



Characteristics of Arizona school districts in improvement



Institute of Education Sciences

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Prepared by

Eric W. Crane
WestEd

Chun-Wei Huang
WestEd

Kenwyn Derby
WestEd

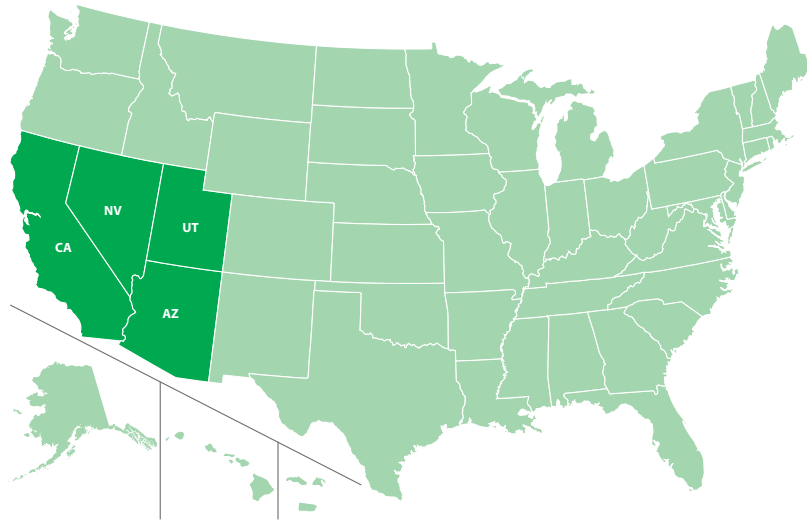
Reino Makkonen
WestEd

Aditi M. Goel
WestEd



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Characteristics of Arizona school districts in improvement

This descriptive analysis provides a statistical profile of Arizona’s lowest performing school districts, which can inform the context for district improvement as Arizona rolls out and refines its district intervention strategies.

Policymakers in Arizona and the other states served by the West Regional Educational Laboratory, like their counterparts across the country, are actively addressing the school and district improvement requirements of the No Child Left Behind (NCLB) Act of 2001. They have developed criteria based on assessment and accountability data to identify and intervene in schools and districts in need of improvement. School improvement efforts are largely defined and in place, but they do not reveal the full accountability picture for policymakers. Less is known, both in Arizona and nationally, about districts in improvement.

Education decisionmakers in Arizona and other states in the West Region have requested more information about the characteristics of districts in improvement. This descriptive analysis provides a statistical profile of Arizona’s lowest performing school districts. As Arizona rolls out and refines its district intervention strategies, this profile can inform the critical work on districts in improvement. Data for the study came from the Arizona

Department of Education School Effectiveness Division and from the Common Core of Data maintained by the U.S. Department of Education, National Center for Education Statistics.

Under the NCLB Act each state must operate a two-level education accountability system, with one level focused on school performance and the other on district performance. Separate accountability calculations are made for schools and for districts, which makes it possible for individual schools to have a different accountability status from their district. In Arizona making adequate yearly progress requires satisfying up to 37 requirements. Arizona’s local school districts first became subject to improvement in 2004/05 if they had failed to make adequate yearly progress in the two previous years in the same content area or reporting category.

A key finding of this study is that the district level of Arizona’s NCLB-driven accountability system is identifying problems that are missed at the school level. An examination of how Arizona’s 218 multiple-school districts and more than 1,500 schools did on these individual adequate yearly progress requirements reveals that in 2005/06—the year on which the 2006/07 district in improvement designations were based—66 districts (39 of them in improvement) failed to make adequate yearly

progress on at least one requirement, even though all their schools made adequate yearly progress on that same requirement. In addition, seven districts failed to make adequate yearly progress in the aggregate, even though not one school in those districts failed to do so. In 2006/07, 24 districts in improvement had no schools identified for improvement.

In these cases districts were being held accountable for student subgroups whose performance was not tracked by school-level accountability rules because there were too few students in the subgroup at each school to meet the minimum subgroup size (40 or more) in Arizona for reporting under the NCLB Act. This occurred most often for the students with disabilities subgroup. While such inconsistencies may appear counterintuitive at first, they reflect the effectiveness of a two-level accountability system—with the district-level system picking up, monitoring, and being accountable for students missed by the school-level system.

In Arizona 77 (35 percent) of the 218 multiple-school districts included in the district accountability system were in improvement in 2006/07, and districts in improvement enrolled more than 610,000 (60 percent) of the 1.01 million public school students in the state. Just over one in eight students enrolled in a district in improvement (about 81,000 altogether) was also enrolled in a school in improvement.

Districts in improvement differed from other districts in many ways. They were generally

larger, with more schools and students—13 of the 17 largest districts were in improvement in 2006/07. Districts in improvement were more likely to be in cities or urban fringe areas than in towns or rural areas. Districts in improvement had higher proportions of Hispanic, American Indian, English language learner, and socioeconomically disadvantaged students and lower proportions of White students than did districts not identified for improvement.

In moving forward under the NCLB Act, Arizona's districts in improvement face tough challenges. None of the 77 districts met all adequate yearly progress criteria in 2005/06. Compared with other districts, districts in improvement were held accountable more often for the test performance of the following student subgroups that met the minimum threshold size of 40: African American students, Hispanic students, American Indian students, English language learner students, and students with disabilities. When held accountable, less than half of districts in improvement met the proficiency targets for these subgroups. Since statewide proficiency targets are set to increase regularly in the years ahead, it is likely that districts already in improvement will have a difficult time climbing out. Furthermore, districts not identified for improvement will need to increase the percentage of students scoring proficient in order to continue making adequate yearly progress.

TABLE OF CONTENTS

Why this study?	1
Findings of the study	4
The district accountability system monitored the progress of many students that the school accountability system did not have to monitor	5
Districts in improvement included large numbers of students enrolled in schools that were not identified for improvement	7
Districts in improvement tended to be larger than other districts, and more urban	7
Districts in improvement had different student demographics than did other districts	8
Staffing rates and instructional and support services expenditures varied little between districts in improvement and other districts	8
Districtwide academic performance for slightly more than half of districts in improvement was above the annual measurable objectives in 2005/06	9
Districts in improvement tended to be held accountable for more subgroups than did other districts and to have lower proficiency rates for some subgroups	10
Limitations of the study	11
Implications for research and practice	12
Notes	14
Appendix A Research questions, data sources, and methodology	15
Appendix B Summary of Arizona’s district accountability system	18
Appendix C The 77 Arizona districts in improvement in 2006/07	21
References	22
Boxes	
1 Accountability under the No Child Left Behind Act: definitions of key concepts	2
2 Summary of methods and data sources	3
Figures	
1 Distribution of Arizona’s districts in improvement and districts not identified for improvement by locale, 2004/05	7
2 Median percentage of students scoring proficient or above in Arizona’s districts in improvement and districts not identified for improvement, spring 2006	10
3 Percentage of students meeting annual measurable objectives in districts accountable for subgroups of English language learner students and students with disabilities, spring 2006	12
Tables	
1 Improvement status of Arizona’s 218 districts with multiple schools, entering 2006/07 school year	4
2 Arizona districts that failed an adequate yearly progress requirement but had no schools that failed the same requirement, 2005/06	5

3	Details for the 66 Arizona multiple-school districts that failed an adequate yearly progress requirement but had no schools that failed the same requirement, 2005/06 (number of multiple-school districts)	6
4	Distribution of Arizona students by 2006/07 school or district improvement status	7
5	Student demographics in Arizona's districts in improvement and districts not identified for improvement, 2005/06 (median percentage)	8
6	Median education expenditures and staffing rates in Arizona's districts in improvement and districts not identified for improvement	9
7	Most challenging 2005/06 adequate yearly progress requirements for Arizona's districts in improvement	11
B1	Arizona reading and math proficiency targets for grades 3–8 and 10, 2002–14 (percent)	19

This descriptive analysis provides a statistical profile of Arizona's lowest performing school districts, which can inform the context for district improvement as Arizona rolls out and refines its district intervention strategies.

WHY THIS STUDY?

The No Child Left Behind (NCLB) Act of 2001 calls for a two-part accountability system in each state—one part tracking schoolwide performance and the other districtwide performance. One goal of performing separate adequate yearly progress calculations at the school and district levels is to give educators—from practitioners to policymakers—a clear picture of where improvement efforts are needed so that every student may succeed. District-level accountability is the newer of the two education accountability elements, phased in nationwide beginning with the 2002/03 school year.

Because federal school accountability policies associated with Title I funding were in place even before the NCLB Act, the first Arizona schools were identified for improvement before the first Arizona districts were identified in 2004/05 (see box 1 for a discussion of key concepts under the NCLB Act). In 2002 Arizona legislated its statewide accountability system, AZ LEARNS, which focuses on school accountability and district responsibility for school and student performance but does not call for the aggregation of performance measures to the district level.

Not surprising, therefore, more is known about schools in need of improvement, and intervention efforts at the school level are largely defined and in place. Less understood are districts in need of improvement. For example, do districts in improvement—or districts not identified for improvement, for that matter—typically have the same adequate yearly progress status as the majority of their schools? If not, why might such inconsistencies occur? Do districts in improvement share some characteristics? How do they resemble or differ from other districts? In what areas do districts most commonly fail to make adequate yearly progress?

Answers to such questions can improve the understanding of local districts that have been identified as in need of improvement and can assist state education decisionmakers as they consider how best to support Arizona districts in need of improvement. This study provides a statistical profile of Arizona's Title I-funded districts (see box 1) in need of improvement. The report addresses two types of questions. One type concerns how the performance of districts in improvement (as defined under Arizona's district accountability rules) compares with that of their own schools (as defined under the state's school accountability rules). The other set of questions concerns common characteristics of districts in improvement, including how they compare with districts that are not identified for improvement. (For details on the data sources and methodology used to answer these questions, see box 2 and appendix A.)

BOX 1

Accountability under the No Child Left Behind Act: definitions of key concepts

The No Child Left Behind (NCLB) Act of 2001. The NCLB Act reauthorized the Elementary and Secondary Education Act, the central federal law in K–12 education. At its heart are new provisions to drive broad achievement gains, eliminate disparities between groups of students, and hold states, districts, and schools more accountable for performance and progress.

Title I. Title I is the section of the NCLB Act that governs resources for districts and schools serving disadvantaged student populations, including low-performing and high-poverty students. It includes accountability provisions for the academic performance of all students and subgroups of students (ethnic groups, low-income students, students with disabilities).

Adequate yearly progress. States must assess students annually in grades 3–8 and once in high school in mathematics and reading/language arts tests aligned with state academic standards. To make adequate yearly progress, schools and districts receiving Title I funds must meet participation and performance requirements on these tests and perform adequately on a state-determined “additional indicator.” In Arizona this indicator is the high school graduation rate and the elementary and middle school attendance rate. Performance requirements rise until they reach 100 percent proficiency in 2013/14. Performance goals are the same for all students.

Annual measurable objectives. Performance requirements in mathematics and reading/language arts are expressed as the percentage of students scoring at or above proficiency on tests aligned with state academic standards. Though the schedule varies by state, annual measurable objectives rise to 100 percent in 2013/14 in all states.

Safe harbor provision. The NCLB Act’s “safe harbor” provision is an alternative measure of adequate yearly progress. A school or district achieves adequate yearly progress by this measure if it reduces by at least 10 percent over the previous year the percentage of students in each subgroup that fails to score proficient or above.

Confidence intervals. Confidence intervals (calculations of the upper and lower limits between which there is “confidence” that a school or district’s true percentage falls) account for statistical uncertainty in the percentage of students scoring proficient. For example, if 69 percent of students in a school score proficient in mathematics, then depending on the number of students tested, the lower proficiency limit might be 63 percent and the upper limit 75 percent—a result that might be high enough to move the school above the annual measurable objectives target in mathematics. Including confidence intervals in accountability systems is intended to acknowledge random measurement errors in assessments and hold the entities affected harmless. Virtually all states use some form of confidence intervals (Chudowsky and Chudowsky 2005).

Another trend is the use of confidence intervals with safe harbor

provisions, which relaxes the 10 percent reduction rule since confidence intervals afford more leniency for smaller subgroups. Eight states added a 75 percent confidence interval for safe harbor in 2005, and nine states did so in 2004 (Chudowsky and Chudowsky 2007).

School and local education agency improvement and corrective action. Schools and districts that repeatedly fail to make adequate yearly progress face increasingly serious consequences from the state. In general, a school or district not making adequate yearly progress for two consecutive years in the same content area or accountability category is designated as in need of improvement. The 2004/05 school year marked the first year that districts were designated as in need of improvement nationwide, based on results for 2002/03 and 2003/04. A district in improvement that fails to make adequate yearly progress for two more years (advancing to Year 3 status) becomes subject to “corrective action,” which involves such sanctions as the deferment or reduction of state funds, replacement of district staff, removal of schools from the district’s jurisdiction, appointment of a trustee to run the district, or abolition or restructuring of the district. To exit district improvement, a district must meet all adequate yearly progress criteria for two years in a row.

To implement these provisions, each state had to submit an accountability plan to the federal government for review. Appendix B offers an overview of school and district accountability in Arizona.

BOX 2

Summary of methods and data sources

To generate a statistical profile of Arizona's districts in improvement, the research team acquired demographic, assessment, and accountability data from the Arizona Department of Education (2007a) School Effectiveness Division. Most data were provided in May 2007, with follow-up and revised data provided through August 2007.

The research team met with and called Department of Education staff to clarify any ambiguous data. Financial and staffing data and information about the rural-urban characteristics of districts were downloaded from the federal Common Core of Data maintained by the U.S. Department of Education, National Center for Education Statistics (U.S. Department of Education, National Center for Education Statistics 2007a,b). The

research team merged datasets to link key variables, and district and school characteristics were investigated using descriptive statistics, including frequency distributions, cross-tabulations, measures of central tendency (generally, the median), and measures of variability (for example, interquartile range). Appendix A offers further detail about the research questions, data sources, and methodology used in this study.

Although Arizona had 567 local education agencies in 2006/07, fewer than half were subject to Title I district accountability provisions because 349 (62 percent) of them were composed of a single school, often a charter school. Charter schools commonly constitute their own local education agency, legally and financially autonomous entities similar to school districts, but subject to Arizona's school improvement process rather than its district improvement process. (Charter school districts with more than one school are subject to district improvement rules.) Thus, only 218 districts were subject to the state's districtwide accountability rules.

All 218 districts, which together enrolled more than 940,000 students (93 percent of Arizona's public school population), received federal Title I funding and so were subject to district improvement if they failed to make adequate yearly progress for two straight years in the same content area or accountability category. These districts first became subject to improvement in the 2004/05 school year, based on accountability results from 2002/03 and 2003/04.

During 2004/05 all districts in improvement were in Year 1 status. Making adequate yearly progress determines whether districts in improvement advance to the next status in improvement. Districts in improvement that did not make adequate yearly progress during 2004/05 advanced to Year

2 status, while those that made adequate yearly progress maintained their Year 1 status. Entering the 2006/07 school year, 77 of Arizona's 218 districts (35 percent) were districts in improvement, and 141 (65 percent) were not (appendix C lists the Arizona districts in improvement in 2006/07). Of these 77, 45 were in Year 1 of district improvement, 7 were in Year 2, and 25 were in Year 3, or "corrective action" (table 1; see box 1 for more on corrective action).

The Year 1 cohort had not made adequate yearly progress for two consecutive years (in the same content area or accountability category), and the Years 2 and 3 cohorts had not made adequate yearly progress for three and four years running. The Arizona Department of Education began to intervene in corrective action districts during the 2006/07 school year. Of the 141 districts not identified for improvement, 84 made adequate yearly progress in 2005/06, and 57 did not. Of the districts not identified for improvement, 23 did not accept Title I funding in 2005/06 but had done so in previous years (see notes to table 1).

For districts in improvement in Year 1 or Year 2 Arizona's district improvement process involves self-assessments using Arizona Department of Education-developed

Although Arizona had 567 local education agencies in 2006/07, fewer than half were subject to district accountability because 349 were composed of a single school

TABLE 1

Improvement status of Arizona's 218 districts with multiple schools, entering 2006/07 school year

Status	Number	Percent of total
Districts in improvement	77	35.3
Year 1 status (not making adequate yearly progress for two consecutive years)	45	20.6
Year 2 status (not making adequate yearly progress for three consecutive years)	7	3.2
Year 3 status (not making adequate yearly progress for four consecutive years—in corrective action)	25	11.5
Districts not identified for improvement	141	64.7
Made adequate yearly progress in 2005/06 ^a	84	38.5
Warning: did not make adequate yearly progress in 2005/06 ^b	57	26.1
Total	218	100.0

a. Includes 16 districts that did not accept Title I funding in 2005/06 but had done so in previous years.

b. Includes 7 districts that did not accept Title I funding in 2005/06 but had done so in previous years.

Source: Authors' analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

In Arizona 77 (35 percent) of the 218 multiple-school districts included in the district accountability system were in improvement in 2006/07 and enrolled more than 610,000 (60 percent) of the 1.01 million public school students in the state

standards and rubrics (Arizona Department of Education 2007b). Districts in corrective action (Year 3) receive more intensive interventions from a team of Arizona Department of Education staff focused on the areas in which the districts have fallen short of adequate yearly progress. These differentiated support teams may include representatives from such state programs as School Improvement and State Intervention, Special Education, and English Acquisition Services. The state officials offer direct guidance and technical assistance to help districts develop and implement a district improvement plan. Beginning with the 2007/08 school year, districts in improvement Year 1 or Year 2 were to also receive improvement grants from a \$498,000 fund. Year 1 districts

were to receive \$25,000, and Year 2 districts were to receive \$11,000. Districts in corrective action receive nothing under this program.

FINDINGS OF THE STUDY

In Arizona 77 (35 percent) of the 218 multiple-school districts included in the district accountability system were in improvement in 2006/07,

and districts in improvement enrolled more than 610,000 (60 percent) of the 1.01 million public school students in the state. Just over one in eight students enrolled in a district in improvement (about 81,000 altogether) was also enrolled in a school in improvement.

Districts in improvement differed from the 141 multiple-school districts not identified for improvement in many ways. They were generally larger, with more schools and students—13 of the 17 largest districts were in improvement in 2006/07. Districts in improvement were more likely to be in cities or urban fringe areas than in towns or rural areas. And they had higher proportions of Hispanic, American Indian, English language learner, and socioeconomically disadvantaged students and lower proportions of White students than did districts not identified for improvement.

A key finding of the study is that the district level of Arizona's NCLB-driven accountability system is identifying problems that are missed at the school level. In 2005/06, the year on which the 2006/07 district in improvement designations were based, 66 districts (39 of them districts in improvement) failed to make adequate yearly progress on at least one requirement, even though all their schools made adequate yearly progress

on that same requirement. In addition, seven districts failed to make adequate yearly progress in the aggregate even though not one school in those districts did. In 2006/07, 24 districts in improvement had no schools in improvement. In these cases districts were being held accountable for student subgroups whose performance was not tracked by school-level accountability rules because there were too few students in the subgroup at each school to meet the minimum subgroup size (40 or more) for reporting under the NCLB Act.

In 2006/07, 24 districts in improvement had no schools in improvement

if none or only a few of its schools are in improvement status. In 2006/07, 24 districts in improvement had no schools in improvement.

There are two reasons why districts might not meet an adequate yearly progress requirement when all of their schools do: districts are held accountable for students who are not enrolled for a full academic year, and individual schools may have too few students in a given subgroup to be held accountable for its progress. In Arizona a school with fewer than 40 students in a subgroup is not held accountable for the test participation or performance of students in that subgroup. But when the numbers of students in that subgroup at each school are aggregated at the district level, the districtwide subgroup size may be large enough for an adequate yearly progress determination.

The district accountability system monitored the progress of many students that the school accountability system did not have to monitor

Can a district fail to make adequate yearly progress even if all of its schools make adequate yearly progress? Though this may seem counterintuitive, separate calculations at the school and district levels mean that the answer is yes. The study found inconsistencies in accountability between districts and their schools at multiple levels of analysis, from discrepancies between districts and their schools in making adequate yearly progress on individual requirements to discrepancies in making adequate yearly progress overall and discrepancies in improvement status.

The tendency for the district accountability element to pick up students that are missed by the school-level accountability system was most pronounced for students with disabilities (table 3).

In Arizona making adequate yearly progress overall is the result of satisfying up to 37 requirements. In 2005/06, the year on which the 2006/07 district in improvement designations were based, 66 (30 percent) of the state’s 218 districts failed to make adequate yearly progress on at least one adequate yearly progress requirement, even though all of their schools made adequate yearly progress on (or were not accountable for) that requirement (table 2). In 7 of these 66 districts all of the schools met all the adequate yearly progress requirements or were not held accountable for them (not shown in table). Collectively, these 66 districts—39 of them in district improvement at the time—enrolled just under half a million students (53 percent of enrollment in the 218 districts). A district may be designated as in need of improvement even

TABLE 2
Arizona districts that failed an adequate yearly progress requirement but had no schools that failed the same requirement, 2005/06

Category	Number	Percent of multiple-school districts
Districts with district-school inconsistencies	66	30
Districts in improvement	39	18
District not identified for improvement	27	12
Student enrollment in these districts	495,638	53

Note: Includes only the 218 multiple-school districts, with 941,289 students; does not include the 349 single-school districts with 70,266 students because they are subject only to school, not district accountability.

Source: Authors’ analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

Of Arizona's 218 multiple-school districts, 21 (10 percent) did not meet the English language arts annual measurable objective proficiency target for their students with disabilities subgroup in 2005/06, even though none of their schools failed in this area.

In other accountability categories for this subgroup 20 districts had similar inconsistencies for the mathematics proficiency target, 9 districts for the English language arts participation rate, and 11 districts for the mathematics participation rate

(61 district-school inconsistencies in total). Some districts have more than one of these inconsistencies. Taken together, 33 multiple-school districts (15 percent) failed to meet one or more of the adequate yearly progress requirements for their students with disabilities subgroup, even though none of their schools failed to meet the same requirement. (This unduplicated count cannot be derived directly from table 3.) These types of inconsistencies also were evident, though less common, across other subgroups and adequate yearly progress requirements (see table 3).

TABLE 3

Details for the 66 Arizona multiple-school districts that failed an adequate yearly progress requirement but had no schools that failed the same requirement, 2005/06 (number of multiple-school districts)

Adequate yearly progress requirement	English language arts	Mathematics	Other
Annual measurable objective proficiency target			
Students with disabilities	21	20	na
English language learner students	7	7	na
Students eligible for free or reduced-price lunch	4	0	na
Hispanic students	3	2	na
Black students	2	2	na
American Indian students	1	1	na
School- or districtwide ^a	2	1	na
Participation rate			
Students with disabilities	9	11	na
English language learner students	5	3	na
Students eligible for free or reduced-price lunch	2	3	na
Hispanic students	2	1	na
Black students	0	3	na
American Indian students	5	3	na
White students	2	2	na
Asian students	1	0	na
School- or districtwide ^a	6	7	na
Additional indicator			
Graduation rate ^b	na	na	4

na is not applicable.

Note: Includes both districts in improvement and districts not identified for improvement. Totals (not shown) exceed 66 because some districts had district-school inconsistencies in more than one category.

a. This discrepancy generally reflects students who are not enrolled in a school for a full academic year and so who are not counted at the school level but are accounted for at the district level.

b. This discrepancy reflects high schools too small to be accountable for the graduation rate requirement and students who are not enrolled in a school for a full academic year and so are not counted at the school level but are accounted for at the district level.

Source: Authors' analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

Districts in improvement included large numbers of students enrolled in schools that were not identified for improvement

In 2006/07 Arizona’s 77 districts in improvement enrolled more than 610,000 students. One in eight students (about 81,000 overall) enrolled in a district in improvement was also enrolled in a school in improvement (table 4, column 1). Across the 141 Arizona districts that were not identified for improvement, however, only about 1 in 69 students (4,805 of 329,800) attended a school in need of improvement (table 4, column 2).

Furthermore, compared with Arizona’s districts not identified for improvement, its districts in improvement oversaw more schools in improvement (per district and overall), and those schools tended to be in a more advanced accountability status (facing more severe sanctions) than schools in other districts. Of the 58 Arizona schools in corrective action in 2006/07, 55 (94.8 percent) were in districts in improvement.

Districts in improvement tended to be larger than other districts, and more urban

In 2006/07, 13 of the state’s 17 largest districts (including 7 of the 10 largest) were districts in

improvement. Furthermore, of these 13 large districts in improvement are 9 of the 25 Arizona districts that have been in district improvement status long enough to be in corrective action.

In general, Arizona’s districts in improvement had more schools and higher student enrollments than districts not identified for improvement. In 2006/07 the median number of schools and students in districts in improvement was 5 schools and 3,014 students, compared with 3 schools and 727 students in other districts.¹

The distribution of districts in improvement and districts not identified for improvement was similar by district locale based on four categories: city, urban fringe, town, and rural.² But when the two urban and rural areas are combined, 63 percent of districts in improvement were located in city or urban fringe areas in 2004/05, compared with 49 percent of other districts (figure 1).

School districts in Arizona are categorized as unified, elementary, high school, accommodation,³ or

TABLE 4
Distribution of Arizona students by 2006/07 school or district improvement status

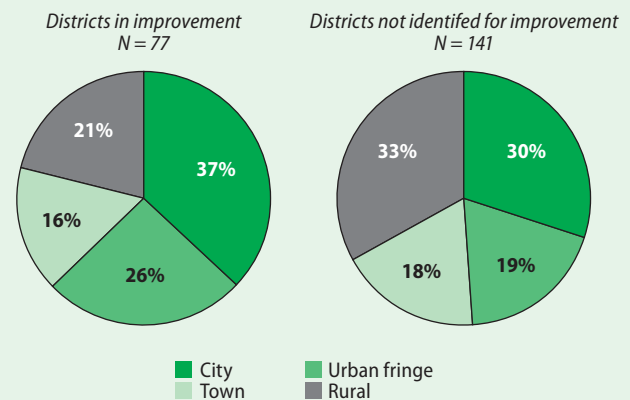
	Districts in improvement	Districts not identified for improvement	Total
Schools in improvement	81,327	4,805	86,132
Schools not identified for improvement	530,162	324,995	855,157
Total	611,489	329,800	941,289

Note: Does not include the 70,266 students who were enrolled in the 349 single-school districts, which are subject only to school, not district accountability.

Source: Authors’ analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

FIGURE 1

Distribution of Arizona’s districts in improvement and districts not identified for improvement by locale, 2004/05



Note: Totals may be less than 77 for districts in improvement and less than 141 for districts not identified for improvement because of missing data.

Source: Authors’ analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007 for districts in improvement and U.S. Department of Education, National Center for Education Statistics 2007b for locale.

charter, and their distribution by these categories differs for districts in improvement and districts not identified for improvement. Elementary school districts make up 34 percent of all districts in improvement status in 2006/07 but 13 percent of districts not identified for improvement. Charter districts, by contrast, make up 14 percent of districts in improvement but 39 percent of districts not identified for improvement. Unified districts make up 47 percent of districts in improvement and 41 percent of districts not identified for improvement. High school districts make up 4 percent of both groups. Accommodation districts make up 1 percent of districts in improvement and 3 percent of districts not identified for improvement.

Districts in improvement had different student demographics than did other districts

In 2005/06 Arizona’s districts in improvement had more minority subgroups, more English language learner students, and more students eligible for free or reduced-price lunch than did districts not identified for improvement. The median percentage of White students in districts not identified for improvement (62.7 percent) was about three times the median percentage in districts in improvement (20.6 percent; table 5). Moreover, the median percentage of English language learner students was about four times higher in districts in improvement (13.6 percent) than in other districts (3.2 percent). Similarly, the median percentage of Hispanic students was nearly twice as high in districts in improvement (46.8 percent) as in other districts (25.3 percent), and the median percentage of students eligible for free or reduced-price lunch was also higher in districts in improvement (64.8 percent) than in other districts (36.9 percent).

Notably, however, the median percentage of students with disabilities is similar in districts in improvement (12.0 percent) and in other districts (11.8 percent).

In 2005/06 Arizona’s districts in improvement had more minority subgroups, more English language learner students, and more students eligible for free or reduced-price lunch than did districts not identified for improvement

TABLE 5

Student demographics in Arizona’s districts in improvement and districts not identified for improvement, 2005/06 (median percentage)

Subgroup	Districts in improvement	Districts not identified for improvement
Race/ethnicity		
White	20.6 (2.3–44.4)	62.7 (41.6–75.7)
Hispanic	46.8 (15.6–75.2)	25.3 (14.7–45.1)
African American	3.3 (1.1–7.5)	2.7 (1.1–6.3)
Asian	1.1 (0.4–2.3)	1.4 (0.6–2.4)
American Indian	4.0 (1.2–27.2)	1.8 (1.0–5.0)
Number of districts	69	121
Student subgroup		
English language learner students	13.6 (6.2–34.1)	3.2 (0.0–8.1)
Students eligible for free or reduced-price lunch	64.8 (38.6–82.2)	36.9 (14.0–58.9)
Students with disabilities	12.0 (10.6–14.4)	11.8 (8.9–14.8)
Number of districts	77	139

Note: Numbers in parentheses are the spread of values from the 25th to the 75th percentiles, which give a sense of how districts vary within each group.

Source: Authors’ analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

Staffing rates and instructional and support services expenditures varied little between districts in improvement and other districts

A review of the median district characteristics reveals little difference between districts in improvement and other districts in staffing rates and expenditures. The two types of districts had similar per student instructional and support services expenditures, although districts in improvement had higher noninstructional expenditures, with median expenditures (\$338) exceeding the 75th percentile for districts not identified for

improvement (table 6). Districts in improvement also had fewer district administrators than did other districts, with a median of 0.5 district administrator per 1,000 students (the 25th percentile for other districts), compared with 1.0 district administrator per 1,000 students in other districts (the 75th percentile for districts in improvement). It is important to note, however, that staffing data were not available for all districts but only for 66 of 77 districts in improvement and 85 of 144 districts not in improvement.

Districtwide academic performance for slightly more than half of districts in improvement was above the annual measurable objectives in 2005/06

Not unexpected, student test performance tended to be higher in districts not identified for improvement than in districts in improvement. The median percentage of students who scored proficient or above on the spring 2006 statewide English language arts test was 52.4 percent among districts in improvement and 70.6 percent among districts not identified for improvement. In mathematics the median proficiency rates were 54.7 percent among districts in improvement and 68.2 percent among other districts (figure 2).

These median district-level percentages were above most of the applicable statewide grade-level annual measurable objectives (listed in table B1 in appendix B). However, districtwide annual measurable objectives represent only two of the state's 37 adequate yearly progress criteria. A district could have failed to make adequate yearly progress based on some of these other criteria. Furthermore, if there was no improvement in these district-level proficiency rates in spring 2008, the median English language arts proficiency level among districts in improvement (52.4 percent) would fall below about half the annual measurable objectives for grades 3, 5, and 8 and be just above the other half for grades 4, 6, 7, and 10. Thus, although the annual measurable objectives were relatively low in the first years of NCLB implementation, Arizona's districts have no "cushion" remaining; increasing numbers of students must move to proficiency

TABLE 6

Median education expenditures and staffing rates in Arizona's districts in improvement and districts not identified for improvement

Expenditure and staffing	Districts in improvement	Districts not identified for improvement
Expenditures per student, 2003/04 (dollars)		
Instructional ^a	3,292 (2,757–4,399)	3,344 (2,458–4,161)
Noninstructional ^b	338 (240–446)	256 (0–336)
Support services ^c	2,456 (1,942–3,586)	2,323 (1,709–3,231)
Number of districts	77	138
Staffing per 1,000 students, 2004/05		
Teachers	53.5 (50.2–63.8)	58.4 (51.6–65.3)
School administrators	2.7 (2.0–3.5)	2.9 (2.2–4.1)
District administrators	0.5 (0.3–1.0)	1.0 (0.5–2.1)
Instructional coordinators and supervisors	0.3 (0.0–0.8)	0.2 (0.0–0.5)
Guidance counselors	1.4 (0.7–2.3)	1.4 (0.7–2.1)
Number of districts	66	85

Note: Numbers in parentheses are the spread of values from the 25th to the 75th percentiles, which give a sense of how districts vary within each group.

a. Current expenditures for activities directly associated with the interaction between teachers and students, including teacher salaries and benefits, supplies (such as textbooks), and purchased instructional services.

b. Composed predominantly of food services and enterprise operations, such as bookstores and interscholastic athletics.

c. Incorporates student support services, instructional staff support, general administration support services, school administration support services, operations and maintenance, student transportation support services, and other support services.

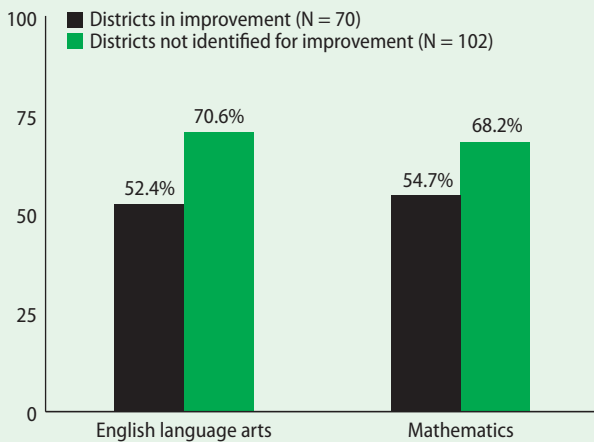
Source: Authors' analysis based on data from U.S. Department of Education, National Center for Education Statistics 2007a.

now or a larger number of districts will fail to make adequate yearly progress.

Districts in improvement that make adequate yearly progress for two years in a row can exit

FIGURE 2

Median percentage of students scoring proficient or above in Arizona's districts in improvement and districts not identified for improvement, spring 2006



Source: Authors' analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

the program. However, none of Arizona's 77 districts in improvement made adequate yearly progress in 2005/06, while 84 of 141 (59.6 percent) districts not identified for improvement did so. Most of both the districts in improvement and the districts not identified for improvement that failed to make adequate yearly progress in 2005/06 fell short in multiple areas. Of the 57 districts not identified for improvement that failed to make adequate yearly progress, 36 (63.2 percent) fell short in more than one area. Among the 77 districts in improvement 69 (89.6 percent) failed to make adequate yearly progress due to multiple problem areas. By far the most challenging requirements for them were the English

language arts proficiency targets for subgroups of students who are English language learner students and students with disabilities and the mathematics proficiency target for students with disabilities: more than 75 percent of districts in improvement accountable for these subgroups failed to meet these objectives (table 7).

None of Arizona's 77 districts in improvement made adequate yearly progress in 2005/06, while 84 of 141 districts (59.6 percent) not identified for improvement did so

Districts in improvement tended to be held accountable for more subgroups than did other districts and to have lower proficiency rates for some subgroups

About 1 in 6 (16 percent) of Arizona's districts not identified for improvement enrolled enough English language learner students (40) to be held accountable for the performance and participation rate of this subgroup in 2005/06. About the same percentage (17 percent) enrolled enough students with disabilities to be held accountable for the performance of that subgroup. More districts in improvement had enrollment rates high enough to be held accountable for the test performance of these subgroups in 2005/06, at 61 percent for English language learner students and 52 percent for students with disabilities.

These discrepancies highlight the difficult adequate yearly progress path of the districts in improvement, with their larger and more diverse student populations, on average. Districts with more criteria to meet are less likely to meet their proficiency targets (Novak and Fuller 2003). While all districts must meet the needs of the diverse students they enroll, districts in improvement, generally, are held accountable for meeting the needs of a broader array of students.

Subgroups of English language learner students and students with disabilities in Arizona's districts not identified for improvement met annual measurable objective targets in higher percentages in 2005/06 than did corresponding subgroups in districts in improvement (figure 3). This result is not surprising, since districts come to be in improvement because large percentages of key groups are not proficient. (Note that low participation and graduation rates are other reasons why districts may be identified for improvement.) Of the 22 districts not identified for improvement accountable for the performance of an English language learner subgroup, 9 (41 percent) met the English language arts annual measurable objective. Of the 47 districts in improvement accountable for this subgroup, 8 (17 percent) did. Subgroups of English language learner students met the mathematics objective in 16 of 21 (76 percent)

TABLE 7

Most challenging 2005/06 adequate yearly progress requirements for Arizona's districts in improvement

Adequate yearly progress requirement	Number of districts in improvement held accountable for requirement ^a	Percentage of districts accountable that did not meet requirement
English language arts annual measurable objectives target for students with disabilities subgroup	40	88
English language arts annual measurable objectives target for English language learner students subgroup	47	83
Mathematics annual measurable objectives target for students with disabilities subgroup	40	78
English language arts annual measurable objectives target for American Indian students subgroup	26	58
Mathematics annual measurable objectives target for English learner students subgroup	46	57
Mathematics test participation for students with disabilities subgroup	51	43
Mathematics annual measurable objectives target for American Indian students subgroup	26	42
English language arts annual measurable objectives target for socioeconomically disadvantaged students subgroup	61	39
English language arts annual measurable objectives target for all students	72	39
English language arts test participation for students with disabilities subgroup	50	38
Mathematics test participation for socioeconomically disadvantaged students subgroup	68	34
English language arts annual measurable objectives target for Hispanic students subgroup	51	33
Mathematics annual measurable objectives target for all students	71	30
Districtwide graduation rate	46	28
Mathematics annual measurable objectives target for socioeconomically disadvantaged students subgroup	62	27
English language arts test participation for American Indian students subgroup	31	26
Mathematics test participation for American Indian students subgroup	31	26

a. Districts with a sufficient subgroup size to be held accountable for the specific adequate yearly progress requirement in 2005/06. (Appendix B provides further details about Arizona's minimum subgroup sizes.)

Source: Authors' analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

districts not identified for improvement and in 20 of 46 (43 percent) districts in improvement.

Districts in improvement and districts not identified for improvement exhibited performance differences among students with disabilities as well. Of the 24 districts not identified for improvement that were held accountable for the performance of the students with disabilities subgroup in 2005/06, 15 (63 percent) met the English language arts annual measurable objective for this subgroup, while 5 of 40 (13 percent)

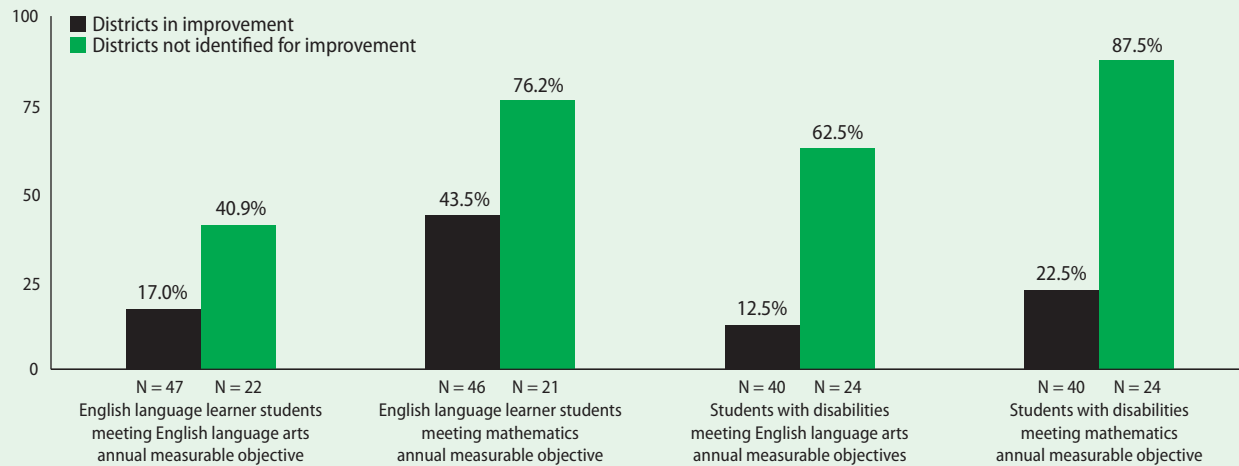
districts in improvement did. Of the 24 districts not identified for improvement, 21 (88 percent) met the mathematics annual measurable objective, while 9 of 40 (23 percent) districts in improvement did.

LIMITATIONS OF THE STUDY

The aim of this study was to document basic descriptive information about Arizona districts in improvement and compare them with other

FIGURE 3

Percentage of students meeting annual measurable objectives in districts accountable for subgroups of English language learner students and students with disabilities, spring 2006



Source: Authors' analysis based on data from Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007.

districts. As a result, the study relied on publicly available demographic, assessment, accountability, financial, and staffing data. Although this report documents the performance differences for certain subgroups that relate to—and in some cases drive—improvement status, the reasons for the performance differences cannot be determined with the data available to this study. Students may differ in important ways in districts in improvement and in districts not identified for improvement, including initial achievement before entering the district and access to resources outside of school that support learning and achievement. Thus, the reasons for the observed differences in performance cannot be identified in this study.

IMPLICATIONS FOR RESEARCH AND PRACTICE

To inform the state's nascent district-level intervention process, this study combines data analysis and document review, along with clarifying discussions with state education officials, to identify distinguishing characteristics of Arizona's districts in improvement. More than 60 percent of Arizona's Title I multiple-school districts (134 of 218) did not make adequate yearly progress in 2005/06, and none of the state's districts in

improvement did so. With statewide annual measurable objective proficiency targets due to increase several times before 2013/14, it is likely to become increasingly difficult for districts to meet adequate yearly progress (Linn, Baker, and Betebenner 2002).

Arizona's districts in improvement face particularly tough challenges. Compared with districts not identified for improvement, they are accountable for more subgroups, including more subgroups of English language learner students and students with disabilities, and they do not meet proficiency targets for these subgroups as often. These subgroup designations do not capture all that is relevant about these student populations, however. More careful study of the differences between student populations in districts in improvement and other districts, especially within the same subgroup designation, could shed additional light on the differences in academic performance across school districts.

The use of primary data (perhaps collected through surveys or targeted interviews) could offer more nuanced insights on certain key issues, including whether and how the education needs of students in districts in improvement and districts not

identified for improvement differ from each other. A future study could explore differences in support for subgroups, including whether districts not identified for improvement are employing useful education strategies or offering more specialized support that might be transferable to districts in improvement. Differences in the education needs of students in different types of districts could also be studied to see whether these subgroups face additional challenges in districts in improvement.

Because of the many district-school discrepancies in the adequate yearly progress areas related to students with disabilities, the state might consider focusing its district-level interventions on coordinating special education services across schools.

The discovery that 23 districts declined Title I funds in 2005/06, after having received them in previous years (see notes to table 1), could be interesting to examine, particularly if these decisions were attempts to avoid Title I accountability.

Furthermore, as accountability rules and intervention approaches are shaped by NCLB reauthorization, an update of this study once these areas are defined in reauthorization would be both appropriate and useful.

Compared with districts not identified for improvement, Arizona's districts in improvement are accountable for more subgroups, and they do not meet proficiency targets for these subgroups as often

NOTES

1. The median values are the 50th percentile for the given characteristic. Equal numbers of districts have higher and lower values. The median is used in this report because extreme values—such as those associated with the Mesa or Tucson Districts, Arizona’s two largest—can skew the average. For more information, see the Arizona Department of Education’s *Standards*.
2. The U.S. Census Bureau uses eight location (locale) codes to delineate the urban and rural characteristics of school districts. For this analysis these codes were merged into four more general density classifications: city (large city and mid-size city); urban fringe (urban fringe of large city and urban fringe of mid-size city); town (large town and small town); and rural (rural, outside core-based statistical area, and rural, inside core-based statistical area).
3. Accommodation districts provide alternative education programs or education services to students who are homeless, in juvenile detention centers, or on military reservations.

APPENDIX A

RESEARCH QUESTIONS, DATA SOURCES, AND METHODOLOGY

The West Regional Educational Laboratory research team began the study with two guiding sets of questions. The first set concerned the characteristics of districts in improvement. Key questions included:

- What is the distribution of districts in improvement by district size and density, improvement status, and overall achievement levels?
- What are the demographic features of the student populations in districts in improvement?
- What type and amount of staff support is available in districts in improvement? How are financial resources spent in these districts?

The second set of questions looked within districts and was concerned with divergences between the school- and district-level accountability systems. Key questions included:

- What percentage of students in districts in improvement are enrolled in schools in improvement? What percentage of students in districts in improvement are enrolled in schools that have been in improvement for more than five years (and are therefore now in corrective action)?
- How common is it for a district to have an accountability status that differs from the schools in the district?
- What accountability provisions are related to inconsistencies between the reasons for 2005/06 adequate yearly progress classifications of districts and of schools in those districts?

To begin to address these questions, the research team acquired state data directly from the Arizona Department of Education's School Effectiveness

Division. The team made a handful of follow-up calls to Arizona Department of Education staff to clarify data elements or findings that were ambiguous or unclear in some way. In addition, financial and staffing data were downloaded from the federal Common Core of Data maintained by the National Center for Education Statistics (U.S. Department of Education, National Center for Education Statistics 2007a,b).

From the outset it was evident that answering the research questions would not require advanced statistics. Judicious application of basic statistics, including a number of descriptive analyses, would be sufficient. The specific statistical approach used to address each research question is described below.

Characteristics of identified districts

For each adequate yearly progress requirement the research team tallied the number of districts that met, failed to meet, or were not bound by the requirement in 2006/07. The counts of districts that did not meet adequate yearly progress for a single reason and for multiple reasons were also determined. The team summarized the distribution of districts in improvement by status and size.

Characteristics of student populations

Using simple descriptive statistics, the research team examined differences between the distributions of districts in improvement and other districts on student demographic characteristics, such as 2004/05 ethnic composition and the percentages of English language learner students, students with disabilities, and socioeconomically disadvantaged students in 2005/06. The investigations included a measure of central tendency (median) and a measure of variability (interquartile range).

Staff support and expenditures

Using 2004/05 staffing data available from the Common Core of Data (U.S. Department of Education, National Center for Education Statistics

2007b) and the Arizona Department of Education (2007a), the research team created a merged dataset that linked district in improvement status to variables such as student–teacher ratio, student–guidance counselor ratio (for high schools), and teacher experience. Additionally, by examining financial information from the Common Core of Data, the team also explored the percentage of annual budget spent on supplemental instruction (U.S. Department of Education, National Center for Education Statistics 2007a).

Prevalence of school improvement and corrective action

By merging state agency lists of schools and districts in improvement with school-level data, the team was able to analyze and describe the prevalence of school improvement and school-level corrective action in 2006/07.

Accountability inconsistencies

The analysis of district-school adequate yearly progress inconsistencies involved looking for divergent performance at the district and school levels in 2005/06. An “inconsistency” was defined as a district not making adequate yearly progress for any given adequate yearly progress requirement when each school within the district either met the requirement or was not held accountable for it.

First, the research team created a categorical variable for each adequate yearly progress requirement at the district level. District values were defined as

- *None*, where at least one school in the district did not meet the requirement, and the remaining schools either did not meet the requirement or were not accountable for it.
- *Some*, where at least one school in the district did not meet the requirement, and at least one school met the requirement.
- *All*, where all schools in the district met the requirement, were not accountable for it, or both.

Then, for each adequate yearly progress requirement these categorical values were cross-tabulated with the district’s adequate yearly progress determination (Met, Did not meet, or Not applicable), and the research team examined situations where all schools in the district met the requirement (or were not held accountable for it) but the district did not meet the requirement, the *All–Did Not Meet* cell of the table.

Reasons for apparent inconsistencies

Once the inconsistencies associated with each 2005/06 adequate yearly progress requirement were identified, the research team investigated the context associated with the anomalies, exploring district in improvement status, locale, and student enrollment information.

Additional measures

The following additional measures were also used:

- *Improvement status*. Lists of districts in improvement and the schools in those districts were obtained from the Arizona Department of Education (2007a). The data represent district in improvement status entering the 2006/07 school year.
- *Academic performance*. Academic performance for 2005/06 was measured by the statewide assessments used in accountability reporting and in the determinations of adequate yearly progress. Measures were accessed through state datasets (Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007).
- *Budget information*. The research team obtained district spending on supplemental instruction and other major budget categories by analyzing budget information in the Common Core of Data (U.S. Department of Education, National Center for Education Statistics 2007a). These data reflect spending during the 2003/04 school year, one of

the recent years in which the districts in improvement failed to meet adequate yearly progress.

- *Sociodemographic variables.* The following sociodemographic compositional variables were examined for districts and for schools in districts in improvement: enrollment, percentage

of students receiving free or reduced-price lunch, percentage of English language learner students, percentage of students with disabilities, and racial/ethnic composition. These data were obtained from state datasets (Arizona Department of Education, School Effectiveness Division, personal communication, May 3, 2007).

APPENDIX B

SUMMARY OF ARIZONA'S DISTRICT ACCOUNTABILITY SYSTEM

This summary describes key components of Arizona's accountability system. It is drawn from the *State of Arizona consolidated state application accountability workbook*, last amended on May 21, 2007 (U.S. Department of Education 2007).

AZ LEARNS and adequate yearly progress

Arizona legislated its statewide accountability system, AZ LEARNS, in 2002 in response to state accountability issues and to meet the requirements of the No Child Left Behind (NCLB) Act of 2001. The state uses Arizona's Instrument to Measure Standards (AIMS) for adequate yearly progress purposes in grades 3–8 and 10. To make adequate yearly progress in Arizona, all Title I-funded districts, schools, and numerically significant student subgroups (at least 40 students) must meet or exceed state annual measurable objectives in reading/English language arts and mathematics, demonstrate a participation rate of 95 percent or higher on statewide exams, and demonstrate a 90 percent attendance rate (for elementary and middle schools) or a 71 percent high school graduation rate (or a 1 percentage point improvement over the previous year's attendance or graduation rate). A district that fails to meet its annual measurable objectives can still make adequate yearly progress if the safe harbor provision applies: if the district reduces its percentage of nonproficient students by 10 percent over the previous year and also meets the attendance or graduation rate target requirements.

The Arizona Department of Education uses a 99 percent confidence interval for all subgroups, schools, and districts to ensure that its adequate yearly progress determinations are valid and reliable. To obtain valid group sizes for districts and schools with fewer than 40 students, the Arizona Department of Education aggregates data by subject and grade level over the most recent three years. (This is done for both proficiency and participation rate determinations.)

Arizona's Title I-funded school districts are identified for improvement when they fail to make adequate yearly progress for two consecutive years, either in the same content area (performance or participation rate) for any numerically significant subgroup or on attendance or graduation rate targets. Districts enter Year 1 of improvement if they have failed to make adequate yearly progress in the previous two years. If Year 1 districts in improvement make adequate yearly progress, they remain in Year 1 status the following year, but can exit improvement if they make adequate yearly progress that next year. If Year 1 districts in improvement fail to make adequate yearly progress, they move into Year 2 status. As in the case of schools, districts exit improvement status after two consecutive years of making adequate yearly progress in the area or areas that put them in improvement in the first place, a rule that applies at any point in the improvement continuum.

Arizona state law supports two options for corrective actions or local education agency sanctions. The state may defer programmatic funds or reduce administrative funds or institute and fully implement a new curriculum based on state and local academic content and achievement standards. This second option includes providing appropriate research-based professional development for all relevant staff. The new curriculum and professional development must offer substantial promise of improving education achievement for low-achieving students. It should also be noted that the Arizona Department of Education has opted to assist local education agencies in redirecting the use of programmatic funds, rather than deferring the funds.

Annual measurable objective proficiency baselines and intermediate goals

Arizona calculated its starting points for adequate yearly progress by ranking all schools in descending order by the percentage of students in each grade and subject combination that achieved proficiency on the AIMS. Enrollment counts were

matched to each school, and the starting points were set at the 20th percentile for student enrollment. For grades 3, 5, 8, and 10 this estimate was based on 2001/02 data; for grades 4, 6, and 7 the baseline year was 2004/05. From these starting points the state set intermediate goals that increased in equal increments, reaching 100 percent proficiency in 2013/14 (table B1).

Adequate yearly progress participation rate

To make adequate yearly progress, Arizona districts with at least 40 students enrolled on testing day must ensure that at least 95 percent of those students complete the test. However, the state provides some flexibility in this area. If the

district falls below 95 percent, Arizona calculates a weighted average of the participation rate for the current and previous two years. If the weighted average is 95 percent or higher, the district meets the adequate yearly progress requirement. For small districts that do not have 40 students enrolled in any grade, the state applies the 95 percent participation rate to all subgroups that have a total of 40 students enrolled over the most recent three years.

Adequate yearly progress subgroups

For districts and schools the minimum number of students required for publicly reporting test data is 10 students, and the minimum group

TABLE B1

Arizona reading and math proficiency targets for grades 3–8 and 10, 2002–14 (percent)

Grade and assessment	2002–04	2005–07	2008–10	2010/11	2011/12	2012/13	2013/14
Grade 3							
Reading	44.0	53.3	62.6	71.9	81.2	90.5	100.0
Math	32.0	43.3	54.6	65.9	77.2	88.5	100.0
Grade 5							
Reading	32.0	43.3	54.6	65.9	77.2	88.5	100.0
Math	20.0	33.3	46.6	59.9	73.2	86.5	100.0
Grade 8							
Reading	31.0	42.5	54.0	65.5	77.0	88.5	100.0
Math	7.0	22.5	38.0	53.5	69.0	84.5	100.0
Grade 10							
Reading	23.0	35.8	48.6	61.4	74.2	87.0	100.0
Math	10.0	25.0	40.0	55.0	70.0	85.0	100.0
	2002–05	2006–08	2009–11	2011/12	2012/13	2013/14	2014/15
Grade 4							
Reading	na	45.0	56.0	67.0	78.0	89.0	100.0
Math	na	54.0	63.2	72.4	81.6	90.8	100.0
Grade 6							
Reading	na	45.0	56.0	67.0	78.0	89.0	100.0
Math	na	43.0	54.4	65.8	77.2	88.6	100.0
Grade 7							
Reading	na	49.0	59.2	69.4	79.6	89.8	100.0
Math	na	48.0	58.4	68.8	79.2	89.6	100.0

na is not applicable.

Source: U.S. Department of Education (2007, p. 31).

size for accountability purposes is 40 students. Students with disabilities participate in AZ LEARNS either by receiving accommodations on the presentation format of the regular AIMS test or by taking the state's alternative assessment, AIMS Form A. The scores for students who take the standard AIMS test with accommodations are included with the results of students who take the test without accommodations. AIMS Form A, which assesses an alternative set of standards, is administered only to students with significant cognitive disabilities.

All English language learner students are required to participate in AIMS, but if they have attended schools in the United States for less than 12 months, their scores on English language arts tests are not included in adequate yearly progress determinations. English language learner students who have become proficient are included in the English language learner subgroup for two additional years, but they are not included in any evaluation of subgroup size.

Additional indicators

Arizona's additional adequate yearly progress indicators are attendance rate at the elementary and middle school levels and graduation rate at the high school level. The attendance rate is calculated by dividing average daily attendance by average daily membership in the school or district; the statewide attendance target for adequate yearly progress is 90 percent. Arizona's four-year graduation rate is derived by dividing the sum of four-year graduates (as defined by the Arizona Department of Education) by the original cohort membership at the start of grade 9, plus net transfers in, minus deceased students who were in the cohort. Students who receive a diploma in the summer after their fourth year of high school are included in the graduating cohort. The statewide graduation rate target for adequate yearly progress is 71 percent. Schools and districts that fall short of these targets can still meet these additional adequate yearly progress indicators if they demonstrate a 1 percentage point improvement over the previous year.

APPENDIX C
THE 77 ARIZONA DISTRICTS IN
IMPROVEMENT IN 2006/07

The 39 districts displayed in bold type missed an adequate yearly progress requirement in 2005/06, even though none of their schools failed to meet the same requirement. The data are from the Arizona Department of Education, *School AYP determinations 2006–2007* (2007a).

Academy of Excellence
Ajo Unified District
Alhambra Elementary District
Altar Valley Elementary District
Amphitheater Unified District
Avondale Elementary District
Buckeye Elementary District
Calli Ollin Academy
Career Success Schools
Cartwright Elementary District
Casa Grande Elementary District
Casa Grande Union High School District
Cedar Unified District
Cesar Chavez Learning Community
Chandler Unified District
Chinle Unified District
Colorado River Union High School District
Coolidge Unified District
Cottonwood-Oak Creek Elementary District
Crane Elementary District
Creighton Elementary District
Douglas Unified District
Dysart Unified District
East Valley Youth and Family Support Centers
Espiritu Community Development Corp.
Flagstaff Unified District
Florence Unified School District
Fowler Elementary District
Fort Thomas Unified District
Gadsden Elementary District
Ganado Unified School District
Gila Bend Unified District
Gilbert Unified District

Glendale Elementary District
Indian Oasis–Baboquivari Unified District
Isaac Elementary District
Kingman Unified School District
Laveen Elementary District
Littleton Elementary District
Marana Unified District
Maricopa County Regional District
Maricopa Unified School District
Mesa Unified District
Miami Unified District
Murphy Elementary District
New Visions Academy
Nogales Unified District
Omega Alpha Academy
Page Unified District
Paradise Valley Unified District
Peach Springs Unified District
Pendergast Elementary District
Phoenix Elementary District
Pinon Unified District
Red Mesa Unified District
Renaissance Educational Consortium
Riverside Elementary District
Roosevelt Elementary District
Sacaton Elementary District
San Carlos Unified District
Sanders Unified District
Scottsdale Horizons Charter School
Scottsdale Unified District
Sierra Vista Unified District
Skyline Technical High School
Somerton Elementary District
Sunnyside Unified District
Tempe School District
Tuba City Unified District
Tucson Unified District
Washington Elementary School District
Whiteriver Unified District
Wilson Elementary District
Window Rock Unified District
Winslow Unified District
Yuma Elementary District
Yuma Union High School District

REFERENCES

- Arizona Department of Education. (2007a). *School AYP determinations 2006–2007*. Accountability Division, Research and Evaluation Section. Retrieved April 2007, from <http://www.azed.gov/profile/publicview/aypschoollist.asp?Year=2007>
- Arizona Department of Education. (2007b). *Standards and rubric for LEA improvement*. 2007 edition. School Effectiveness Division, School Improvement and Intervention Section. Retrieved April 2007, from <http://www.ade.az.gov/asd/Title1/AccountabilityGrants/2007StandardsandRubricsforLEAImprovement.pdf>
- Arizona Revised Statutes, Title 15, Chapter 1, Article 8, Sections §15-181–§15-189. [2007] Retrieved September 2007, from <http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=15>
- Center for Education Reform. (2007). *National charter data: Schools and enrollment state-by-state*. Retrieved September 2007, from http://www.edreform.com/charter_directory/data2.cfm?CFID=3853032&CFTOKEN=44663510.
- Chudowsky, N., & Chudowsky, V. (2005). *States test limits of federal adequate yearly progress flexibility*. Washington, DC: Center on Education Policy.
- Chudowsky, N., & Chudowsky, V. (2007). *No Child Left Behind at five: a review of changes to state accountability plans*. Washington, DC: Center on Education Policy.
- Hassel, B. C., & Terrell, M. G. (2004). *The rugged frontier: a decade of charter schooling in Arizona*. Washington, DC: Public Policy Institute.
- Linn, R., Baker, E., & Betebenner, D. (2002, August/September). Accountability systems: Implications of requirements of the No Child Left Behind Act of 2001. *Educational Researcher*, 31(6), 3–16.
- No Child Left Behind Act of 2001. Pub. L. No. 107–110, 115 Stat. 1425 (2002).
- Novak, J. R., & Fuller, B. (2003). *Penalizing diverse schools? Similar test scores, but different students, bring federal sanctions* (PACE Policy Brief 03–4). Berkeley, CA: Policy Analysis for California Education.
- U.S. Department of Education. (2007). *State of Arizona consolidated state application accountability workbook*, for state grants under Title IX, Part C, Section 9302 of the Elementary and Secondary Education Act (Public Law 107-110). Washington, DC: U.S. Department of Education.
- U.S. Department of Education, National Center for Education Statistics. (2007a). *Common Core of Data. Local Education Agency (School District) Finance Survey (School Year 2003–04)*. Retrieved July 2007 from <http://nces.ed.gov/ccd/f33agency.asp>
- U.S. Department of Education, National Center for Education Statistics. (2007b). *Common Core of Data. Local Education Agency Universe Survey (School Year 2004–05)*. Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved July 2007 from <http://nces.ed.gov/ccd/pubagency.asp>