

Chapter One



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The NAEP 1997 Assessment in the Arts

When we teach a child to sing or play an instrument, we teach her to listen. When we teach a child to draw, we teach her to see. When we teach a child to dance, we teach him about body and about space. When we teach a child design, we teach the geometry of the world.

*- Jane Alexander
Former Chair, National Endowment for the Arts*

Introduction

The last several years have seen a growing resolve among educators and policymakers to assure the place of a solid arts education in the nation's schools. There are many reasons for this resolve, but certainly among the most important is the contribution the arts make to the quality of education. As stated in the *Improving America's Schools Act of 1994*, "The Congress finds that the arts are forms of understanding and ways of knowing that are fundamentally important to education."¹ What are these ways of understanding and knowing? They are eloquently expressed in the words of Jane Alexander quoted above. As a means of encountering the world around us, the arts offer a unique combination of intellectual, emotional, imaginative, and physical experiences. Musical sounds, the gestures of a dancing body, colors in a painting, the emotion visible on the face of an actor: all of these

are alternative languages. They are opportunities for capturing ideas and feelings, for communicating, for learning, that move well beyond words.

The arts as a means of expression are especially important in the context of current educational reform that emphasizes "multiple intelligences."² Children learn in many different ways. The range of artistic experiences offers visual, kinetic, aural, and spatial means of teaching and learning. The arts' capacity to reach many kinds of students may account for evidence that arts learning improves student performance in diverse subjects.³

According to a study performed at the University of California at Irvine, early education in classical keyboard increased students' aptitude for math and science.⁴ College Board data indicate that students who have engaged in sequential arts programs perform significantly better on both the verbal and math components of the

SAT than their peers who have not.⁵

Until further study can explain with precision how arts improve student learning, it is worth considering that, in the words of one artist, "the study of art is a means of personal expression that is important to well-being."⁶ Learning to use different senses, make choices, benefit from mistakes, work with others, and to be imaginative, mentally flexible, and playful are important educational experiences that translate into skills indispensable in a rapidly changing world. Workplaces are likely to demand increasing abilities to solve problems, generate new ideas, and make independent choices. The arts encourage these skills. Another dimension of change is the increasing connectedness among peoples and cultures. Learning about artistic expressions from all over the world is an important means of introducing young people to the diversity and shared experiences of humanity.

1 *Improving America's Schools Act of 1994*. H.R. 6, 103rd Cong., 2nd Sess. (1994).

2 Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.

3 Kane, E. and Frankonis, E.. (1998, May). Arts education in the new millennium. *Education New York*, 2(5), 3.

4 Ibid.

5 Childress, J. (1998, May). Art education pays off. *Education New York*, 2(5), 5.

6 EDNY interviews artist Sylvia Plimack Mangold [Q and A]. (1998, May). *Education New York*, 2(5), 14.

NAEP's Mission

The National Assessment of Educational Progress (NAEP) is the only nationally representative and continuing assessment of what students in the United States know and can do in various subjects. NAEP is authorized by Congress and directed by the National Center for Education Statistics (NCES) of the U.S. Department of Education. The National Assessment Governing Board (NAGB), an independent body, provides policy direction for NAEP.

Since its inception in 1969, NAEP's mission has been to collect, analyze, and produce valid and reliable information about the performance of students in the United States in various subject areas. NAEP has become a valuable tool in tracking progress toward the National Education Goals.

The purpose of this report is to inform educators, policymakers, and the public about student achievement in the arts.

Readers should be aware that NAEP administered assessments in music and visual arts in 1974 and 1978. The assessment results for 1997 examined in this report are not comparable with the results from the earlier assessments because of considerable changes in the nature of the 1997 assessment, based on the recently created *Arts Education Assessment Framework*.

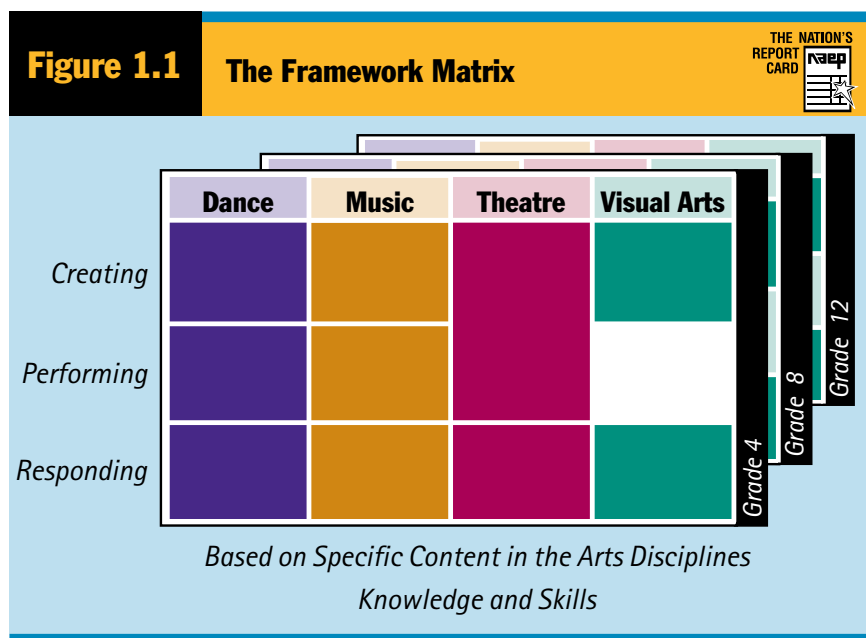
The NAEP Arts Education Assessment Framework

The 1997 arts assessment was designed according to specifications described in the NAEP *Arts Education Assessment Framework*. The framework was developed between 1992 and 1994 through a consensus process involving arts educators, artists, policymakers, representatives from the business community, assessment specialists, and members of the public. The project was managed by the Council of Chief State School Officers under the auspices of NAGB.

The central principles underlying the arts framework are that a complete and rich arts education is a crucial part of the curriculum, and that such an education must emphasize creating and performing as much as studying and analyzing works of art. Thus, mirroring a solid arts education, a strong arts assessment should be built around the three arts processes of Creating, Performing, and Responding.

Figure 1.1 illustrates the framework's vision of how Creating, Performing, and Responding are parts of arts education and assessment. In dance and music, the processes of Creating, Performing, and Responding are all emphasized, although music educators have typically placed greater emphasis on performance of existing works and students' responses to performances. In theatre, Creating and Performing are understood as a combined act, and the responses of the audience, director, actors, and designers are seen as important components of the development of Creating/Performing work. In visual arts, creative expression and responses to artworks are more highly valued than the performance, or duplication, of existing works.

The figure also expresses the idea that in dance, music, theatre, and visual arts, students' arts knowledge and skills apply in equally important ways to the processes of Creating, Performing, and Responding.



Although the matrix applies to grades 4, 8, and 12, only grade 8 was administered as an assessment.

Table 1.1 below gives a further visual representation of how both knowledge and skills are important for the processes of Creating, Performing, and Responding. Table 1.1 describes the two major components of arts learning according to the assessment framework. Students should gain (1) knowledge and understanding about the arts, including the personal, social, cultural, and historical contexts for works, and (2) perceptual, intellectual/reflective, expressive, and technical skills. Both of these components are found in dance, music, theatre, and visual arts.

As represented in the left-hand column of the table, when students engage in Creating, Performing, and Responding, they draw upon many kinds of knowledge and understanding about the arts in order to create meaning. Students need to be able to place the arts in broader contexts to appreciate their significance. For example, a student studying a

collage by Romare Bearden would benefit from some understanding of African American history. A personal perspective, a knowledge of how the arts fit into the students' immediate society and broader culture, and an historical perspective are all important elements of arts learning.

Students also need knowledge of aesthetics to understand the varied ideas about the nature, meaning, and value of the arts held by peoples from many cultures and historical periods. When creating a dance composition based on an abstract idea like metamorphosis, for example, a grasp of how contemporary choreographers experiment with elements like space and movement would be helpful for students.

Finally, students need to know and understand the different forms of artistic expression and the technical processes by which these forms can be created. For example,

when creating the effect of a thunderstorm on stage for a play by Carson McCullers, students would need to know how to use sound and lighting effects to communicate the storm to an audience.

The acquiring and application of skills determine the quality of Creating, Performing, and Responding in the arts (see the right-hand column of the table). Perceptual skills are needed to collect sensory stimuli and to discern subtleties. For example, musicians must be able to hear pitches and rhythms to be able to perform correctly. Intellectual/Reflective skills are needed to test different creative possibilities, solve artistic problems, refine work, and deepen artistic experience and thought. Expressive skills are needed to add a unique and personal nature to works of art: a Bach keyboard suite played without expression would fail to move an audience. Technical skills are needed to produce works of quality. Without an ability to manipulate materials correctly, an artist would not be able to create a sculpture that stands upright.

Of great importance to the creators of the assessment framework is the idea that throughout the processes of Creating, Performing, and Responding, students utilize and apply knowledge and skills simultaneously. Knowledge and skills rarely function in isolation. It is difficult to master an artistic skill in the absence of relevant knowledge. Similarly, students use their

Table 1.1

Knowledge and Skills Based On Specific Content from Dance, Music, Theatre, and Visual Arts



Knowledge of Creating, Performing, Responding

Applying Knowledge of:

Context:

- personal
- social
- cultural
- historical

Aesthetics

Form and Structure

Processes

Skills in Creating, Performing, Responding

Applying Cognitive, Affective, and Motor Skills Including:

Perceptual

Intellectual/Reflective

Expressive

Technical

knowledge of aesthetics and history as they Create, Perform, or Respond. Often, more knowledge is gained as students actively engage in artistic processes.

In order to measure the application of knowledge and skills to Creating, Performing, and Responding, the framework called for the arts assessment to include the following kinds of exercises:

- Authentic tasks that assess students' knowledge and skills in Creating and Performing music and theatre and in Creating in visual arts. Among other activities, students were to sing, create music, create and perform dances, act in theatrical improvisations, and work with various media to create works of visual art. Students were also to evaluate their own work in written form.
- Constructed-response (questions that require students to create a response in written or other form) and multiple-choice questions that explore students' abilities to apply knowledge and skills in Responding to works of art. These questions asked students to analyze, describe, and identify important qualities of works.

Developing exercises to meet the requirements of the arts framework posed interesting challenges. In educational settings, students and

teachers of the arts can discuss the range of choices available to students to communicate meaning, and students can work on their projects over time. This is not the case in a timed assessment. To give students as much of an opportunity as possible to demonstrate their arts knowledge and skills, it was necessary to create contexts for the assessment exercises. This was done in two important ways. First, while taking care not to "overteach" students, and hence damage assessment results, instructions for Creating, Performing, and Responding tasks were carefully crafted to lead students through complex exercises step by step, and to give students as much information as possible about what knowledge and skills they were being asked to demonstrate. In this way, the arts assessment avoided asking students to Create, Perform, or Respond in a conceptual vacuum. Second, as much as possible, exercises were built around a theme or particular work of art, so that students could focus on just a single work or issue. This gave students the opportunity to think more deeply about the assessment tasks, and ensured that students were not asked isolated questions about unrelated works of art.

The Assessment Design

Independent sets of exercises were developed for each discipline that

was assessed: music, theatre, and visual arts.⁷ Within each art, there were four "blocks" (groups of exercises administered as separate units to be completed in a set time frame) of written Responding exercises, and three Creating and/or Performing blocks. (In theatre, Creating and Performing constitute one category, and visual arts do not include the process of Performing.) The music assessment also featured two additional Creating/Performing blocks designed for students who indicated that they were currently involved in some musical activity.

Each student who participated in the assessment was assessed in one of the three arts, to ensure that sufficiently in-depth information about students' arts abilities was gathered. In the first portion of the assessment, each student received one booklet containing two blocks of cognitive Responding exercises and three blocks of background questions. The cognitive blocks included multiple-choice questions and two types of constructed-response questions: short constructed-response questions that required students to write answers of a few words or sentences, and extended constructed-response questions that required students to provide answers of a paragraph or more. (In visual arts, three of the Responding blocks included two-dimensional Creating tasks.) Answers to the constructed-response questions

⁷ As noted in the Executive Summary of this report, an attempt was made to find a sample of students attending schools that have a solid dance curriculum for participation in the grade 8 dance assessment. Since dance is usually not part of schools' curricula, a sample of a statistically suitable size could not be found. Therefore, NAEP did not assess grade 8 students in dance.

were evaluated using multi-level scoring guides that defined criteria for full credit, partial credit, or no credit. The background questions asked students to provide information about their demographic characteristics, arts classroom instruction, and self-perceptions about their abilities in the art form in which they were being assessed.

In the second portion of the assessment, each student completed one Creating and/or Performing block. (Again, the exception is music. Students who were currently engaged in some type of musical activity took two Creating and/or Performing blocks, one for the general student sample and one for students with special music knowledge.) No background questions were asked during this part of the assessment.

Separating the more active portions of the assessment allowed for a suitable amount of time to be devoted to these complex tasks. It also allowed for numerous special conditions that had to be met to successfully administer Creating and/or Performing tasks. Among these were the need to have students work in pairs or groups for theatre improvisations; the need to videotape students acting; the need to set up instruments and recording devices for music tasks; the complications associated with distributing large amounts of visual arts materials; the time needed to photograph three-dimensional visual art works for future scoring; and in general,

special space requirements for all three arts.

Taken together, the Responding, Creating, and Performing portions of the assessment, and the background questionnaires, make it possible to analyze and compare the performances of various subgroups of students. A more extensive discussion of the content of the assessment and of the various student, (theatre) teacher, and school questionnaires is presented in Appendix A.

The Arts Assessment Student Samples

The NAEP 1997 arts assessment was conducted nationally at grade 8.⁸ For music and visual arts, representative samples of public and nonpublic school students were assessed.

The theatre sample was a "targeted" sample. 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, were identified. Students attending these schools who had accumulated 30 hours of theatre classes by the end of the 1996–97 school year were selected to take the theatre assessment. The sample of nonpublic schools for theatre was not large enough to permit the separate reporting of nonpublic school results for this discipline. (Appendix A contains information

on sample sizes and participation rates for the assessment.)

Evaluating Students' Work in the Arts

One of the greatest challenges of the arts assessment was scoring student works of art. While the arts have a long tradition of judging student works, a national assessment posed new difficulties. Among these were how to apply precise criteria to student works that demonstrated a wide range of abilities. Another was how to train large numbers of raters to apply these criteria appropriately in scoring.

Both challenges were largely met by hiring experienced teachers in each of the arts to train raters to apply suitable criteria. In the case of theatre, methods were borrowed from actual educational practice; teams of two or three raters discussed student performances before assigning scores.

A fuller description of scoring methods is included in Appendix A. Greater detail about how those methods were developed and applied will be featured in the forthcoming *1995 and 1997 Arts Field Test Process Report*. For the purposes of this *Report Card*, readers are asked to keep in mind the inevitable diversity of views involved in scoring student works of art as they encounter decisions made by raters during the course of the assessment scoring.

⁸ The arts assessment was administered at grade 8 only because, due to budget constraints, NAEP could not comprehensively assess the arts at all three grade levels. (This shortfall also affected other NAEP subjects, such as math and science.) The arts community was consulted widely and recommended that the assessment be administered at one grade, grade 8. In this way, a full assessment of the Arts Framework, with authentic Creating, Performing, and Responding exercises, could be administered in the different arts.

Reporting NAEP Arts Results

Student performance on the arts assessment is presented in several ways in this report. Overall summaries of Creating, Performing, and Responding results and their relationships to student- and school-reported background variables are featured. For theatre, relationships between student results and teacher-reported background variables are also presented.⁹

Results for Creating, Performing, and Responding are summarized separately in each arts area because at least some students may be stronger in one process than another.¹⁰ As stated earlier, while the knowledge and skills students draw upon to Respond to, Perform, and Create works of art do overlap and inform one another, it is plausible that some students will create or perform but not respond well, and vice versa.

Responding results within music, theatre, and visual arts are grouped for summarization on three NAEP arts Responding scales, each of which ranges from 0 to 300. Creating and Performing results are not summarized on a standard NAEP scale. To scale assessment results, there must be a sufficient number of students taking a given group of exercises,

and a sufficient number of exercises to be scaled of a given type. This was not the case for the Creating and Performing exercises in any of the three arts assessed. Although they consumed far more assessment time than written exercises, there were fewer exercises to group together into a scale. Moreover, given the complex administrative procedures associated with these tasks (such as videotaping responses, distributing arts materials, and having students work in groups), each student took only one such task.¹¹ This prohibited the use of the kind of scaling methodology used to summarize Responding results. Instead of a scale, Creating and Performing results are presented in terms of an average percent of the maximum possible score.

Finally, the arts assessment results are not able to be reported in terms of the NAEP achievement levels (basic, proficient, and advanced). The complex, diverse nature of the assessment tasks in each arts discipline resulted in different scales for Creating, Performing, and Responding. Therefore, results could not be summarized for each arts discipline for the purpose of setting achievement levels.

Interpreting NAEP Results

This report examines and compares the arts performance of groups of

students defined by demographic characteristics (e.g., males compared to females) or by responses to background questionnaires regarding experience in a given arts area. It does not explore the relationships among combinations of these groups (e.g., White males compared to Black males). Appendix A presents detailed descriptions of the reporting subgroups.

The averages and percentages presented in the report are estimates because they are based on samples rather than on all members of each population. Consequently, the results are subject to a measure of uncertainty, reflected in the standard errors of the estimates. The comparisons made in the report are based on statistical tests that consider the magnitude of the differences between the group averages or percentages and the standard errors of those statistics. Throughout this report, differences among reporting groups are defined as "significant" when they are significant from a statistical perspective. The discussion of a difference as statistically significant means that observed differences in the sample are likely to reflect real differences in the population and are highly unlikely to have resulted from chance factors associated with sampling variability.¹² The term "significant," therefore, is not intended to imply a

9 A teacher questionnaire was used only for theatre, because the special targeted nature of the theatre sample considerably increased the chances of getting responses from theatre teachers.

10 Furthermore, a measurement requirement for summarizing student responses to different exercises together is that those exercises measure the same or similar knowledge and skills. The range of arts knowledge and skills is very wide. Knowledge and skills are also related in subtle and various ways in their applications to Creating, Performing, and Responding. These factors diminish the possibility that the three processes, in strict measurement terms, utilize knowledge and skills in ways similar enough to be summarized on a single scale. However, overall Creating, Performing, and Responding results are presented side by side wherever possible.

11 A small proportion of students currently involved in some type of musical activity at the time of the assessment received two music Creating and/or Performing tasks.

12 All differences reported are statistically significant at the .05 level with appropriate adjustments for multiple comparisons.

judgment about the educational relevance of the differences. It is, rather, intended to identify statistically dependable population differences to help focus subsequent discussion among policymakers, educators, and the public.

This report also contains appendices that support or supplement the results presented. Appendix A contains an overview of the NAEP arts framework and specifications, information about assessment design, scoring, and the sample, and a detailed description of the major reporting subgroups featured in Chapter 6. Appendix B presents the standard errors for the tables presented in this report.

Cautions in Interpretations

The reader is cautioned against interpreting the relationships among subgroup averages or percentages as causal relationships. Average performance differences between two groups of students may result in part from socioeconomic and other factors. For example, differences among racial/ethnic subgroups are almost certainly associated with a broad range of socioeconomic and educational factors not discussed in this report. Similarly, differences in performance between public and nonpublic school students may be better understood by accounting for other factors such as the composition of the student body, parents' education levels, and parental involvement.

Additionally, readers should avoid making comparisons in scores across arts areas. The assessment exercises and performance tasks in each area were independently developed. No explicit efforts were undertaken to match the difficulty level or scope of coverage of the assessments across the different arts areas. Furthermore, the scales in each content area are independently derived, and the same score in two areas may not represent the same level of student achievement. Consequently, comparisons of average scores across content areas are not inherently meaningful.

About This Report

This *Report Card* is organized as follows. This chapter, Chapter 1, presents the overview of the NAEP 1997 Arts Assessment: its content framework, design, student sample, administration, and scoring. Chapter 2 presents an in-depth look at the music component of the assessment. Assessment questions and student responses are examined, as are average student results for Creating, Performing, and Responding. Chapters 3 and 4 do the same for theatre and visual arts, respectively (visual arts does not include the process of Performing). Chapter 5 features the dance exercises intended for the grade 8 dance assessment.¹³ Chapter 6 presents average results in music, theatre, and visual arts for the nation and subgroups of students. Finally, Chapter 7 describes contextual factors related to students' arts achievement, such as frequency of arts instruction and school arts facilities.

Readers should note that this report is intended to be read with a CD-ROM. The CD features the complete text of the report, as well as many more examples of student responses to assessment exercises.

¹³ Due to an insufficient number of schools with comprehensive dance programs, this portion of the assessment did not take place. The exercises are included to provide a picture of the authentic performance assessment developed for dance. For samples of student responses to dance field test exercises, see the forthcoming *1995 and 1997 Arts Field Test Process Report*.