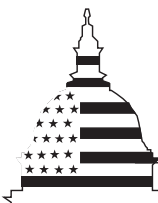


September 2004

NO CHILD LEFT BEHIND ACT

Additional Assistance and Research on Effective Strategies Would Help Small Rural Districts

Corrections made on 10/05 to change 86 to 85 in the 2nd paragraph, line 4, page 2 and to correct figure 2 on page 4.



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Highlights

Highlights of [GAO-04-909](#), a report to congressional requesters

Why GAO Did This Study

To improve the academic achievement of the nation's 48 million school-aged children, the No Child Left Behind Act (NCLBA) introduced significant changes to state, district, and school accountability for student performance and teacher qualifications. Congress has raised concerns about difficulties rural districts face implementing NCLBA. GAO is providing NCLBA implementation information on (1) key challenges rural states and districts face, (2) strategies rural districts have developed, (3) expenditures and resources related to rural districts' compliance, and (4) guidance and assistance the Department of Education (Education) is providing.

To address these objectives, GAO conducted a nationally representative survey of rural and nonrural school districts. Also GAO interviewed officials in rural states and districts and Education officials.

What GAO Recommends

GAO recommends that Education provide additional assistance on approaches small rural districts can use to address their unique challenges and support research on effective strategies to improve student performance in small rural districts through its new center. In Education's comments on a draft of this report, it provided information on its past and planned efforts but did not explicitly agree or disagree with our recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-04-909.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Marnie Shaul at (202) 512-7215 shaulm@gao.gov.

NO CHILD LEFT BEHIND ACT

Additional Assistance and Research on Effective Strategies Would Help Small Rural Districts

What GAO Found

Rural districts faced some challenges in meeting NCLBA provisions to a greater extent than nonrural districts. For example, rural district officials were more likely than nonrural district officials to report challenges presented by a large enrollment of economically disadvantaged students who may live in communities lacking resources such as libraries. Rural districts also identified small school size and geographic isolation as greatly affecting their ability to implement NCLBA. Rural officials we interviewed said that limited access to teacher training facilities and Internet line maintenance difficulties impeded NCLBA implementation efforts.



Springdale Elementary,
Park County, Montana

Total number of students: 7
Total number of teachers: 1

Source: Montana Office of Public Instruction.

Rural district officials reported using some strategies, such as training for teachers, to the same extent as nonrural respondents, to help meet student proficiency provisions and implement teacher qualification requirements of NCLBA. Rural districts were more likely to increase computer capacity than nonrural districts. However, small rural districts were less likely than other rural districts to report using certain strategies, such as teacher mentoring.

Rural state and district officials we interviewed identified some specific expenditures related to NCLBA, such as those related to analyzing assessment results and providing tutoring services to students. However, district officials were unable to determine total expenditures made to implement NCLBA, in part because their accounting records were not maintained in a way that tracked expenditures by NCLBA categories; states we contacted did not require districts to report separately on NCLBA expenditures. Besides state and local funds, officials reported using multiple federal programs to implement NCLBA, such as the Rural Education Achievement Program (REAP).

Since 2002, Education has provided NCLBA guidance and assistance to all states and districts, and since April 2003, it has focused on rural education issues by issuing new guidance, establishing a task force on rural issues, and awarded a grant in September 2004 for a rural education research center. However, rural officials indicated that further assistance would be helpful for small rural districts that are experiencing difficulties in providing teacher development opportunities and identifying effective remedial services to improve student achievement. Currently, research on the effectiveness of different strategies to improve student performance is limited.

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Abbreviations

AYP	adequate yearly progress
CCD	Common Core of Data
ESA	educational service agency
K-12	kindergarten through 12th grade
LEA	local education agency
NCLBA	No Child Left Behind Act
NCES	National Center for Education Statistics
REAP	Rural Education Achievement Program

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G A O

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United States Government Accountability Office
Washington, DC 20548

September 23, 2004

The Honorable Kent Conrad
Ranking Minority Member
Committee on the Budget
United States Senate

The Honorable Susan Collins
Chairman
Committee on Governmental Affairs
United States Senate

The Honorable Michael Enzi
United States Senate

The Honorable Tim Johnson
United States Senate

In an effort to improve the academic achievement of all of the nation's 48 million school-aged children, the No Child Left Behind Act (NCLBA) introduced significant changes to how states, districts, and schools are held accountable for their students' academic performance and teachers' qualifications. The Congress, as well as state and district education officials, has expressed concerns that many rural districts are encountering difficulties in implementing NCLBA provisions. NCLBA requires districts and schools to assess students' reading, math and science abilities and measure the results against a level of proficiency that has been established by the state. As a condition for receiving federal funds, NCLBA currently requires states to ensure that every student becomes proficient in reading and math by school year 2013-14. NCLBA also requires that teachers of core academic subjects, such as English, meet teacher qualification requirements, and most of these teachers must do so by the end of the 2005-06 school year. To meet requirements teachers must have a bachelor's degree, be state-certified to teach, and demonstrate subject matter competence in each core academic subject that they teach. Because of the small size and geographic isolation of many rural districts and schools, there is a concern that these districts and schools may find it difficult to implement some NCLBA provisions. In the 2001-02 school year, rural districts comprised 25 percent of all school districts in the country.

As a result of concerns that rural states and districts may have difficulties meeting some NCLBA requirements, we are providing you with information about implementation issues. This study addresses the following questions:

1. What key challenges do rural states and districts face in meeting student proficiency provisions and teacher qualification requirements of NCLBA?
2. What strategies have rural districts developed to meet student proficiency provisions and teacher qualification requirements of NCLBA?
3. What expenditures and funding sources are related to rural districts' compliance with NCLBA?
4. What guidance and assistance is the Department of Education (Education) providing?

To answer these questions, we used multiple methodologies, including a survey, site visits, and interviews with Education officials. We conducted a survey of a stratified, nationally representative sample of 1,215 school districts and received a response rate of 85 percent. We surveyed rural and nonrural districts so that we could determine whether and to what extent rural districts differed from nonrural districts. We used a definition of rural that focused on places that were distant from metropolitan areas. We categorized our sample as follows:

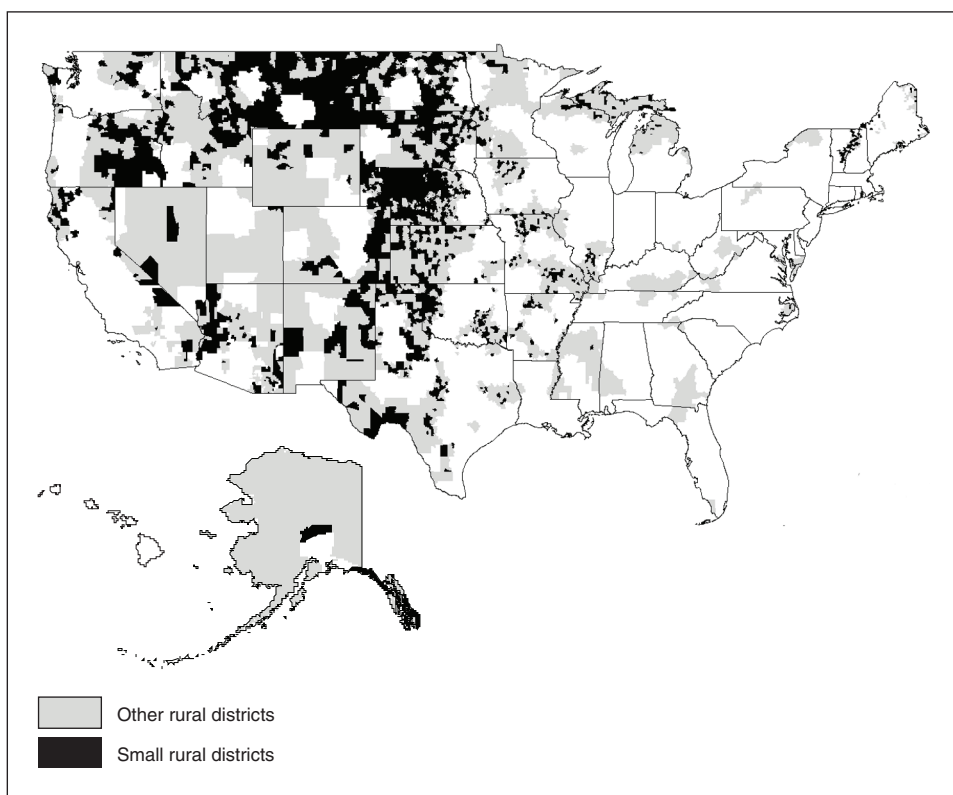
- **Rural districts.** We defined districts as rural if they were 55 miles or farther from a metropolitan statistical area.
- **Nonrural districts.** We defined districts as nonrural if they were located less than 55 miles from a metropolitan statistical area.

To obtain information from the most rural school districts, we further stratified our sample by size. The literature suggests that smaller districts may face unique challenges.

- **Small rural districts.** We defined districts as small rural if they were 55 miles or farther from a metropolitan area and had 300 or fewer students.
- **Other rural districts.** We defined districts as other rural if they were 55 miles or farther from a metropolitan statistical area but had more than 300 students.

We used Education’s Common Core of Data (CCD) to draw the sample of school districts for our survey. Figure 1 presents the distribution of small rural and other rural districts based on the definition we use that incorporated distance from metropolitan area.

Figure 1: Small Rural and Other Rural Districts

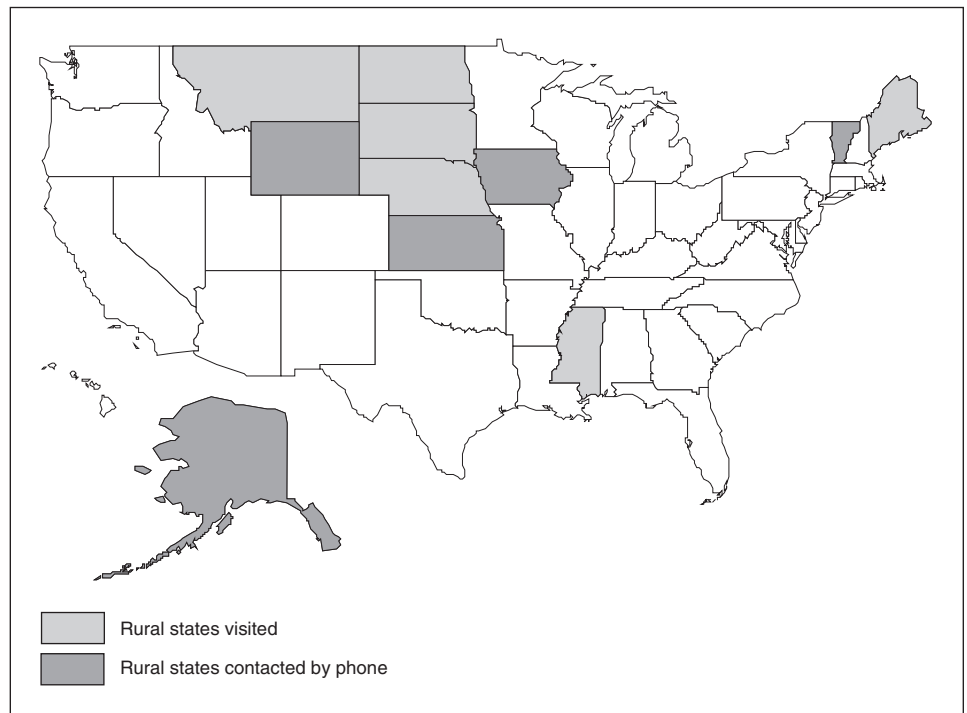


Source: GAO analysis of Education’s 2001-02 Common Core of Data.

In addition to the survey, we made site visits to six states—Maine, Mississippi, Montana, Nebraska, North Dakota, and South Dakota. In addition, we conducted telephone interviews with officials in four states—Alaska, Iowa, Kansas, and Vermont. We selected these states because they were the most rural states in the country, based on the percentage of their school districts in rural communities, the percentage of their students attending schools in rural communities, and the average distance between the school district in the state and the nearest metropolitan statistical area as a measure of geographic isolation. In addition, we included Wyoming because of the large geographic distance that its school districts cover. We selected school districts to visit in these states based on variation in

student enrollment, geographic isolation, school proficiency, and demographic characteristics. Figure 2 shows the rural states that we visited and contacted by telephone.

Figure 2: Rural States Contacted



Source: GAO analysis of Education's 2001-02 Common Core of Data.

We also conducted telephone interviews with educational association representatives and other experts, met with Education officials, and reviewed guidance and data from Education. In some cases, our survey and site visits predated Education's guidance that addressed some issues relevant to rural schools and districts. When this occurred, it was identified in the report in the context of related findings. For a more detailed explanation of our methodology, see appendix I. We conducted our work in accordance with generally accepted government auditing standards between August 2003 and August 2004.

Results in Brief

Rural districts we surveyed faced challenges in meeting NCLBA student proficiency goals and implementing teacher qualification requirements and faced some of these challenges to a greater extent than nonrural districts.

In terms of meeting NCLBA's student proficiency goals, officials in rural districts were more likely than those in nonrural districts to report that a large enrollment of economically disadvantaged students created challenges. These students may not have the community resources, such as libraries and computers, that may be associated with improved academic performance. Rural districts were more likely to report difficulties in offering competitive salaries to teachers, limiting their ability to recruit teachers; 52 percent of officials in rural districts reported this as a challenge compared with 36 percent of officials in nonrural districts. In our analysis of small rural districts, we found that they were more likely than other rural districts to report that school size and geographic isolation were factors that affected NCLBA implementation. About half of small rural districts, compared with about a quarter of other rural districts, reported school size as greatly affecting their ability to implement student proficiency provisions. For example, officials in small rural districts told us that limited personnel made it difficult to release teachers and administrators for attending Education's conferences and training. These conferences and training are designed to help teachers and administrators better understand what student proficiency goals are and how they can help their students meet them. In addition, rural district officials indicated that they typically had few staff, which created difficulties completing tasks associated with meeting NCLBA requirements, such as developing and disseminating reports on school progress.

Rural and nonrural districts generally reported using some similar strategies, such as teacher training to increase subject matter knowledge, to meet student proficiency provisions and implement teacher qualification requirements of NCLBA. However, differences between rural and nonrural districts were found in the extent to which they reported the use of other strategies. For example, rural districts were more likely to use distance learning, such as receiving training online, for providing instruction to teachers in implementing teacher qualification requirements. Small rural districts were less likely to report the use of some strategies, such as teacher mentoring programs, than other rural districts. For example, about half of small rural districts reported offering mentoring programs for teachers, compared with about three-quarters of other rural districts. Factors such as having very few teachers, existing teachers having to teach multiple subjects and grade levels, and large distances to other rural districts limit small rural districts' pool of teachers available to serve as mentors for other teachers.

Rural state and district officials we interviewed identified some specific NCLBA related expenditures such as some teacher training and paying for

staff to supervise students while they received instruction from online tutors. However, officials found it difficult to determine all expenditures made to implement NCLBA, primarily because their accounting records were not maintained in a way that categorized expenditures according to whether or not they were associated with NCLBA requirements. NCLBA does not require states or districts to report separately on expenditures related to implementation. Further, projecting expenditures that will be needed in the future to meet the goals of NCLBA is difficult because necessary data are often not available to produce such estimates. For example, it is difficult to project expenditures needed for meeting student proficiency provisions because there is insufficient research on what strategies will help all students reach academic proficiency goals. State and rural district officials reported using multiple funding sources to support their NCLBA implementation efforts. Besides state and local funds, they relied on federal appropriations under NCLBA, and the majority of rural districts reported receiving funds provided under the Rural Education Achievement Program (REAP).

Education has provided all states and districts with guidance and assisted them in a variety of ways; however, officials from rural states and districts, including small rural districts, told us further assistance would be helpful in addressing their issues. Beginning in 2002, after the passage of NCLBA, Education provided guidance applicable to all states and districts, and communicated with state officials through site visits and conferences. For example, Education sent a team of experts to every state to obtain information on their challenges and provide assistance on implementing the teacher qualifications requirements of NCLBA. Since April 2003, Education's actions have focused more directly on rural education issues. Education introduced new flexibilities that were intended, among other things, to assist rural states with meeting student proficiency provisions and implementing teacher qualification requirements. For example, under some circumstances, teachers in rural districts are allowed extra time—up to 3 years—to meet teacher qualification requirements. Also, states can now use a single state test for teachers to demonstrate subject matter competency for core academic subjects that they teach instead of a separate test for each subject taught. This could be especially helpful to rural districts and schools where a single teacher might have to teach multiple subjects. Education also established a Rural Education Taskforce to coordinate and focus rural education efforts within the department. Further, Education has recently awarded a grant to establish a National Center for Research and Development in Rural Education. In addition, states we contacted provided districts with guidance and assistance to help them implement NCLBA, and most rural districts surveyed found

state assistance helpful. However, even with state and Education assistance, a majority of the rural districts surveyed reported that their implementation issues have not been fully addressed. For example, almost three-quarters of rural district officials responding to our survey reported the need for information on remedial services that will help students meet academic proficiency goals. In addition, small rural districts and those that may be very isolated continued to face unique challenges in recruiting, retaining, and training teachers, and lacked strategies to address them. Education officials told us they are continuing to work on rural issues and provide more guidance in an effort to assist rural states.

To assist rural states in meeting the provisions of NCLBA, we are recommending that Education provide additional assistance on implementation approaches small rural districts can use to address their unique challenges and direct its National Research and Development Center on Rural Education to focus on effective, scientifically based methods that can be applied to improve student performance in small rural districts.

In its comments on a draft of this report, the department discussed but did not explicitly agree or disagree with our recommendations. For both recommendations, Education provided new information that was incorporated, as appropriate, in the report.

Background

The NCLBA of 2001 amended and reauthorized the Elementary and Secondary Education Act, the largest and most comprehensive federal education law.¹ Title I of NCLBA provides funds to states for educating students from low-income families and is the single largest federal program supporting education in kindergarten through 12th (K-12) grade.² Districts receive Title I funds based on a formula that incorporates, among other things, the number of children in poverty. Approximately 56 percent of all schools are eligible to receive Title I funds, compared with 65 percent of rural schools.

¹NCLBA was signed into law as Pub. L. No.107-110.

²Title I, Part A of the Elementary and Secondary Education Act, allocated almost \$12 billion in fiscal year 2003 to serve disadvantaged children in approximately 90 percent of the nation's school districts.

Rural districts comprised 25 percent of all school districts in the country. Rural schools and districts, on average, have fewer students than nonrural schools and districts and tend to be more geographically isolated. Moreover, rural school districts are more likely to be comprised of one, two, or three schools, whereas the number of schools in urban and suburban districts is typically higher. Further, in our analysis we found that 11 percent of all school districts are small rural districts. (See table 1 for comparisons between very small rural, other rural, and nonrural districts.)

Table 1: Characteristics of Small Rural, Other Rural, and Nonrural Districts, 2001-02

Characteristics	Small rural	Other rural	Nonrural
Percentage of districts	11	14	75
Average number of students in district	126	1741	4015
Average school enrollment	77	368	560
Average number of schools in district	2	5	7
Average number of students per teacher	11	16	17
Percentage of minority students	16	33	40
Percentage of students participating in the free and reduced school lunch program	41	42	36
Average per pupil cost	\$9,420	\$6,970	\$7,820

Source: GAO analysis of Education's 2001-02 Common Core of Data and 2001 U.S. Census Bureau's Public Elementary-Secondary Education Finance Data.

Note: Valid data on students' participation in the free and reduced school lunch program were not available for Arizona, Connecticut, Tennessee, and Wyoming.

In addition to the characteristics listed in Table 1, small rural districts may have unique geographic characteristics that distinguish them from other districts. Small rural districts can exist in unique locations, such as small islands off the coasts of states, usually making air or sea transportation a necessity. Small rural districts can also be located in mountainous areas with difficult terrain and roads that may not be passable for some part of the year because of extreme weather conditions. These weather conditions can also affect accessibility to electrical power. Small rural districts can also be located long distances from other districts, towns, and universities.

In recent years, the Congress and other parts of the federal government have demonstrated a growing interest in rural schools. The House and Senate Rural Education Caucuses, consisting of bipartisan groups of

members of Congress, were formed to advance the education interests of rural schools and districts. Further, the Congress authorized a Rural Education Achievement Program (REAP) to help rural districts compete for and make more effective use of federal grants. REAP was designed to help rural districts that may lack the personnel and resources to compete effectively for federal competitive grants. It is comprised of two programs: (1) The Small, Rural School Achievement program authorizes the Secretary of Education to award formula grants directly to eligible school districts; (2) The Rural and Low-Income Schools program is designed to address the needs of rural, low-income schools, and authorizes the Secretary to award formula grants to state educational agencies, which in turn award subgrants to eligible school districts either competitively or on a formula basis. The funds can be used for many activities, including teacher recruitment and retention, professional development, and educational technology. The Congress appropriated approximately \$168 million for REAP funding in fiscal year 2003. Finally, the National Center for Education Statistics (NCES) has made improvements in its classification of schools to accommodate more information about location, making it possible to develop more refined information about rural education.³ NCES also established a rural education data section on its Website, called Navigating Resources for Rural Schools.

NCLBA was designed to raise the academic achievement of students and the qualifications of teachers, and states, districts, and schools are currently in their third year of its implementation. Key provisions of the law included the following:

Academic content standards and yearly academic assessments.

NCLBA requires that states develop and implement academic content and achievement standards in math, reading/language arts, and science, and that annual assessments are aligned to these standards. States must administer annual student assessments that are aligned with state standards. Beginning in the 2005-06 school year, state assessments in math and reading/language arts must be administered every year in grades 3 through 8 and once in high school, and by 2007-08, states must also measure students' science achievement. All students, including students

³NCES is part of the Department of Education and is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations.

with limited English proficiency and those with disabilities, are required to participate in assessments.

Adequate yearly progress and student proficiency goals. NCLBA requires states to develop annual goals for adequate yearly progress (AYP) that schools and districts must meet to ensure that every student becomes proficient in math and reading/language arts by school year 2013-14. The annual goals on state assessments and the final target of 100 percent student proficiency applies to all students and those in designated groups, including economically disadvantaged students, major racial and ethnic groups, students with disabilities, and students that have limited English proficiency. Schools must also show that 95 percent of their students—overall and within each subgroup—participated in the assessments. In addition to including annual assessment results, high schools must include students' graduation rate, and elementary and middle schools must include one other academic indicator determined by the state to assess whether they made annual progress.

Teacher qualification requirements. Teachers of core academic subjects must be certified to teach by their state, have a bachelor's degree, and demonstrate subject matter competency in each core academic subject they teach by the end of school year 2005-06. Subject matter competency can be demonstrated in either of two ways: (1) successful completion of an academic major, coursework equivalent to a degree, or advanced certification in each subject or (2) passing a high, objective, uniform state standard of evaluation developed by the state to certify teachers' knowledge of the subjects they teach. In addition to teachers, paraprofessionals are required to have two years of college, or an associate's degree, or a rigorous standard of quality on formal state or local assessment. Improving teacher qualifications is identified in the NCLBA as a strategy to raise student academic achievement. For example, by learning new instructional approaches and enhancing subject matter expertise, teachers will be better equipped to help students learn.

School choice. After 2 years of not making adequate progress toward reaching student proficiency goals, schools receiving Title I funds must offer all their students the option to transfer to a higher-performing public school within the district. Under circumstances where no viable transfer options exist—as in districts with only one school serving all grade levels, districts are expected, to the extent practicable, to make arrangements with other districts to accept their transfer students and may offer supplemental educational services.

Supplemental educational services. After 3 or more years of not making adequate progress toward reaching student proficiency goals, schools receiving Title I funds must offer supplemental educational services, such as tutoring in reading and math, to low-income students in the school. States are required to provide a list of acceptable providers of supplemental educational services to school districts and monitor the performance of the provider, including success in improving student performance.

In addition, NCLBA requires that all federally funded instruction, technical assistance, and professional development activities be supported by scientifically based research. However, this type of research is limited in the education field. For example, this body of research does not generally include the use of control groups and randomly assigned subjects in experiments, techniques used in physical science research to show that outcomes are caused by program interventions and not other factors. Education is currently expanding its grant awards to support scientifically based research in education.

State education officials play a major role in the implementation of NCLBA in their states and districts. Some key decisions to be made by state officials include:

- Developing academic content standards and assessments for math, reading/language arts, and science, and determining the level of proficiency each student must reach on assessments.
- Defining the criteria for state certification of teachers and identifying tests teachers are required to take to demonstrate subject matter competence.
- Determining the smallest number of students that must be enrolled in a school, as well as in designated student groups, necessary for their test results to be used in determining whether a school has met proficiency goals. States have selected a wide range of numbers for this purpose; the majority of states set their group size minimums at between 25 and 45 students.
- Deciding whether or not they will accept NCLBA funding and thus agree to the implementation of NCLBA requirements in their state.
- Developing a plan for submission to Education that, among other things, demonstrates how the state will meet requirements for setting annual goals and measuring student progress.

Education provides technical assistance to help states understand the law and for monitoring their progress in meeting the law's student proficiency

provisions and teacher qualification requirements. The Secretary of Education is required to report to the Congress annually regarding state progress in implementing various requirements, including how many of their schools were identified for improvement.

Rural Districts and States Faced Challenges in Implementing NCLBA

Rural districts faced challenges in meeting student proficiency goals and implementing teacher qualification requirements of NCLBA and faced some of them to a greater extent than nonrural districts. State officials we interviewed also cited challenges to implementing student proficiency provisions on both the state and the district level. Rural districts also identified small school size and geographic isolation as greatly affecting their ability to implement NCLBA.

Rural Districts Reported Similar Challenges as Nonrural Districts in Meeting Student Proficiency Goals but Faced Some of Them to a Greater Extent than Nonrural Districts

Rural districts were more likely than nonrural districts to report some challenges in meeting student proficiency goals. For example, officials in about 52 percent of rural districts surveyed reported that a large enrollment of economically disadvantaged students created challenges to meeting student proficiency goals; about 40 percent of nonrural districts reported this as a challenge.⁴ During our site visits, several rural district officials with large numbers of economically disadvantaged students told us that these students generally did not have structures in their communities or homes that are typically associated with improved academic performance. For example, some communities did not have libraries near where many of their students lived. As a result, during our site visits rural district officials noted their economically disadvantaged students often required more resources and instruction time at the school than other students to meet student proficiency goals. Another challenge reported to a greater extent by officials in rural districts than nonrural districts was declining student enrollment. This could result in reducing the number of teachers in a school or district, and the remaining teachers assuming additional responsibilities for subjects taught.

⁴All percentage differences reported from the survey have sampling errors of no more than plus or minus 10 percentage points, at a 95 percent confidence level, unless otherwise noted. In our analysis of the survey data, we combined responses that were reported to a “great” or “very great” extent. References in the report that describe the frequency of occurrence of a particular response reflect this combined category. For example, all reported responses for challenges to implementation were identified by respondents as occurring to a “great” or “very great” extent.

Rural and nonrural districts reported some challenges to the same extent, such as a large enrollment of students with disabilities. About half of both rural and nonrural district officials reported large enrollment of students with disabilities to be affecting their ability to meet student proficiency goals. Students with disabilities often require more services and assistance to help them achieve academic proficiency. For example, students with learning disabilities may require additional services from a reading resource teacher. Further, several rural state and district officials explained that although most students with disabilities participated in the standard state assessment tests, they may require extended time and other accommodations to take these tests. Officials noted that offering such accommodations or services in rural areas may be difficult due to limited staff available to provide them or the increased cost of transporting students to sites where services could be received. A quarter of both rural and nonrural districts noted that it was challenging to provide services, such as tutoring or after-school enrichment, to help students achieve proficiency.

Rural state officials we interviewed also identified several difficulties in implementing student proficiency provisions. For example, rural state officials cited difficulties performing administrative duties, such as developing state plans and notifying districts of improvement actions required under the law. Most rural state officials we contacted noted that their state education offices had few staff yet were responsible for meeting the same requirements as all other states. In addition to having a limited number of staff responsible for multiple tasks, most state officials said that they did not always have the information on and explanation of the latest guidance from Education. Although Education was making efforts to get information to the states, rural state officials told us that they had few administrative staff to act on that information once it arrived.

Rural Districts Faced Some Challenges to a Greater Extent than Nonrural Districts in Implementing Teacher Qualification Requirements

Rural districts were more likely than nonrural districts to identify certain challenges to implementing NCLBA's teacher qualifications provisions. (See table 2.)

Table 2: Percentages of Rural and Nonrural District Superintendents Reporting Challenges in Implementing NCLBA’s Teacher Qualification Requirements

Challenges	Percentage of rural district superintendents	Percentage of nonrural district superintendents
NCLBA’s highly qualified teacher provision		
Competing in salary with other school districts for highly qualified teachers	52	36
Few professional development opportunities for teachers	15	6

Source: GAO survey data.

Notes: Percentages above show the proportion of respondents who reported being affected by a particular factor to a great or a very great extent.

Each difference between rural and nonrural districts in this table is significant at the 95 percent confidence level.

More than half of officials in rural districts reported that it was a challenge to offer competitive salaries to teachers, compared with about one-third of officials in nonrural districts. According to rural district officials, as well as organization representatives we spoke with, it was often difficult for school districts to recruit and retain teachers when the salaries they offered were low. One rural district official we spoke with told us that it was difficult for her district to recruit new teachers because teacher salaries in her state were so low; average teacher salaries in her state were among the lowest in the nation. Recent data show that teacher salaries in the 10 most rural states, excluding Alaska, rank among the lowest in the nation, generally reflecting regional differences in the cost of living.⁵ However, officials in rural districts noted that other factors, such as geographic isolation, also affected their ability to recruit and retain teachers. Additionally, 15 percent of rural district superintendents reported having few professional development opportunities for teachers as a factor that affected their ability to implement NCLBA’s highly qualified teacher requirements, while 6 percent of nonrural district superintendents reported this as a factor. In rural districts it is not uncommon for schools to be separated by long distances from the nearest college or training facility and have limited access to the Internet. Some district staff, such as those in isolated communities, may have to travel three or more hours to reach training facilities; others, such as those

⁵See GAO, *DOD Overseas Schools: Compensation Adequate for Recruiting and Retaining Well-Qualified Teachers*, [GAO-03-19](#) (Washington, D.C.: December 2002).

located on island districts, must use planes or boats to travel to training. Rural state officials we interviewed also expressed concerns about implementing teacher qualification requirements similar to those reported by survey respondents. In particular, they noted the challenge of ensuring that all teachers demonstrate subject matter competency in the subject that they teach by the deadline in the law. Even though states had several options for teachers to demonstrate subject matter competency, including a state-developed test, officials did not know whether these alternatives could be developed within the required time frames.

**Rural Districts Faced
Additional Implementation
Challenges Related to
Small Size and Isolation**

Rural districts also identified small school size and geographic isolation as greatly affecting their ability to meet student proficiency provisions and implement teacher qualification requirements of NCLBA, with the small rural districts more likely than other rural districts to report these factors. (See table 3.) According to our definition of rural districts, all were isolated, that is, 55 miles or farther from metropolitan areas. However, those rural districts that were also small—fewer than 300 students—were more likely to report isolation as a challenge. The majority of nonrural districts did not report these factors as challenges.

Table 3: Percentages of Small Rural and Other Rural District Superintendents Reporting Additional Challenges in Implementing Various NCLBA Provisions

Challenges	Percentage of small rural district superintendents	Percent of other rural district superintendents
NCLBA’s student proficiency provision		
Very small school size	52	23
Geographic isolation	39	28
NCLBA’s highly qualified teacher requirement		
Very small school size	54	29
Geographic isolation	51	38

Source: GAO survey data.

Notes: Percentages above show the proportion of respondents who reported being affected by a particular factor to a great or a very great extent.

We calculated confidence intervals for our study using methods that are appropriate for a stratified, probability sample. For the percentages presented in this report, we are 95 percent confident that the results we would have obtained if we had studied the entire population are within plus or minus 10 percentage points of our results.

Small school size

Small school size was associated with several difficulties for schools trying to implement NCLBA’s student proficiency provisions, according to survey results and our site visit interviews. About half of small rural district officials we surveyed reported school size as a factor affecting their ability to implement student proficiency provisions, compared with about one-fourth of officials in other rural districts. Officials we visited also cited difficulties related to small school size, such as having fewer administrative staff and limited expertise that reduced their capacity to perform tasks associated with NCLBA provisions. For example, for small administrative staff, completing the paperwork associated with NCLBA—such as preparing and distributing reports on assessment results—was a substantive addition to their workload. Further, district staff often had to assume multiple roles, which reduced the amount of time they could spend on collecting and disseminating information on promising implementation strategies, as well as designing and implementing them to raise student performance. Some school district superintendents in single K-12 school districts explained that they had to fulfill the duties of superintendent as well as those of principal and teacher at their K-12 schools. Furthermore, limited personnel made it difficult to release teachers and administrators to attend conferences and receive training that might help them address student proficiency goals. One rural district official told us that he could not afford to allow his staff to take off time to attend training on assessments because substitute teachers were difficult

to find. Moreover, officials told us that rural states in which these districts were located had few staff themselves, which limited their ability to provide assistance to the districts. In addition, districts not meeting student proficiency goals faced difficulties in offering supplemental educational services to students because of the small school size. According to some rural officials, providers were reluctant to provide services in rural districts because the small number of children who may need these services do not provide a profitable business opportunity.

Small school size also created difficulties for schools trying to implement NCLBA's teacher qualification requirements, which slightly more than half of small rural districts reported as a challenge, compared with about one-quarter of other rural districts. On average, 77 students are enrolled in schools in small rural districts and rural state and district officials told us that some small rural schools might have only two or three students in each grade, requiring teachers to take responsibility for teaching multiple subjects across different grade levels. For example, officials in one rural district we contacted explained that its three teachers were responsible for teaching every subject to 15 students enrolled in grades K-12. Many district officials we spoke with said that such small student enrollment made it more challenging for teachers to meet the definition of highly qualified in each core academic subject they teach. It also made it difficult for teachers to take time off to attend professional development classes because substitutes were generally not available in small districts.

In March 2004, Education issued new guidance allowing states to administer a single evaluation to determine competency in multiple core academic subjects. However, some state officials told us that developing a test to gauge teachers' competency in every core subject was a formidable task that would require time, expertise, and other resources. Additionally, while guidance extended the time for obtaining subject matter competency to existing teachers in some rural districts, extending time for teachers to meet the requirements did not address the underlying problem of a lack of professional development opportunities.⁶

⁶In March 2004, Education issued guidance with new flexibility for states to allow some rural districts up to 3 years for multiple subject teachers who are highly qualified in one subject to become highly qualified in the additional subjects they teach.

Geographic isolation

Geographic isolation created difficulties for districts to implement NCLBA provisions, particularly the supplemental educational services component. During our site visits, district officials explained that they were often unable to use supplemental educational service providers on approved state lists. Officials stated that traveling long distances to meet the providers was generally not a viable option for students, and thus they choose not to offer them. For example, when one rural district made an effort to offer supplemental educational services, it took students 3 hours to reach the provider's site. According to state and district officials, the use of online service providers as an option was difficult in some small rural districts, especially those where severe weather conditions and physical features such as mountains made it difficult to establish and maintain Internet lines. Many of the rural school district superintendents we interviewed in states such as Montana, Alaska, South Dakota, North Dakota, and Maine noted that frequent power outages and poor transmissions hindered the use of distance learning. Other officials explained that even when Internet capabilities were established, it was difficult to recruit technical maintenance personnel to isolated rural areas.

Geographic isolation was also associated with difficulties in implementing teacher qualification requirements, according to district officials. About half of small rural districts identified geographic isolation as greatly affecting their ability to implement teacher qualifications provisions, compared with about one-third of other rural districts. Several district officials we interviewed also said that geographic isolation made it difficult for current teachers to obtain the training they need to become certified in every subject taught. Because long distances and boundaries such as mountains or bodies of water can separate small rural districts from training opportunities, rural districts may need to rely on atypical means to get there. For example, the superintendent of one very small and isolated rural district we spoke with reported that traveling by air or boat was the only option to reach the nearest college where his teachers could receive appropriate training. In another district, officials said that the nearest college where teachers and paraprofessionals could obtain the necessary credentials was more than 600 miles away.

Additionally, the remote environment could be a deterrent to new teachers seeking employment. During our site visits, districts officials explained that geographic remoteness impeded the ability of rural districts to recruit and retain teachers because of the lack of social opportunities, severe weather conditions, and long distances to the nearest metropolitan area. For example, officials from several very isolated districts we spoke with explained that at times weather was so severe that teachers and other

school staff were forced to live in the school until severe weather conditions subsided.

Rural and Nonrural Districts Generally Reported Using Similar Strategies to Implement NCLBA, but Small Rural Districts Were Less Likely to Use Them

Rural and nonrural districts used similar strategies, such as providing training for teachers, to meet student proficiency provisions and teacher qualification requirements of NCLBA. However, small rural districts were less likely than other rural districts to use the strategies for implementation of these provisions.

Rural and Nonrural Districts Used Some Similar Strategies in Implementing Student Proficiency Provisions

The primary strategies used to meet student proficiency goals, reported by about 90 percent of both rural and nonrural district superintendents surveyed, were remedial services, such as tutoring for students, and additional training for teachers. (See table 4.)

Table 4: Percentages of Rural and Nonrural District Superintendents Reporting Specific Strategies to Meet Student Proficiency Goals

Strategy	Percentage of rural district superintendents	Percentage of nonrural district superintendents
Provided remedial services to students at risk of failing ^a	89	94
Provided additional training for teachers	90	93
Provided test opportunities for students ^a	77	86
Provided additional computer capability ^a	76	68
Provided teacher mentoring ^a	62	75

Source: GAO survey data.

^a We calculated confidence intervals for our study using methods that are appropriate for a stratified, probability sample. For the percentages presented in this report, we are 95 percent confident that the results we would have obtained if we had studied the entire population are within plus or minus 10 percentage points of our results.

Among rural districts we contacted, most offered tutoring, extended day and summer programs, or other remedial services to help students improve academically. For example, one rural district we visited made after-school tutoring in reading and math available to students four nights

per week, while another rural district extended its academic program by two hours and introduced Saturday programs to help raise students' academic achievement. Officials told us that such in-school programs were particularly valuable in rural areas lacking other enrichment opportunities. Furthermore, to help meet adequate yearly progress provisions related to high school graduation rates, one school district implemented a mentoring program for students in grades 6-12 by district staff, while another was establishing an alternative high school for recent dropouts on the campus of a local community college; officials in both districts indicated that the purpose of these programs was to help increase graduation rates among high school students. Consistent with what the survey respondents reported, some rural districts we visited also provided additional training for teachers to help improve the level of instruction to students. Those strategies included, for example, training on ways to more effectively teach reading and math, as well as training on assessments required under NCLBA. However, many of the strategies cited by district officials were used even before NCLBA, and officials were uncertain about the effectiveness of these strategies in helping all students meet academic proficiency goals.

Although they reported doing so to a lesser extent, rural and nonrural districts also used other strategies to implement student proficiency provisions, and differences were found in the extent to which rural and nonrural districts used many of them. (See table 4.) For example, rural districts were less likely than nonrural districts to offer mentoring for teachers—62 percent of rural district superintendents reported the use of this strategy compared with 75 percent of nonrural district superintendents. Mentoring programs, which employ the skills and experience of a more senior teacher to assist newer teachers, can serve a variety of purposes. One rural district we visited, for example, offered mentoring to better familiarize teachers with standards-based curriculum and to enhance the quality of instruction they provide to students. However, several officials noted that rural districts might experience difficulties offering such mentoring opportunities due to their limited resources and small staff. On the other hand, rural districts were more likely to increase computer capacity, such as adopting distance learning technology in order to provide video class instruction, than nonrural districts. Officials in some rural states also reported on their efforts to invest in statewide technology initiatives to help districts improve their technological capability and use technology, such as distance learning, for raising students' academic achievement. One rural state we visited, for example, launched an initiative to provide every 7th and 8th grader in the state with a laptop computer, thus enabling students in even the most

remote rural areas in that state to gain access to a wide array of academic opportunities available through the Internet. Several officials, however, were concerned about the effectiveness of online instruction for low-achieving and younger students who may need direct teacher contact.

Additionally, other strategies for meeting student proficiency goals were reported, although they were used by less than half of rural and nonrural superintendents. For example, less than half of both rural and nonrural district superintendents reported coordinating with regional educational service agencies (ESA) in an effort to help students attain academic proficiency goals.⁷

Rural and Nonrural School Districts Used Similar Strategies in Implementing Teacher Qualification Requirements

Rural districts also used a variety of strategies to implement NCLBA teacher qualification requirements; the use of most of these strategies by rural districts was not different from their use by nonrural districts, according to survey results. The primary strategies used by the majority of all districts were teacher and paraprofessional training and dissemination of information to schools on exemplary practices. (See table 5.)

Table 5: Percentages of Rural and Nonrural District Superintendents Reporting Specific Strategies to Implement NCLBA’s Highly Qualified Teacher Provisions

Strategy	Percentage of rural district superintendents	Percentage of nonrural district superintendents
Provided training for teachers	83	81
Disseminated information on exemplary practices to schools	74	80
Encouraged paraprofessionals to meet teacher qualification requirements and become teachers	58	63
Obtained services from ESAs	50	48

Source: GAO survey data.

Note: The differences between rural and nonrural districts in this table are not significant at the 95 percent confidence level.

⁷The term “educational service agency” refers to a regional public multiservice agency authorized by state statute to develop, manage, and provide services or programs to school districts.

Likewise, these strategies were cited by rural state and district officials that we visited. Many rural states and districts we visited provided teachers and paraprofessionals with professional development opportunities to help them obtain the necessary qualifications. For example, in one rural state we visited, officials said they developed training programs for teachers to obtain subject area certifications. They also said that most of their teachers who needed to become highly qualified chose to take advantage of these state-funded programs because they could obtain the necessary coursework free of charge. In another rural state, one small and isolated rural district offered courses in the school to paraprofessionals for which they could receive credits from a local community college. Several rural districts we visited were collecting and sharing information on exemplary practices in raising students' academic performance with district staff. For example, in one rural district visited, officials learned of another state developing individualized education programs for each student, not just students with disabilities, and disseminated information on this approach for staff in their own district to adopt.⁸

The strategy for implementing teacher qualification requirements that rural districts were more likely to use than nonrural districts was distance learning for providing instruction to teachers and paraprofessionals, as well as for students to receive instruction from a highly qualified teacher in another location. (See table 6.)

⁸Under the Individuals with Disabilities Education Act, an individualized education program must be developed for each student with a disability to state the student's current levels of education performance, establish measurable annual goals, and outline special education and related services to be provided to the student. A state discussed here, however, adopted this practice for all students, not just those with disabilities.

Table 6: Percentages of Rural and Nonrural District Superintendents Reporting the Use of Distance Learning Technology in Implementing NCLBA’s Highly Qualified Teacher Provisions

Strategy	Percentage of rural district superintendents	Percentage of nonrural district superintendents
Used distance learning for teacher training	47	35
Used distance learning to provide a highly qualified teacher in the classroom	35	18

Source: GAO survey data.

Note: Each difference between rural and nonrural districts in this table is significant at the 95 percent confidence level.

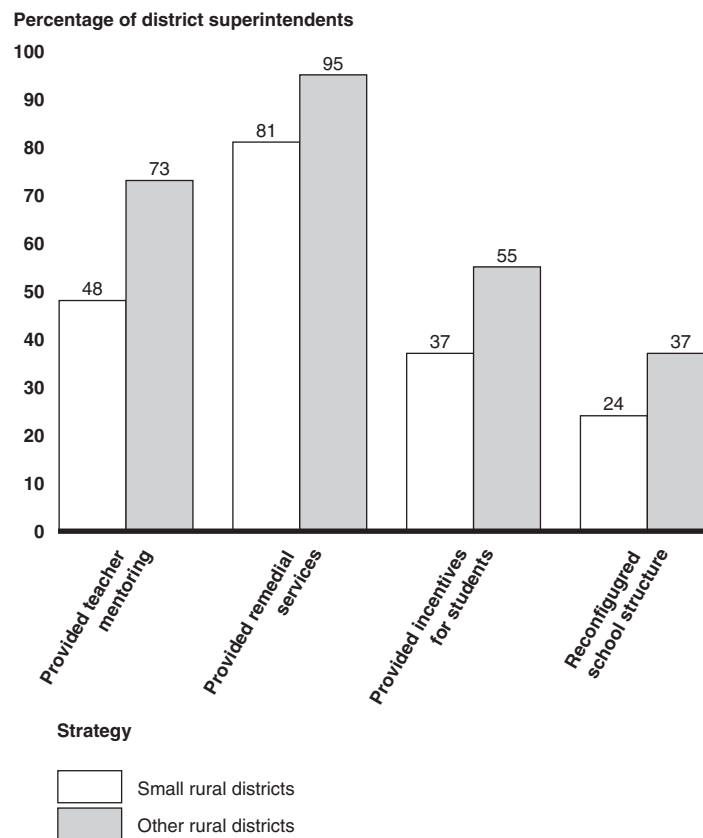
Among rural districts contacted, some used distance learning for teachers or paraprofessionals to take classes to meet NCLBA’s qualification requirements, an approach that officials indicated was very helpful in rural districts located far away from higher learning institutions. Officials also cited rural districts using distance learning to provide courses to students by a highly qualified teacher when one was not available in the school. However, rural state and district officials, although citing advantages of distance learning, faced challenges in using technology, such as limited capacity or Internet connection difficulties. Moreover, small rural districts did not always know how to make best use of available technology and were unaware of ways in which this technology could be used to meet the requirements and the goals of NCLBA. For example, one small rural district we visited had distance learning technology and high-speed Internet connections in place, but officials indicated that none of the students were taking online classes yet, and at the time of our visit, they did not have the information on online professional development options for teachers.

Other strategies for meeting teacher qualification requirements were reported as well, although less than half of rural and nonrural district superintendents reported using them. For example, about 40 percent of both rural and nonrural district superintendents reported establishing partnerships with higher education institutions to train teachers, and more than 10 percent of rural and nonrural districts created agreements with other school systems for purposes such as sharing highly qualified teachers. Officials indicated that some of these strategies might be difficult to implement in rural areas. For example, even though some districts were making attempts to share teachers, large distances made it difficult for rotating teachers to travel from one district to the next.

Small Rural Districts Were Less Likely to Use Some Strategies than Other Rural Districts

Among rural districts, small rural districts were less likely to report using some strategies, such as teacher mentoring and remedial services, to meet student proficiency goals than other rural districts. (See fig. 3.)

Figure 3: Percentages of Small Rural District Superintendents Reporting Use of Specific Strategies to Help Schools Meet Student Proficiency Goals Compared with Percentages of Other Rural District Superintendents



Source: GAO survey data.

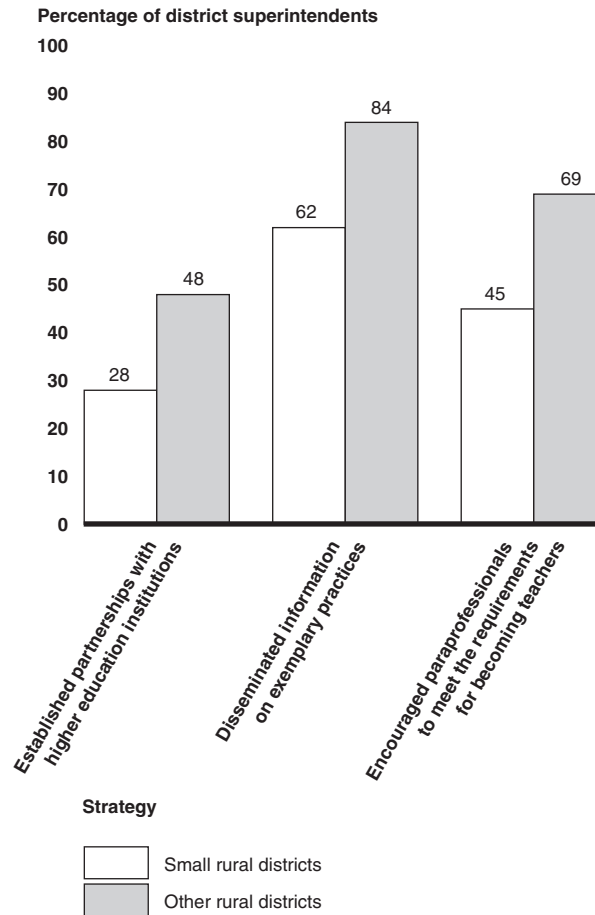
Note: Each difference between small rural and other rural districts in this table is significant at the 95 percent confidence level.

For example, about half of small rural districts reported offering mentoring to teachers, compared with about three-quarters of other rural districts. Small rural districts may experience greater difficulties offering mentoring programs for teachers than other rural districts since they typically have even fewer teachers, those they have are more likely to teach multiple subjects and grade levels, and they are located farther from other districts—factors that limit their pool of teachers to serve as

mentors to other teachers. Likewise, although most rural districts used remedial services such as tutoring, a smaller percentage of superintendents from small rural districts than superintendents from other rural districts reported offering these services to meet districts' student proficiency goals—81 percent compared with 95 percent. Rural district officials noted that offering remedial services to students was difficult because the distances students had to travel home were large and road conditions were poor, thus minimizing the amount of time that students could spend in school to participate in remedial programs. Other strategies for meeting student proficiency goals were generally as likely to be reported by superintendents from small rural as by those from other rural districts, and included coordinating with ESAs, providing additional computer capacity, and offering incentives or bonuses for teachers.

Small rural districts were also less likely than other rural districts to use certain strategies for meeting teacher qualification requirements. (See fig. 4.)

Figure 4: Percentages of Small Rural District Superintendents Reporting Use of Specific Strategies to Meet NCLBA’s Teacher Qualification Requirements Compared with Percentages of Other Rural District Superintendents



Source: GAO survey data.

Note: Each difference between small rural and other rural districts in this table is significant at the 95 percent confidence level.

For example, about a quarter of small rural districts established partnerships with higher education institutions to help teachers become highly qualified, compared with almost half of other rural districts. Similarly, fewer than half of superintendents from small rural districts reported encouraging paraprofessionals to become highly qualified in order to increase their supply of teachers who met NCLBA’s qualification requirements, compared with almost 70 percent of superintendents from other rural districts. Officials indicated that establishing partnerships with higher education institutions or sending paraprofessionals for training was

difficult in small and isolated rural areas, since the nearest institutions were far away. According to one official working with many small rural districts, it was also not cost-effective for higher education institutions to send their representatives to these districts to offer training on-site, given a very small number of staff in small rural areas. Other strategies for ensuring that teachers met NCLBA's qualifications requirements were generally as likely to be reported by superintendents from small rural districts as by those from other rural districts, and included provision of training to teachers, increases of teacher salaries, and the use of services for teachers offered by ESAs, among others.

Rural Districts Identified Some Specific Expenditures Made for NCLBA Implementation and Used Multiple Funding Sources to Support Implementation Efforts

Rural state and district officials identified some specific expenditures that they associated with implementation of NCLBA, such as those related to assessments and services to help students meet academic proficiency goals. However, officials were unable to determine all NCLBA implementation expenditures, in part because their accounting records were not maintained in a way that tracked expenditures by NCLBA categories. States are not required to report separately on expenditures related to NCLBA implementation, nor have any of the states we contacted required their districts to do that. Officials reported relying on various funding sources to support their implementation efforts, including different federal programs, as well as state and local funds.

Officials Cited Specific Expenditures Made for Implementing NCLBA

Officials in states and districts we visited cited specific assessment-related expenditures, including the cost of administering assessments and collecting and analyzing assessment results in order to identify students' academic needs and to inform parents and the community of schools' progress. For example, officials in one district visited indicated that they had to add 2 additional days into teachers' contracts to allow teachers enough time to administer and score assessments. Officials also indicated that assessment-related expenditures involved those for training teachers on new assessments. For example, officials in one district said that the district paid for a trainer to conduct a 2-day training to familiarize staff with new assessments.

Officials also identified expenditures related to schools' and districts' efforts to meet student proficiency goals, including those for providing

remedial services to students and improving the curriculum. For example, one rural district we visited invested in a remedial reading program, after-school tutoring sessions, and a summer program to improve students' proficiency. Another rural district paid an educational research organization to review the district's math curriculum and make recommendations for improvement.

In addition, officials in states and districts we contacted cited some expenditures related to meeting NCLBA's teacher qualifications requirements, including the direct costs of classes and professional development programs that teachers and paraprofessionals attended, as well as other costs associated with teachers and paraprofessionals taking steps to meet the necessary qualifications. For example, one small, isolated district we visited paid for teachers to enroll in a semester-long distance learning class, while several others reimbursed paraprofessionals for taking college courses to meet NCLBA requirements. Officials also indicated that sending teachers to training led to other expenditures, such as hiring substitutes while teachers attended training or covering travel expenses for teachers who were sent to training.

Finally, officials identified expenditures related to the provision of supplemental educational services and school choice in districts and schools not meeting student proficiency goals. In addition to covering providers' fees, expenditures for supplemental educational services included those used to purchase supplies and pay staff to supervise students. For example, in one rural district, where only online providers were available, officials said that expenditures would have to be made to cover the cost of software and an on-site staff person to monitor students while they received online instruction. Rural state and district officials also indicated that they expected the cost of transportation for students eligible for public school choice under NCLBA to be very high, but those expenses have generally not materialized because choice options have been so limited in rural areas.

Difficulties Exist in Determining and Projecting NCLBA Implementation Expenditures

Although state and district officials identified specific expenditures associated with NCLBA implementation, difficulties exist in determining all NCLBA implementation expenditures. District officials were unable to identify all of their current expenditures made for NCLBA purposes, since their accounting records were not maintained in a way that categorized current expenditures according to whether or not they were associated with NCLBA requirements. NCLBA does not require states to report separately on expenditures related to NCLBA implementation, and none of

the states we contacted required their districts to do so. Our review of the accounting records for one district we visited disclosed that for fiscal years 2002 and 2003 expenditures were placed in general expense categories. For example, supplies purchased for use in providing extended day programs, which were expanded due to NCLBA, were placed in the same “Supplies” category as supplies purchased for typical school day instruction. Similarly, salaries paid for teaching during the extended day programs were placed in the same “Salaries” category as salaries paid for teaching during the regular school day; overtime pay and substitute costs, which officials often attributed to NCLBA, were also placed in this “Salaries” category. An official in that district indicated that it might be possible to report on NCLBA-specific expenditures if the district changed the way accounting records were maintained, but doing this would be time-consuming.

In addition to the difficulties identifying all current expenditures associated with NCLBA implementation efforts, it is also difficult to determine what expenditures would have to be made in the future to meet NCLBA goals. One reason for this difficulty is that research and data needed to project total expenditures for meeting NCLBA goals are often not available. For example, research does not consistently suggest what strategies will help all students meet student proficiency goals. In fact, district officials told us they did not know which of the existing strategies would enable students to improve academic performance to the extent sufficient to reach NCLBA’s student proficiency goals. As a result, projected NCLBA expenditures based on expanding current strategies, such as those made for tutoring or after-school programs, may not represent the actual expenditures needed to meet student proficiency goals if these strategies prove to be either insufficient to help students meet these goals or are more than what is needed. Similarly, states and districts currently do not know how many students will use the school choice option under NCLBA and attend a different school within their district. Consequently, the true number of students who would require transportation could be higher or lower than what may be currently assumed, resulting in a potentially inaccurate estimate of transportation-related expenditures that districts might incur.

Another reason why projecting total NCLBA expenditures is difficult is that different assumptions are made about what costs should be included. Currently, a consensus does not exist on whether expenditures that originated prior to NCLBA but are now being used to help meet NCLBA goals should be included in the estimate of total NCLBA expenditures. For example, officials often cited remedial programs for students and

professional development for teachers as being related to NCLBA, but these programs may already have been in place prior to passage of the law. This may have been true particularly for states that implemented systems for measuring student proficiency prior to NCLBA or in states that were already striving for goals and outcomes similar to those associated with NCLBA. In addition, it may be difficult to determine the extent to which NCLBA may lead some districts to redirect expenditures to more efficient purposes—such as identifying and providing services to at-risk students in earlier grades to reduce the need for subsequent services.

The accounting and conceptual difficulties we identified have affected the total expenditure estimates produced by existing studies, resulting in a wide range of estimates across the studies.⁹ For example, one study included expenditures for various strategies that will be provided to help students meet proficiency goals, including summer school, in-school tutoring, and extended day programs; on the other hand, another study included expenditures for 6 additional weeks of academic instruction to help students meet these goals. As a result, the studies resulted in different estimates of the total expenditures that would be needed to meet student proficiency provisions of NCLBA.

As states and districts have more time to implement NCLBA or if the studies estimating NCLBA expenditures become more focused on either specific provisions of the law or on particular locations in which the law is

⁹These studies included Driscoll, William, and Howard Fleeter, *Projected Costs of Implementing the Federal “No Child Left Behind Act” In Ohio* (Columbus, OH: Levin, Driscoll, & Fleeter, December 12, 2003); AccountabilityWorks, *NCLB under A Microscope: A Cost Analysis of the Fiscal Impact of the No Child Left Behind Act of 2001 on States and Local Education Agencies* (Washington, D.C.: Education Leaders Council, January 2004); Mathis, William J., *The Federal “No Child Left Behind” Law: Should Vermont Take the Money?* (Vermont Society for the Study of Education, October 22, 2002); New Hampshire School Administrators Association, *Analysis of Cost Impact of ESEA No Child Left Behind Act on New Hampshire* (Penacook, NH: November 19, 2002); the Minnesota Office of the Legislative Auditor, *Evaluation Report: No Child Left Behind* (St. Paul, MN: Program Evaluation Division, March 2004). A number of studies have estimated the cost of providing a certain level of education, yet they did not directly estimate the cost of NCLBA. For example, see Myers, John, and Justin Silverstein, *Calculation of the Cost of a Suitable Education in Montana in 2001-2002 Using the Professional Judgment Approach* (Denver, CO: Augenblick & Myers, Inc., August 2002) and Duncombe, William, *Estimating the Cost of an Adequate Education in New York* (Syracuse, NY: Center for Policy Research, Syracuse University, February 2002). While these studies may be helpful in thinking about potential approaches to estimating total expenditures related to NCLBA, they were not directly relevant to NCLBA implementation efforts. We also reviewed NCLBA cost estimates developed by Kansas State Department of Education and a school district in Utah.

implemented, these difficulties may be mitigated. For example, as districts have more time to identify which of their schools are required to offer school choice to their students and as more parents learn about this option, data will become available on how many students will make use of school choice. In addition, instead of trying to estimate the total expenditures associated with implementing NCLBA, it may be less difficult to focus on individual NCLBA provisions, such as assessments and teacher qualification requirements. Given the differences in approaches that states and districts can use to meet the requirements of the law, it may be less difficult to determine NCLBA expenditures incurred by a particular district, rather than to try to determine expenditures for all districts in the state or for all states across the country. For example, some school districts required to offer school choice might have a school available for students to transfer to within their own district, while other districts might choose to enter into agreements with other districts to offer school choice; depending on whether students will have to travel within their own district or outside of it to attend a different school, transportation expenditures associated with offering school choice may be different across districts.¹⁰ Thus, focusing on expenditures associated with the school choice provision in one particular district at a time may be less difficult than attempting to determine a single estimate for school choice expenditures across the entire state. States, researchers, and education organizations have been working on developing methodologies to identify NCLBA expenditures. Some states and districts told us they are trying to find a method to document NCLBA expenditures separately from their expenditures on other state initiatives. Researchers in the education finance area have also been exploring methods for estimating expenditures. Education organizations, such as the Council of Chief State School Officers have also been working on developing approaches to

¹⁰In its recent study, GAO developed a model for estimating states' assessment expenditures by analyzing expenditure data from seven states. The study provided three estimates of total state spending between fiscal years 2002 and 2008 for test development, administration, scoring, and reporting—ranging from \$1.9 billion to \$5.3 billion—largely depending on the type of scoring method that tests chosen by the states would require. For example, GAO estimated that total state expenditures will be about \$1.9 billion if states use all multiple choice questions, which are machine-scored, but \$5.3 billion if states choose tests with a mixture of multiple-choice questions and a limited number of open-ended questions that require students to write their responses and that have to be hand-scored. See GAO, *Title I: Characteristics of Tests Will Influence Expenses; Information Sharing May Help States Realize Efficiencies*, GAO-03-389 (Washington, D.C.: May 8, 2003).

identify specific activities used to implement NCLBA, as well as expenditures made for each of those activities.¹¹

Officials Used Multiple Funding Sources to Support NCLBA Implementation Efforts

Rural district officials responding to the survey identified various funding sources as being very helpful in the implementation of NCLBA, including different federal programs, as well as state and local funds. Although the Congress has appropriated billions of dollars for education—more than \$37 billion for K-12 education in fiscal year 2004—the largest portion of district revenue typically comes from state and local sources of funds. According to the U.S. Census Bureau’s Public Elementary-Secondary Education Finance Data, districts received, on average, roughly 7 percent of their revenues from federal funds in 2001, but federal funds tended to make up a slightly higher proportion of total revenue for rural districts than they did for nonrural districts. Other major district revenues included state funds (approximately 50 percent) and local funds (approximately 40 percent). Rural districts received a somewhat larger portion of their revenues from state funds and a smaller portion from local funds than nonrural districts.

Officials reported using various federal funding sources for their implementation efforts. According to survey results, Title I was one of the primary sources of federal funds, and more than 60 percent of rural district superintendents reported this source of funds as being very helpful for implementing NCLBA. In rural states and districts contacted, Title I funds were used for various initiatives designed to improve student achievement and teacher qualifications. For example, in one state contacted, officials indicated that Title I funds were used by the rural districts for remedial services in reading and math, initiatives to help increase academic achievement of students with limited English proficiency, and professional development programs for teachers.

More than half of rural district superintendents responding to the survey also reported that Title II funds for improving teacher qualifications were very helpful with NCLBA implementation efforts, and officials contacted reported using these funds to help their staff meet NCLBA’s qualification

¹¹The Council of Chief State School Officers is a nonpartisan, nationwide, nonprofit organization of public officials who head departments of elementary and secondary education in the states, the District of Columbia, the Department of Defense Education Activity, and five U.S. extra-state jurisdictions. Its goals are to provide leadership, advocacy, and technical assistance on major educational issues.

requirements.¹² For example, in one state visited, officials indicated that Title II funds were used to develop a portfolio-based assessment for teachers to demonstrate subject matter competency, as required under NCLBA.¹³ In addition, while the survey results showed that only 14 percent of rural district superintendents reported that Impact Aid was very helpful for NCLBA implementation, it played a large role among rural districts we visited that had a large proportion of Native American students; in two districts visited, officials told us that Impact Aid constituted almost half of the districts' budgets.¹⁴ In rural districts visited, Impact Aid funds were used for purposes such as providing remedial services for students and tuition for paraprofessionals to take college courses and become qualified under NCLBA.

Rural districts also used REAP funds for a variety of purposes associated with NCLBA implementation, including providing remedial services to students and professional development to teachers.¹⁵ Almost 70 percent of rural district superintendents responding to the survey indicated that they received REAP, and the majority of them reported using or having plans to use REAP to address technology needs of students and teachers, provide remedial and supplemental educational services to students, and offer

¹²Title II, Part A, of the Elementary and Secondary Education Act, Teacher and Principal Training and Recruiting Fund, provides grants to state and local educational agencies, state higher education agencies, and eligible partnerships to implement strategies for improving teacher and principal quality, as well as to increase the number of highly qualified teachers, principals, and assistant principals. For fiscal year 2004, \$2.93 billion was appropriated under this program.

¹³Portfolio-based assessment provides for teachers' subject-matter competency to be determined on the basis of teachers' educational and professional credentials and experiences.

¹⁴The Impact Aid program (now Title VIII of the Elementary and Secondary Education Act) provides assistance to school districts with a large number of children living on Indian reservations, military bases, low-rent housing properties, or other federal lands. School districts use Impact Aid for various purposes, including salaries of teachers and teacher aides, textbooks, after-school and special enrichment programs, and remedial tutoring. For fiscal year 2004, \$1.2 billion was appropriated under this program.

¹⁵REAP was designed to help rural districts that may lack the personnel and resources to compete effectively for federal competitive grants. It is composed of two programs: (1) the Small, Rural School Achievement program authorizes the Secretary of Education to award formula grants directly to eligible school districts; (2) the Rural and Low-Income Schools program is designed to address the needs of rural, low-income schools and authorizes the Secretary to award formula grants to state educational agencies, which in turn award subgrants to eligible school districts either competitively or on a formula basis.

professional development for teachers to help them meet NCLBA's qualification requirements. (See table 7.)

Table 7: Percentages of Rural District Superintendents Reporting the Use of REAP Funds for Purposes Associated with NCLBA Implementation

Purpose	Percentage of rural district superintendents
Technology needs of students and teachers	86
Supplemental educational services to students	66
Remedial services to students in preparation for annual assessments	60
Professional development to help teachers meet NCLBA qualification requirements	64
Annual assessments (e.g., developing and administering assessments, preparing report cards, disseminating information on assessment results, data management for reporting results)	49
Professional development to help paraprofessionals meet NCLBA qualification requirements	46
After-school or extended day programs	37
Recruitment of highly qualified teachers	31
Recruitment of qualified paraprofessionals	19
School choice	5

Source: GAO survey data.

In rural states and districts visited, officials reported that REAP funds have been of great assistance in implementing various initiatives to meet the goals of NCLBA. For example, some rural districts visited used REAP to provide tutoring and after-school programs for students falling behind, while others used REAP for programs to improve students' reading skills. Some districts also used REAP for teacher qualifications initiatives, such as sending teachers to training, offering signing bonuses to attract teachers to a rural location, or funding distance learning and video conferencing infrastructure to enable teachers in geographically isolated areas to take classes to raise their qualifications.

In addition to making additional funds available to eligible rural districts, REAP also allows eligible districts to spend funds under certain programs, such as the Safe and Drug-Free School Program, for activities beyond what those programs intended. For example, districts may choose to use

funds allocated under technology and antidrug programs for initiatives to help students reach academic proficiency.¹⁶ In many rural states contacted, officials indicated that this flexibility facilitated their efforts to implement NCLBA by allowing them to direct funds to areas where they were most needed to meet NCLBA's goals. For example, in one rural state contacted, officials reported that many of their districts used Safe and Drug-Free School Program funds to support their technology initiatives, which, in turn, helped with implementing some of the provisions of NCLBA.

Among rural district superintendents responding to the survey, 84 percent reported receiving E-Rate funds since the passage of NCLBA.¹⁷ Rural officials we contacted indicated that these funds facilitated their efforts to implement the law. For example, beginning with school year 2004-05, some rural districts in a state that we contacted will use E-Rate funds to finance distance learning infrastructure for offering professional development to teachers. In another rural state, the technology infrastructure created with the help of E-Rate helped ensure that students in isolated rural areas could take classes taught by highly qualified teachers in other locations. Several district officials noted that E-Rate discounts enabled them to provide or sustain Internet access, thus offering learning opportunities to students that may have otherwise been unavailable in rural areas.

In addition to using federal funds, rural districts used state and local funds to implement NCLBA. For example, a few rural districts we visited used

¹⁶Rural districts eligible for REAP funds have the flexibility to use funds under the following programs for activities beyond those that the programs intend: Subpart 2 of Part A of Title II (Improving Teacher Quality State Grants); Part D of Title II (Educational Technology State Grants); Part A of Title IV (Safe and Drug-Free Schools and Communities); Part A of Title V (State Grants for Innovative Programs). Funds can be used for activities authorized under the following programs: Part A of Title I (Improving the Academic Achievement of the Disadvantaged); Part A of Title II (Improving Teacher Quality State Grants) and Part D of Title II (Educational Technology State Grants); Title III (Language Instruction for Limited English Proficient and Immigrant Students); Part A of Title IV (Safe and Drug-Free Schools and Communities), Part B of Title IV (21st Century Community Learning Centers); and Part A of Title V (State Grants for Innovative Programs). Additional information on these programs is available on Education's website at www.ed.gov.

¹⁷The E-Rate program, created as part of the Telecommunications Act of 1996, provides discounts on telecommunications services, Internet access, and internal connections to libraries and schools in the United States. Through disbursement of over \$10 billion in discounted services since 1997, the E-Rate has helped ensure Internet access in most schools and libraries in the country.

state funds to improve technology and offer programs to students via mechanisms such as interactive TV. In another rural district visited, local property taxes were used to reimburse staff for taking college courses to raise their qualifications.

Education Provided Many Types of Assistance, but Rural Officials Said Additional Assistance Would Be Helpful

Since the passage of NCLBA, Education has provided guidance and assisted all states in a variety of ways, but officials from rural states and districts, including small rural districts, stated that more assistance would be helpful to fully address their issues. Education has posted on its Website current NCLBA implementation guidance and communicated with state officials in all states through telephone calls, conferences, and visits. Education has employed an evolving approach to assistance by providing more information and expanded guidance as it learned more from state officials regarding questions and issues they had difficulty addressing. Since April 2003, Education has devoted more attention to rural issues. However, officials in rural states we interviewed told us that additional assistance addressing their unique challenges, such as the extreme challenges faced by small and isolated rural districts, would be beneficial.

Education Provided Many Types of Assistance

Since the passage of NCLBA, Education has provided general assistance and guidance to all states in several ways in order to help them implement the legislation. (See table 8.)

Table 8: Actions Taken by Education to Assist States with Implementation of NCLBA and Their Intended Purpose

Efforts to assist states	Purpose
Websites providing current guidance on implementation, promising practices, and scientific research.	Clarify requirements of NCLBA to help states correctly implement legislation and share information among states and districts on successful practices taken to implement NCLBA
State visits—Teacher Assistance Corps	Obtain information on state efforts and challenges and advise states on implementation of NCLBA teacher requirements
Conferences and workshops	National and regional conferences to explain guidance, provide information on strategies, answer questions and obtain information from states and districts on their challenges
Superintendents' Hotline	To respond to questions from district superintendents on NCLBA and its implementation

Source: GAO analysis of Education's documents and interviews with Education officials.

Education's website contained information on guidance, regulations, and legislation. The website featured large sections devoted to NCLBA, including frequently asked questions and other useful information. For example, key requirements, such as those related to teacher qualifications, were highlighted with references to guidance. Education's website also included links to other websites. For example:

- A website on teacher qualifications (April 2004) that identified best practices for meeting teacher requirements. The Website also announced plans to hold teacher workshops on strategies for improving student proficiency.
- A website on supplemental educational services (May 2004) that provided information to administrators, teachers, and parents on lessons learned and available resources for providing supplemental educational services. The site also included links to websites of all state departments of education.
- A website for promising practices in offering school choice (May 2004) to assist districts in offering parents the choice of sending their child to another school if the child's current school was in need of improvement.

Education also provided assistance through state visits, conferences, and a hotline for superintendents. In the summer of 2003, Education organized

teams of experts, called Teacher Assistance Corps teams. These teams—composed of federal and state education officials, teachers, principals, superintendents, leaders from higher education, and others—visited every state education department to obtain information on how states were implementing teacher qualification provisions and the challenges they were facing, as well as to provide assistance to states on implementing these provisions. The teams completed visits to all states in April 2004. Education also held several regional and national conferences to assist states with NCLBA implementation. The conferences provided state and district officials with the opportunity to meet Education’s staff, discuss implementation issues, and learn about recently issued guidance. In January 2004, Education established a Superintendents’ Hotline to provide a single point where district superintendents could go to seek answers to their questions on NCLBA implementation. In addition to receiving Education’s assistance, states we contacted provided districts with guidance and assistance to help them implement NCLBA, such as conducting workshops on NCLBA’s requirements and disseminating information through state websites. State officials told us that they have spent considerable time and resources on these efforts, including the development of state plans that provide a road map for districts to implement the law. Rural districts surveyed reported assistance from the state department of education as the most helpful, as compared to federal and local agencies and other organizations.

Education Has Become More Focused on Rural Education Issues

Since April 2003, Education has focused more efforts on rural education issues. At that time, Education established a Rural Education Task Force to coordinate and focus rural education efforts within the department and, according to the Executive Director of the task force, to bring together senior level personnel to identify rural issues and solutions. According to the information provided by the Executive Director, the task force has met with the Congressional Rural Caucus and several national education organizations. The task force also organized a virtual town hall meeting, hosted by the Secretary of Education, on how rural communities are using technology to meet the goals of NCLBA. The event was a live webcast to allow school officials from across the country to learn more about how their colleagues are using technology to achieve the goals and meet the requirements of NCLBA. The Executive Director also indicated that the task force contributed to developing the new flexibilities for rural states that addressed some of their challenges, such as those related to qualifications for teachers of multiple subjects. He said he believed that rural states and districts currently had all the flexibilities that they needed to implement NCLBA. The Executive Director added, however, that

discussion would continue on whether there is any other work for the taskforce to do in assisting rural states and districts.

Education issued new flexibilities in guidance in March 2004. According to Education officials, the information that rural state officials provided to visiting Education teams, along with other communications with state officials, was used by Education to develop the flexibilities. The new flexibilities were intended, among other things, to assist rural states with teacher qualification and student proficiency provisions of NCLBA. For example, under some circumstances, teachers in rural districts are allowed extra time—up to 3 years—to meet the teacher qualification requirements, and states can now use a single state test for teachers to demonstrate subject area knowledge in multiple subjects and grades. These flexibilities may be helpful to some rural districts, since teachers in small rural districts may be expected to teach multiple subjects. In addition, schools may average student participation in assessment over a 3-year period, which may make it easier for small rural schools to meet NCLBA's assessment participation requirement.

Education is also overseeing a research center for rural education. In response to congressional legislation, Education funds national research and development centers that examine a wide range of education topics in order to provide information on educational practices and outcomes contributing to successful school performance. On September 14, 2004, Education awarded a grant for the National Center for Research and Development in Rural Education. According to Education's Cooperative Agreement with the grantee, the purpose of the center is to develop, test, and disseminate new approaches to improve teaching and learning, and ultimately student achievement. The grant proposal and the cooperative agreement documents contain several research initiatives to address challenges rural districts face. According to the agreement document, the research agenda is focused on the implementation and evaluation of school-wide strategies that enhance rural students' academic, behavioral, and social adjustment across the elementary and middle school years and two supplemental studies related to distance learning and career exploration for rural high school students. However, there was no mention of any research directed to the unique challenges faced by small rural districts such as frequent inaccessibility to technology-based initiatives. Education has also given other grants, including one to the National Association of State Boards of Education that focus on assisting rural states.

Rural State and District Officials Cited the Need for More Technical Assistance and Information on Services That Will Help Improve Student Performance

Many districts reported the need for more assistance at the time our survey was administered in January 2004, and officials that we contacted reported that Education's current assistance did not fully address their unique issues. For example, almost three-quarters of rural district officials responding to the survey reported the need for additional assistance on remedial services that will help students meet academic proficiency goals. Officials we contacted said they did not know which strategies would help students reach student proficiency goals or the extent to which strategies currently in use should be maintained, modified, or eliminated. Currently, scientific research on the effectiveness of different strategies to improve student performance is limited.

Officials from some states we contacted between October 2003 and April 2004 told us that while Education's on-site teacher qualification teams did seek information on challenges these states were facing, they did not always respond to their questions. State officials with unanswered questions were concerned that they may be out of compliance with the law. Education officials told us that because they were continually developing new policies and flexibilities in guidance to respond to states' concerns, some questions could not be answered during Education's visits to the states.

Most state officials told us that the guidance received from Education for implementing various parts of NCLBA was helpful, but officials from nine states we interviewed cited concerns, such as guidance being in draft form, changing frequently, or not being issued in a timely manner for meeting NCLBA requirements. In response to these concerns, Education officials told us it was challenging to provide the support states needed to meet NCLBA requirements given the short time frames for issuing guidance to implement NCLBA provisions and the differences in education systems among states. Education officials said that they were continuing to address rural issues.

Conclusions

NCLBA seeks to make fundamental changes in public education by challenging federal, state, and local education officials to reevaluate the way education has been delivered. For the first time, the Congress has specified a deadline for when it expects all students to reach proficiency on state assessments, showing that students possess knowledge of the subject matter in accordance with state standards. Achieving the goal of having all students proficient will be a formidable challenge for all states, districts, schools, and students. However, educators in rural areas may

face additional challenges, primarily related to the small size of rural school districts and their geographic isolation.

Education made considerable efforts and progress in promulgating regulations, providing assistance, and working with states during the first two and a half years of NCLBA implementation. States also have devoted significant time and resources in developing state plans and working with districts to meet NCLBA requirements and deadlines. As a result of these efforts, many states are becoming better positioned to meet the 2014 deadline that all students be proficient. Yet, these efforts have not always been as successful for states with small rural districts because of the unique challenges they face. Small rural districts comprise 11 percent of all school districts in the country.

Officials in states with small rural districts, as well as the district officials, reported on the difficulties they were having implementing NCLBA provisions. Although Education issued guidance that provides additional flexibilities to help rural areas, challenges still exist. Rural districts are held accountable for student performance to the same extent as all other districts, so in the third year of NCLBA implementation, additional assistance from Education would likely help students in rural districts, particularly small rural districts, fully benefit from NCLBA.

Further, rural districts, as well as nonrural districts, reported that they needed information on what strategies are most effective in helping improve students' performance. Currently, scientifically based research on the effectiveness of various remedial services is limited, particularly research on effective strategies that takes into account the challenges that small and geographically isolated districts face. Without information from scientifically based research studies on effective remedial services, particularly services that can be used in these districts, students may not achieve the levels of academic progress sufficient for meeting state proficiency goals. In addition, without this information, districts would not know what expenditures they would need to make to better position themselves for meeting the goals of NCLBA.

Recommendations for Executive Action

Because of the challenges small rural districts face, we recommend that the Secretary of Education provide additional assistance to states on approaches small rural districts can use to implement student proficiency provisions and teacher qualification requirements, including the application of new flexibilities.

To assist rural states in meeting student proficiency provisions of NCLBA, we are recommending that Education—through its recently established National Research and Development Center on Rural Education—focus on effective, scientifically based methods to improve student performance, and that it conduct studies on the services that can help small rural districts meet students proficiency provisions in light of the unique challenges that these districts face.

Agency Comments and Our Evaluation

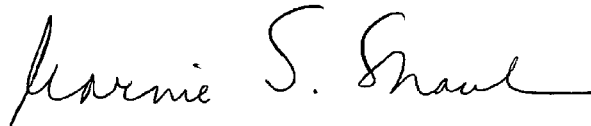
We provided a draft of this report to Education for review and comment. Education's written comments are reproduced in appendix II. The department discussed but did not explicitly agree or disagree with our recommendations. For both recommendations, Education provided new information that was incorporated, as appropriate, in the report. In addition, we modified the report to address Education's two technical comments.

In response to our recommendation that Education provide additional assistance to states on approaches small rural districts can use, the department commented that it intends to provide such assistance. In its comments, Education provided some additional information on the actions already taken and stated that it plans to take action to help states and districts, including those districts in rural areas. However, some of these actions do not address the unique challenges of small rural school districts, such as those with limited access to the Internet. Therefore, we continue to recommend that Education focus some assistance to address the needs of these small rural school districts.

Regarding our second recommendation, that Education use its new National Research and Development Center on Rural Education to address the unique challenges small rural districts face, Education commented that through the center, it would initiate a long-term program of research to implement and evaluate professional development strategies to enhance rural students' performance. Education awarded the research grant to fund this center on September 14, 2004, after it had received and reviewed our report. Education noted in its comments that the center will conduct research programs that will be helpful to rural districts, such as the effectiveness of web- and video-based programs. However, our findings have shown such programs may not be appropriate for some small, isolated rural districts that often have limited access to technology. On the basis of our review of the awarded grant proposal, we found that it contained no indication that the center would direct any research to specifically focus on challenges and strategies applicable to small, isolated

rural districts. Therefore, we continue to recommend that through the center Education conduct studies on approaches that can help small rural districts meet student proficiency provisions in light of the unique challenges these districts face.

Unless you publicly announce its contents earlier, we plan no further distribution until 30 days after the date of this letter. At that time, we will send copies of this report to the Secretary of Education, appropriate congressional committees, and others who are interested. We will also make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site at <http://www.gao.gov>. If you have any question about this report, please call me at (202) 512-7215. Key contributors are listed in appendix III.

A handwritten signature in black ink that reads "Marnie S. Shaul". The signature is written in a cursive style with a long horizontal flourish at the end.

Marnie S. Shaul, Director
Education, Workforce, and
Income Security Issues

Appendix I: Scope and Methodology

In conducting our work, we administered a mail survey to a nationally representative sample of 1,215 school district superintendents. The survey was conducted between January 19, 2004, and March 26, 2004. We analyzed survey data and identified significant results. The response rate for the survey was 85 percent.

The study population for the survey consisted of public school districts contained in the Department of Education's Common Core of Data (CCD) Local Education Agency (LEA) file for the 2001-02 school year, the latest year for which data were available. We reviewed the documentation for this file and conducted electronic testing of the file we received. Based on these reviews, we determined that the file was sufficiently reliable for our purposes. In addition, we determined the data were sufficiently accurate to serve as our study population. From this file, we identified a population of 14,396 school districts in the 50 states.

Sample. The sample design for this survey was a stratified sample of 1,215 LEAs in the study population. To enable us to compare rural districts with nonrural districts, we categorized our sample as follows:

- **Rural districts.** We defined districts as rural if they were 55 miles or farther from a metropolitan statistical area.
- **Nonrural districts.** We defined districts as nonrural if they were located less than 55 miles from a metropolitan statistical area.

The distance of 55 miles was chosen because it reflects the 25 percent of districts in the country located farthest from a metropolitan statistical area. This definition allowed us to analyze those districts that may be experiencing special challenges due to their geographic isolation.

To ensure that we obtained information from most rural school districts, we further stratified our sample by size as follows:

- **Small rural districts.** We defined districts as small rural if they were 55 miles or farther from a metropolitan area and had 300 or fewer students.
- **Other rural districts.** We defined districts as other rural if they were 55 miles or farther from a metropolitan statistical area but had more than 300 students.

Estimates. All estimates produced from the district sample in this report were for a target population defined as all public school districts in the 50 states for the 2003-04 school year. Estimates of this target population were formed by weighting the survey data to account for both sample design and the response rates for each stratum.

Sampling error. Because we surveyed a sample of school districts, our results were estimates of a population of school districts and thus were subject to sampling errors associated with samples of this size and type. Our confidence in the precision of the results from this sample was expressed in the 95 percent confidence intervals. The 95 percent confidence intervals are expected to include the actual results for 95 percent of the samples of this type. We calculated confidence intervals for our study results using methods that were appropriate for a stratified, probability sample. For the percentages presented in this report, we were 95 percent confident that the results we would have obtained if we had studied the entire study population were within plus or minus 10 percentage points of our results, unless otherwise noted. For example, we estimated that 39 percent of small rural school districts identified geographic isolation as a challenge in meeting the highly qualified teacher provisions of the No Child Left Behind Act (NCLBA). The 95 percent confidence interval for this estimate would be no wider than plus or minus 10 percent, or from 29 percent to 49 percent.

Nonsampling error. In addition to these sampling errors, the practical difficulties in conducting surveys of this type may introduce other types of errors, commonly referred to as nonsampling errors. For example, questions may be misinterpreted, the respondents' answers may differ from those of the districts that did not respond, or errors could be made in keying questionnaire data. We took steps to reduce these errors.

Prior to fielding the questionnaire, we met with two outside experts in October 2003 to discuss the survey and listen to their suggestions. On the basis of these suggestions, the survey was revised. It was pretested with 5 district superintendents in rural and nonrural districts in November and December of 2003. We conducted these pretests to ensure that the respondents understood the questions and could provide the answers to them. Following these pretests, the survey underwent additional, mostly minor, revisions. Data edits and estimation programs were independently verified to ensure that programming errors did not affect our estimates. To reduce nonresponse, we sent a follow-up mailing to all school districts that had not responded to the survey by our deadline, followed by telephone calls to nonresponding districts.

Site visits. To obtain information on rural districts' experiences with implementing the accountability and teacher quality provisions of NCLBA, we made site visits and conducted telephone interviews with the 10 most rural states: Alaska, Iowa, Kansas, Maine, Mississippi, Montana, Nebraska, North Dakota, South Dakota, and Vermont. These states represented the most rural states in the country based on the percentage of their school districts in rural communities, the percentage of their students attending schools in rural communities, and the average distance between the school districts in the state and the nearest metropolitan statistical area as a measure of geographic isolation. We made site visits to 6 states—Maine, Mississippi, Montana, Nebraska, North Dakota, and South Dakota, visiting state education officials, as well as officials in two or three local school districts in each state (see table 9). We selected school districts to visit on the basis of variation in student enrollment, geographic isolation, school performance, and demographic characteristics. In addition, we consulted with state education officials in helping us select local school districts that were in need of improvement. We conducted telephone interviews with officials in Alaska, Iowa, Kansas, and Vermont. We spoke with state education officials in each of these states, as well as with officials in three Alaska districts. We also conducted telephone interviews with state education officials in Wyoming because of the large geographic distance that school districts in that state cover.

Table 9: Site Visit States and School Districts

State	Local school district
Alaska	Haines Borough Kuspuk Pelican City
Maine	School Administrative District 34, Belfast School Administrative District 49, Fairfield Steuben School Department
Mississippi	Jefferson County North Panola
Montana	Box Elder Browning
Nebraska	Creighton Santee Wheeler Central
North Dakota	Mandaree Selfridge
South Dakota	Isabel Todd County

Source: GAO data.

Note: Interviews with state and district officials in Alaska were conducted by telephone.

Other Methodology

We also conducted interviews with educational association representatives and other experts, met with Education officials, and reviewed guidance and data from Education. We conducted our work in accordance with generally accepted government auditing standards between August 2003 and August 2004.

Appendix II: Comments from the U.S. Department of Education



UNITED STATES DEPARTMENT OF EDUCATION

September 15, 2004

THE DEPUTY SECRETARY

Ms. Marnie S. Shaul
Director
Education, Workforce,
and Income Security Issues
United States Government Accountability Office
Washington, DC 20548

Dear Ms. Shaul:

This is in response to your request for comments on the draft report entitled "No Child Left Behind: Additional Assistance and Research on Effective Strategies Would Help Small Rural Districts" (GAO-04-909). We have carefully reviewed the document and appreciate this opportunity to provide comments to you.

We are pleased that GAO recognized in the report that "Education made considerable efforts and progress in promulgating regulations, providing assistance, and working with states in the first two and a half years of NCLBA implementation." You additionally recognized the considerable efforts of the States.

Your report first recommends that the U.S. Department of Education "provide additional assistance to states on approaches small rural districts can use to implement student proficiency provisions and teacher qualification requirements, including the application of new flexibilities."

We appreciate the concerns that you have expressed concerning the unique challenges that small rural districts face and recognize there is a continuing need for additional assistance in confronting those challenges. While we intend to provide such additional assistance, the authors of the report may not understand all the actions we have already taken in this area, and the report might be revised to include more information on those actions.

As you noted in your report, we have taken a number of steps to address the challenges faced by small rural districts. These steps include the formation of a rural task force, updates to the Title II, Part A non-regulatory guidance, Teacher Assistance Corps visits, new flexibility for meeting the "highly qualified teacher" requirements provided in guidance last March, and a variety of workshops. Other activities we have undertaken to help improve student achievement in rural districts and help those districts implement the *No Child Left Behind Act* (NCLB) include the following.

In March and July of this year, we conducted two major Technology Leadership Summits that provided technical assistance on how technology can assist States and districts in the implementation of NCLB. For each summit, we made a special effort to invite and encourage participation from small and low-income rural school districts. The first summit provided

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technical assistance in identifying technology tools and resources that are available to support the accountability, student information, and data collection and reporting requirements of NCLB, promoting the benefits of online assessment, illustrating how online assessments can inform instruction at the classroom level (through, for example, diagnostic tests, real-time reporting, and the use of performance-based assessments) and focusing on strategies to make assessment results useful. The second summit focused on increasing options through “e-learning.” This summit explored virtual education – distance learning, virtual schools and other online education courses – as a powerful technology innovation expanding opportunities for learning in support of NCLB. A major feature of the summit was a “Virtual Schoolhouse” in which students from a rural school demonstrated how technology has increased their learning options.

We also have conducted Webcasts with State Title I directors and district Federal program coordinators in which Federal, State, district, and other officials discuss NCLB requirements and strategies for addressing them. In addition, we are expanding the use of Web conferencing technology as another strategy for providing information to, and sharing information among, States in order to assist all districts including rural and low-income school districts in understanding and meeting the requirements of NCLB. We have a contract with the Council of Chief State School Officers to provide technical assistance to States. One area of focus is technical assistance to States with small districts and small schools regarding different strategies for making adequate yearly progress (AYP) determinations. Such districts and schools have enrollments in tested grades that require them to go through a separate review process to make AYP determinations since the total number of students doesn’t meet the State’s minimum size requirements (“group size”) for making accountability determinations in the same manner as other, larger schools.

As a part of our continuing outreach to rural districts and schools, our Teacher-to-Teacher initiative, which is designed to support teachers in raising student achievement, is planning four Saturday workshops this fall, two of which will be in rural areas. Next summer we will hold an additional six workshops throughout the country. To provide further e-learning opportunities for teachers, the Department will make available, on line, eleven presentations focusing on reading, math, and science from this summer’s Teacher-to-Teacher workshops, and we plan to add twelve more reading and math presentations from the fall workshops mentioned above. To access these presentations visit www.ed.gov/teacherinitiative. Teachers will be able to access this high-quality professional development free of charge.

Your report recommends, secondly, that the Department “through its recently established National Research and Development Center on Rural Education – focus on effective, scientifically-based methods to improve student performance, and that it conduct studies on the services that can help small rural districts meet student proficiency provisions in light of the unique challenges that these districts face.”

On February 4, the Institute of Education Sciences released a Request for Applications (RFA) for its Education Research and Development Center Grants competition. The requirements for the proposed research and development centers were published in that RFA. Prior to receiving the GAO’s report, the Institute awarded a research grant to fund a national research and development center on rural education. The grantee proposed, and the Institute is funding, a focused, long-

Appendix II: Comments from the U.S.
Department of Education

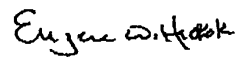
term program of research to implement and evaluate professional development strategies for rural schools aimed at establishing schoolwide strategies that enhance rural students' academic, behavioral, and social adjustment across the elementary and middle school years. As part of its program of research, the center will evaluate the effectiveness of delivering a teacher professional development program via Web-based training and video-conferencing consultation, an approach that may prove to be extremely useful for small, isolated rural school districts. The primary purpose of the National Research and Development Center on Rural Education is to conduct rigorous research to identify which education practices are effective for increasing student achievement and improving the teaching and learning environment and not to provide technical assistance. However, approximately one quarter of the effort of the Department's regional laboratories is devoted to providing support and technical assistance for rural schools.

As you complete this report, there are two other comments we would like to offer.

- We recommend that the report specifically note that, by statute, the "Rural-Flex" authority to use funds for alternative purposes is available only to those districts that meet the specific eligibility requirements of the Small, Rural School Achievement program as set forth in 6211(b) of the Elementary and Secondary Education Act, as amended.
- In the report, reference is made to a requirement by NCLB "to ensure that every student becomes proficient in reading, math and science by school year 2013-14." NCLB requires student proficiency in reading/language arts and math by 2013-14. Proficiency in science is not an NCLB accountability requirement.

Again, we appreciate your efforts in preparing this report and providing us with an opportunity to submit these comments. Please feel free to contact us if you would like to discuss any of these matters further.

Sincerely,



Eugene W. Hickok

Appendix III: GAO Contacts and Staff Acknowledgments

GAO Contacts

Harriet C. Ganson (202) 512-7042 or gansonh@gao.gov
Mary E. Roy (202) 512-7072 or roym@gao.gov

Staff Acknowledgments

In addition to those named above, the following individuals made important contributions to this report: Natalya Bolshun, Daniele Schiffman, Cynthia Decker, Kris Braaten, Jessica Botsford, Jean McSween, John Mingus, Corinna Nicolaou, Robert Owens, and Jay Smale.

Related GAO Products

Special Education: Additional Assistance and Better Coordination Needed among Education Offices to Help States Meet the NCLBA Teacher Requirements. [GAO-04-659](#). Washington, D.C.: July 15, 2004.

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