

February 2009

# ACCESS TO ARTS EDUCATION

Inclusion of Additional  
Questions in  
Education's Planned  
Research Would Help  
Explain Why  
Instruction Time Has  
Decreased for Some  
Students



GAO

Accountability \* Integrity \* Reliability

GAO  
Accountability · Integrity · Reliability

# Highlights

Highlights of [GAO-09-286](#), a report to congressional requesters

## Why GAO Did This Study

Under the No Child Left Behind Act (NCLBA), districts and schools must demonstrate adequate yearly progress (AYP) for all students. Because schools may spend more time improving students' academic skills to meet NCLBA's requirements, some are concerned that arts education might be cut back. To determine how, if at all, student access to arts education has changed since NCLBA, the Congress asked: (1) has the amount of instruction time for arts education changed and, if so, have certain groups been more affected than others, (2) to what extent have state education agencies' requirements and funding for arts education changed since NCLBA, (3) what are school officials in selected districts doing to provide arts education since NCLBA and what challenges do they face in doing so, and (4) what is known about the effect of arts education in improving student outcomes? GAO analyzed data from the U.S. Department of Education (Education), surveyed 50 state arts officials, interviewed officials in 8 school districts and 19 schools, and reviewed existing research.

## What GAO Recommends

To identify factors that may contribute to changes in access to arts education for certain groups, GAO recommends that the Secretary of Education require the department's planned study of NCLBA implementation to ask survey respondents why any changes in instruction time they report occurred. Education generally agreed with our recommendation.

To view the full product, including the scope and methodology, click on [GAO-09-286](#). For more information, contact Cornelia Ashby at (202) 512-7215 or [ashbyc@gao.gov](mailto:ashbyc@gao.gov).

## ACCESS TO ARTS EDUCATION

### Inclusion of Additional Questions in Education's Planned Research Would Help Explain Why Instruction Time Has Decreased for Some Students

#### What GAO Found

According to data from Education's national survey, most elementary school teachers—about 90 percent—reported that instruction time for arts education stayed the same between school years 2004-2005 and 2006-2007. The percentage of teachers that reported that instruction time had stayed the same was similarly high across a range of school characteristics, irrespective of the schools' percentage of low-income or minority students or of students with limited English proficiency, or the schools' improvement under NCLBA. Moreover, about 4 percent of teachers reported an increase. However, about 7 percent reported a decrease, and GAO identified statistically significant differences across school characteristics in the percentage of teachers reporting that the time spent on arts education had decreased. Teachers at schools identified as needing improvement and those with higher percentages of minority students were more likely to report a reduction in time spent on the arts. Because Education's survey did not include questions about why instruction time changed, GAO was not able to determine the reasons for the disparities its analysis identified. A new study of NCLBA implementation that Education plans to undertake may collect information on the uses of instruction time, among other topics. However, Education has not yet determined if it will collect information on the reasons instruction time changed for certain groups.

While basic state requirements for arts education in schools have remained unchanged in most states, state funding levels for arts education increased in some states and decreased in others, according to GAO's survey of state arts officials. Arts education officials attributed the funding changes to state budget changes to a greater extent than they did to NCLBA or other factors.

School principals have used several strategies to provide arts education; however, some struggled with decreased budgets and competing demands on instruction time, according to those GAO interviewed. Strategies for maintaining arts education include seeking funding and collaborative arrangements in the arts community. Competing demands on instruction time were due to state education agency or school district actions taken to meet NCLBA proficiency standards.

Overall, research on the effect of arts education on student outcomes is inconclusive. Some studies that examined the effect of arts education on students' reading and math achievement found a small positive effect, but others found none.

#### Elementary School Children Participating in Arts Education



Source: Art Explosion (image).

---

# Contents

---

<b>Letter</b>		<b>1</b>
	Results in Brief	3
	Background	6
	Overall Time Spent on Arts Education Changed Little between the 2004-2005 and 2006-2007 School Years, but Decreases Were More Likely at Some Schools and the Reasons for the Differences Are Uncertain	11
	While Basic State Requirements for Arts Education in Schools Have Remained Constant in Most States, State Funding Levels for Arts Education Changed	16
	Since NCLBA, District Officials and School Principals Have Used Several Strategies to Provide Arts Education; However, Some Struggled with Decreased Budgets and Competing Demands on Instruction Time	21
	Overall Research on the Association between Arts Education and Student Outcomes Is Inconclusive	27
	Conclusions	28
	Recommendation for Executive Action	28
	Agency Comments and Our Evaluation	29
<b>Appendix I</b>	<b>Scope and Methodology</b>	<b>30</b>
	Scope	30
	Methodology	31
<b>Appendix II</b>	<b>Average Amount of Instruction Time Elementary School Teachers Reported Spending</b>	<b>37</b>
<b>Appendix III</b>	<b>Arts Education Requirements and Funding, by State, School Years 2001-2002 and 2006-2007</b>	<b>38</b>
<b>Appendix IV</b>	<b>Studies Meeting GAO's Criteria for Methodological Quality</b>	<b>40</b>
<b>Appendix V</b>	<b>Comments from the Department of Education</b>	<b>41</b>

**Tables**

Table 1: Time Line for Implementing Interventions for Schools That Do Not Make Adequate Yearly Progress	7
Table 2: Percentage of Teachers across All Schools Reporting Whether Instruction Time Had Changed between the 2004-2005 and 2006-2007 School Years, by Subject	12
Table 3: Percentage of Elementary Schools Teachers Reporting Whether Arts Education Instruction Time Had Changed between the 2004-2005 and 2006-2007 School Years, by School Characteristic	13
Table 4: Mean Decrease in the Amount of Instruction Time Spent on Arts Education among Teachers Reporting a Decrease from School Year 2004-2005 to 2006-2007	14
Table 5: Number of States with Arts Education Requirements in School Years 2001-2002 and 2006-2007	17
Table 6: Number of States with Funding for Arts Education in School Years 2001-2002 and 2006-2007	17
Table 7: Sources of Funding for State Arts Education between School Years 2001-2002 and 2006-2007	18
Table 8: Of States That Had Funding in Both School Years 2001-2002 and 2006-2007, Number of States with Changes in Funding for Arts Education and Number Where Funding Stayed about the Same	19
Table 9: Number of States Identifying Factors That Contributed to Change in Funding of Arts Education between School Years 2001-2002 and 2006-2007	20
Table 10: Criteria for Selecting School Districts and Schools	34

---

---

## Abbreviations

AEP	Arts Education Partnership
AYP	adequate yearly progress
CEP	Center on Education Policy
CPS	Chicago Public Schools
ERIC	Education Resources Information Center
ESEA	Elementary and Secondary Education Act of 1965
IASA	Improving America's Schools Act of 1994
NAEP	National Assessment of Educational Progress
NCLBA	No Child Left Behind Act
NEA	National Endowment for the Arts
NLS-NCLB	National Longitudinal Study of No Child Left Behind
SEAS	Student Enrichment in the Arts program
SES	supplemental education services

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



United States Government Accountability Office  
Washington, DC 20548

February 27, 2009

The Honorable Christopher J. Dodd  
Chairman  
The Honorable Lamar Alexander  
Ranking Member  
Subcommittee on Children and Families  
Committee on Health, Education,  
Labor and Pensions  
United States Senate

The federal government has invested billions of dollars in federal grants to states and school districts to improve educational opportunities for low-income students because their academic performance is substantially lower than that of other students. The No Child Left Behind Act of 2001 (NCLBA) sought to address this issue by building on the proficiency targets required by the Improving America's Schools Act of 1994 (IASA) and by establishing a deadline of 2014 for all students to reach proficiency in reading, math, and science. Under NCLBA, districts and schools must demonstrate adequate yearly progress (AYP) toward meeting state standards for all students and every key student subgroup, including low-income and minority students, students with disabilities, and students with limited English proficiency, toward annual state-established proficiency targets. When students in schools receiving funds under Title I of NCLBA do not make sufficient progress toward meeting state proficiency targets, their schools are identified as needing improvement, and both districts and schools are required to take certain actions.

Schools' efforts to improve students' academic performance and the school's NCLBA status can lead to changes in the amount of instruction time devoted to reading, math, and other subjects, including arts education. With NCLBA's 2014 deadline approaching, increased attention has been focused on the amount of time teachers are able to devote to other subjects, including the arts, which for this study includes four art forms: visual arts, music, theater, and dance. To the extent that schools spend more time improving students' reading, math, and science skills to meet NCLBA's accountability requirements, some are concerned that arts education might be reduced or eliminated.

To determine whether there have been any changes in student access to arts education since NCLBA, the Congress asked us to examine the following questions: (1) has the amount of instruction time for arts

---

education changed and, if so, have certain groups been more affected than others, (2) to what extent have state education agencies' requirements and funding for arts education changed since NCLBA, (3) what are school officials in selected districts doing to provide arts education since NCLBA and what challenges do they face in doing so, and (4) what is known about the effect of arts education in improving student outcomes?

To identify changes in students' access to arts education, if any, we analyzed data on changes in instruction time between school years 2004-2005 and 2006-2007 for all subjects, including the arts, from the Department of Education's (Education) National Longitudinal Study of No Child Left Behind (NLS-NCLB).<sup>1</sup> Because this study collected data on changes in instruction time only from elementary school teachers, the nationally representative findings on students' access to arts education apply only to elementary schools. Although NLS-NCLB data did not allow us to answer the study question for middle and secondary schools, they were the only existing data on changes in instruction time available that met GAO's data quality standards. Our findings also apply only to the time between school years 2004-2005 and 2006-2007 and not to the full period of time since NCLBA's passage. As a further step in identifying changes in students' access to arts education by identifying any changes in state arts education requirements and funding, we surveyed arts officials in 49 states and the District of Columbia.<sup>2</sup> For the survey, an arts official was an official in a state department of education or other designated state agency who was knowledgeable about the states' role in shaping the provision of arts education in public schools. Forty-five state arts officials completed the survey. The survey collected data on state arts education requirements and funding in school years 2001-2002, the year NCLBA was passed, and 2006-2007, changes made to state arts education requirements and funding between those school years, and factors contributing to any changes. To determine what district officials and school principals are doing to provide arts education since NCLBA and the challenges they face, we visited and interviewed officials in Illinois, Massachusetts, Florida, and New York. We selected states with large numbers of schools not meeting AYP and school districts and schools based on criteria that provide variation in the income

---

<sup>1</sup>The NLS-NCLB's surveys collected data only in school years 2004-2005 and 2006-2007. Because the NLS-NCLB was a congressional mandate and conducted under contract, the time required to negotiate the mandate, solicit and award a contract, and design the study precluded collecting data before school year 2004-2005.

<sup>2</sup>One state has not designated an official to oversee arts education in the state's public schools, and the state education agency's director of curriculum and instruction did not respond to our contacts.

---

level of the school district, schools' performance status under NCLBA, and schools' urban and rural location. Within each state, we visited 2 school districts and 4 to 6 schools in each district for a total of 8 school districts and 19 schools. In each state, we also interviewed officials representing at least one local arts organization that supported arts education in public schools. To determine what is known about the effect of arts instruction, we reviewed existing studies that examined the effect of arts instruction on student outcomes, such as academic achievement and graduation rates. Appendix I provides a detailed description of our methodology and its limitations, as well as our scope. We conducted this performance audit from September 2007 to February 2009, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on the audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

---

## Results in Brief

Most elementary school teachers—about 90 percent—reported that instruction time for arts education remained the same between school years 2004-2005 and 2006-2007. The percentage of teachers that reported that instruction time had stayed the same was similarly high across a range of school characteristics, irrespective of the schools' percentage of low-income or minority students or of students with limited English proficiency, or the schools' improvement under NCLBA. Moreover, about 4 percent of teachers reported an increase. However, about 7 percent reported a decrease, and we identified statistically significant differences across school characteristics in the percentage of teachers reporting that the time spent on arts education had decreased. Specifically, teachers at schools identified as needing improvement and those with higher percentages of minority students were more likely to report a reduction in time spent on the arts. In addition, when we examined the average amount of change in weekly instruction time among teachers that reported either an increase or a decrease, we found that teachers at elementary schools with high percentages of low-income or minority students reported larger average reductions than teachers at schools with low percentages of these students.<sup>3</sup> For example, teachers reporting decreases in arts education time at schools with a high percentage of low-income students reported an average decrease of 49 minutes per week while teachers reporting

---

<sup>3</sup>The differences were statistically significant (p<.05 level).

---

decreases in arts education time at schools with lower percentages of these students reported an average decrease of 31 minutes per week. Because Education's NLS-NCLB survey did not include questions for the teachers to identify why instruction time for arts education decreased at their school, we could not explore the reasons that might explain some of the disparities we identified in our analysis of the data. A new study of NCLBA implementation that Education plans to undertake may collect information on the uses of instruction time, among other topics. However, Education has not yet determined if it will collect information on the reasons instruction time changed for certain groups.

While basic state requirements for arts education in schools have stayed about the same in most states, state funding levels for arts education increased in some states and decreased in others, according to our survey of state arts officials. Basic state education requirements for arts education in schools—such as the number of hours a week that the arts must be taught or the number of courses that must be taken—have remained constant in most states since NCLBA was implemented. Of the 45 states that responded to our survey, 34 states had established the basic requirement that arts education be taught, and 28 states had included arts education as a high school graduation requirement by school year 2001-2002. By school year 2006-2007, most of these states had retained these requirements. While basic requirements for arts education remained nearly unchanged, state funding for arts education changed, with some states reporting decreases, and others reporting increases or funding levels that stayed about the same. For example, of the 32 states that awarded arts education grants in both school years 2001-2002 and 2006-2007, funding decreased in 12 states and increased in 5 states. Arts education officials attributed the increases or decreases in funding to state budget changes to a greater extent than they did to NCLBA or other factors.

District officials and school principals have used several strategies to provide arts education; however, some struggled with decreased budgets and competing demands on instruction time, according to officials we interviewed. School principals that have been able to maintain arts education have used several strategies, including varying when the arts are offered, seeking funding and collaborative arrangements in the arts community, and integrating the arts into other subjects. For example, at one Boston school, the principal had eliminated arts education classes during the school day and purchased an after school arts program in drama and music production from an outside organization.

---

On the other hand, to ensure that students could attend arts education during the school day, one New York City school principal added an additional period to the end of the day to provide remedial instruction to students who required additional help. To expose his students to different international musical styles, one Broward County social studies teacher played music from other countries during geography lessons. Officials we met with told us that the main challenges to providing arts education have been decreased state or local funding and competing demands on instruction time due to requirements established by the state education agency or school district in order to meet NCLBA proficiency standards, such as doubling the amount of time low-performing students spend on reading and math. For example, at one school, the principal could not afford a full-time art teacher when the school's budget was reduced. In addition, some officials said that requirements established to meet NCLBA proficiency standards affected the time available for certain subjects. For example, at several schools, officials said that students not meeting state proficiency requirements could be pulled from art class to attend a remedial class in reading or math. Moreover, district officials and school principals told us that when trade-offs involving funding or instruction time had to be made, the school principal made the decision, and that principals' decisions differed. For example, some principals chose not to spend their limited discretionary funds on arts education, while other principals, even when their school had been identified as needing improvement several times, maintained their arts offerings.

Overall, research on the association between arts education and student outcomes is inconclusive. Some studies that examined the association between arts education and students' reading and math achievement found a small positive relationship, but others found none. For example, one study that combined the findings of several studies found that music education in elementary or high school had a small positive relationship with standardized math test scores. However, another similarly constructed study found that arts education had no significant relationship with standardized reading and math test scores. While some of the research on arts education has focused on special populations, such as students from low-income families, these studies did not meet GAO's criteria for methodological quality, and their findings were questionable.

To help identify factors that may contribute to changes in access to arts education for certain student subgroups, we are recommending that the Secretary of Education require that the department's planned study of NCLBA implementation include questions in its surveys asking survey respondents to describe the reasons for any changes in instruction time they report.

---

## Background

Since passage of the Elementary and Secondary Education Act of 1965 (ESEA), more than 40 years ago, the Congress has sought to improve student learning through several initiatives. Current legislation, NCLBA, builds upon previous legislation—the IASA—by adding provisions meant to strengthen accountability requirements for school districts and schools.<sup>4</sup> For example, both IASA and NCLBA required states to measure the performance of students in reading and math. NCLBA built upon this requirement by requiring annual testing in these subjects in each of grades 3 to 8 and added requirements that children’s performance in science also be assessed.

Under NCLBA’s accountability provisions, states are required to develop plans that include academic standards and establish performance goals for schools’ meeting AYP that would lead to 100 percent of their students being proficient in reading, mathematics, and science by 2014.<sup>5</sup> To measure their progress, states were required to establish academic proficiency goals for making AYP and to administer an annual assessment to students in most grade levels.<sup>6</sup> In addition, each school’s assessment data must be disaggregated in order to compare the achievement levels of students within certain designated groups, including low-income and minority students, students with disabilities, and those with limited English proficiency, with the state’s proficiency targets. Each of these groups must make AYP in order for the school to make AYP. In addition to proficiency targets on state assessments, states must use another academic indicator to determine AYP. For high schools, the indicator must be graduation rates. States may choose what the other academic indicator will be for elementary and middle schools.

Title I of the ESEA, as amended and reauthorized by NCLBA, authorizes federal funds to help elementary and secondary schools establish and maintain programs that will improve the educational opportunities of

---

<sup>4</sup>IASA and NCLBA reauthorized and amended ESEA.

<sup>5</sup>This requirement applies to students in all public schools in a state regardless of whether the school receives Title I funding.

<sup>6</sup>Students in grades 3 to 8 must be annually assessed in reading and mathematics, while high school students are only required to be assessed once in these subjects. Assessments in science, which were first required under NCLBA in school year 2007-2008, are required at least once in grades 3 to 5, grades 6 to 9, and grades 10 to 12. 20 U.S.C. § 6311(b)(3)(C)(v) – (vii).

economically disadvantaged children<sup>7</sup> For schools receiving Title I funds that do not achieve proficiency, a time line is required for implementing specific interventions based on the number of years the school missed AYP. If a school fails to meet AYP in reading, mathematics, or science for 2 consecutive years, districts must offer students in these schools the opportunity to transfer to a higher performing school in the district, and after the third year they must offer both school choice and supplemental education services (SES), such as tutoring. Prior legislation—IASA—required districts to take corrective action as a final intervention for schools that repeatedly missed AYP. While IASA allowed states to determine the appropriate corrective action for their districts and schools, NCLBA is more prescriptive in defining the corrective actions districts and schools must implement. In addition, a new intervention to change the governance of schools—school restructuring—was introduced for schools that miss AYP for 5 or more years. (See table 1.) Districts are responsible for selecting and implementing the corrective actions and restructuring options for these schools contained in the law. Schools exit improvement status if they make AYP for 2 consecutive years.

**Table 1: Time Line for Implementing Interventions for Schools That Do Not Make Adequate Yearly Progress**

<b>Adequate yearly progress</b>	<b>School status in the next year</b>	<b>NCLBA interventions for Title I schools</b>
First year missed	Not applicable	None
Second year missed	Needs improvement (first year of improvement)	Required to offer public school choice <sup>a</sup>
Third year missed	Needs improvement (second year of improvement)	Required to offer public school choice and SES
Fourth year missed	Corrective action (third year of improvement)	Implement certain corrective actions and offer public school choice and SES
Fifth year missed	Planning for restructuring (fourth year of improvement)	Plan for a change in governance and offer public school choice and SES <sup>b</sup>
Sixth year missed	Implementation of restructuring (fifth year of improvement)	Implement a change in governance and offer public school choice and SES

Sources: GAO analysis of NCLBA and Education's regulations.

<sup>a</sup>At this stage, the school must also develop the school improvement plan.

<sup>b</sup>While NCLBA does not require that corrective actions must be continued after a school enters restructuring, Education officials noted that, in practice, many schools continue corrective actions after entering restructuring status.

<sup>7</sup>In this report, we refer to Title I, Part A of the ESEA, as amended, as "Title I." Other parts of Title I (Parts B through D) are targeted at specific populations or purposes and are commonly referred to by their program names, such as Even Start.

---

In prior work on implementation of NCLBA, GAO reported that the Title I schools in corrective action and restructuring status during school year 2005-2006 were more frequently located in urban school districts and a few states and served higher percentages of low-income, minority, and middle school students than other Title I schools.<sup>8</sup>

---

## NCLBA Provisions and Funding Related to Arts Education in Public Schools

In its last two reauthorizations of the ESEA, the Congress has recognized the importance of arts education in public schools. Although the NCLBA does not include proficiency requirements for the arts, it does authorize Education to make grants for arts education. The purpose of these programs as set out in NCLBA includes helping students meet state academic achievement standards in the arts and supporting “the national effort to enable all students to demonstrate competence in the arts.” In addition, arts education is identified by NCLBA as a core academic subject. Similarly, the Congress stated in IASA that the arts express “forms of understanding and ways of knowing that are fundamentally important to education.” This finding incorporates the two prevailing perspectives on the role that arts education can play in public schools. One perspective sees arts education as having intrinsic value because of the insights into self and others that experiencing the arts can yield. A second perspective focuses on the association between arts education and development of cognitive, affective, and creative skills, including improved achievement in academic subjects such as reading and math. While NCLBA does not attempt to address these perspectives, it does affirm that arts education has a role in public schools.

Education administers a number of specific programs related to arts education, but two arts education grant programs authorized by NCLBA—the Model Development and Dissemination grants program and the Professional Development for Arts Educators program—are competitive grant programs that provide funding for arts education research projects that integrate arts disciplines into public school curricula, strengthen arts instruction, and improve students’ academic performance and funding for art teachers’ professional development, respectively. Total funding for

---

<sup>8</sup>See GAO, *No Child Left Behind Act: Education Should Clarify Guidance and Address Potential Compliance Issues for Schools in Corrective Action and Restructuring Status*, [GAO-07-1035](#) (Washington, D.C.: Sept. 5, 2007).

---

these two programs in the last few years was \$21.1 million in fiscal year 2006, \$21 million in fiscal year 2007 and \$20.7 million in fiscal year 2008.<sup>9</sup>

---

## Research on Arts Education in Public Schools

Prior to passage of NCLBA, the National Endowment for the Arts twice collaborated with Education to determine the extent to which public schools offer arts education in the four major art forms: visual arts, music, theater, and dance. Through surveys of school principals and teachers that Education conducted in school years 1993-1994 and 1999-2000, Education found that visual arts and music were offered by 80 to 90 percent of public elementary and secondary schools, while theater and dance were offered by a smaller fraction—fewer than half. Education plans to conduct another such survey in school year 2009-2010. Education sponsored the National Assessment of Educational Progress (NAEP) arts assessment of students in the eighth grade during school year 1996-1997, which reported the frequency of arts offerings by art form, and how well public school students could respond to, create, and perform works of visual art, music, and theatre. Known as the *NAEP 1997 Arts Report Card*, the study report was issued in November 1998.<sup>10</sup> The assessment found that a high percentage of eighth grade students were offered music and visual arts in the schools they attended, but that instruction in theater and dance was more limited. Students' performance ranged from 78 percent who sang the song "America" rhythmically to 1 percent who created expressive collages. Two other studies focused primarily on NCLBA implementation but also included analyses of changes in instruction time for all subjects, including arts education. One study, reported in *Choices, Changes, and Challenges: Curriculum and Instruction in the NCLB Era*, sponsored by the Center on Education Policy (CEP) and issued in July 2007, asked school district officials in school year 2006-2007 whether instruction time for individual subjects, including arts education, had changed since school year 2001-2002 when NCLB was enacted.<sup>11</sup> The CEP study reported that 30

---

<sup>9</sup>Education also awards arts education grants to VSA arts—formerly known as Very Special Arts—and the John F. Kennedy Center for Performing Arts. These grants provide arts education activities for adults as well as school children. VSA arts supports the involvement of persons with disabilities in arts programs and promotes awareness of the need for such programs.

<sup>10</sup>The *NAEP 1997 Arts Report Card* cautions readers that, because of changes in the nature of the assessment, results are not comparable to assessments in music and visual arts that NAEP administered in 1974 and 1978.

<sup>11</sup>CEP is a national, independent advocate for public education and for more effective public schools.

---

percent of school districts reported that instruction time for arts education in elementary schools had decreased since NCLBA was enacted. NLS-NCLB, also sponsored by Education, collected data in school years 2004-2005 and 2006-2007 to describe major patterns in state, district, and school implementation of NCLBA's central accountability provisions, including changes in instruction time. To address study question 1 in our report concerning changes in students' access to arts education, if any, we analyzed the data on changes in instruction time and other school characteristics collected from elementary school teachers and principals during school year 2006-2007 by the NLS-NCLB.<sup>12</sup>

Education plans to undertake a new study, which is expected to build on previous research, including the NLS-NCLB study, to continue to examine NCLBA implementation issues. Among a broad range of topics the planned study likely will explore are the uses of instruction time for all academic subjects. Education expects to award a contract for the study in September 2009 and begin data collection in the 2011-2012 school year.

---

<sup>12</sup>While findings of the CEP study were based on a survey of school district officials, the NLS-NCLB school year 2006-2007 survey collected detailed data on changes in instruction time from teachers, who are much closer than district officials to the point where instruction takes place.

---

## Overall Time Spent on Arts Education Changed Little between the 2004-2005 and 2006-2007 School Years, but Decreases Were More Likely at Some Schools and the Reasons for the Differences Are Uncertain

Most elementary school teachers—90 percent—reported that instruction time for arts education stayed the same between the 2004-2005 and 2006-2007 school years. The percentage of teachers that reported that instruction time had stayed the same was similarly high across a range of school characteristics, irrespective of the schools' percentage of low-income or minority students or of students with limited English proficiency, or the schools' improvement under NCLBA. However, 7 percent of the teachers reported a reduction in the time spent on arts education. Moreover, when we looked at teacher responses across a range of school characteristics, we found some significant differences in the percentages of teachers reporting that the time spent on arts education had decreased and in the average amount of time that instruction had been reduced. In contrast, among teachers reporting increases in instruction time for the arts, we found no differences across different types of schools. Because Education's survey did not include questions for teachers to indicate why instruction time decreased at their school, in our analysis of Education's data, we were unable to identify factors that might help explain some of the apparent disparities in instruction time suggested by our findings.

---

## Teachers at Schools Identified as Needing Improvement and Those with a Higher Percentage of Minority Students Were More Likely to Report a Decrease in the Amount of Time Spent on Arts Education

According to Education's data, the vast majority of elementary school teachers surveyed reported that the amount of weekly instruction time spent across all subjects, including arts education, stayed the same in the 2006-2007 school year compared with the 2004-2005 school year.<sup>13</sup> Table 2 shows that about 89.8 percent of elementary school teachers reported that instruction time spent on arts education did not change between these school years, while about 3.7 percent reported the time had increased compared with about 6.6 percent that reported it had decreased. The percentage of teachers that reported increases in instruction time was higher for reading/language arts and mathematics than for other subjects, which is understandable since these were the two subjects for which the NCLBA held schools accountable for demonstrating student proficiency at that time. In contrast, the percentage of teachers that reported decreases in instruction time was higher for social studies and science than for other subjects, including arts education, even though the NCLBA required schools to begin testing student proficiency in science in the 2007-2008 school year.

---

<sup>13</sup>See appendix II for average amount of instruction time spent on individual subjects in school year 2006-2007.

**Table 2: Percentage of Teachers across All Schools Reporting Whether Instruction Time Had Changed between the 2004-2005 and 2006-2007 School Years, by Subject**

<b>Subject</b>	<b>Increased</b>	<b>Stayed the same</b>	<b>Decreased</b>	<b>Total</b>
Art/music	3.7	89.8	6.6	<b>100</b>
Physical education/ health	5.5	88.1	6.4	<b>100</b>
Social studies/ history	4.0	82.8	13.1	<b>100</b>
Science	5.6	82.0	12.4	<b>100</b>
Mathematics	18.1	77.8	4.1	<b>100</b>
Reading/language arts	21.9	75.4	2.7	<b>100</b>

Source: GAO analysis of Education data.

Note: Percentages across columns may not add to 100 percent due to rounding.

When we looked at teacher responses across a range of school characteristics—including percentage of low-income and minority students and students with limited English proficiency, as well as improvement status, as indicated in table 3—we found no differences across characteristics in the percentages of teachers reporting that the time spent on arts education had increased. However, there were some significant differences across characteristics in the percentages of teachers reporting that the time spent on arts education had decreased, as shown in table 3. Elementary school teachers at schools identified as needing improvement, those at schools with higher percentages of minority students, and those at schools with higher percentages of students with limited English speaking skills, were significantly more likely to report a decrease in the amount of time spent on arts education compared with teachers at other schools. We might also point out that the vast majority of teachers reported that instruction time stayed the same, irrespective of their schools’ percentage of low-income or minority students or students with limited English proficiency, or the schools’ improvement status under NCLBA.

**Table 3: Percentage of Elementary Schools Teachers Reporting Whether Arts Education Instruction Time Had Changed between the 2004-2005 and 2006-2007 School Years, by School Characteristic**

School characteristic	Increased	Stayed the same	Decreased
<b>Percentage of low-income students<sup>a</sup></b>			
Schools with 75% or more	3	88	9
Schools with 35% or less	4	89	7
<b>Percentage of minority students<sup>b</sup></b>			
Schools with 75% or more	6	84	10*
Schools with less than 25%	3	91	6*
<b>Percentage of students with limited English proficiency</b>			
Schools with greater than 5%	4	88	8*
Schools with 0%	3	92	4*
<b>Improvement status<sup>c</sup></b>			
Schools identified for improvement	3	86	11*
Schools not identified for improvement	4	90	6*
<b>School location<sup>d</sup></b>			
Urban	4	88	7
Rural	3	92	6

Legend

\*=differences in percentage of teachers reporting a decrease were statistically significant (p<.05 level).

Source: GAO analysis of Education data.

Notes: Percentages across columns may not add to 100 percent due to rounding.

We also found statistically significant differences between the percentages of teachers reporting a decrease in arts education instruction at schools with a higher percentage of low-income students (9 % v. 5 %) or minority students (10 % v. 5 %) and those with a moderate percentage of these students.

<sup>a</sup>Schools were classified by Education as having “high—75 percent or more,” “moderate—35 to less than 75,” or “low—35 percent or less” percentages of low-income students using the number of students at the school that were eligible for the free and reduced-price lunch program.

<sup>b</sup>Schools were classified as having “high—75 percent or more,” “moderate—25 to less than 75,” or “low—25 percent or less” percentages of minority students, based on the school population that principals reported to be American Indian/Alaskan Native, Asian, Black, or African-American, Hispanic or Latino, and Native Hawaiian or other Pacific Islander. To see if certain groups were more affected than others, we also looked separately at the responses of teachers based on the percentages of African-American or Hispanic students enrolled at the school.

<sup>c</sup>Schools receiving funds under Title I of the NCLBA are identified as needing improvement when students do not make sufficient progress toward meeting state proficiency targets for 2 years or more.

<sup>d</sup>Schools were classified as central city (urban), urban fringe/large town (suburban), or small/fringe town (rural).

**Teachers at Schools with Higher Percentages of Low-Income or Minority Students Reported Significantly Larger Average Decreases Compared with Other Teachers**

When we looked at the average amount of change in instruction time among teachers that reported either an increase or decrease, we found significant differences among teachers that reported a decrease. Among teachers that reported a decrease, teachers at schools with higher percentages of low-income or minority students reported significantly larger average decreases in time spent on arts education compared with teachers at other schools. (See table 4.) For example, among teachers reporting a decrease, teachers at schools with a higher percentage of low-income students reported an average decrease of 49 minutes per week in the time spent on arts education compared with an average decrease of 31 minutes reported by teachers at schools with a low percentage of these students.<sup>14</sup> While this data might suggest that students at these types of schools are receiving less instruction time in arts education during the school day compared with students at other schools, we could not determine how this might affect their overall access to arts education without information on other opportunities, such as after-school programs in arts education.

**Table 4: Mean Decrease in the Amount of Instruction Time Spent on Arts Education among Teachers Reporting a Decrease from School Year 2004-2005 to 2006-2007**

School characteristic	Minutes per week	
	Schools with a low percentage of these students	Schools with a high percentage of these students
Percentage of low-income students	31.2*	49.0*
Percentage of minority students	33.3*	48.5*
Percentage of limited English proficient Students	53.4	40.2
Percentage of African-American students	41.7	52.3
Percentage of Hispanic students	42.5	52
	Schools not identified for improvement	Schools identified for improvement
Improvement status (Not IFI v. IFI)	37.6	41.5
	Urban schools	Rural schools
Location (urban v. rural)	43.4	59

**Legend**

\*=difference between the “low” and “high” range was statistically significant (p<.05 level).

Source: GAO analysis of Education data.

Note: All findings in the table are those reported by the fraction of teachers who reported a decrease. Because none of the differences in the percentages involving schools with teachers that reported an increase were statistically significant, findings for those schools are not included in the table.

<sup>14</sup>The average decrease in time spent on arts education among teachers reporting a decrease across all schools was 41 minutes per week.

---

Interestingly, while teachers at elementary schools identified for improvement and those with high percentages of limited English-proficient students were more likely to report a decrease in arts education as shown in table 3, when looking at the amount of change, as shown in table 4, the data shows that, on average, they reported about the same amount of change in instruction time as teachers from nonidentified schools and those with lower percentages of limited English-proficient students, respectively—that is, the differences were not statistically significant. It was difficult to determine which school characteristic had a stronger effect on the changes in arts education instruction time without a more advanced analysis.<sup>15</sup>

---

### Education’s NLS-NCLB Survey Does Not Currently Ask Questions That Might Explain the Disparities in Changes in Instruction Time across Different Types of Schools

Education’s NLS-NCLB survey did not include questions for respondents to identify the reasons instruction time may have changed, which might help explain some of the apparent disparities in instruction time suggested by our analysis of Education’s data. Although Education’s survey asked questions regarding whether schools have implemented any of a variety of NCLBA-defined interventions,<sup>16</sup> such as extending the school day or adopting a new curriculum program, it did not specifically ask respondents to identify the reasons for any change in the amount of instruction time they reported for the respective subjects.

---

<sup>15</sup>Because we were not able to obtain raw data files from Education to do a comprehensive analysis of the data ourselves, Education’s research team generated a limited set of analyses from their survey data file for us, based on our specifications. Time and resources precluded a more advanced analysis to assess and control for the correlations between the variables and to estimate their effects net of one another. Moreover, the aggregated data we received from Education did not allow us to determine whether the larger declines in arts education instruction in selected schools resulted from their spending more time on those subjects than other schools to begin with or not.

<sup>16</sup>As part of Education’s NLS-NCLB study, they administered separate surveys to school principals and elementary school teachers.

---

## While Basic State Requirements for Arts Education in Schools Have Remained Constant in Most States, State Funding Levels for Arts Education Changed

According to our survey of state arts officials, since passage of NCLBA, basic state requirements for arts education in schools, such as the number of hours a week that the arts must be taught, have remained virtually unchanged and more states have established funding for some type of arts education, such as providing grants to schools to promote arts education. However, while some states have increased funding, other states have reduced funding since NCLBA's passage. Arts officials attributed changes in funding to state budget changes to a greater extent than to NCLBA or other factors.

---

## The Basic Requirement for Arts Education Stayed about the Same in Most States and Additional States Have Established Funding for Some Type of Arts Education

By school year 2001-2002, the year NCLBA was enacted, most states had taken steps to establish arts education in their public school systems by developing basic arts education requirements, such as the number of hours a week that the arts must be taught or the number of courses that must be taken. As shown in table 5, of the 45 states that responded to our survey, 34 states had established the basic requirement that arts education be taught, and 28 states had included arts education as a high school graduation requirement by that school year. By school year 2006-2007, as shown in the third column of table 5, most of these states had retained these requirements. In addition, 3 more states had established basic arts education requirements, and 5 more states had included arts education as a high school graduation requirement by that school year. As table 5 also shows, a number of states did not have any requirements for arts education in place by the time NCLBA was passed. Specifically, 7 states had no basic requirement that arts education be taught, and 11 states had not included arts education as a high school graduation requirement by school year 2001-2002. State by state breakouts are provided in appendix III.

**Table 5: Number of States with Arts Education Requirements in School Years 2001-2002 and 2006-2007**

Arts education requirements	2001-2002 only	Both 2001-2002 and 2006-2007	2006-2007 only	No requirements in either year	Did not know	Total
General arts requirements	0	34	3	7	1	45
Arts requirements for high school graduation	0	28	5	11	1	45

Source: GAO analysis of GAO survey data.

Many states had also provided funding to promote arts education in public schools and, as shown in the third column of table 6, most of the funding still was in place 5 years later, in school year 2006-2007. In addition, the number of states with arts education grants, training funding, and state established schools for the arts increased in school year 2006-2007.

**Table 6: Number of States with Funding for Arts Education in School Years 2001-2002 and 2006-2007**

Arts education funding	Funding in 2001-2002 only	Funding in both 2001-2002 and 2006-2007	Funding in 2006-2007 only	No funding in either year	Did not know	Total
Arts education grants	0	32	5	3	5	45
Artist-in-residence funding	2	33	0	5	4	44
Training funding	1	27	4	8	4	44
State-established arts school funding	0	11	1	29	4	45

Source: GAO analysis of GAO survey data.

State arts officials identified multiple sources of funding for arts education, including the state education agency, the state cultural agency, private foundations, the federal government, and other organizations, as shown in table 7. Of the 45 arts officials who responded to the survey, more identified the state cultural agency as a funding source than any other organization, including the state education agency.

**Table 7: Sources of Funding for State Arts Education between School Years 2001-2002 and 2006-2007**

<b>Arts education funding</b>	<b>State education agency</b>	<b>State cultural agency</b>	<b>Private foundations</b>	<b>Federal government</b>	<b>Other</b>	<b>Number of states with funding<sup>a</sup></b>
Arts education grants	18	30	15	21	7	37
Artist-in-residence funding	8	33	12	16	9	35
Training funding	26	27	13	16	9	32
State-established arts school funding	8	0	1	2	2	12

Source: GAO analysis of GAO survey data.

<sup>a</sup>Total represents the number of states that provided funding in at least one of the 2 school years.

**Levels of State Financial Support for Arts Education Varied Among the States, and States Reported That State Budget Changes rather than NCLBA Were the Major Factor Prompting the Funding Changes**

While the number of states that had basic requirements for arts education remained nearly unchanged and most states maintained their arts education funding, levels of funding changed, with some states reporting decreases, and others reporting increases. For example, of the 32 states that awarded arts education grants in both years, funding decreased in 12 states, increased in 5 states, and stayed the about same in 8 states, as shown in table 8.

**Table 8: Of States That Had Funding in Both School Years 2001-2002 and 2006-2007, Number of States with Changes in Funding for Arts Education and Number Where Funding Stayed about the Same**

Arts education funding	Extent of change in funding					Changes differed depending on school level <sup>a</sup>	Did not know
	Decreased greatly	Decreased somewhat	Stayed about the same	Increased somewhat	Increased greatly		
Arts in Education Grants	8	4	8	4	1	3	4
Artist-in-Residence Funding	6	6	7	5	0	5	4
Training Funding	4	6	6	4	3	4	0
State Arts Schools Funding	0	1	2	6	0	n/a	3

Source: GAO analysis of GAO survey data.

Notes: Five states had arts education grants only in school year 2006-2007.

Five states did not have artist-in-residence funding for either school year 2001-2002 or 2006-2007, and two states had artist-in-residence funding only in 2001-2002.

Four states had training funding only in 2006-2007, and one state had training funding only in 2001-2002.

Twenty-nine states did not have state-established arts schools in either school year 2001-2002 or 2006-2007.

<sup>a</sup>Arts officials were asked to answer questions about changes in funding for each school level (elementary, middle, and high). The frequencies in columns 2-6 and 8 represent the states that answered the same for each school level. The frequencies in column 7 show the number of states that gave mixed responses by school level.

According to our survey, state arts officials attributed changes in funding for state arts education to state budget changes to a greater extent than to NCLBA or other factors. For example, of the states that provided arts education grants in both school years 2001-2002 and 2006-2007, 11 arts officials attributed changes in funding to state budget changes, and 18 reported that shifting funds to meet NCLBA needs had little or nothing to do with the funding changes. Table 9 shows the extent to which the arts officials attributed changes in funding to state budget changes, state policy changes, shifting funds to meet NCLBA needs, and other factors for each of the four types of state arts education funding.

**Table 9: Number of States Identifying Factors That Contributed to Change in Funding of Arts Education between School Years 2001-2002 and 2006-2007**

Factors that contributed to change	Extent of change						Total response
	Very great extent	Great extent	Moderate extent	Some extent	Little or no extent	Cannot judge	
<b>Arts education grants</b>							
State budget changes	11	6	2	2	8	5	<b>34</b>
State policy changes	4	1	4	2	18	4	<b>33</b>
Shifting funds to meet NCLB needs	3	0	2	0	18	9	<b>32</b>
Other	6	2	4	3	2	6	<b>23</b>
<b>Artist-in-residence funding</b>							
State budget changes	11	2	2	4	10	6	<b>35</b>
State policy changes	1	3	3	4	15	8	<b>34</b>
Shifting funds to meet NCLB needs	1	3	2	2	16	10	<b>34</b>
Other	3	0	2	1	6	8	<b>20</b>
<b>Training funding</b>							
State budget changes	11	4	4	0	7	5	<b>31</b>
State policy changes	2	3	2	3	14	4	<b>28</b>
Shifting funds to meet NCLB needs	4	0	5	1	14	6	<b>30</b>
Other	4	1	3	0	5	6	<b>19</b>
<b>State-established arts school funding</b>							
State budget changes	1	1	2	0	3	4	<b>11</b>
State policy changes	0	1	0	0	6	4	<b>11</b>
Shifting funds to meet NCLB needs	0	0	0	1	6	4	<b>11</b>
Other	0	0	1	1	3	4	<b>9</b>

Source: GAO analysis of GAO survey data.

---

## Since NCLBA, District Officials and School Principals Have Used Several Strategies to Provide Arts Education; However, Some Struggled with Decreased Budgets and Competing Demands on Instruction Time

District officials and school principals have used several strategies to provide arts education, including varying when the arts are offered, seeking funding and collaborative arrangements in the arts community, and integrating the arts into other subjects; however, some struggled with decreased budgets and competing demands on instruction time, according to officials we interviewed. Faced with decreased funding or increased demands on instruction time, some principals told us that they had to make trade-offs.

---

## District Officials and School Principals Have Used Several Different Strategies to Provide Arts Instruction

School principals we met with had found several ways to maintain arts education, including varying when the arts are offered. More than half of the 19 schools we visited offered some form of arts education outside of the regular school day. In a few schools, after school classes were the only arts education opportunity available to students. At one middle school in Boston that had not met AYP in school year 2006-2007, the principal had eliminated arts education classes during the school day and purchased an after-school arts program in drama and music production from an outside organization. The program is open to all students, but participation in the program is offered on a first-come-first-served basis. In contrast, one New York City middle school, which was not meeting AYP in English and language arts in school year 2007-2008, changed when other classes were offered, rather than changing when arts education was offered. This school extended the school day for students who required additional help by adding a period to the school schedule four times a week. The principal told us that this allowed all students to attend art class held during the regular school day. While many schools experienced changes to their arts programs, several of the schools we visited reported no changes in their arts education offerings. For example, the principal of the high school we visited in the Waltham school district, near Boston, which met AYP, said that the school had experienced a stable budget for the past 10 years and had made no changes to its arts education policies. The principal of a large high school in Chicago, which has not met AYP for 4 years, also said that the school had not changed its arts education policies. He explained that because the school's budget is determined by the enrollment level, his

---

school had the resources to offer students arts education opportunities that smaller Chicago schools could not.

Several of the schools we visited also reported receiving grants and private funding and establishing collaborative relationships with organizations in the arts community that supplemented the arts education classes funded by general revenues. For example, one elementary school in Boston has developed partnerships with several companies, including a bank, that fund the school's instrumental music program. This elementary school also has obtained a grant from a television station to pay for instruments and participates in a city-funded program that sends seven selected students to the Boston Ballet once a week for lessons. A Chicago high school received a private grant that supported a student art project to do a mosaic on the walls outside the music rooms at the school.<sup>17</sup> The principal of this high school also said that he has informal arrangements with local artists to bring special projects to the school, such as the group that visited the school to teach a belly dancing class. A high school in Miami set up internships for its students at local music stores and solicited a donation of used equipment from the local news station when it moved to a new facility. The drama teacher also solicits donations of costumes for school dramatic productions. In Broward County, Florida, the school district provides funds each year to pay for the cost of transporting the school district's students to performances at the Broward Center for the Performing Arts (Center).<sup>18</sup> A New York City junior high school receives support for students to attend plays from a private program and sends the school's theater group to perform at Lincoln Center every year. A senior high school in the city has arranged music programs with Carnegie Hall, a local orchestra, and the Juilliard School of Music. The Museum of Modern Art and the Metropolitan Museum of Art also cover the students' cost of admission for exhibits and performances.

Arts organization officials in Chicago, Miami, and Broward County, Florida, described the arts integration model of arts education as a strategy for maintaining the arts in school curricula and provided

---

<sup>17</sup>The high school principal said that teachers are responsible for seeking and preparing grant proposals.

<sup>18</sup>In 1991, the Broward County school district established the Student Enrichment in the Arts (SEAS) program which provides \$466,000 per year in funding for SEAS, with each school receiving about \$2,400/year to pay for the costs of transporting students to attend, at no charge, educational performances held at the Center.

---

examples of arts integration programs in schools we did not visit. In Chicago, the Chicago Arts Partnerships in Education, a nonprofit arts education advocacy organization, is participating as a partner in a project that supports arts integration in the 55 fine and performing arts schools operated under Chicago Public Schools' (CPS) magnet school cluster program.<sup>19</sup> The project, funded by Education's Model Development and Dissemination grant program, funds teaching artists who work with art teachers and regular classroom teachers to incorporate the arts into teaching academic subjects. In Miami, Arts for Learning, a nonprofit that promotes arts integration through in-school and after-school programs, operates "GET smART," a yearlong professional development program that provides interdisciplinary training to teachers on how to effectively create and implement arts integration projects in the core academic subjects. About 18 Miami-Dade schools participated in this program in school year 2007-2008. Arts for Learning also offers "Early GET smART" a program that works with preschoolers aged 2 to 6 to provide an arts-based learning approach to literacy and school readiness. The Broward County Cultural Division, a publicly funded agency established by the Board of County Commissioners, promotes arts integration in the local schools. One initiative provides a block grant to the school board to implement artist-in-residencies and arts integration workshops in individual schools. Officials representing the division said that schools are increasing use of the arts to teach lessons in academic subject areas. For example, as his class learned about a particular country, a social studies teacher would play music from that country to expose the students to different musical styles from around the world. The teacher was also working with an artist to develop a visual presentation that could be incorporated into the lesson. In addition, the Ft. Lauderdale Children's Theater goes into schools and performs dramatic readings of plays with the children acting out the roles as part of their classroom reading lessons.

---

<sup>19</sup>The CPS Office of Academic Enhancement administers a magnet school cluster program, which involves about 300 schools. Each school focuses on one academic area or approach, including fine and performing arts, world language, literature and writing, math and science, International Baccalaureate, and Montessori. The International Baccalaureate program focuses on developing the intellectual, personal, emotional, and social skills to live, learn, and work in a rapidly globalizing world. The Montessori method is a child-centered alternative educational approach involving adapting the learning environment to a child's developmental level, and it emphasizes physical activity in absorbing both abstract concepts and practical skills. Magnet schools are located throughout Chicago, and they function as neighborhood schools. The magnet cluster program money is part of a desegregation decree between the federal government and CPS. Since CPS cannot bus, it uses the magnet cluster program as a tool to integrate schools and to bring quality programming to a large number of neighborhood schools.

---

**Officials Report That the Main Challenges to Providing Arts Instruction Have Been Decreased State or Local Funding and Competing Demands on Instruction Time**

Officials we met with told us that the main challenges to providing arts education have been decreased state or local funding and competing demands on instruction time due to requirements established by the state education agency or school district to meet NCLBA proficiency standards, such as doubling the amount of time low-performing students spend on reading and math.

District officials and school principals in the Boston, Chicago, Miami-Dade, and New York City school districts all reported that state or local budget cuts created a challenge for arts education in the schools. The Boston school district expects an \$11 million budget shortfall for the upcoming school year, a result of a declining population base. School district officials expect this shortfall to lead to a loss of 10 arts teachers across the school district. District officials and school principals in Chicago attributed funding shortages for arts education to the school district's arts personnel funding policy. The Chicago school district funds personnel positions on the basis of student enrollment and supports one half-time position for an arts teacher in primary schools with fewer than 750 students. To employ a full-time arts teacher on the staff, a school principal must supplement the arts teacher's salary from discretionary funds. Officials in both Florida school districts we visited reported budget pressures due to a state budget shortfall, but the consequences for arts education differed. Miami-Dade school district officials reported cuts in the district's arts education budget of as much as 70 percent, resulting in staff cuts. In Broward County, while acknowledging budget pressures, school district officials reported that the arts have not been cut. They said that the district had taken steps several years ago to prepare for this possible economic downturn. However, if cuts in content area programs are necessary, the district makes an across-the-board percentage cut in the budget allocated to each school rather than targeting individual subjects for reduction. New York City school district officials reported that a line item in the school district budget that provided schools a per capita allotment solely to support arts education was eliminated in 2007, and funds were incorporated into the school's general fund.<sup>20</sup> This change allowed school principals to allocate the funds to the arts or other subjects.

---

<sup>20</sup>The line item for arts education provided all schools with approximately \$63 per student annually.

---

In addition to state and local budget cuts, district officials and school principals in the Boston, Chicago, Miami-Dade, and New York City school districts also agreed that competing demands on instruction time were a major challenge for providing arts education in their schools. These officials also identified NCLBA's proficiency standards—as well as requirements established by the state and school district to meet NCLBA proficiency standards—as a key source of the time pressure. Boston school district officials said that it is difficult to convince principals of the importance of continuing to provide arts education when it is not a tested subject. They said that the arts curriculum takes a back seat because school success is based on student performance on their state tests as required under NCLBA. Although they tried to avoid pulling students out of arts education classes for remedial work, one elementary and one high school principal interviewed in Boston, whose schools were not meeting AYP, agreed that NCLBA's testing requirements had increased the demands on instruction time for tested subjects and reduced time available for the arts, at least for students not meeting proficiency requirements. A Waltham school district official said that to meet the state and federal proficiency standards, the district added workshops in math, reading, and science, which led to cuts in arts staff and even eliminating arts field trips because they reduce the amount of available class time. She added that, 2 years ago, the district added a two-block period twice a week to keep up with state proficiency standards. This resulted in the loss of one full-time equivalent (FTE) arts teacher. A Chicago school district official affirmed that the priorities principals set for meeting AYP in reading and math affect the time available for the arts. In Florida, where the state requires that students who perform at the lowest two of five levels on the state NCLBA proficiency tests be placed in intensive classes for language arts and math, district officials agreed that time for arts education might be affected. In Broward County, officials said that the district follows the state policy that requires mandatory pull-out sessions for students performing at reading levels 1 and 2 on the state performance assessments. In some cases, the district will require some students to be pulled out for additional intensive instruction in math. These “pull-out” students receive double periods of reading or other intensive instruction that reduces the number of periods they have available to take elective classes, such as art or music. A New York City school district official acknowledged that schools not meeting AYP faced challenges in providing arts education but said that the responsibility for meeting instructional requirements was the school principal's. Principals in the elementary and middle schools we visited in New York, two of which were not meeting AYP, said they had taken steps to meet the time demands of NCLBA's testing requirements. The high school principal said that students not

---

meeting proficiency requirements could attend their remedial classes and still meet the arts course requirement for graduation, but that they may not have an opportunity to take courses above the minimum credit requirement. This high school was not meeting AYP in school year 2007-2008.

---

**Officials Report That When Trade-Offs Involving Funding or Instruction Time for Arts Education Had to Be Made, the School Principal Made the Decision**

District officials and school principals told us that when they faced decreased budgets or increased demands on instruction time, trade-offs had to be made, and school principals made the decision. Principals' decisions differed, however. Some principals chose not to spend their limited discretionary funds on arts education, while other principals, even when their school had been identified as needing improvement several times, maintained their arts offerings. For example, one school principal in a Chicago elementary school chose to spend discretionary budget funds on special reading and math programs needed to improve students' performance rather than supplement half the salary of a full-time arts teacher. On the other hand, one Miami-Dade high school principal had allocated Title I funds to help retain and rebuild the school's arts education program as part of its NCLBA restructuring plan. New York City officials said that a new accountability system the school district had developed in part because of NCLBA, but also to evaluate progress toward meeting city instructional requirements, increased the discretionary authority vested in school principals. The district also developed an accountability initiative called ArtsCount. For this initiative, district arts officials developed measures to be incorporated in the district's evaluation of school performance and the quality of arts offerings. This information will be used to influence the scores that are incorporated into each school principal's report card. For middle and high schools, the results are incorporated into the measure of graduation requirements. Under the accountability system and this initiative, school principals are given greater authority to make trade-offs, such as the discretion to allocate funds formerly restricted to expenditures for the arts to other subjects, but the school district monitors the results of their decisions.

---

## Overall Research on the Association between Arts Education and Student Outcomes Is Inconclusive

While some studies that have examined the association between arts education and students' academic achievement have found a small positive association with student outcomes, others have found none. One meta-analysis that combined the results of several studies found small positive relationships.<sup>21</sup> This study included two separate analyses: one that looked at the association between music instruction and math scores, and another that looked at the association between listening to music and math scores. The first analysis of six studies found that learning to play music had a small positive relationship with both standardized and researcher-designed achievement test scores in mathematics, regardless of whether or not the child learned to read music.<sup>22</sup> Music instruction in these studies included both instrumental and vocal performance for durations of at least 4 months and up to 2 years, and included children at the preschool through elementary level.<sup>23</sup> The second analysis, which included 15 studies, determined that there was a small positive relationship with math test scores when children listened to certain types of music while attempting to solve math problems. In contrast, another meta-analysis found no association with students' achievement. This analysis, which looked at 24 studies examining reading outcomes and 15 studies examining math outcomes, found no association between arts education and standardized reading or math test scores, regardless of the child's background or academic history. The students included in the studies had a wide range of academic abilities and came from a wide range of backgrounds. For example, some of the studies included academically at-risk students and students from lower-income families, while some of the studies included "academically gifted" students and students from higher-income families. The studies also included children of a variety of ages and several different types of arts instruction, including music, visual arts, drama, and dance. Moreover, some research has focused on special populations, such as students from low-income families; however, most of these studies did not meet GAO's criteria for methodological quality, and their findings are questionable.

---

<sup>21</sup>A meta-analysis is a statistical analysis of a collection of studies for the purpose of integrating the results.

<sup>22</sup>The author had predicted that learning music notation might be associated with higher test scores because practice in learning symbols in notation might generalize to practice in reading math symbols.

<sup>23</sup>Two studies included keyboard training, two included vocal training, one included violin training, and one included a variety of "school band instruments."

---

Similarly, studies that examined the association between arts education and abilities associated with academic performance also were mixed. For example, two of the three analyses from one meta-analysis looking at the association between music education and certain spatial abilities found a positive relationship. One analysis, which was made up of 15 studies, and another that analyzed 8 studies, found that music education was associated with student performance on a wide range of spatial tasks. However, the third analysis, which included 5 studies, found no association between music education and one measure of spatial performance. In these studies, enhanced spatial performance referred to the ability to mentally recognize and manipulate patterns that fall into a certain logical order and are usually used in subjects such as music, geometry, and engineering. An example of spatial ability in a music course would be the ability to produce a piece of music based on memory alone, anticipating mentally the changes needed to play a certain piece of music. A complete list of the studies assessed is included in appendix IV.

---

## Conclusions

Amid concerns about possible elimination of arts education, the national picture indicates that the vast majority of schools have found a way to preserve their arts education programs. However, a somewhat different story emerges for some schools identified as needing improvement under NCLBA, which include higher percentages of low-income and minority students. Among teachers reporting a decrease in instruction time for arts education, our study identified a more likely reduction in time spent on arts education at schools identified as needing improvement and those with higher percentages of minority students. While school officials in our site visit states told us that requirements established by the state and school district to meet NCLBA proficiency standards placed competing demands on instruction time for arts education, the reasons for the differences in instruction time our statistical analysis identified are difficult to establish nationally, given current limitations in Education's NLS-NCLB longitudinal data. Having national-level information about the reasons for these differences could add to the current body of research on arts education and help guide school decisions with respect to arts education.

---

## Recommendation for Executive Action

To help identify factors that may contribute to changes in access to arts education for certain student subgroups, we recommend that the Secretary of Education require that the department's planned study of NCLBA implementation include questions in its surveys asking survey respondents to describe the reasons for any changes in instruction time

---

they report. Once the information has been collected and analyzed, Education could disseminate it to school districts and schools to help them identify and develop strategies to address any disparities in access.

---

## Agency Comments and Our Evaluation

We provided a draft of the report to the Department of Education for review and comment. Education generally agreed with our findings and stated that, our finding that among the small percentage of teachers reporting a decrease in arts education instruction time, teachers in schools identified for improvement and those with high percentages of minority students were more likely to report reductions in time for arts education is cause for concern. Regarding our recommendation, Education agreed that further study would be useful to help explain why arts education instruction time decreased for some students. Education said that it will carefully consider our recommendation that the department's planned study of NCLBA implementation include questions in its surveys asking respondents to describe the reasons for any changes in instruction time they report. Education also provided technical comments, which have been incorporated in the report as appropriate. Education's comments appear in appendix V.

---

We are sending copies of this report to the Secretary of Education, relevant congressional committees, and other interested parties. The report also is available at no charge on the GAO Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-7215 or [ashbyc@gao.gov](mailto:ashbyc@gao.gov). Contact points for our Office of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix VI.



Cornelia M. Ashby  
Director, Education, Workforce, and  
Income Security Issues

---

# Appendix I: Scope and Methodology

---

This appendix discusses in more detail our methodology for examining any changes in students' access to arts education in public elementary and secondary schools that may have taken place since passage of the No Child Left Behind Act (NCLBA) and what is known about the effect of arts education on student academic performance. The study was framed around four questions: (1) has the amount of instruction time for arts education changed and, if so, have certain groups been more affected than others, (2) to what extent have state education agencies' requirements and funding for arts education changed since NCLBA, (3) what are school officials in selected districts doing to provide arts education since NCLBA and what challenges do they face in doing so, and (4) what is known about the effect of arts education in improving student outcomes?

---

## Scope

As the Department of Education (Education), working in collaboration with the National Endowment for the Arts, determined first in school year 1993-1994 and again in school year 1999-2000, arts education in some form is provided in the vast majority of public schools nationwide.<sup>1</sup> Questions about changes in access thus need to be considered for the national population of public schools. However, because we recognized that states' and school districts' roles in school governance, funding, and implementation of NCLBA introduce variation in time devoted to individual subjects, including arts education, we determined that an in-depth look at state, district, and school policies and practices also was needed to help understand any systematic changes in instruction time for arts education that a national-level analysis might identify. Therefore, to examine any changes in students' access to arts education in public elementary and secondary schools that may have taken place since passage of NCLBA, we focused on time devoted to instruction in arts education and other subjects and any changes that occurred in a nationally representative sample of elementary schools. We also reviewed state arts education requirements and funding related to students' access to arts education and steps that school districts and schools in selected states had taken to provide arts education in the post-NCLBA environment. To determine what is known about the effect of arts education on student academic achievement and other outcomes, we reviewed and methodologically assessed existing research on arts education.

---

<sup>1</sup>Education plans to survey schools again in school year 2009-2010 to examine arts education.

---

## Methodology

We used separate sources of data for each study question, including nationally representative survey data collected by the Department of Education's (Education) National Longitudinal Study of No Child Left Behind (NLS-NCLB), which collected data on changes in instruction time by subject; a GAO survey of state arts education officials; on-site interviews with school district, school, and arts organization officials in selected states; and existing studies of the effect of arts education on student outcomes that met GAO's methodological criteria. Before deciding to use the NLS-NCLB data, we conducted a data reliability assessment. We discuss our assessment procedures and steps we took to mitigate any data limitations below, as part of the methodology for analyzing changes in instruction time. We provided specifications to Education for descriptive analyses of the NLS-NCLB data, and we conducted a descriptive analysis of our state survey data, a synthesis of our site visit data, and a methodological assessment of existing research on arts education.

---

## Procedures for Analyzing Changes in Instruction Time

Because we were not able to obtain raw data files from Education to do a comprehensive analysis of the data ourselves, we asked Education to provide us with summary information from the Survey of Teachers component of the school year 2006-2007 NLS-NCLB. These data are from a nationally representative survey of teachers, as well as of schools and school districts. We requested tables that showed (1) the average (mean) amount of time that teachers reported devoting to arts education each week in 2006-2007; (2) the percentage of teachers that reported that the amount of time spent on arts education had increased, decreased, and remained the same over the past 2 years; and (3) for those teachers who reported a change, the average increase or decrease (in minutes per week) that was devoted to arts education. We obtained these estimates from Education for teachers in all schools, and separately for teachers in different categories of schools, defined by the percentages of students in the schools that were (1) minorities, (2) African-Americans, (3) Hispanics, (4) eligible for free/reduced lunches, and (5) in individualized education programs. We also compared the reports from teachers in schools that were (6) urban with those from rural teachers, and (7) that were and were not identified as being in need of improvement. We obtained from Education the standard errors associated with the estimates from the different types of schools and thus were able to test the statistical

significance of the differences between what teachers from different types of schools reported.<sup>2</sup>

Before deciding to use the data, we reviewed guidance on the variable definitions and measures provided, documentation of the survey and sampling methodology used, and the data collection and analysis efforts conducted. We also interviewed Education officials about the measures they and their contractors took to ensure data reliability. We assessed the reliability of the NLS-NCLB data by (1) reviewing existing information and documentation about the data and the system that produced them and (2) interviewing agency officials knowledgeable about the data. On the basis of our efforts to determine the reliability of the estimates for which supporting information was provided, which included verifying calculations, we believe that they are sufficiently reliable for the purposes of this report.

---

### State Survey Data Collection and Analysis Procedures

We designed and implemented a Web-based survey to gather information on states' role in shaping the provision of arts education in public schools and changes that may have occurred since NCLBA. Our survey population consisted of state arts officials in 49 states and the District of Columbia.<sup>3</sup> We identified these arts officials through searches of the Arts Education Partnership Web site, and verified the contact information provided through e-mails and phone contacts.

To develop survey questions, we reviewed existing studies on arts education and the state arts education policy data bases on the Web sites of the Education Commission of the States and the Arts Education Partnership. We also conducted interviews with representatives of these organizations. In addition, we interviewed the Arts Education Director and Research Director of the National Endowment for the Arts (NEA) to develop an understanding of federal and state roles in arts education in public schools and of the alternative funding sources for arts education that are available to schools. Finally, we conducted pretests of various

---

<sup>2</sup>We obtained similar estimates from Education on the time devoted to other subjects, such as math, science, and reading, and whether and how much it had changed over the past 2 years.

<sup>3</sup>One state has not designated an official to oversee arts education in the state's public schools, and the state education agency's director of curriculum and instruction did not respond to our contacts.

drafts of our questionnaire with arts education officials in seven states to ensure that the questions were clear, the terms used were precise, the questions were unbiased, and that the questionnaire could be completed in a reasonable amount of time. We modified the questionnaire to incorporate findings from the pretests.

The survey was conducted using self-administered electronic questionnaires posted on the World Wide Web. In the questionnaire, we asked the state arts official to be the lead survey respondent and, if necessary, to confer with other representatives of state departments of education, state arts commissions, and state cultural agencies to answer questions requiring more detailed knowledge. We sent e-mail notifications to these officials beginning on April 22, 2008. To encourage them to respond, we sent two follow-up e-mails over a period of about 3 weeks. For those who still did not respond, GAO staff made phone calls to encourage the state officials to complete our questionnaire. We closed the survey on July 2, 2008. Forty-five state officials completed the survey.

Because this was not a sample survey, there are no sampling errors; however, the practical difficulties of conducting any survey may introduce errors. For example, difficulties in how a particular question is interpreted, in the sources of information that are available to respondents, or in how the data are entered into the database or were analyzed, can introduce unwanted variability into the survey results. We took steps in the development of this questionnaire, in the data collection, and in the data analysis to minimize such error. For example, a social science survey specialist designed the questionnaires in collaboration with GAO staff with subject matter expertise. Then, as noted earlier, the draft questionnaire was pretested in seven states to ensure that questions were relevant, clearly stated, and easy to comprehend. The questionnaire was also reviewed by an additional GAO survey specialist. Data analysis was conducted by a GAO data analyst working directly with the GAO staff with subject matter expertise. When the data were analyzed, a second independent data analyst checked all computer programs for accuracy. Since this was a Web-based survey, respondents entered their answers directly into the electronic questionnaires. This eliminated the need to have the data keyed into databases thus removing an additional source of error.

---

Site Visit Selection, Data Collection, and Analysis

To obtain information about what school officials are doing to provide arts education since NCLBA and the challenges, if any, they face in doing so, we visited school districts and schools in four states—Illinois,

Massachusetts, Florida, and New York. Having learned from other studies of NCLBA implementation that schools not meeting AYP were difficult to recruit for site visits, to ensure that a sufficient number of schools would be selected, we identified states for our visits with large numbers of schools that were not meeting AYP in school year 2006-2007. Within each state, we selected school districts and schools that represented variation in income level of the school district, schools' performance under NCLBA, and schools' location as indicated in table 10.

**Table 10: Criteria for Selecting School Districts and Schools**

State	School districts' income level	Schools' NCLBA performance status	Schools' location
Massachusetts	1 low-income	3 not meeting AYP 2 meeting AYP	4 urban
	1 moderate to upper income		1 suburban
Illinois	1 low-income	2 not meeting AYP 2 meeting AYP	2 urban
	1 moderate income		2 rural
Florida	1 low-income	2 not meeting AYP 2 meeting AYP	2 urban
	1 moderate income		2 suburban
New York	1 low-income	3 not meeting AYP 3 meeting AYP	4 urban
	1 moderate to upper income		2 rural

Source: GAO.

Within each state, we visited two school districts and 4 to 6 schools in each district for a total of eight school districts and 19 schools. We interviewed officials responsible for the arts education curriculum in each school district and school principals and, at the principal's discretion, art teachers in elementary, middle, and high schools. We also visited and interviewed officials representing local arts organizations that had undertaken arts education initiatives in the public schools.

Recruiting low-income school districts and schools for this study was especially challenging. For example, one district we initially selected to include in our study was in California, the state with the largest number of schools identified as needing improvement in school year 2006-2007. Officials representing that school district said that the district had placed a moratorium on all research in the district's schools. In other California school districts, we experienced long delays in receiving a response from both district and school officials to requests for initial or follow-up interviews. We ultimately decided to recruit school districts and schools in other states.

---

For the site visits, we developed structured interviews with a standard set of questions for school district and school officials including the following topics:

- art forms included in the schools' arts education classes;
- daily or weekly schedule for all subjects, including arts education;
- changes in instruction time for all subjects, including arts education, occurring in the past school year and recent years;
- changes in students' access to arts education in the schools;
- challenges faced in providing arts education in the schools; and
- funding sources for arts education and how budget cuts are implemented when resource reductions occur.

Our questions for arts organization officials asked them to describe their arts education initiatives in the local schools, what resources they contributed, if any, to arts education in the schools, and their perception of public school students' access to arts education and the challenges school districts and schools face in providing arts education.

To analyze the site visit data, we created matrices to summarize key findings from interviews with school district, school, and arts organization officials on changes in instruction time, changes in students' access to arts education, challenges faced, and experience with changes in funding.

---

## Review of Existing Studies on the Effect of Arts Education on Student Outcomes

To determine what existing research says about the effects of arts education on student outcomes, we used several search strategies. To identify existing studies, we conducted searches of several automated databases, including the Education Resources Information Center (ERIC), Proquest, and Nexis. We also interviewed individuals familiar with available research, including the Research Director of the NEA and the former Director of the Arts Education Partnership (AEP). From these sources, we identified over 1,000 studies that were screened for relevance for our study. Using information about these studies that was readily available, we screened them using the following criteria:

- published during or after 1998,
- research based on subjects within the United States,
- published in a peer reviewed journal, and

- employed an experimental or quasi-experimental design.<sup>4</sup>

We selected the studies for our review based on their methodological strength and not on the generalizability of the results. Although the findings of the studies we identified are not representative of the findings of all studies of arts education programs, the studies consist of those published studies we could identify that used the strongest designs—experimental or quasi-experimental—to assess the effects of arts education. At the end of this screening process, 32 studies on the effects of arts education on student outcomes remained. We performed our searches for research and research evaluations between August 2007 and April 2008.

To assess the methodological quality of the 32 selected studies, we developed a data collection instrument to obtain information systematically about each study being evaluated and about the features of the evaluation methodology. We based our data collection and assessments on generally accepted social science standards. We examined such factors as whether evaluation data were collected before and after arts education implementation; how arts education effects were isolated, including the use of nonarts participant comparison groups or statistical controls; and the appropriateness of sampling, outcome measures, statistical analyses, and any reported results. A senior social scientist with training and experience in evaluation research and methodology read and coded the documentation for each evaluation. A second senior social scientist reviewed each completed data collection instrument and the relevant documentation for the outcome evaluation to verify the accuracy of every coded item. This review identified 7 of the 32 selected studies that met GAO's criteria for methodological quality.

---

<sup>4</sup>Meta-analyses were included as long as they met the stated criteria. For meta-analyses that included correlational research in addition to experimental and quasi-experimental studies, only the experimental and quasi-experimental research was reviewed for purposes of this report.

---

# Appendix II: Average Amount of Instruction Time Elementary School Teachers Reported Spending

---

<b>Subject</b>	<b>Mean time spent per week (in hours)</b>	<b>Percentage of weekly instruction time</b>
Reading/language arts/English	10.0	39
Mathematics	5.8	22
Science	2.5	10
Social studies/history	2.5	10
Art/music	1.6	6
Physical education/health	1.6	6

Source: GAO analysis of Education data.

# Appendix III: Arts Education Requirements and Funding, by State, School Years 2001-2002 and 2006-2007

State	Arts education		Artist-in-residence		Training for arts education		State-established arts schools		General state requirements for the arts		Minimum arts requirement for high school graduation	
	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007
Alabama	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Alaska	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No
Arizona	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Arkansas	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
California	Yes	Yes	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Colorado	No	Yes	Yes	No	Yes	No	No	No	No	No	No	No
Connecticut	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Delaware	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	No	No
Florida	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	Yes
Georgia	Yes	Yes	Yes	Yes	No	Yes	No	No	No	No	No	No
Hawaii	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	No
Idaho	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Illinois	No	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Indiana	Yes	Yes			No	No	No	No	Yes	Yes	No	No
Iowa	Yes	Yes			No	No	No	No	Yes	Yes	No	No
Kansas	Yes	Yes	No	No	Yes	Yes	No	No	No	Yes	No	Yes
Kentucky	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Louisiana	Yes	Yes	Yes	Yes			Yes	Yes	No	No	Yes	Yes
Maine	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes
Maryland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Massachusetts	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Michigan	Yes	Yes	Yes	No	Yes	Yes	No	No			No	Yes
Minnesota	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mississippi							Yes	Yes	Yes	Yes	Yes	Yes
Montana	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Nevada									No	No	No	No
New Hampshire	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
New Mexico	No	Yes	Yes	Yes	No	Yes	No	No	No	Yes		
New York			Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
North Carolina			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
North Dakota	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Ohio	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes

**Appendix III: Arts Education Requirements  
and Funding, by State, School Years 2001-  
2002 and 2006-2007**

State	Arts education		Artist-in-residence		Training for arts education		State-established arts schools		General state requirements for the arts		Minimum arts requirement for high school graduation	
	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007	2001-2002	2006-2007
Oklahoma	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Oregon			Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes
Pennsylvania	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Rhode Island	Yes	Yes							Yes	Yes	Yes	Yes
South Dakota	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Yes	Yes
Tennessee	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Texas	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Utah	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Vermont	No	No	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes
Virginia	No	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Washington	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	Yes
Wisconsin	No	No	No	No	No	No	No	No	Yes	Yes	No	No
Wyoming	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes

Legend

Blank cell = either "don't know" or "no response"

Source: GAO analysis of GAO survey data.

# Appendix IV: Studies Meeting GAO's Criteria for Methodological Quality

Study title	Author	Source	Summary of findings
Does Studying the Arts Engender Creative Thinking? Evidence for Near but Not Far Transfer	Erik Moga, Kristin Burger, Lois Hetland, and Ellen Winner	<i>Journal of Aesthetic Education</i> , vol. 34, no. 3/4. Special Issue: The Arts and Academic Achievement: What the Evidence Shows, Autumn-Winter 2000, 149-166	Two meta-analyses: analysis 1 found no support for a causal relationship between arts study and verbal creativity. The second analysis found some equivocal support for a causal relationship between arts study and figural creativity.
Can Music Be Used to Teach Reading?	Ron Butzlaff	<i>Journal of Aesthetic Education</i> , vol. 34, no. 3/4. Special Issue: The Arts and Academic Achievement: What the Evidence Shows, Autumn-Winter 2000, 167-178	Results varied and showed an extremely small positive overall association between the study of music and reading/verbal scores.
Learning to Make Music Enhances Spatial Reasoning	Lois Hetland	<i>Journal of Aesthetic Education</i> , vol. 34, no. 3/4. Special Issue: The Arts and Academic Achievement: What the Evidence Shows, Autumn-Winter 2000, 179-238	Three meta-analyses: two of the analyses showed a positive relationship between music instruction and spatial-temporal tasks. The third analysis showed no relationship between music and a non spatial task.
Listening to Music Enhances Spatial-Temporal Reasoning: Evidence for the "Mozart Effect"	Lois Hetland	<i>Journal of Aesthetic Education</i> , vol. 34, no. 3/4. Special Issue: The Arts and Academic Achievement: What the Evidence Shows, Autumn-Winter 2000, 105-148	Two meta-analyses: analysis 1 found a significant and robust relationship between listening to music and performance on all types of spatial tasks. Analysis 2 also found a significant, robust effect of music listening on spatial-temporal tasks.
Music and Mathematics: Modest Support for the Oft-Claimed Relationship	Kathryn Vaughn	<i>Journal of Aesthetic Education</i> , vol. 34, no. 3/4. Special Issue: The Arts and Academic Achievement: What the Evidence Shows, Autumn-Winter, 149-166	Quasi-experimental studies showed that background music has a very minimal effect on math scores. Experimental instruction showed a small association between music instruction and math skills.
Instruction in Visual Art: Can It Help Children Learn to Read?	Kristin Burger, Ellen Winner	<i>Journal of Aesthetic Education</i> , vol. 34, no. 3/4, Special Issue: The Arts and Academic Achievement: What the Evidence Shows. Autumn-Winter, 2000, 277-293	Analysis 1 did not demonstrate a reliable relationship between arts instruction and reading improvement. Analysis 2 found a positive, moderately-sized relationship between reading improvement and an integrated arts-reading form of instruction.
Mute Those Claims: No Evidence (Yet) for a Causal Link between Arts Study and Academic Achievement	Ellen Winner, Monica Cooper	<i>Journal of Aesthetic Education</i> , vol. 34, no. 3/4. Special Issue: The Arts and Academic Achievement: What the Evidence Shows, Fall-Winter 2000, 11-75	Showed no evidence for any educationally significant impact of arts on achievement (both verbal and math outcomes).

Source: GAO review of existing research.

Note: The autumn-winter 2000 issue of the *Journal of Aesthetic Education* was a special issue devoted to examining research evidence about the relationship between the arts and academic achievement.

# Appendix V: Comments from the Department of Education



UNITED STATES DEPARTMENT OF EDUCATION  
OFFICE OF PLANNING, EVALUATION AND POLICY DEVELOPMENT

February 23, 2009

Ms. Cornelia Ashby  
Director, Education, Workforce,  
and Income Security Issues  
U.S. Government Accountability Office  
Washington, D.C. 20548

Dear Ms. Ashby:

Thank you for the opportunity to comment on the draft GAO report, *Access to Arts Education: Inclusion of Additional Questions in Education's Planned Research Would Help Explain Why Instruction Time Has Decreased for Some Students*. We were pleased to be able to share with your research team the teacher survey data from our study, the National Longitudinal Study of No Child Left Behind, which provided the basis for much of this report, and we reviewed your reanalysis of these data with great interest.

We agree that arts education is an important part of a well-rounded education for all students, and we were encouraged to see the survey findings that very few elementary teachers reported decreases in the amount of time spent on arts education. The findings that teachers in schools identified for improvement and high-minority schools are more likely to report reductions in time for arts education is cause for concern, but it is important to note that reductions in arts education time were reported by a small minority of teachers in these schools. We agree that further study would be useful to better understand the reasons behind changes in instruction time in certain types of schools.

As your report noted, the Department is currently planning to launch a new comprehensive evaluation of Title I implementation, and we will carefully consider your recommendations for collecting more detailed information on changes in instruction time when we develop the study design and survey instruments for that study.

We are attaching technical comments provided by Department staff on the text of the report. If you have any questions, we would be glad to discuss our comments with your research team.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas P. Skelly".

Thomas P. Skelly  
Delegated to Perform Functions of  
Assistant Secretary for OPEPD

400 MARYLAND AVE., SW, WASHINGTON, DC 20202  
[www.ed.gov](http://www.ed.gov)

*Our mission is to ensure equal access to education and to promote educational excellence throughout the nation.*

---

# Appendix VI: GAO Contact and Staff Acknowledgments

---

## GAO Contact

Cornelia M. Ashby, (202) 512-7215, [ashbyc@gao.gov](mailto:ashbyc@gao.gov)

---

## Staff Acknowledgments

Sherri Doughty, Assistant Director;  
Sara Edmondson, Analyst-in-charge

Michael Meleady; Michael Morris; Douglas Sloane; Luann Moy; Stuart Kaufman; Justin Fisher; Rebecca Rose; Michele Fejfar; Amanda Miller; Susannah Compton; and James Rebbe made significant contributions to this report.

---

## GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site ([www.gao.gov](http://www.gao.gov)). Each weekday afternoon, GAO posts on its Web site newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to [www.gao.gov](http://www.gao.gov) and select "E-mail Updates."

---

## Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's Web site, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

---

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: [www.gao.gov/fraudnet/fraudnet.htm](http://www.gao.gov/fraudnet/fraudnet.htm)

E-mail: [fraudnet@gao.gov](mailto:fraudnet@gao.gov)

Automated answering system: (800) 424-5454 or (202) 512-7470

---

## Congressional Relations

Ralph Dawn, Managing Director, [dawnr@gao.gov](mailto:dawnr@gao.gov), (202) 512-4400  
U.S. Government Accountability Office, 441 G Street NW, Room 7125  
Washington, DC 20548

---

## Public Affairs

Chuck Young, Managing Director, [youngc1@gao.gov](mailto:youngc1@gao.gov), (202) 512-4800  
U.S. Government Accountability Office, 441 G Street NW, Room 7149  
Washington, DC 20548