAEP Arts Education Framework concluded that assessment of the *Creating* and *Performing* processes

	Average Creating¹ Score (0 100%)	Average Performing Score (0 100%)	Average Responding Scale Score (0 300)
MUSIC			
National Average	34	34	150
Males	32*	27*	140*
Females	37	40	160
VISUAL ARTS			
National Average	43	NA	150
Males	42*	NA	146*
Females	45	NA	154
THEATRE			
National Average	49	NA	150
Males	46*	NA	140*
Females	52	NA	158
¹ “Creating/Performing” for Theatre only. NA Not Applicable * Scores lower than those achieved by female students. All tests of statistical significance were made at the .05 level with appropriate adjustments for multiple comparisons. SOURCE: National Center for Education Statistics, National Assessment of Educational Progress			

would be different for each of the three arts assessed, due to differences in the nature of these arts. Students who participated in music were assessed in both *Creating* and *Performing*. Those assessed in the visual arts were assessed in *Creating* only, because *Performing* is not usually part of the visual arts. Students assessed in theatre were assessed in a combined process, *Creating/Performing*, because performance in the theatre almost always involves creative activities as well.

Differences in achievement are reported here only if they are statistically significant. This means that the observed differences in the samples are likely to reflect real differences in the population and are highly unlikely to have resulted from chance factors associated with sampling variability. Reporting of these differences is not intended to imply any causal relationships nor to make any judgment on the educational relevance of the differences.

Readers are cautioned against making simplistic inferences about differences in performance among different groups of students. Average performance differences

may be partly related to socioeconomic or sociological factors, such as parental education or parental involvement. More in-depth investigations would be required to produce a clearer picture of performance differences by subgroup.

Gender

Differences in achievement by gender were pronounced. Female students outperformed male students in every category, for all three arts assessed (table 1). Female students have also outperformed males in NAEP assessments in two other subjects, reading and writing, at the 4th, 8th, and 12th grades.

Race/Ethnicity

Differences in achievement by race/ethnicity were also common (table 2). Whites outperformed Hispanics in every category for all three arts assessed and outperformed blacks in every category except music *Creating*. Asians outperformed Hispanics and blacks in music *Responding* and visual arts *Responding* and outperformed them in visual arts *Creating* as well. Because the samples for Pacific Islanders and American Indians were too small to provide statistically valid data, these subgroups are omitted from table 2.

Type of School

Approximately 90 percent of the nation's grade 8 students attend public schools. The remainder attend Catholic and other private schools (that is, nonpublic schools). In past NAEP assessments across a variety of subjects, students attending nonpublic schools have consistently outperformed students attending public schools.

That pattern was not found in the 1997 arts assessment (table 3). Nonpublic school students had higher scores in only one category, visual arts *Responding*. For visual arts *Creating*, and for all music categories, scores for public and nonpublic students were similar. No comparison was possible for Theatre, because the nonpublic school sample was too small.

Endnotes

¹NCES assessed music in 1972 and 1978 and visual arts in 1975 and 1978.

²To provide an understanding of the assessment that was planned for dance, the dance assessment tasks are included in the *NAEP 1997 Arts Report Card*.

	Average Creating¹ Score (0 100%)	Average Performing Score (0 100%)	Average Responding Scale Score (0 300)
MUSIC			
All Students	34	34	150
Students who indicated their race/ethnicity as ...			
White	36	36	158
Black	34	30*	130*†
Hispanic	29*	24*	127*†
Asian	31		152
VISUAL ARTS			
All Students	43	NA	150
Students who indicated their race/ethnicity as ...			
White	46	NA	159
Black	37*†	NA	124*†
Hispanic	38*†	NA	128*†
Asian	45	NA	153
THEATRE			
National Average	49	NA	150
Students who indicated their race/ethnicity as ...			
White	52	NA	159
Black	39*	NA	120*
Hispanic	44*	NA	139*
Asian		NA	

¹ "Creating/Performing" for Theatre only. NA Not Applicable
 * Scores lower than those achieved by White students.
 † Scores lower than those achieved by Asian students.
 Sample size is insufficient to permit a reliable estimate.
 All tests of statistical significance were made at the .05 level with appropriate adjustments for multiple comparisons.
 SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP). 1997 Arts Assessment.

Table 3.—Eighth-grade students' arts achievement scores by type of school attended

	Average Creating ¹ Score (0–100%)	Average Performing Score (0–100%)	Average Responding Scale Score (0–300)
MUSIC			
National Average	34	34	150
Public school students	34	34	149
Nonpublic school students	37	33	158
VISUAL ARTS			
National Average	43	NA	150
Public school students	43	NA	148*
Nonpublic school students	44	NA	167
THEATRE			
National Average	49	NA	150
Public school students	48	NA	146
Nonpublic school students	—	NA	—

¹“Creating/Performing” for Theatre only. NA Not Applicable

* Scores lower than those achieved by nonpublic school students. — Sample size is insufficient to permit a reliable estimate.

All tests of statistical significance were made at the .05 level with appropriate adjustments for multiple comparisons.

SOURCE: National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 1997 Arts Assessment.

For Further Information

The NAEP 1997 Arts Report Card, NCES 1999–486, is the complete report. Single copies are available free from ED Pubs, P.O. Box 1398, Jessup, Md. 20794–1398. Copies may also be obtained over the World Wide Web at

<http://nces.ed.gov/nationsreportcard/arts/arts.asp>

The NAEP 1997 Arts CD-ROM, NCES 1999–485, is a multimedia product that contains the full text of the Report Card, plus numerous examples of student work, along with explanations of scoring and other additional information. Single copies are available free from ED Pubs, P.O. Box 1398, Jessup, Md. 20794–1398. Copies may also be obtained over the World Wide Web at

<http://nces.ed.gov/nationsreportcard/arts/arts.asp>

The NAEP 1997 Arts Education Assessment Framework, developed by the National Assessment Governing Board, can be accessed online at <http://www.nagb.org>

NAEPfacts briefly summarize findings from the National Assessment of Educational Progress (NAEP). The series is a product of the National Center for Education Statistics, Gary Phillips, Acting Commissioner, and Peggy Carr, Associate Commissioner for Education Assessment. This issue of *NAEP*

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