AEPI

Arizona Education
Policy Initiative

The Condition of Pre-K-12 Education in Arizona: 2005

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Northern Arizona University

Introduction

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The Condition of Pre-K-12 Education in Arizona: 2005, the second annual report by the Arizona Education Policy Initiative (AEPI), is a collection of policy briefs on key issues in Arizona education. Launched in 2003, AEPI uses the expertise of faculty from Arizona's public universities to inform public debate on education policy issues. The authors of ***The Condition of Pre-K-12 Education in Arizona: 2005*** briefs are on the faculty of Arizona's three public universities: Arizona State University (ASU), Northern Arizona University (NAU), and the University of Arizona (UA). In addition, all the briefs were reviewed by an expert in the field.

Taken together, the ten policy briefs that follow are a case study of sorts on the impact of standardization and accountability in a single state. Academic standards and accountability are a consistent theme in many of the briefs. This illustrates the extent to which the federal No Child Left Behind (NCLB) act and Arizona LEARNS affect nearly every facet of K-12 public education in the state.

Michael Kelley of ASU West and Joseph Tobin and Karen Ortiz of ASU Tempe note that the condition of early education and care remains largely unchanged since 2004. "Collection of Early Childhood Education and Care (ECEC) data continues to be extremely fragmented (collected by multiple state agencies and community organizations) and difficult to obtain, creating difficulty in making accurate comparisons or assumptions." Although the authors identify a number of initiatives implemented since the release of the 2004 report, they caution that significant systemic change has not occurred. Not surprising, most of the authors' recommendations pertain to improving early education research by investing in data collection and analysis to better understand the impact of Arizona's early education programs.

Standardization has affected the education of Arizona's English Language Learners (ELL) since the passage of Proposition 203 in 2001. Proposition 203 requires Structured English Immersion (SEI) as the program of instruction for ELL students. Kate Mahoney of ASU East and Jeff MacSwan and Marilyn Thompson of ASU Tempe conduct a review of recent studies about the effectiveness of SEI and bilingual education programs. The authors conclude that the research findings are at odds with the current philosophy and direction of Arizona's language policies.

In their brief on special education, ASU Tempe professors Sarup R. Mathur and Rob Rutherford address the tension between the goals of NCLB, which focuses on accountability standards for all students, and the individualized instruction required for Arizona's Special Needs children. They discuss the uncertainty among special educators as they work to meet the provisions of NCLB. They also highlight promising practices developed from university and state partnerships, and calls for additional collaborative efforts to address other special education challenges in Arizona.

The academic achievement provisions in NCLB are based on the expectation that 100 percent of all students will reach proficiency on the Arizona Academic Standards by 2014. Francis Reimer of NAU documents the extent of the achievement gap for Arizona minority students using academic indicators that are central to NCLB: graduation rates, dropout rates, and scores for Arizona's Instrument to Measure Standards (AIMS). She also identifies two state policy issues that, if not addressed, could hinder Arizona's efforts to educate all children and close the achievement gap between majority and minority students: the delay in providing sufficient funds for the education of ELL students and limitations in state data collection.

The brief on teacher quality identifies the far-reaching implications of State Board of Education policies. For example, changes in State Board rules significantly affect college and university programs that prepare teacher candidates. Sherry Markel of NAU reviews State Board minutes over a 14-month period and highlights how the policies adopted will influence the training of new teachers and the ongoing professional development of the current teaching force.

In their analysis of school administration in Arizona, Arnold Danzig (ASU Tempe), Walter Delecki (NAU), and David Quinn (UA) highlight the challenges principals face in the current era of accountability. The authors explore how unprecedented state intervention for failing schools through the use of Arizona Department of Education (ADE) Solutions Teams affects principals. They also raise questions about the effectiveness of certification tests for administrators and discuss the practice of re-hiring retired school administrators. The authors caution that the decision to re-hire retired administrators slows the entry of new people into the field, which could stunt the introduction of new ideas, energies, and capacities for learning into schools.

The most public feature of accountability in Arizona is the labeling of schools based on indicators of academic achievement. David Garcia of ASU Tempe analyzes the relationship between the Arizona LEARNS school labels and 2004 AIMS scores. He finds confusing variability in school performance across individual schools. For example, two elementary schools, one with 0 percent of students meeting or exceeding the standards in 2004 and another school with 93 percent of students meeting the same standards, are both classified with a "Performing" label. The author then offers several explanations for the discrepancy between school labels and AIMS scores, and recommends that policy makers provide clear and consistent information to parents.

In school accountability systems, student academic achievement is reduced to scores on standardized tests. Most of the general public is familiar with test scores, but few understand the intricacies of assessing student learning and the influences of assessment on classroom instruction. Darrell Sabers and Sonya Powers of UA provide an informative overview of standardized testing that should be requisite reading for all consumers of test scores. The brief is tailored to inform the reader about Arizona's standardized assessment, the Dual-Purpose Assessment. The authors discuss how well assessment tests meet their intended purpose and the impact of testing for accountability on classroom instruction.

In her brief on the state of technology in Arizona public education, Laura E. Sujo de Montes of NAU reviews research that demonstrates how meaningful integration of

technology into instruction can improve student academic achievement. However, despite the general availability of technology in Arizona schools, the author notes Arizona educators are not effectively integrating technology and instruction. Sujo de Montes concludes by discussing the inadequacies of technology education in relation to Arizona's aspirations to excel in the knowledge economy.

Ric Wiggall of NAU contrasts Arizona's standards movement with state funding to support it. He notes policy makers have not taken into consideration the "two-edged nature of accountability." The development of a system of standards and measurements to hold schools (and students) accountable also requires a new approach focused on differentiated funding that takes into account the varying needs of students. He concludes, however, "policies promoted by the Arizona legislature appear to be focused on restricting funds for core instructional purposes to the greatest degree possible and financially promoting a competitive system that offers alternatives (charter schools, vouchers, tax credits) to traditional public schools."

The Condition of Education in Arizona: 2005 is intended as a resource document. Each brief stands alone; readers can go directly to their area of interest or review the entire document to get a comprehensive picture of the current condition of public education in Arizona.

Arizona Education by the Numbers: 2005

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Introduction

There are many gaps in the available information about Arizona's public school system. As long as this information deficit persists it will be difficult to make data-based policy decisions in a number of key areas. For example, due to missing or contradictory data, Arizonans do not know:

1. Arizona's dropout rate.
2. The exact number of charter holders.
3. The number of charter schools.
4. The average size of charter schools.
5. The number of Arizona's public school students attending charter schools.
6. The ethnic composition of Arizona's charter school student population.
7. The number of English Language Learners (ELL) in Arizona's charter schools.
8. The number of charter school teachers.
9. The ethnic and gender composition and years of experience of charter school teachers.
10. The number of charter school administrators.

Organization

In this report, data about Arizona's public schools are presented in two categories:

1. Information Associated with Non-Charter Districts and District Schools:

    Non-Charter District Characteristics

    District School Characteristics

    District School Student Characteristics

    District School Teacher Characteristics

    District School Administrators by Administrative Category

2. Information Associated with Charter Holders and Charter Schools:

    Charter Holder School Characteristics

    Charter School Characteristics

    Charter School Student Characteristics

    Charter School Teacher Characteristics

    Charter School Administrators by Administrative Category

Where possible, data from 2002-2003 have been included, and differences between 2002-2003 and 2003-2004 noted. A narrative explaining why the data can not be reported replaces data in some of the tables that follow.

Information on Non-Charter Districts and District Schools

Non-Charter District Characteristics

Table 1: Total Non-Charter School Districts

	2002-03	2003-04	Difference
Elementary School Districts	97	108	11
Secondary Districts	15	15	None
Unified School Districts	95	95	None
Accommodation School Districts	7	16	9
Total Districts	***214***	***234***	***20***

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at http://www.ade.az.gov/schoolfinance/Reports/

Table 2: Non-Charter School Districts by Size

Number of Students	2002-03	2003-04	Difference
Districts Serving less than 100	30	38	8
Districts Serving 100 to 500	49	46	3
Districts Serving 501 to 1,000	20	22	2
Districts Serving 1,001 to 2,500	46	45	1
Districts Serving 2,501 to 5,000	27	32	5
Districts Serving 5,001 to 10,000	21	21	None
Districts Serving 10,001 or more	24	26	2
Total Districts with Enrollment Data	***217****	***230****	***13***

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at http://www.ade.az.gov/schoolfinance/Reports/

*ADE reported 214 in the state summary of number and type of public schools, but AEPI counted 217 in its enrollment data collected in 2002-2003.

**The following districts did not report enrollment data: Greenlee County Accommodation District, Kino Academy accommodation District, Maricopa County Regional Special Services District, and Pima County Special Education Program District

Table 3: Total Non-Charter School Districts: Average School Size by District Size

Number of Students	2003-04
Districts Serving less than 100	34.5
Districts Serving 100 to 500	165.6
Districts Serving 501 to 1,000	267.8
Districts Serving 1,001 to 2,500	310.9
Districts Serving 2,501 to 5,000	492.3
Districts Serving 5,001 to 10,000	630.3
Districts Serving 10,001 or more	778.4
Average School Size District Schools	***592.4***

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at: http://www.ade.az.gov/schoolfinance/Reports/

District School Characteristics

Table 4: Number of District Schools

	2002-03	2003-04	Difference	% Change
District Schools	1,512	1,576	64	4.23%

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at: http://www.ade.az.gov/schoolfinance/Reports/

Table 5: Number of District Schools by Type

School Type	2002-03	2003-04	Difference
Elementary	1,138	1,180	42
Secondary	271	285	14
Combined	78	62	-16
Accommodation	25	49	24
Total District Schools	***1,512***	***1576***	**64**

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at: http://www.ade.az.gov/schoolfinance/Reports/

Table 6: Composition of District Schools by Type

School Type	2002-03	2003-04	Difference
Elementary	75.26%	74.87%	-0.39%
Secondary	17.92%	18.08%	0.16%
Combined	5.16%	3.93%	-1.23%
Accommodation	1.65%	3.11%	-1.46%

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at: http://www.ade.az.gov/schoolfinance/Reports/

District School Student Characteristics

Table 7: Total District School Enrollment*

	2002-03	2003-04	Difference	% Change
District Schools	906,403	930,343	23,940	2.64%

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at: http://www.ade.az.gov/schoolfinance/Reports/

*District enrollment figures include enrollment of 31 district sponsored charter schools.[1]

Table 8: Number of District School Students by Ethnicity*

	2002-03	2003-04	Difference
White (non-Hispanic)	452,628	453,610	982
Native American **	58,621	61,899	3,278
Hispanic	333,646	350,655	17,009
Black (non-Hispanic)	41,636	43,405	1,769
Pacific Islander or Asian	19,872	20,774	902
Total District School Students	***906,403***	***930,343***	***23,940***

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at: http://www.ade.az.gov/schoolfinance/Reports/
*District enrollment figures include enrollment of 31 district sponsored charter schools.[2]
**These numbers are reported by ADE as "American Indian or Alaskan Native."

Table 9: Composition of District School Student Enrollment by Ethnicity

	2002-03	2003-04	% Change
White (non-Hispanic)	49.94%	48.76%	-1.18%
Native American*	6.47%	6.65%	0.18%
Hispanic	36.81%	37.69%	0.88%
Black (non-Hispanic)	4.59%	4.66%	0.07%
Pacific Islander or Asian	2.19%	2.23%	0.04%

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Available at: http://www.ade.az.gov/schoolfinance/Reports/
*These numbers are reported by ADE as "American Indian or Alaskan Native."

Table 10: District School Students Eligible for Free/Reduced Price Lunches

	2003-04
Total District School Students	930,343
Total District School Students Eligible for Free/Reduced Price Lunches	412,787
Percentage of Total District School Students Eligible for Free/Reduced Price Lunches	***44.37%***

Source: Arizona Department of Education. (2004, December). *Free & reduced price lunches data counts.* Research & Policy Division

Table 11: District School Students Classified as English Language Learners (ELL)

	2003-04
Total District School Students	930,343
Total District School ELL Students	148,527
Percentage of Total District School ELL Students	***15.96%***

Sources: Arizona Department of Education. (2004). *Superintendent's annual report.* Available at: http://www.ade.az.gov/schoolfinance/Reports/
Arizona Department of Education. (2004, February). *ELL student counts data.* English Acquisition Services Unit.

Table 12: District School Students Classified as Students with Disabilities

	2002-03*
Total District School Students	930,343
Total District School Students with Disabilities	106,261[3]
Percentage of Total District School Students who have Disabilities	***11.42%***

Sources: Arizona Department of Education. (2004). *Superintendent's annual report.* Available at: http://www.ade.az.gov/schoolfinance/Reports/
Arizona Department of Education. (2004, August & October). *Disability data counts.* Exceptional Student Services Division.
* The Disability Data Counts report indicates numbers from 2003, though the counts were updated in August and October of 2004.

Table 13: District School Dropout Rate – Grades 7-12

	2003-04
White (non-Hispanic)	ADE included the following disclaimer with the *Dropout Rate Statistics for 2003-2004*: "These results may not be comparable to prior year's dropout rate studies as a majority of SAIS data were [*sic*] excluded from these calculations due to the inability to verify accuracy."[4] ADE's Student Accountability Information System (SAIS) is an online tracking system. Given the magnitude of excluded data, the figures provided by ADE cannot be said to accurately reflect dropout rates in Arizona schools.
Native American	
Hispanic	
Black (non-Hispanic)	
Pacific Islander or Asian	
Percentage of Total District School Students who Dropped Out	

Source: Arizona Department of Education. (2003). *Dropout rate study report*. Available at: http://www.ade.az.gov/researchpolicy/DropoutInfo/

District School Teacher Characteristics

Table 14: Number of District School Teachers by Ethnicity

	2002-03	2003-04	Difference
White (non-Hispanic)	41,384	42,861	1,477
Native American	1,075	1,087	12
Hispanic	5,177	5,404	227
Black (non-Hispanic)	889	908	19
Pacific Islander or Asian	472	487	15
Total District School Teacher Population	***48,997***	***50,747****	***1,750***

Source: Arizona Department of Education. (2004). *School district employee report, school year 2003-2004, positions by gender and ethnicity report*.

*The *Positions by Ethnicity and Gender Report* (SDER 31) reports teachers by position and it is possible that some teachers have been counted twice.[5]

Table 15: Composition of District School Teacher Population by Ethnicity

	2002-03	2003-04	% Change
White (non-Hispanic)	84.46%	84.46%	None
Native American	2.19%	2.14%	-0.05%
Hispanic	10.57%	10.64%	0.07%
Black (non-Hispanic)	1.81%	1.79%	-0.02%
Pacific Islander or Asian	0.96%	0.96%	None

Source: Arizona Department of Education. (2004). *School district employee report, school year 2003-2004, positions by gender and ethnicity report*.

Table 16: Composition of District School Teacher Population by Gender

	Gender	Elementary Schools	%	Secondary Schools	%	Combined Schools	%	Total	Total %
2002-03	**Male**	5,506	*16.29*	5,822	*45.30*	719	*33.13*	12,047	*24.67*
	Female	28,296	*83.71*	7,030	*54.70*	1,451	*66.87*	36,777	*75.33*
	Total	***33,802***		***12,852***		***2,170***		***48,824***	
2003-04	**Male**	5,406	*15.88*	5,853	*45.01*	803	*33.51*	12,062	*24.40*
	Female	28,638	*84.12*	7,150	*54.99*	1,593	*66.49*	37,381	*75.60*
	Total	***34,044***		***13,003***		***2,396***		***49,443****	
Difference	**Gender**	**Elementary Schools**	**% Change**	**Secondary Schools**	**% Change**	**Combined Schools**	**% Change**	**Total Change**	**Total % Change**
	Male	-100	*-0.49*	31	*-0.29*	84	*0.38*	15	*0.12*
	Female	342	*0.41*	120	*0.29*	142	*-0.38*	604	*1.64*
	Total	***242***		***151***		**226**		***619***	

Source: Arizona Department of Education. (2004). *School district employee report, school year 2003-2004, teacher by gender and grade level report.*

* The *Teachers by Grade Level/Gender Report* (SDER 77) should reflect the most accurate information.[6]

Table 17: Number of District School Teachers by Years of Experience

	2002-03	2003-04	Difference
1	3,945	3,348	-597
2	3,317	3,231	-86
3	3,162	3,029	-133
4	2,970	3,050	80
5	2,721	2,734	13
6	2,365	2,748	383
7	2,301	2,265	-36
8	2,066	2,131	65
9	2,026	1,943	-83
10	1,685	1,898	213
11	1,519	1,631	112
12	1,313	1,485	172
13+	15,418	15,175	-243
Total	***44,628***	***44,670****	***42***

Source: Arizona Department of Education. (2004). *School district employee report, school year 2003-2004, teacher experience index (TEI) detail.*

*The Teacher Experience Index (TEI) (SDER 96) does not include any teachers that are not paid through Maintenance and Organization. Teachers who are paid through federal grants and Chapter 1 funds, for example, are excluded.[7]

Table 18: Composition of District School Teachers by Years of Experience

	Percent of Teaching Core Represented 2002-03	Percent of Teaching Core Represented 2003-04	Change in Percent of Teaching Core Represented
1	8.84%	7.49%	-1.35%
2	7.43%	7.23%	-0.20%
3	7.09%	6.78%	-0.31%
4	6.25%	6.82%	0.57%
5	6.10%	6.12%	0.02%
6	5.30%	6.15%	0.85%
7	5.16%	5.07%	-0.09%
8	4.63%	4.77%	0.14%
9	4.54%	4.35%	-0.19%
10	3.78%	4.25%	0.47%
11	3.40%	3.65%	0.15%
12	2.94%	3.32%	0.38%
13+	34.55%	33.97%	-0.58%

Source: Arizona Department of Education. (2004). *School district employee report, school year 2003-2004, teacher experience index detail.*

District School Administrators

Table 19: Number of District School Administrators by Administrative Category

	2002-03	2003-04	Difference
Superintendent	190	190	0
Assistant Superintendent	114	116	2
Principal	1,189	1,270	81
Assistant Principal	744	723	-21
Total Administrative Positions	***2,237***	***2,299***	***62***

Source: Arizona Department of Education. (2004). *School district employee report, school year 2003-2004, positions by gender and ethnicity.*

Table 20: Composition of District School Administration by Administrative Category

	2002-03	2003-04	% Change
Superintendent	8.49%	8.26%	-0.23%
Assistant Superintendent	5.10%	5.04%	-0.06%
Principal	53.15%	55.24%	2.09%
Assistant Principal	33.26%	31.44%	-1.82%

Source: Arizona Department of Education. (2004). *School district employee report, school year 2003-2004, positions by gender and ethnicity.*

Charter Holder Characteristics

Table 21: Total Charter Holders

	2003-04
Arizona State Board for Charter Schools (ASBCS) Sponsored Charter Holders	Arizona State Board of Charter Schools (ASBCS) indicated that there are 311charter holders sponsored solely by ASBCS.
Arizona State Board of Education Sponsored Charter Holders (SBE)	ASBCS indicated that there are 36 charter holders sponsored by solely SBE.
District Sponsored Charter holders	According to ASBCS there are 14 district sponsored charter holders. The sponsoring district serves as the oversight authority for these charter holders and are, therefore, not included in charter school data provided by ASBCS.[8]
Total Charters Holders with Enrollment Data	***338***
Total Charter Holders	The total number of Charter holders reported by ADE and ASBCS are conflicting. AEPI could account for 338 charter holders with enrollment data.[9]

Source: Arizona Department of Education (2004): *Superintendent's Annual Report* (SAR). Access at: http://www.ade.az.gov/schoolfinance/Reports/ and the *FY2005 Number of District and Charter Schools Report* [10] and the *Charter Holder List*.[11]

Table 22: Charter Holders by Size

2003-04
The Arizona Department of Education's *2004 Superintendent's Annual Report* does not provide enrollment data for at least 12 SBE and ASBCS sponsored charter holders. Given that the exact number of charter holders provided by ADE is uncertain, it is not possible to report accurate information for charter holders by size.

Table 23: Charter Holders by Size: Average School Size 2003-04

Average School Size
Given that enrollment data are missing for at least 12 SBE and ASBCS charter holders, it is not possible to calculate average charter school size.

Charter School Characteristics

Table 24: Total Charter Schools

	2003-04
Arizona State Board For Charter Schools (ASBCS) Sponsored Charter Schools	ASBCS reported 406 ASBCS sponsored sites. However, as of April 25, 2005, ASBCS was unable to provide a list of charter holders sponsored by ASBCS and the number of schools for which each holder was responsible. In some instances ADE has not changed the identifier used to distinguish between ASBCS and SBE sponsored sites, which makes such a list less reliable.[12]
Arizona State Board of Education Sponsored Charter Schools (SBE)	ASBCS reported 62 SBE sponsored sites. However, as of April 25, 2005, ASBCS was unable to provide a list of charter holders sponsored by SBE and the number of schools for which each holder was responsible. In some instances ADE has not changed the identifier used to distinguish between ASBCS and SBE sponsored sites, which makes such a list less reliable.[13]
District Sponsored Charter Schools	ASBCS reported 31 charter schools sponsored by districts. These data are not included in charter school information.[14]
Total Charters Schools	ASBCS reports a total of 500 charter school sites for 2003-2004,[15] while ADE indicates there are 694 sites for this same year.[16] AEPI was able to account for 442 school sites, though at least 12 of these charter holders have no enrollment data (it is unclear how many sites for which these 12 holders may be responsible). The 31 district sponsored schools are not included in this number. Given the discrepancies in these numbers, it is not possible to report accurate information on the number of charter schools.

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Access at: http://www.ade.az.gov/schoolfinance/Reports/

Table 25: Number of Total Charter Schools by Type

2003-04
It is not possible to report the number of elementary, high school, or combined sites. The information provided by ADE in this regard is incorrect[17] and it is not gathered by any other entity.

Table 26: Composition of Total Charter Schools by Type

2003-04
It is not possible to report the composition of elementary, high school, or combined sites. The information provided by ADE in this regard is incorrect[18] and it is not gathered by any other entity.

Charter School Student Characteristics

Table 27: Charter School Enrollment

	2003-04
Charter Schools	ADE reported a total enrollment figure of 81,725 while AEPI was able to account for a total enrollment figure of 77,904.[19] The difference in these figures may be attributed to the lack of enrollment data for the 12 holders sponsored by SBE or ASBCS. Given the lack of information, it is not possible to report total charter enrollment.

Source: Arizona Department of Education. (2004). *Superintendent's annual report*. Access at: http://www.ade.az.gov/schoolfinance/Reports/ and http://www.ade.state.az.us/Districts/ReportsData/ReportsData.asp

Table 28: Number of Charter School Students by Ethnicity

2003-04
It is not possible to report student ethnicity numbers because accurate enrollment data are not available.

Table 29: Composition of Charter School Student Population by Ethnicity

2003-04
It is not possible to report student ethnicity composition because accurate enrollment data are not available.

Table 30: Charter School Students Eligible for Free or Reduced Price Lunches

	2003-04
Total Charter Schools Participating in Free or Reduced Lunch Program	132*
Total Charter School Students Eligible for Free or Reduced Price Lunches	26,987
Percentage of Total Charter School Students Eligible for Free or Reduced Price Lunches	***66.36%***

Source: Arizona Department of Education. (2004). *Free and reduced percentage reports*. Available at: http://www.ade.state.az.us/health-safety/cnp/frpercentages/

* Figures only reflect the charter schools that have chosen to participate in the National School Lunch program. These figures cannot be generalized across charter schools statewide, as they do not include all charter school students who may be eligible for the program.[20]

Table 31: Charter School Students Classified as English Language Learners (ELL)

2003-04
It is not possible to report the number of English Language Learners in charter schools because accurate enrollment data are not available.

Table 32: Charter School Students Classified as Students with Disabilities

	2002-03*
Total Charter School Students	Because charter school enrollment data are not accurate, statistics cannot be accurately calculated.
Total Charter School Students with Disabilities	The 6,625 charter school students with disabilities are based on the December 2003 reporting period and represent a verified count reported to the U.S. Department of Education annually.[21]

Source: Arizona Department of Education. (2004). *Exceptional student services: Data management*. Available at: http://www.ade.state.az.us/ess/DataManagement/DmHome.asp

* The *Disability Data Counts* report provided by ADE reports numbers from 2003, though ADE also indicates that the counts were updated in August and October of 2004.

Table 33: Charter School Dropout Rate – Grades 7-12

2003-04
ADE included the following disclaimer with the *Dropout Rate Statistics for 2003-2004*: "These results may not be comparable to prior year's dropout rate studies as a majority of SAIS data were [*sic*] excluded from these calculations due to the inability to verify accuracy."[22] ADE's Student Accountability Information System (SAIS) is an online tracking system. Given the magnitude of excluded data, the figures provided by ADE cannot be said to accurately reflect dropout rates in Arizona schools.

Source: Arizona Department of Education (2003). *Dropout rate study report*. Available at: http://www.ade.az.gov/researchpolicy/DropoutInfo/

Charter School Teacher Characteristics

Table 34: Number of Charter School Teachers by Ethnicity

2003-04
Charter schools are not required to report this information.

Table 35: Composition of Charter School Teachers by Ethnicity

2003-04
Charter schools are not required to report this information.

Table 36: Charter School Teacher Gender

2003-04
Charter schools are not required to report this information

Table 37: Number of Charter School Teachers by Years of Experience

2003-04
Charter schools are not required to report this information

Table 38: Composition of Charter School Teachers by Years of Experience

2003-04
Charter schools are not required to report this information

Charter School Administrators

Table 39: Number of Charter School Administrators by Administrative Category

2003-04
Charter schools are not required to report this information.

Table 40: Composition Charter School Administration by Administrative Category

2003-04
Charter schools are not required to report this information.

Data Limitations

Information on Non-Charter District Schools

Non-charter District Characteristics (Tables 1-3)

Four districts (Greenlee County Accommodation District, Kino Academy Accommodation District, Maricopa County Regional Special Services District, and Pima County Special Education District) did not report enrollment data. Although these data are missing, the data available are sufficient to provide a substantially accurate picture of district schools average size.

District School Student Characteristics (7-13)

With regard to Student Dropout Rates, ADE included the following disclaimer with the *Dropout Rate Statistics for 2003-2004*:

> These results may not be comparable to prior year's dropout rate studies as a majority of SAIS data were [*sic*] excluded from these calculations due to the inability to verify accuracy.[23]

Dropout Rates in Arizona are calculated for grades 7-12 and are based on *Year End Enrollment Application* and the *Student Accountability Information System* (SAIS), which is an online tracking system. It is important to note that Year End Enrollment Applications are not mandatory, and the majority of information taken from SAIS was omitted. Therefore, only those schools that submitted the Year End Enrollment information are reflected in the data. Given the magnitude of excluded data, the figures provided by ADE cannot be said to accurately reflect dropout rates in Arizona schools.

District Teacher Characteristics (Tables 14-18)

The data for all three of these tables were taken from the ADE annual *School District Employee Report* (SDER). ADE reports three different figures for the total number of public school teachers: Table 21 reports 50,747 public school teachers in Arizona,[24] Table 22 reports 49,443,[25] and Table 23 reports 44,670.[26] ADE provided the following explanation for the discrepancies between the reports:

> The Positions by Ethnicity and Gender report (SDER 31) reports teachers by position and it is possible that some teachers have been counted twice (Table 14).
>
> The Teacher Experience Index (TEI) (SDER 96) does not include any teachers that are not paid through *Maintenance and Organization,* therefore some teachers will not be reflected in the report. This would include any teachers who are paid through federal grants and Chapter 1 funds (Table 16).
>
> The Teachers by Grade Level/Gender Report (SDER 77) should reflect the most accurate information (Table 17).[27]

Information on Arizona's Charter Schools

Charter Holder Characteristics (Tables 21-23)

In the *FY 2003-2004 State Summary Number and Type of Public Schools*, ADE reports 364 charter holders while ACBCS reports 347 charter holders, and 14 charter holders sponsored by 7 schools districts.[28] AEPI was only able to account for 338 charter holders with enrollment data.[29] In the *Charter Holder Detail Report*, ADE provided the names and some enrollment figures for 352 charter holders. Eight of the 14 district sponsored charter holders were included in this list, though these schools are the responsibility of the districts sponsoring them. Given the discrepancies in these data, the number of charter holders cannot be accurately calculated.

Charter School Characteristics (Tables 24-26)

Disparities in the number of charter schools listed between ADE's Charter Schools List, the *FY2005 Number of District and Charter Schools Report*, and the *Charter Holder Detail Report* indicates that the numbers reported in the *2003-2004 Superintendent Annual Report (SAR)* are not accurate.[30] In addition, the total number of charter schools reported by ADE in the *2003-04 SAR*, does not match the total number of charter schools listed on the Charter School List. The Charter School List contains the following disclaimer to explain the discrepancy:

> Disclaimer: The following information is self reported and is not an exhaustive list. If the school does not have a Mission Statement in the database it will not show up in the search.[31]

ASBCS reports a total of 468 charter school sites (not including district sponsored charter schools) for 2003-2004.[32] ADE, in the *FY 2003-2004 State Summary of Number and Type of Public Schools*, indicates there are 694 sites for this same year.[33] AEPI was able to account for 442 schools, again not including district sponsored charter schools.[34] Given the discrepancies in the numbers available, it is not possible to accurately calculate the number of charter schools.

Charter School Student Characteristics (Tables 27-33)

ADE reported a total enrollment figure of 81,725 while AEPI was able to account for a total enrollment figure of 77,904.[35] The difference in these figures may be attributed to the lack of enrollment data for the district sponsored charter holders, and the 12 holders sponsored by SBE or ASBCS. The *2004 Superintendent's Annual Report* is a compilation of reports from fiscal year 2004 that includes enrollment data collected on October 1, 2003 for the 2003-2004 school year. This reporting period limits the amount of information that can be gathered because subsequent changes in school composition, charter holder status, school operations, or the addition of new charter schools cannot be captured or compared to data from other sources. Given the lack of information, total charter enrollment cannot be accurately calculated.

Due to the lack of total enrollment figures for charter schools provided by ADE, it is not possible to provide accurate student ethnicity statistics.

The 26,987 students eligible for free, reduced or paid lunches represent only those students that have been verified by the 132 charter schools participating in the program and are separate figures from enrollment data collected by ADE. These figures are submitted to ADE and reported by school for reimbursement by the federal government.

Charter enrollment data are not complete; therefore, the number of English Language Learners in charter schools could not be accurately calculated.

The 6,625 charter school students identified as students with disabilities represent the student count on December 1 used to determine eligibility for federal entitlement dollars and additional state funding. The count requires reporting of all students receiving special education services on December 1 of the current school year and is a separate accounting from enrollment data collected by ADE.

With regard to dropout rates for charter schools, this information is also provided as an aggregate figure reflecting dropout rates for all of Arizona's public schools. Given the inability to report enrollment figures for charter schools, it is not possible to report dropout information on these schools either.

More importantly, as indicated in the District Schools Student Characteristics section, ADE included the following disclaimer with the *Dropout Rate Statistics for 2003-2004*: "These results may not be comparable to prior year's dropout rate studies as a majority of SAIS data were [sic] excluded from these calculations due to the inability to verify accuracy."[36]

Dropout Rates in Arizona are calculated for grades 7-12 and are based on *Year End Enrollment Application* and the *Student Accountability Information System* (SAIS), which is an online tracking system. It is important to note that Year End Enrollment Applications are not mandatory, and the majority of information taken from SAIS was omitted. Therefore, only those schools that submitted the Year End Enrollment information are reflected in the data. Given the magnitude of excluded data, the figures provided by ADE cannot be said to accurately reflect dropout rates in general for Arizona schools.

Charter School Teacher Characteristics (Tables 34-38)

There are no available data on charter school teachers. Charter schools are not required provide this information.

Charter School Administrator Characteristics (Tables 39-40)

There are no available data on charter school administrators. Charter schools are not required to provide such information.

Notes & References

[1] L. Damanti, Management Analyst, ADE (Personal communication, May 5, 2005).

[2] L. Damanti, Management Analyst, ADE (Personal communication, May 5, 2005).

[3] This number is derived by subtracting the 6,625 charter school students classified as disabled from the total number of public school students (charter and district students) classified as disabled as reported by ADE. The number 6,625 was obtained from L. McIlroy, Research Analyst, Arizona State Board for Charter Schools, April 29, 2005.

[4] Melton, D. (March 2005). *Dropout rate report 2003-2004*. Phoenix, AZ: Research & Evaluation Section, Arizona Department of Education. Retrieved March 22, 2005, from http://www.ade.az.gov/researchpolicy/DropoutInfo/Complete_2003-2004_Dropout_Report.pdf

[5] Explanation regarding the difference on total teacher population provided in each of the three reports was obtained from:

S. Willis, ADE Program Project Specialist, Transportation/SDER (Personal communication, telephone, April 13, 2005).

The exact magnitude of the difference in teacher totals is unknown, though in light of the conversation, it is likely that it is approximately 100.

[6] Explanation regarding the difference on total teacher population provided in each of the three reports was obtained from:

S. Willis, ADE Program Project Specialist, Transportation/SDER (Personal communication, telephone, April 13, 2005).

The exact magnitude of the difference in teacher totals is unknown, though in light of the conversation, it is likely that it is approximately 100.

[7] Explanation regarding the difference on total teacher population provided in each of the three reports was obtained from:

S. Willis, ADE Program Project Specialist, Transportation/SDER (Personal communication, telephone, April 13, 2005).

The exact magnitude of the difference in teacher totals is unknown, though in light of the conversation, it is likely that it is approximately 100.

[8] The seven districts sponsor 14 charter holders. The charter holders run a total of 31 schools. These districts are:

Benson Unified District, Casa Grande Union High School District, Coolidge Unified District, Higley Unified District, Payson Unified District, Peach Springs Unified District, and Vail Unified District.

Some charters are governed in the same manner as the other schools in a district, while others are not. Prior to legislative change, districts were allowed to charter schools anywhere in Arizona, which made oversight more difficult because of the geographic distance between district operations and some charter schools. The legislative change (*ARS §15-183.C.1.d)* permitted districts to sponsor charter schools only if the charter school existed within that district's geographic boundaries, beginning July 1, 2000.

Information on district schools received from:

L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (Personal communication, April 15 and 26, 2005).

[9] ADE and ASBCS reports each provide a different number of charter holders:

FY2005 number of district and charter schools report, provided by R. Arroyo, Budget Analyst, School Finance, ADE (Personal communication, email, March 1, 2005).

Arizona Department of Education. (2004). *FY 2003-2004 state summary of number and type of public schools*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P12StateSumNumTypePublicSchls.pdf

Charter Holder list provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

[10] *FY2005 number of district and charter schools report*, provided by R. Arroyo, Budget Analyst, School Finance, ADE (Personal communication, email, March 1, 2005).

[11] Charter Holder list provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

[12] Information and numbers provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

[13] Information and numbers provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

[14] Information on district schools provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

[15] Numbers provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

[16] Arizona Department of Education. (2004). *FY 2003-2004 state summary of number and type of public schools*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P12StateSumNumTypePublicSchls.pdf

[17] Summary info indicates a number of total charter schools that cannot be verified in any other report. The number is more than 200 higher than AEPI could account for and 194 higher than reported by ASBCS. See:

Arizona Department of Education. (2004). *FY 2003-2004 state summary of number and type of public schools*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P12StateSumNumTypePublicSchls.pdf

[18] Summary info indicates a number of total charter schools that cannot be verified in any other report. The number is more than 200 higher than AEPI could account for and 194 higher than reported by ASBCS. See:

Arizona Department of Education. (2004). *FY 2003-2004 state summary of number and type of public schools*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P12StateSumNumTypePublicSchls.pdf

[19] Enrollment information was calculated by AEPI using following reports:

Arizona Department of Education. *(2004) Charter holder detail report.* Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/

FY 2005 number of district and charter schools report, provided by R. Arroyo, Budget Analyst, School Finance, ADE (Personal communication, email, March 1, 2005).

Arizona Department of Education. (2005). *Information and financial services, student counts reports and data*. Phoenix, AZ: Author. Retrieved February 27, 2005, from: http://www.ade.state.az.us/Districts/ReportsData/ReportsData.asp

[20] Percentages are based on the 2004-2005 school year's October claims for reimbursement. Health & Nutrition Services Section, Arizona Department of Education (2004).

Provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (Personal communication, email, April 15, 2005).

[21] The student count on December 1 is used to determine eligibility for Federal Part B IDEA entitlement dollars distributed to states and allocated to districts. The count requires reporting of all students receiving special education services on December 1 of the current school year. This count is also used to calculate add-on weights for state funding.

[22]Melton, D. (2005, March). *Dropout rate report 2003-2004*. Phoenix, AZ: Research & Evaluation Section, Arizona Department of Education. Retrieved March 22, 2005, from http://www.ade.az.gov/researchpolicy/DropoutInfo/Complete_2003-2004_Dropout_Report.pdf

[23]Melton, D. (March 2005). *Dropout rate report 2003-2004*. Phoenix, AZ: Research & Evaluation Section, Arizona Department of Education. Retrieved March 22, 2005, from http://www.ade.az.gov/researchpolicy/DropoutInfo/Complete_2003-2004_Dropout_Report.pdf

[24]Arizona State Department of Education. (2004). *School district employee report, school year 2003-2004, positions by gender and ethnicity report.* Phoenix, AZ: Author.

[25]Arizona State Department of Education. (2004). *School District Employee Report, school year 2003-2004, teacher by gender and grade level report*. Phoenix, AZ: Author.

[26] Arizona State Department of Education. (2004). *School District Employee Report, school year 2003-2004, teacher experience index (TEI) detail.* Phoenix, AZ: Author.

[27] Explanation of the differences in total teacher population reported in each of the three reports was obtained from:

S. Willis, ADE Program Project Specialist, Transportation/SDER (Personal communication, telephone, April 13, 2005).

The exact magnitude of the difference in teacher totals is unknown, though in light of the conversation, it is likely that it is approximately 100.

[28] Arizona Department of Education. (2004). *FY 2003-2004 state summary of number and type of public schools*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P12StateSumNumTypePublicSchls.pdf

Number of charter holders and district sponsored charter holders provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 13, 2005).

[29] Enrollment data was compiled from the following sources:

Arizona Department of Education. *(2004) Charter holder detail report.* Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/

FY 2005 number of district and charter schools report, provided by R. Arroyo, Budget Analyst, School Finance, ADE (Personal communication, email, March 1, 2005).

Charter Holder list provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

Arizona Department of Education. (2005). *Information and financial services, student counts reports and data*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.state.az.us/Districts/ReportsData/ReportsData.asp

[30] For access to ADE's Charter School List, see:

http://www.ade.az.gov/charterschools/search/SiteList.asp

For the Charter Holder Detail Report, see:

Arizona Department of Education. (2004). *Charter holder detail report.* Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/

Arizona Department of Education. (2004). *FY 2003-2004 state summary of number and type of public schools*. Phoenix, AZ: Author. Retrieved February 27, 2005, from: http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P12StateSumNumTypePublicSchls.pdf

[31] For information on the disclaimer provided by ADE see: http://www.ade.az.gov/charterschools/search/

[32] Numbers provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (Personal communication, April 13, 2005).

[33] Arizona Department of Education. (2004). *FY 2003-2004 state summary of number and type of public schools*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P12StateSumNumTypePublicSchls.pdf

[34]ADE reports enrollment data by charter holder, providing the number of sites that can be attributed to each holder. Information on charter holders was compiled from ASBCS and ADE. ASBCS was unable to provide a list of charter holders with the number of sites each holder is responsible for (Personal communication with L. McIlroy, April, 22, 2005). Therefore, the charter holders added to the ASBCS list lacked site information.

[35] ADE Enrollment data are located in the Superintendent's Annual Report.

Arizona Department of Education. (2004). *State Summary by Grade of Pupil Enrollment: Charters Only*. Phoenix, AZ: Author. Retrieved April 22, 2005, from: http://www.ade.az.gov/AnnualReport/AnnualReport2004/Includes/Summary/P14StateSumGrdPupilEnrChars.pdf

AEPI compiled individual charter enrollment data from the following sources:

Arizona Department of Education. (2004). *Charter holder detail report.* Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.az.gov/AnnualReport/AnnualReport2004/

FY 2005 number of district and charter schools report, provided by R. Arroyo, Budget Analyst, School Finance, ADE (Personal communication, email, March 1, 2005).

Charter Holder list provided by L. McIlroy, Research Analyst, Arizona State Board for Charter Schools (personal communication, April 15, 2005).

Arizona Department of Education. (2005). *Information and financial services, student counts reports and data*. Phoenix, AZ: Author. Retrieved February 27, 2005, from http://www.ade.state.az.us/Districts/ReportsData/ReportsData.asp

[36] Melton, D. (2005, March). *Dropout rate report 2003-2004*. Phoenix, AZ: Research & Evaluation Section, Arizona Department of Education. Retrieved March 22, 2005, from http://www.ade.az.gov/researchpolicy/DropoutInfo/Complete_2003-2004_Dropout_Report.pdf

The Condition of Early Childhood Education and Care in Arizona: 2005

Executive Summary

The data on Early Childhood Education and Care (ECEC) in Arizona continue to remain poor in 2005. Current policy initiatives focus on fully-funded, full-day kindergarten for children who qualify for free or reduced-price lunch, and improving the quality and capacity of early childhood care and education. Even though public support to strengthen and expand ECEC services in Arizona remains robust, much of the data needed to plan this effort are still either non-existent or hard to find. The data that are available continue to be in a format or of a type that do not allow for the kind of aggregation or analysis needed to guide policy.

Recommendations

It is recommended that:

- The Arizona State Legislature give the School Readiness Board (SRB) the authority and funding to develop a comprehensive, coordinated statewide plan for the collection of critical data across the full range of ECEC programs.
- The Arizona State Legislature give the SRB the authority and funding to implement a statewide quality rating system (QRS) based on the findings of the QRS being piloted by the Tucson United Way of Southern Arizona.
- The Arizona State Legislature expand and fund the Statewide Child Care and Early Education Development System (S*CCEEDS) program to collect training and wage data on the educational levels of all ECEC teachers and providers of care so that universities, community colleges, school districts, and ECEC practitioners can plan appropriately for ECEC teacher preparation and staff training needs.
- The Arizona State Legislature give the SRB the authority and funding to identify and track annually the amount of federal and state dollars invested in ECEC.
- The Arizona State Legislature give the SRB the authority and funding to develop and implement an evaluation plan that will use school readiness indicators data and the QRS data to track child readiness outcomes over time.

The Condition of Early Childhood Education and Care in Arizona: 2005

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Background

Early Childhood Education and Care (ECEC) in Arizona remains largely unchanged. A number of new initiatives have been created and implemented since the release of *The Condition of Pre-K-12 Education in Arizona: 2004* but significant systemic change has not occurred. The Arizona State Board on School Readiness (SRB) has been arduously working on creating an efficient and coordinated system of early care and education. Due to limited financial resources, implementing action steps recommended by the SRB and community members will take years.

Additional efforts have been made to initiate a voluntary full-day kindergarten program (see "Recent Developments" section for additional details). Approximately 1,000 new children have been added to the Early Childhood Block Grant (ECBG) program.

The number of young children in Arizona enrolled in ECEC programs continues to grow rapidly. Twenty years ago, about one-quarter of 4-year olds in Arizona were cared for outside the home; now the figure is closer to three-quarters.[1] The story of

ECEC remains a story of struggle to assess the need for and balance the supply of quality programs.

For detailed background on specific early care and education programs such as Head Start, Early Head Start, kindergarten, center and non-center-based care, and the early childhood block grant program, please refer to the "Background" section in the 2004 report.[2]

Recent Developments

Policy and budgetary discussions at the national and state levels continue to significantly affect the quality of Early Childhood Education and Care (ECEC) in Arizona. The following subsections highlight new or enhanced ECEC programs that have been created within the last year.

The Arizona State Board on School Readiness (SRB)

In 2004, teams convened by the SRB identified the initial steps for the implementation of a quality rating system (QRS), a professional development scholarship program for early childhood teachers, increased health screening for young children, and a child care health consultation system. Through the work of these teams, funding was identified for the creation of a professional development system and recommendations were made for a QRS.

In the past year, SRB has accomplished:

- Governor Janet Napolitano announced School Readiness Action Plan which allots $84.7 million in state funds targeted to early childhood education.
- SRB Quality Rating Team outlined a quality rating system as directed by Governor Napolitano.
- Work of the SRB Quality Rating Implementation Team is used in a QRS innovation project in Tucson.
- Scholarships for Early Education Development (SEEDs), a statewide scholarship program began in 2004 for early education professionals.

- The Arizona Emergent Leaders Project was launched to provide early childhood managers and directors with a year of intensive professional development and leadership skill building.
- The SRB, to improve health screening, supports Arizona Health Care Cost Containment System (AHCCCS)' goal to increase well-child visits and roll back premiums for KidsCare families and DHS' efforts to improve newborn hearing screening and to train physicians and childcare staff.
- SRB recommended phasing-in a Child Care Health Consultant (CCHC) system.[3]

Arizona Early Childhood Education Fund

With the support of the governor and the State School Readiness Board (SRB), the Arizona Early Education Fund was established at the Arizona Community Foundation to help communities statewide build the quality and capacity of early care and education programs for children birth to age five. The purpose of the Fund is to enhance the early learning experiences of Arizona children by building quality into early care and education programs. Approximately $1.2 million have been received by the Fund, and there are outstanding pledges yet to be received.[4]

Early Learning Opportunities Act Grant – Tucson

United Way of Tucson and Southern Arizona (UWTSA) received a $1 million Early Learning Opportunity Act Grant from the U.S. Department of Health and Human Services to create, enhance, and implement a number of early care and education quality improvement projects, including a quality rating system (QRS). The QRS will begin with 50 centers in Tucson, and in coordination with other United Ways, add at least one childcare center in Pinal County, Nogales, Phoenix, Flagstaff and Mesa in February 2005 through August 2006. Each of the 50 centers will receive technical assistance, incentives, nurse health consultations, training by early literacy specialists, lending libraries, and evaluations. The UWTSA used the work of the SRB Quality Rating Implementation Team as the foundation for the quality rating levels. [5]

Early Learning Opportunities Act Grant – Phoenix

The Valley of the Sun United Way was awarded $675,000 to enhance The Early Learning Connections Project, concentrating on Pendergast, Fowler, and Cartwright school districts. The focus of the project is to increase access to community-based services, enhance quality early care and education resources in the community, improve the quality of early childhood education, and to support the social and emotional development of children from birth to age six. The Valley of the Sun United Way and its community partner, the Phoenix Advisory Council for Early Childhood, are committed to promoting children's success upon entering public school.[6]

Emergent Leaders Project

In July of 2004, supplemental grant funding was obtained from the Department of Health and Human Services, Administration for Children and Families. The goal of the project is to build on one of the professional development strategies identified in Governor Napolitano's School Readiness Action plan: A program to improve the education and retention of early education professionals.

The yearlong program will provide the opportunity for 30 selected early childhood professionals to develop professional development projects focused on improving the quality of childcare and to build their leadership, management, and advocacy skills. Program participants will meet and participate in discussions with local and national experts in the field of early childhood education and will receive one-on-one mentoring. The program is a partnership of the Governor's State Board on School Readiness, The Arizona Head Start State Collaboration Office, The Arizona Head Start Association, and Southwest Human Development.[7]

Full-Day Kindergarten

During the 46th legislative session in 2004, a priority for Governor Napolitano was to phase in and fund voluntary full-day kindergarten in public schools throughout the state, beginning in 2004-2005 in schools with at least 90 percent of children enrolled in the free or reduced-price lunch program. This legislation was passed and signed by

Governor Napolitano. Senate Bill 1405, now Chapter 278, requires a school or charter school that provides and accepts monies pursuant to this section 15-901.02 for full-day kindergarten to offer full-day kindergarten instruction to all pupils who meet the enrollment requirement for kindergarten programs. Parents of these pupils may choose either half-day kindergarten instruction or full-day kindergarten instruction. Chapter 278 also requires the legislature to develop a plan, including capital monies, considering recommendations from the Joint Legislative Study Committee on Full-Day Kindergarten, to provide statewide full-day kindergarten instruction in all public schools by fiscal year 2009-2010.

School districts are not required to offer full-day kindergarten instruction to qualifying students if there is insufficient classroom space; in fact, schools shall not accept monies from the full-day kindergarten fund if space limitations result in class sizes that exceed the average class size of the district or charter school. Additionally, schools accepting monies for full-day kindergarten must provide professional development that is directly related to the delivery of kindergarten standards in a full-day program, including a research-based reading curriculum for all kindergarten instructors on staff.[8]

Statewide Child Care and Early Education Development System (S*CCEEDS)

S*CCEEDS recognizes the education levels of child care practitioners by using an established Career Ladder and provides Core Knowledge Elements and Competencies to guide practitioners along a Career Path.[9] In addition, the S*CCEEDS program collects data regarding trainings that are conducted throughout the state. S*CCEEDS can also provide statistical information regarding the location, frequency, and content of early childhood trainings conducted throughout the state.

School Readiness Indicator Project

The indicators identified for this project focus on monitoring the capacity of child and family programs to prepare children to read by the end of grade 3.[10] The National School Readiness Indicators Initiative: Making Progress for Young Children was a multi-

state initiative, inclusive of Arizona, that developed sets of indicators at the state level to track results for children from birth through age 8. The goal was for states to use the school readiness indicators to inform public policy decisions and track progress in meeting key goals for young children. The task of participating states was to develop a comprehensive set of school readiness indicators from birth through third grade. In addition to the development of state reports on the school readiness indicators, the states agreed on a core set of common indicators.[11]

Partners for Arizona Children

Hosted by the Valley of the Sun United Way, representatives from state and community organizations, agencies, United Way agencies, businesses, and philanthropic entities convened to develop social marketing strategies to increase the public will to invest in children through the creation of a statewide communication plan and campaign. The strategies identified by this partnership evolved into the "*You're It*" campaign. The campaign, which implies the game of "Tag," is a call to action to all audiences and will be released both in Spanish and English. In addition to the social marketing plan, another goal of this group is to increase access to services by supporting, replicating, and expanding quality early care in local communities.[12]

Early Childhood Education Certification and Endorsement

In December 2004, the State Board of Education approved the creation of an Early Childhood Education Certificate and an Early Childhood Education Endorsement for Arizona teachers to provide improved professional development and teacher preparation programs for educators who will be providing services in the early years, primarily preschool and kindergarten programs. The Board recognizes that early childhood, the years between birth and age 8, are an important and unique period in a child's life.

The Early Childhood Education Certificate and Endorsement proposals are currently awaiting approval from the Arizona Attorney General's Office. If approved, all Arizona teachers providing instruction in public schools to children from birth through kindergarten will be required to obtain the Early Childhood Education Certificate or

Endorsement by July 1, 2009. Teachers certified in elementary education or special education by July 1, 2006, and with documented current teaching experience, may automatically qualify for the endorsement.[13]

Available Data

Collection of Early Childhood Education and Care (ECEC) data continues to be extremely fragmented (collected by multiple state agencies and community organizations) and difficult to obtain, creating difficulty in making accurate comparisons or assumptions. No central depository for the collection of ECEC data has been identified, though recognition of the need exists. The following tables highlight Arizona early care and education data on relevant demographics, early care and education programs, professional development, funding, and spending.

Demographics of ECEC in Arizona

Table 1: Number of Children by Age in Arizona

0-5	459,141
Under 1 Year	77,421
One Year	77,174
Two Years	75,241
Three Years	75,990
Four Years	76,560
Five Years	76,755

Source: U.S. Census Bureau. (2000). *American Fact Finder*. Retrieved March 6, 2004, from http://www.factfinder.census.gov

Table 2: Projections of the Arizona Population Under 6, 2000–20

Year	Population	Percent increase from 2000
2000	459,141	
2005	531,100	16%
2010	605,800	32%
2015	693,000	50%
2020	790,200	72%

Source: Center for Business Research, L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University. (2004). *The economics of early care and education in Arizona*. Tempe, AZ: Author.

Table 3: Working Parents of Children Under Age 6

Children 0-5	459,151	
With Primary Caregiver(s) in Workforce	270,900	59%

Source: Arizona School Readiness Task Force. (2002). *Growing Arizona*. Phoenix, AZ: Children's Action Alliance.

Table 4: Risk Factors for Arizona's Children Under 5

Children Under 5 in Poverty	21%
New Babies at Risk*	29%

Source: School Readiness Indicator Project. (2003). *Measuring school readiness: How do we know when we're on track?* Phoenix, AZ: Children's Action Alliance.
*In order to be considered at risk, a child must be exposed to two of four risk factors: mother is 19 years or younger, mother is unmarried, mother has less than 12 years of education, birth is paid for by the Arizona Health Cost Containment System, (AHCCCS).

Early Childhood Program Enrollments

Table 5: Enrollments in ECEC Programs

Nursery Schools and Preschools	81,923
Kindergarten	77,930

Source: U.S. Census Bureau. (2000). *American Fact Finder*. Retrieved March 6, 2004, from http:www.factfinder.census.gov

Table 6: Enrollments and Capacity by Program Type

	Programs	Enrollment	Capacity
Childcare Centers	1,580[a]	91,018[b]	156,927[c]
Block Grant Preschools (School Districts)	607[d]	5,059[e]	64,337[f]
Head Start	931[g]	20,908[h]	
Department of Health Services (DHS) Certified Small Group Homes	373[i]		4,826[j]
Department of Economic Security (DES) Certified Childcare Homes	1,476[k]		5,904[l]
DES Relative Childcare Homes	3,816[m]		N/A[n]
Unregulated Registered Childcare Homes	737[o]		
ADE Alternate Approval Childcare Homes	2,980[p]		
Early Head Start		1,497[q]	

a: Center-based care as defined by DHS, excluding Block Grant Preschools and Head Start Programs. Source: Personal communication (email) with David Douglas at the DHS, Office of Child Care Licensure, March 24, 2005.
b: On an average day
c, d: Personal communication (email) with David Douglas at DHS, Office of Child Care Licensure, March 24, 2005.
e: Early Childhood Block Grant (ECBG) Enrollment Report, Arizona Department of Education, March 2005.
f: Capacity figures for centers and preschools were obtained by personal communication (email) with David Douglas at the DHS, Office of Child Care Licensure, March 24, 2005, and are understated due to a software bug.
g, h: Head Start reports numbers of classrooms, not programs or sites. Source: Program Information Report (PIR) (2003-2004). Includes: Regional, Migrant, and Tribal programs.
i, j: Personal communication (email) with David Douglas at the DHS, Office of Child Care Licensure, March 24, 2005.
k: Based on certification limit of 4 children for compensation per home. Personal communication (email) with staff at DES, Child Care Administration, March 11, 2005.
l, m: Personal communication (email) with staff at DES, Child Care Administration, March 11, 2005.
n: DES only pays for care by relatives for children who are eligible for child care assistance. This figure does not capture the larger population of people who provide care for children to whom they are related.
o: Personal communication (email) with staff at the Association for Supportive Childcare, Child Care Resource and Referral, March 22, 2005; Personal communication with Jakob Raskob at Child & Family Resources, on March 28, 2005.
p: Personal communication (email) with Melissa Steinle at ADE, March 29, 2005.
q: PIR (2003-2004). Based on actual enrollment.

Table 7: Arizona Head Start Facts, 2003–2004

	Regional	Migrant	Tribal	Total
Children Enrolled	15,821	684	5,900	22,405
Percent Under Age 3	8.6%	17.0%	0.3%	7.0%
Percent Age 3 or older	91.4%	83.0%	99.6%	93.0%
Number of Classes	589	37	238	864
Number of Staff	2,848	149	1,202	4,199
Number of Volunteers	22,802	358	4,037	27,197

Source: Program Information Report (PIR). (2003-2004).
Note: Based on actual enrollment; Regional number of children enrolled does not include 181 pregnant women.
Note: Percentages may not add up to 100 due to rounding.

Table 8: Arizona Kindergarten Facts

	Public	Charter
Kindergarten-Aged Children	65,381[a]	3,367[b]
In Half-Day Programs	36,326[c]	1,718[d]
In Full-Day Programs	28,813[e]	1,986[f]
Schools Offering Full-Day K	568[g]	49[h]

a-f: Nagle, A. (2003). *Survey regarding kindergarten facts and figures*. Unpublished survey.
g, h: Comparison of Nagle, A. (2003) with ADE funded Full–day Kindergarten (FDK) schools, August 2004. In 2004 FDK funding for schools with 90% + students eligible for free and reduced lunch increased the percentage of FDK schools by 53 % when compared to the number who were offering FDK in all classrooms in 2003.

Table 9: Projections of Demand for ECEC Programs

	Total Non-Parental Care	Center-Based Care
2000	178,200	72,100
2005	206,100	83,400
2010	235,100	95,100
2015	268,900	108,800
2020	306,700	124,000

Source: Center for Business Research, L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University. (2004). *The economics of early care and education in Arizona*. Tempe, AZ: Author.

Early Childhood Professional Development

Table 10: ECEC Professionals, 2004

Assistant Teachers	6,694
Teachers	9,973
Teacher Directors	1,074
Administrative Directors	1,264
Total	*19,005*

Source: Maricopa County Office of Research and Reporting. (2004). *Arizona wage and benefit survey*: *A study of child care/early childhood education center based personnel*. Phoenix, AZ. Sponsored by the State School Readiness Board, Children's Action Alliance and the Arizona Community Foundation. Conducted by Maricopa County Research and Reporting.
Note: Licensed centers only.

Table 11: ECEC Practitioners and Trainers Registered with S*CCEEDS

	Applied	Assigned Career Level
Practitioners	4,337	3,789
Trainers	612	557

Source: Personal communication (e-mail) with Boni Lowney of the Association for Supportive Child Care, S*CCEEDS Program, March 28, 2005.

Table 12: Median Hourly Wage for ECEC Practitioners, 2004

Assistant Teachers	$8.10[a]
Teachers	$9.00[b]
Teacher Directors	$10.92[c]
Directors	$15.00[d]
Kindergarten Teachers (public school)	$26.14[e]

[a-d] Maricopa County Office of Research and Reporting. (2004). *Arizona wage and benefit survey*: *A study of child care/early childhood education center based personnel*. Phoenix, AZ. Sponsored by the State School Readiness Board, Children's Action Alliance and the Arizona Community Foundation. Conducted by Maricopa County Research and Reporting.
[e]American Federation of Teachers. (2003). Survey & Analysis of Teacher Salary Trends 2002-2003. Retrieved March 21, 2005, from http://www.aft.org/research/salary/home.htm Click on Table I, figure based on average salary.

Funding for Early Childhood Programs

Table 13: Funding Levels for ECEC Programs

Early Head Start	$12.7 Million[a]
Head Start	$130 Million[b]
Early Childhood Block Grant	$19.4 Million[c]
Block Grant Funds Used for Preschool	$10.5 Million[d]
Childcare Subsidies	$170.4 Million[e]
Full-Day Kindergarten (new FY2005)	$25 Million[f]
Kith & Kin	$238,453[g]

Source: Early Childhood Programs Matrix. (2003). Phoenix: Arizona State Board on School Readiness.
a: Includes regional and tribal programs. Department of Health and Human Services, Administration for Children and Families, Funding Guidance, September 2004.
b: Includes regional, tribal, and migrant worker programs. Department of Health and Human Services, Administration for Children and Families, Funding Guidance, September 2004.
c: Does not include the multiple funding streams being utilized by school districts to fund full-day Kindergarten.
c, d: Early Childhood Block Grant (ECBG) FY 05 total allocation and amount reported as expended for preschool by grantees in FY 04. Based on personal communication (e-mail) with staff in the Early Childhood Division, Arizona Department of Education, March 18, 2005.
e: Child Care subsidies, SFY 2005 appropriated amount. Personal communication (e-mail) with staff at DES, Child Care Administration, March 11, 2005.
f: House Engrossed Senate Bill, State of Arizona, Senate, 46th Legislature, 2nd Regular Session, 2004, Chapter 278, Senate Bill 1405.
g: Personal Communication (e-mail) with staff at the Association for Supportive Child Care, March 29, 2005.

Table 14: Total and Per Capita Spending by Child

In Millions of Dollars					In Dollars		
Age	**State & Local**	**Federal**	**Total**	**# Of Children**	**Per Capita State /Local**	**Per Capita Federal**	**Per Capita Total**
0-5	11.50	218.67	230.17	459,141	25	476	501
6-18	5,076.95	441.26	5,518.21	982,098	5,169	449	5,619
19-23	1,003.71	284.37	1,288.09	368,440	2,724	772	3,496

Source: Bruner, C., Elias, V., Stein, D., & Schaefer, S. (2004). *Early learning left out: An examination of public investments in education and development by child age.* Washington, DC: Voices for America's Children. Retrieved February 26, 2004, from http://www.voicesforamericaschildren.org

Table 15: Average Daily Rates for Full-Time Childcare in Arizona

Age of Child	**0-1**	**1-2**	**3+**
Licensed Centers	$31.00	$27.91	$24.19
Approved Homes	$20.00	$18.00	$18.00
Certified Group Homes	$22.00	$20.00	$20.00
Unregulated Homes	$25.00	$25.00	$23.00

Source: Maricopa County Office of Research and Reporting. (2004). *Child care market rate survey 2004.* Phoenix, AZ: Arizona Department of Economic Security, Division of Employment & Rehabilitation Services, Child Care Administration.

Table 16: Spending Per Child Enrolled

Childcare Subsidies	$3,660[a]
Block Grant Preschools	$2,220[b]
Head Start	$7,295[c]
K-12	$5,745[d]

a: Average monthly Department of Economic Security (DES) payment per child in state fiscal year SFY2005 is expected to be approximately $305/month. Source: Personal communication with staff at Child Care Administration, DES, March 11, 2005.
b: Represents state block grant resources per child only. This figure does not represent total funding per child as school districts supplement with additional dollars for FY 2005. Personal communication with staff at the Early Childhood Division, Arizona Department of Education, March 18, 2005.
Head Start represents Department of Health and Human Services average rate, September 2004. Funding Guidance. Based on funded enrollment versus actual enrollment.
c: Represents the average cost of serving 1,095 Early Head Start (EHS) children and 18,466 Head Start Preschool children Personal communication with Arnold Ramirez, Arizona Head Start Association, March 31, 2005.
d: *Lead with Five* (2005) retrieved from www.rodelfoundationaz.org.

Table 17: DES Childcare Subsidy Waiting List

March 2005	0 Families *	0 Children *

Source: Personal communication (e-mail) with staff at the DES Child Care Administration, March 18, 2005.
* In the time period between July 1, 2004, and February 3, 2005, the waiting list was as high as 2,400 children. The waiting list was eliminated on February 3, 2005.

Program Quality

Table 18: Arizona Public School Reading Outcomes for 2003

NAEP 4th Grade Reading[a]	**AIMS 3rd Grade Reading[b]**
46% below basic level	8% below the standard
31% basic level	16% approached the standard
19% proficient level	56% met the standard
4% advanced level	21% exceeded the standard

a: Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP, 1992, 1994, 1998, 2002, 2003). Reading Assessments. Washington, DC: Author Retrieved March 18, 2005, from http://nces.ed.gov/nationsreportcared/states/profiles.asp
b: Source: Retrieved March 21, 2005, from http://www.ade.state.az.us/standards/

The collection of specific data can indicate the quality of early care and education services and programs. Without an accountability system for early care and education, only a limited number of indicators are being collected that relate to quality. Several categories of statistics are available that bear some relation to program quality. In the 2004 ECE policy brief, the National Institute for Early Education Research (NIEER) report[14] gave Arizona a score of 4 out of 10 on quality of ECEC programs, but this was based mostly on assessments of the Early Childhood Block Grant (ECBG) preschools, which make up a small percentage of the ECEC programs in the state. A continuing way to measure program quality is to chart the frequency of ECEC programs found to be in non-compliance by Department of Health Services (DHS). Between November of 2003 and October of 2004, DHS conducted approximately 4,200 licensing inspections of childcare facilities. During that time frame, DHS issued to ECEC facilities 13 cease and desist orders, held 91 enforcement agreements, applied 88 civil money penalties, and issued 11 intent-to-deny-license notices.[15] DHS licensing surveyors' caseloads continue to remain large: 85 programs per surveyor in 2004, as compared to 56 per specialist in 1997. Between November 2003 and October 2004, DHS did not respond in the prescribed time period 55 times. Of these 55 times, 36 times DHS failed to respond to requests to process licensing applications, and 19 times DHS failed to respond to licensing changes.[16]

Accreditation by a nationally accredited childcare organization remains a predictor of program quality. The majority of Arizona's ECEC programs remain unaccredited, but the accuracy of the number of accredited programs is difficult to assess as the data are collected by accessing individual websites. There are 353 programs in Arizona listed as having National Association for the Education of Young Children (NAEYC) accreditation, 22 accredited from the National Accreditation Commission for Early Care and Education Programs (NAC), and 26 accredited from the National Early Childhood Program Accreditation (NECPA).[17] Totals for programs accredited by the other four accrediting organizations are not accessible.[18] Of the 2,187 licensed childcare centers and preschools, approximately 401, or 18 percent, are listed as accredited.

There are little data collected or available on student learning outcomes. Of the ECEC programs in the state, only Head Start, the Arizona Department of Education's

Early Childhood Block Grant (ECBG) Preschools, and kindergartens require any assessments of children. These outcome assessment data remain inaccessible and are not organized in any systematic fashion. Each local Head Start or ECBG preschool program may conduct child assessments, but the assessment tools they use vary and the assessment data they collect are not collected or compiled uniformly. Moreover, since there is no entity responsible for systematic data collection, any data that the individual programs may collect are not useful for ECEC program evaluation, child outcome purposes, or general program planning.

Evaluation of Available Data

A lack of aggregated data and the lack of an early care and education database continue to limit the ability to compare statistics between state agencies, community organizations, and national databases. The data presented in this report were gathered by going through various reports and databases and having conversations with representatives from each entity. Without the continued employment of experienced staff within each state agency and community organization, the difficulty of data collection would increase exponentially. The validity of the data and recognition of any changes would also be significantly reduced.

Demographic of ECEC in Arizona

The numbers in Tables 1, 2, and 5 (numbers of young children in Arizona, population projections through 2020, and number of children from birth to age 5 in ECEC programs, respectively) remain unchanged from the 2004 edition of this report, as these figures are drawn from year 2000 U.S. Census.[19] Locating data that incorporate the number of undocumented immigrants either utilizing or in need of child care services in Arizona remains elusive. There is evidence that Hispanics are the fastest growing racial/ethnic group in the birth-to-age-5 range.[20] Reports indicate that undocumented immigrant families use a host of informal care environments, including Kith and Kin providers.[21]

The methodology used by the Center for Business Research in formulating future forecasts is based on recent birth data. Statistics for children living in poverty and babies born to mothers with multiple risk factors (Table 4) continue to speak to the need for better access to resources and improved access to health screening for children that leads to earlier intervention. Figures for poverty and new babies at-risk suggest a continued high need for ECEC intervention. Most demographic data for Arizona are obtained from national databanks and are often not separated by socioeconomic or age group. The lack of specific data contributes to the difficulty in assessing the need and planning for appropriate early care and education services for families and their children.

Early Childhood Program Numbers and Enrollments

Data for both preschool and kindergarten enrollment remain fragmented. Data in these two areas are frequently obtained through special interest surveys rather than through the planned and coordinated effort of a state agency. The state's collection of child-care data continues to be problematic in several ways. The Department of Health Services (DHS) licenses centers and is able to report licensed capacity, but is unable to provide accurate enrollment numbers. The Department of Economic Security (DES), however, estimates enrollment data on an average daily basis that do not distinguish full-time from part-time attendance or pre-school-aged children from school-aged children receiving after-school care. No data from either agency report the specific age of children. DHS does not collect data on the number of slots available for each age range. The data on childcare center enrollments and capacity continue to show that there are sufficient childcare slots available for children, yet parents and early childhood professionals complain about the difficulty of locating high-quality center care for children younger than age one. Arizona does not regulate homes providing care to four or fewer children not subsidized by DES; therefore, there is no way to track the number of homes providing such care. An accurate depiction of the need for childcare remains difficult to portray. Anecdotal data indicate that there is a very limited amount of quality odd-hour care, care that occurs after 6:00 p.m. and on weekends.

Head Start enrollment data are routinely and reliably collected. The reports indicate actual enrollment figures (Table 7), and year after year the percentage of eligible

children who *do not* receive service due to lack of federal or state funding remains unknown. Nationally, it is estimated that only 3 in 5 income-eligible children are served by Head Start.[22] If that ratio were applied to Arizona in 2004, then approximately 15,000 eligible low-income children in Arizona were not served by Head Start.

The data profiled on kindergarten-aged children are based on a survey conducted by Ami Nagle in Spring 2003 (Table 8). With the addition of full-day kindergarten classes these figures have undoubtedly increased, yet no state agency has been charged with the responsibility of collecting and reporting the new data. It remains difficult to assess both the number of kindergarten classrooms in each school district and the total number of kindergarten classrooms in the state. The numbers of children enrolled in half-day programs versus full-day kindergarten programs are not currently being compiled and reported in any organized fashion.

Early Childhood Professional Development

The available data on the number and type of ECEC professionals working with children remain limited. The data were recently updated but still do not incorporate early childhood practitioners employed in kindergartens. Due to the self-reporting of data from childcare facilities, the accuracy of the data is not reliable.

The data collected in the 2004 *Arizona Wage and Benefit Survey* show minimal improvement in salaries for teachers and assistant teachers, but the percentage of assistant teachers who remain at their place of employment one year or less remains high at 32 percent. The hourly wage data continue to show a wide disparity in wages paid to ECEC professionals who work with young children in programs other than public school kindergartens. Data on educational levels of early childhood practitioners within specific childcare programs are still not collected. The lack of such data impedes future planning for relevant post-secondary education programs.

Funding for Early Childhood Programs

The data on funding for ECEC programs remain outdated or have limited viability, as certain figures are not reliable. While the data have limited utility, the need

for children and families to have support in accessing intervention services, child care, and other family support programs is critical for the stability and success of the family and children. The recent funding for full-day kindergarten has contributed to an increase in full-day kindergarten classrooms, yet the lack of aggregated data collection makes it extremely difficult to express an accurate depiction of accessibility or need.

Program Quality

The data on ECEC program quality remain limited and fragmented. The National Institute for Early Education Research (NIEER) report is now slightly dated and continues to be based only on the Early Childhood Block Grant (ECBG) preschools and does not address the full scope of ECEC program offerings. Even though the DHS licensing inspections doubled from the previous year, the caseloads remain high, which may be contributing to an under-identification of problems in licensed childcare settings. The National Assessment of Educational Progress (NAEP) and Arizona's Instrument to Measure Standards (AIMS) data, while more rigorous, still do not identify who received ECEC services. While accreditation is a valid predictor of quality, the differences in benchmarks utilized by each accrediting body reduce the ability to determine clear levels of comparative program quality. No significant progress has been made in the collection of readiness or learning outcomes data on children in ECEC programs. While policy makers seek child outcome data, this report is not recommending *formal* testing of young children.

Key Unanswered Policy Questions

The unanswered policy questions for this update are virtually the same as in the earlier 2004 report.

Demographic and Enrollment Issues

As reported in the 2004 Early Childhood Education and Care (ECEC) policy brief, while the census and population projections data offer the big picture on numbers of children age 5 and younger, it remains to be known how many young children need early care and education and what types of programs are most needed and wanted.

Early Childhood Professional Development

Can the universities, community colleges, and school districts meet the training and certification needs of ECEC practitioners in Arizona in the coming years? Will the requirement of additional professional development for early care and education practitioners change society's perceived value of an ECEC professional and in turn lead to a dramatic rise in ECEC salaries? What effect would a rise in salaries have on tuition?

Funding for Early Childhood Programs

What are the costs of meeting the ECEC needs of Arizona's growing population? Where will the funding come from to meet these growing needs, needs that include improvements in program quality, in staff training, in the number of children being served, and in the number of districts providing full-day kindergarten? While there was initial year funding for full-day kindergarten in 2004, it remains to be seen whether the Arizona State Legislature will continue to fund this initiative through 2010.

Program Quality

Will the field-testing of the quality rating system (QRS) currently underway provide sufficient information to support statewide implementation? Will the continued implementation of full-day kindergarten produce measurable growth in state (AIMS) and federal (NAEP) achievement scores in later grades?

Recommendations

The difficulty experienced in accessing data that would inform the state in the development of critical Early Childhood Education and Care (ECEC) policy procedures and initiatives leads to the recommendations that follow. As reported in the 2004 Early Childhood Education policy brief, these recommendations are not meant to address all of the complex issues in ECEC, but merely provide an outline for the collection of data that will be useful for policy analysis. It is recommended that:

1. The Arizona State Legislature give the School Readiness Board (SRB) the authority and funding to develop a comprehensive, coordinated statewide plan for the collection of critical data across the full range of ECEC programs.
2. The Arizona State Legislature give the SRB the authority and funding to implement a statewide quality rating system (QRS) based on the findings of the QRS being piloted by the Tucson United Way of Southern Arizona.
3. The Arizona State Legislature expand and fund the Statewide Child Care and Early Education Development System (S*CCEEDS) program to collect training and wage data on the educational levels of all ECEC teachers and providers of care so that universities, community colleges, school districts, and ECEC practitioners can plan appropriately for ECEC teacher preparation and staff training needs.
4. The Arizona State Legislature give the SRB the authority and funding to identify and track annually the amount of federal and state dollars invested in ECEC.
5. The Arizona State Legislature give the SRB the authority and funding to develop and implement an evaluation plan that will use school readiness indicators data and the QRS data to track child readiness outcomes over time.

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The Condition of English Language Learners in Arizona: 2005

Executive Summary

This brief focuses on the condition of education for English Language Learners (ELLs) in the state of Arizona. Two events – a federal court case (*Flores v. Arizona*) and voter-initiated Proposition 203 – have brought significant changes to the ways in which ELLs are educated in Arizona. Both events affected laws governing numerous aspects of education, including program options, teacher qualifications, and assessment. This brief reviews the events that led to these policy changes and the relevant program effectiveness studies, and analyzes state language testing data to address the question of whether Proposition 203's English-only requirement is providing the learning advantage it promised. The authors conclude that the increasingly restrictive manner in which the state's English-only education law has been implemented is indefensible in terms of the research and data reviewed.

Recommendations

It is recommended that:

- The Arizona Department of Education (ADE) continue to refine and expand the statewide student database.
- ADE make qualitative and quantitative data more accessible to researchers.
- ADE engage in collaborative ventures with the state's university research communities.
- The Arizona State Legislature commission a scientifically rigorous evaluation study of Proposition 203.
- ADE and the State Board of Education require alternatives to standardized language testing for the statewide accountability system.

The Condition of English Language Learners in Arizona: 2005

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Background

Two events – *Flores v. State of Arizona (1999)*[1] (*Flores*) and the passage of Proposition 203[2] – continue to direct English Language Learner (ELL) education policy in Arizona.[3] The *Flores* case imposed a number of duties on the State Board of Education and the Superintendent of Public Instruction related to identifying and providing appropriate services to ELLs. Proposition 203 changed the state law governing the range of educational programs for ELLs, mandating that "all children in Arizona public schools shall be taught English by being taught in English."[4]

Flores v. Arizona

In 1992, Miriam Flores, individually and as the parent of a minor child, filed an action against the State of Arizona in Federal District Court accusing the state of failing to provide ELLs with a program of instruction designed to make them proficient in English and enabling them to master the standard academic curriculum. The suit was predicated on the Equal Educational Opportunities Act (EEOA) of 1974.[5] The major complaints of the suit were that ELLs were taught by under-qualified teachers, that the state lacked adequate processes of identifying and monitoring ELLs, and lacked adequate funding for appropriate educational programs for these students.

A Consent Decree resulting from the *Flores* case led to many changes in the process for monitoring the progress of ELLs. In addition to standardized achievement testing, the court required the Arizona Department of Education (ADE) to include classroom observations, curriculum reviews, teacher interviews, student record reviews, and an ELL program review. ADE was further required to evaluate students in each of two years following a student's exit from ELL status. Exited students who do not perform satisfactorily are to be re-enrolled in an ELL program (subject to parental consent), be given compensatory instruction, or both.

Funding for ELLs has also been a focal point of the *Flores* case. A court-ordered cost study in May of 2001 surveyed multiple Arizona districts and found that the cost of services for ELL students ranged from $0 to $4,600 per pupil. The cost study, however, did not provide a rationale for any specific funding recommendation, and the court ordered a new study to specify both appropriate services and the cost of providing such services.

The *Flores* case pressed the issue of qualifications for ELL teachers. The State Board opened a rule-making docket for ELL teacher qualifications proposed by the Flores' attorney and the Bilingual Consortium, and requested that ADE develop recommendations. Meeting on February 23, 2004, the State Board of Education decided to reduce the qualifications required for teachers to work with ELLs from 21 credit hours to 4 credit hours. The Board considered three different options drafted by ADE for

endorsing Arizona teachers to work with ELLs, and voted in support of the least demanding plan. The new requirements state that all persons who currently hold a valid K-12 Arizona teaching certificate must obtain a provisional structured English immersion (SEI) endorsement by completing a one-credit-hour course in SEI methods by August 1, 2006, and obtain a full SEI endorsement by August 1, 2009, by completing a three-credit-hour course in SEI. Equivalent training provided by a school district's professional development staff may be substituted for the college coursework. Teachers who hold a valid bilingual or ESL endorsement are exempt. Persons who obtain a teaching certificate after August 1, 2006, must obtain a provisional endorsement by completing a three-credit-hour SEI course and then must complete a second three-credit-hour SEI course within three years to obtain the full SEI endorsement.

Proposition 203

Educational programs available to ELLs were significantly changed in 2000. The passage of the voter initiative Proposition 203 ended local flexibility regarding program options for educating ELLs by repealing Article 3.1 of the Arizona Revised Statutes, which sanctioned a variety of program models, and replaced it with a requirement that all ELLs in the state be taught using SEI unless they obtain a waiver.[6] Only about a third of ELLs were enrolled in any of the bilingual education programs offered in the state prior to the passage of proposition 203, while twice as many were placed in English as a second language (ESL) programs, a model similar to the newly mandated SEI approach.[7]

In addition to prescribing a specific language education program for ELLs, Proposition 203 also provided that "a standardized, nationally-normed written test of academic subject matter [be] given in English each year for children in grades 2 and higher."[8] Prior to the implementation of Proposition 203, state law[9] did not require students not yet proficient in English to take an academic achievement test in English; a district's governing board could exempt students classified as ELLs from such tests for up to three years, beginning with second grade, provided that a suitable alternative academic assessment was used.[10] Prior to the implementation of Proposition 203, many districts used the *Aprenda*, a Spanish-language test of academic subject matters, for

students who had been exempted from the statewide English-medium test of academic achievement.

Qualifications for Waivers

Proposition 203 permits alternatives to the SEI requirement. Waivers allowing students to participate in alternative educational programs such as bilingual education are available for "older children" (at least age 10), children with "special individual needs" (physical or psychological), or children who "already know English." To apply for a waiver, parents must submit a written request at the start of each school year at a time when they personally visit the school and receive from a school official a full description of the educational materials to be used in the alternative program. Once these requirements are met, waivers are granted at the discretion of the district superintendent.[11]

According to the law, a child who already knows English is one who "possesses good English language skills, as measured by oral evaluation or standardized tests of English vocabulary, comprehension, reading, and writing, in which the child scores approximately at or above the state average for his grade level, or at or above the fifth grade average, whichever is lower."[12] Because the grade-level average for students in Arizona on English oral language assessments is not known, many districts had been using their own district testing data to estimate the state average in order to determine the required minimum score for a waiver.

In response, Superintendent of Public Instruction Tom Horne issued guidelines insisting that children qualifying for waivers under this provision must meet the test publisher's "passing score" rather than the district's estimated statewide average for the appropriate grade level. Despite challenges to the superintendent's guidelines by state politicians and an Attorney General's Opinion, the superintendent's guidelines remained in place with slight modifications, and many of the state's few remaining bilingual education programs were disbanded.[13]

Time Needed to Learn English

An especially controversial aspect of Proposition 203 was the suggestion in the text of the initiative that children would become proficient in English within a year's time: "Children who are English learners shall be educated through sheltered English immersion during a temporary transition period not normally intended to exceed one year."[14] The assumption that ELLs can learn English very quickly in an all-English instructional setting plays a key role in the underlying rationale for SEI. In *Lau v. Nichols (1974)*, the Court found that "students who do not know English are effectively foreclosed from any meaningful education" because they cannot understand classroom instruction. SEI advocates believe that young children learn English so quickly under conditions of immersion that they can readily catch up to other students once classroom instruction has become understandable.[15] Proponents of bilingual education, on the other hand, have maintained that classroom instruction in the native language is necessary to help children keep up academically during the time it takes to learn English well enough to get by in an all-English instructional setting. The time frame required to learn English is understood to be a matter of years rather than months.[16] Thus, opponents of the measure warned that the negative effects of SEI are likely to show most prominently in later years, when the cumulative effects of incomprehensible classroom instruction would begin to take a toll.[17]

Because children who have limited knowledge of English cannot fully participate in an all-English school curriculum, the SEI approach has the effect of deferring aspects of the academic curriculum until children have learned English well enough to follow English-medium instruction. Thus, whether students will learn English at the hypothesized rate is of crucial importance. If indeed children learn English within a year's time, then they might reasonably be expected to catch up on missed content the following year. If children require much more time to learn English than the SEI method assumes, however, then the approach may have the effect of deferring academic instruction for a prolonged period, possibly leading to long-term negative effects on the academic achievement of ELL children.

Charter Schools and Proposition 203

In 1994, the Arizona Legislature authorized the establishment of public charter schools to serve as alternatives to traditional public schools.[18] Following the passage of Proposition 203, Superintendent Horne asked the state Attorney General to address the question of whether charter schools, as public schools, are subject to its provisions. On July 25, 2003, the Attorney General released an opinion stating that charter schools are not subject to the requirements of Proposition 203 unless its charter provides otherwise, because "[c]harter schools are not operated within the oversight framework that governs traditional public schools" and "are exempt from all statutes and rules relating to schools, school districts, and school district governing boards unless the statutes that govern charter schools or their own charters provide otherwise."[19]

Superintendent Horne reacted to the opinion by stipulating that charter schools permitting bilingual education are not eligible to receive the state-allotted $300 per pupil earmarked to help schools teach ELL students.[20] Nonetheless, interest in charter schools as a locus of multilingual education for ELLs and majority language students appears to have grown.

Recent Policy Developments

Following is a summary of policy developments affecting ELLs in Arizona since last year's *Conditions* report.[21]

Funding

A new court-ordered cost study, following from the *Flores* case and undertaken by the National Conference of State Legislatures,[22] was released in February 2005. Using school district surveys, professional judgment panels, school performance data, school-site interviews, and a review of the relevant scholarly literature, the study concluded that adequate funding for ELL students ranges from $703 to $6,455 per student, depending on grade level, specific needs, and other school- and child-level factors. All estimates were significantly higher than the state's present allocation for ELL students.

On May 12, 2005, the Legislature responded to the funding requirement of the *Flores* case by passing HB 2718. The new bill, strongly opposed by Tim Hogan, the attorney for the Flores family, provides an increase in funding of $28 million for one year only; then schools would have to apply to ADE on an individual basis. Funding under the program is only available if a school's costs exceed all other state, federal, and local money available for ELL students. At the time of this writing, the governor is considering a recommendation of a veto by opponents of the bill.

Teacher Quality

In December 2001, the Arizona Legislature had passed House Bill 2010,[23] which doubled funding for ELLs by providing funds for materials, teacher tuition reimbursements, reclassification bonuses, and compensatory education programs. It also required the State Board of Education to adopt an SEI endorsement. The Board adopted standards for qualifications for teachers of ELLs to comply with federal and state law. House Bill 2010 also provides that universities overseen by the Board of Regents that offer a degree in education must require courses necessary to obtain a provisional SEI endorsement as prescribed by the State Board.

The Superintendent of Public Instruction notified school personnel on February 8, 2005, that all certified teachers and administrators in the state must obtain a provisional SEI endorsement by August 31, 2006, and a full SEI endorsement by 2009. The provisional endorsement requires 15 clock hours (or 1 university credit) and the full SEI endorsement requires an additional 45 clock hours (or 3 university credits).

These requirements have been highly controversial and have been criticized as inadequate. A majority of the Professional Judgment Panel interviewed by the National Conference of State Legislatures for the cost study believed these standards to be "insufficient."[24] Indeed, the policy may have precisely the opposite effect of what the *Flores* Decree intended, namely, the creation of a context permitting schools to place ELLs in classrooms with teachers who have only minimal training to provide appropriate services. Hence, it may in fact result in a reduction in teacher quality for ELL students rather than an increase.

Language Assessment Policy

On August 25, 2003, the State Board of Education approved a motion by the Superintendent of Public Instruction that school districts be permitted to continue using four standardized oral language assessments for ELLs, including the *Language Assessment Scales* (LAS), the *IDEA Proficiency Test* (IPT), the *Woodcock-Muñoz Language Survey* (WMLS), and the *Woodcock Language Proficiency Battery* (WLPB). Effective in the 2004-2005 school year, all schools were required to begin using the Stanford English Language Proficiency (SELP) test of English, developed by Harcourt. The change in policy is pursuant to the requirement of the No Child Left Behind (NCLB) Act, which is generally interpreted as requiring a single statewide assessment for all ELL students. The SELP is offered in four test levels: Primary (K-2), Elementary (3-5), Middle grades (6-8) and High school (9-12).

Available Data

Research on the effectiveness of the state's English Language Learner (ELL) policies is of crucial importance and goes to the heart of Arizona's policy debates about how language of instruction affects the academic success of ELLs. In this section several studies and analyses of state data are reviewed that speak to this issue. Also addressed is an important and related question: Are Arizona's ELLs learning English at the rate expected by proponents of the SEI approach?

How Does Language of Instruction Affect Academic Success for ELLs?

A considerable number of studies and reviews of studies have been conducted nationally to examine whether and to what extent native language instructional support is beneficial to ELLs. Researchers have used a variety of research synthesis methods to summarize findings from effectiveness studies for ELL education. One approach, known as meta-analysis uses statistical methods to provide such summaries.[25] A 1998 meta-analysis of bilingual education programs, conducted by Jay Greene of the Manhattan Institute, found that "bilingual programs are effective at increasing standardized test scores measured in English."[26] In another report, using "best evidence" as an approach to

research synthesis, Robert Slavin and Alan Cheung of Johns Hopkins University identified studies that they believed used sound research methods to investigate the relative strengths of different program options for ELLs. These researchers reported that most of the studies that met their criteria for inclusion favored bilingual approaches over immersion approaches. While some found no difference, none significantly favored immersion over bilingual education.[27] The National Research Council reached similar conclusions in two separate reviews of the scholarly literature.[28]

Locally in Arizona, before the passage of Proposition 203, several studies were conducted to examine academic achievement among ELLs in bilingual education classes and English-only classes, and findings concurred with those in the national literature. A recent meta-analysis of Arizona studies of program effectiveness, conducted by Arizona State University researchers, found "positive effects on all measures in English, and especially positive effects for all native language outcome measures" for students in bilingual education programs.[29] The results indicate that ELLs exposed to bilingual education programs outperformed ELLs who were exposed to English-only programs on all measures.

Studies attempting to address the question of ELL program effectiveness using Arizona state-level data have been less successful. Analysis of state achievement data has been shown[30] to be of limited use for evaluating program effectiveness primarily due to two problems: (1) the lack of a reliable way to track individual students across years[31] and (2) lack of reliable coding of program types. For example, a group of Arizona State University researchers, in partnership with the Arizona Department of Education (ADE), attempted a longitudinal (over time) analysis of existing academic achievement data (Stanford-9 scores) collected by the state, and included the entire state population of over one million students who were in grades three through nine during the five-year period from the 1996-1997 academic year through 2000-2001.[32] Students' scores were linked across years using an algorithm developed by researchers at ADE, a method estimated to have 80 percent accuracy. Although an analysis of mean growth revealed a slightly positive effect for bilingual education over students in English immersion, the program placement variable shifted erratically from one year to the next in the longitudinal dataset.[33] Many of the observed sequences of classroom placements were not consistent

with approved or known program models. Because data were in most cases coded by teachers and students, the authors interpreted the observed shifts to reflect errors in the data coding, and expressed concern about the reliability of the findings.

Two years later, ADE, using 2003 statewide Stanford 9 scores only, relied on the same thread of data to conduct its own analysis to determine whether students in SEI or bilingual education had performed better. The study[34] examined program advantage in terms of grade equivalence differences in average test scores in 2003. In the comparisons among Spanish-background students, SEI students reflected a 0-2 month advantage in the lower grades and a 3-8 month advantage in the higher grades.

In addition to the program coding inaccuracies, the study also had several major methodological shortcomings. First, it was based on a single measure of achievement rather than on longitudinal growth. Thus, there was no control for prior test scores or English proficiency levels across the program groups, and it was therefore not known whether students in one group initially had an advantage unrelated to the program in either of these domains. Second, students' program placement in prior years was not considered. For example, because bilingual programs include progression to ESL classroom placements in later grades, students reported to be in ESL classrooms in 2003 may actually have been in a later phase of a bilingual education program. A third limitation was that the study did not consider socioeconomic status, which is known to independently predict academic achievement gaps; this is very important in the present context, as children enrolled in bilingual education classes are twice as likely to be enrolled at a school with lower socioeconomic status than children enrolled in English-only classes.[35]

A recent study by Joseph Guzman[36] on the long-term benefits of bilingual education deserves discussion because it has been frequently cited in public by the Superintendent and others as evidence that English-only programs are more beneficial to students than bilingual programs, contrary to the conclusions of most published research. The study found that students who participated in bilingual education completed about a half-year less of school than students taught in an English-only approach. It further concluded that students taught through bilingual education were less likely to be in a

high-skill occupation and earned less than students taught using English-only approaches, but the differences in wages earned was not statistically significant.

Although the advantages Guzman reported for English learners taught through English-only approaches were modest, it is important to point out that the conclusions of the report were incorrect because of a critical flaw in the research design. Guzman identified bilingual education students in his study as those who indicated on a survey that they had received "foreign language instruction in a non-language topic" but had not received special instruction in English for non-English speakers. As mentioned, however, bilingual education programs provide both native language support and special instruction in English for non-English speakers. Thus, Guzman's group of "bilingual education" participants was not correctly defined. In a brief footnote,[37] Guzman indicated that including students who reported both treatments (as one would expect in a properly designed bilingual education program) in the statistical analysis increased the effect of bilingual instruction on years of education completed, but he offered no details.[38] Another significant problem was that program participation was self-reported in Guzman's study years later, and no effort was made to corroborate their recollections.

In sum, language of instruction has been shown to have an impact upon students' academic achievement, but not in the direction that current Arizona education policy suggests. Although attempts to analyze Arizona statewide academic achievement data have not lead to meaningful conclusions due to limitations inherent in the data, research syntheses of scientifically designed studies conducted nationally and in the state converge on the conclusion that bilingual education programs can effectively increase students' academic achievement scores in English, with results superior to those typical of SEI programs.

Is SEI Working in Arizona?

SEI programs theorize that ELLs will learn English very fast under conditions of total immersion, typically within a year's time, so that all-English instruction in academic subjects will be comprehensible to children soon enough to prevent potential negative consequences that might otherwise follow from being instructed in a language they

cannot understand. This section examines changes in English language proficiency test scores for children participating in the state's language testing program in school years 2002-2003 and 2003-2004 to evaluate whether the underlying theory of the SEI program appears to be working in Arizona.

By specifying research interests and signing a confidentiality agreement with ADE, authors of this brief obtained student language test score information along with relevant demographic indicators such as home language and ethnicity. Unique student identifiers, introduced in 2002-2003, made it possible to accurately track students over a two-year period. Growth in oral language development was computed, as measured on four different tests used during this period: the *Language Assessment Scales-Oral* (LAS-O), the *IDEA Oral Proficiency Test* (IPT), the *Woodcock-Muñoz Language Survey* (WMLS), and the *Woodcock Language Proficiency Battery* (WLPB).

Table 1: Number of ELL Students in Arizona's Oral English Language Proficiency Testing Programs by Year, Grade Level, and Test

Grades K – 3				
	2003		2004	
Test	**Number of Students**	**Percentage**	**Number of Students**	**Percentage**
IPT Oral	28,429	58.7	42,315	67.4
LAS-O	14,697	30.3	14,976	23.9
WLPB	48	0.1	0	0.0
WMLS	5,260	10.9	5,455	8.7
Total	***48,434***	***100***	***62,746***	***100***
Grades 4 – 8				
	2003		**2004**	
Test	**Number of Students**	**Percentage**	**Number of Students**	**Percentage**
IPT Oral	25,254	63.2	39,162	72.9
LAS-O	11,490	28.7	11,702	21.8
WLPB	25	0.5	1	0.0
WMLS	3,156	7.6	2,879	5.3
Total	***39,925***	***100***	***53,744***	***100***
Grades 9 – 12				
	2003		**2004**	
Test	**Number of Students**	**Percentage**	**Number of Students**	**Percentage**
IPT Oral	7,495	57.3	10,750	65.5
LAS-O	4,278	32.6	4,066	24.7
WLPB	5	0.0	33	0.2
WMLS	1,327	10.1	1,572	9.6
Total	*13,105*	*100*	*16,421*	*100*

Source: Computed from Statewide English Language Proficiency data file provided by the Arizona Department of Education.

Table 1 shows the number of ELLs who participated in Arizona's oral English proficiency testing programs by year, grade level, and instrument for school years 2002-2003 and 2003-2004. Table 2 shows the ethnicity and home language breakdowns for all students who participated in any part (oral, reading, writing) of the language proficiency testing program between 2003 and 2004. Although 46 languages were coded in the data set, only the three largest language groups – Spanish (81.9 percent), English (7.5 percent), and Navajo (5.8 percent) – are reported in Table 2. Other languages coded but not reported here comprise the remaining five percent of students; examples include Vietnamese (0.7 percent), Arabic (0.4 percent), Korean (0.2 percent), Romanian (0.2 percent), Russian (0.2 percent), and Yugoslavian (0.2 percent).

Table 2: Ethnicity and Home Language (English, Spanish, Navajo) of Students Participating in Arizona's Oral English Language Proficiency Testing Programs in 2003 and 2004.

Ethnicity				
	2003		**2004**	
	Number of Students	**Percentage**	**Number of Students**	**Percentage**
Asian	2,721	2.2	3,502	2.2
Black	683	0.6	985	0.6
Hispanic	104,039	85.6	132,596	83.4
Indian	11,082	9.1	18,208	11.5
White	2,995	2.5	3,707	2.3
Total	***121,520***	***100***	***158,998***	***100***
Home Language				
	2003		**2004**	
	Number of Students	**Percentage**	**Number of Students**	**Percentage**
English	9,170	7.5	14,917	9.4
Spanish	99,570	81.9	126,323	79.4
Navajo	7,000	5.8	9,556	6.0

Source: Computed from statewide English language proficiency testing data file provided by the Arizona Department of Education. Note: This section does not include totals because data on only the three largest language groups were analyzed.

Table 3 shows the proficiency level changes for oral language over the course of one school year by grade level (in 2004) and test.[39] Zero indicates no gain in proficiency level, negative numbers indicate the number of proficiency levels a student declined in one year, and positive numbers indicate the number of levels a student increased. For example, 60 percent of younger students (grades 1 through 5) experienced no change in English proficiency between 2003 and 2004, whereas 70 percent of older students (grades 6-12) had no change in English proficiency.

Table 3: One-Year Change in Fluency Level for Students Taking the IPT Oral and LAS-O by Grade Level Grouping and Oral Proficiency Test, 2003-2004

Grades 1 – 5										
	Gain									
	-2		**-1**		**0**		**1**		**2**	
Test	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
IPT Oral	34	0.2	1,468	7.9	11,784	63.7	4,744	25.6	476	2.6
LAS-O	12	0.2	291	3.8	3,850	50.9	3,001	39.7	408	5.4
All	***46***	***0.2***	***1,759***	***6.7***	***15,634***	***60.0***	***7,745***	***29.7***	***884***	***3.4***
Grades 6 – 12										
	Gain									
	-2		**-1**		**0**		**1**		**2**	
Test	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
IPT Oral	13	0.1	900	8.3	7,446	68.9	2,352	21.8	109	2.3
LAS-O	33	0.7	294	6.2	3,441	72.3	873	18.5	94	0.9
All	***46***	***0.3***	***1,194***	***7.7***	***10,887***	***70.0***	***3,225***	***20.7***	***203***	***1.3***

Source: Computed from Statewide English Language Proficiency data file provided by the Arizona Department of Education.

The percentage of ELLs who experienced a zero or negative change in English proficiency between 2003 and 2004 (71 percent) dramatically exceeds the number of students who had any gain (29 percent).

Finally, Table 4 shows changes in English language proficiency status over a one-year period for students who tested non-proficient in 2003. Among students in grades 1-5, who are subject to the waiver requirement of Proposition 203 and therefore most heavily impacted, 41 percent tested non-proficient again in their second year. Approximately 48 percent of students achieved intermediate proficiency, and only 11 percent achieved oral English language proficiency in one year's time. In all, 89 percent of non-English proficient ELLs failed to achieve English proficiency in the one-year period considered here. The number of years of schooling these children may have had prior to testing non-English proficient in 2003 is unknown.

Table 4: English Proficiency Status in 2004 for ELL Students Not Proficient in 2003 (LAS-O and IPT)

Grades 1 – 5						
	Not Proficient		**Limited English**		**Fluent English**	
Test	**Number**	**Percentage**	**Number**	**Percentage**	**Number**	**Percentage**
LAS-O	895	31	1,609	55	408	14
IPT Oral	2,519	47	2,364	44	476	9
All	***3,414***	***41***	***3,973***	***48***	***884***	***11***
Grades 6 – 12						
	Not Proficient		**Limited English**		**Fluent English**	
Test	**Number**	**Percentage**	**Number**	**Percentage**	**Number**	**Percentage**
LAS-O	726	58	421	34	109	9
IPT Oral	678	40	921	54	94	6
All	***1,404***	***48***	***1,342***	***46***	***203***	***7***

Source: Computed from statewide English language proficiency testing data file provided by the Arizona Department of Education.
Note: Percentages may not add up to 100 because of rounding.

Proficiency levels for the WLPB and WMLS could not readily be combined with those of the IPT Oral and LAS-O in Tables 3 and 4 because the WLPB and WMLS use a different coding system for proficiency levels than do the IPT Oral and the LAS-O.[40]

However, because only a small proportion of the ELL population took the WLPB and WMLS (9.7 percent in 2003, 7.5 percent in 2004; see figures in Table 1), and because independent empirical evidence indicates that these tests have a lower pass rate than the IPT Oral and the LAS-O,[41] including them in the data summaries presented here would not likely improve the overall perception of student outcomes on the language proficiency measures.

Regrettably, we cannot calculate the number of years students need to learn English under Proposition 203 from these data, as the unique identifier which links students across years is only available in 2003 and 2004. However, we can observe that extremely few achieved proficiency within a single year, and a very large number of students, across the range of proficiency levels, showed zero or negative score changes in their second year of language testing.

Because program coding data are believed to be unreliable in this data set and other important variables are not available, rates of English acquisition across different program types cannot be meaningfully assessed. However, the question of comparable rate of acquisition may be illuminated by a recently completed analysis of district-level language proficiency data collected from students enrolled in a bilingual education program prior to the passage of Proposition 203. Using a longitudinal data set from Spanish-background children enrolled in a bilingual education program in Central Arizona, Arizona State University researchers found that ELLs achieved linguistic parity with native English speakers in a range of 1 to 6.5 years and in an average of 3.31 years.[42] These results suggest that students enrolled in bilingual education programs learn English at a reasonable pace.

Findings reported here based on the state's language proficiency data contradict the Superintendent's public statements suggesting that students tend to achieve oral language proficiency within a year under the SEI program.[43] These findings also cast doubt on the feasibility of the underlying theory of SEI. These data indicate that a majority of students did not experience an increase in proficiency level between 2003 and 2004 when enrolled in SEI programs. A possible implication is that students do not learn English at a rate fast enough to prevent the development of academic deficiencies

resulting from instruction in a language they cannot understand. On the other hand, longitudinal language proficiency data obtained from a bilingual education program in Arizona prior to the passage of Proposition 203 indicate that children achieve parity with native speakers of English in an average of about three years. Academic deficiencies are not expected to accrue during the time needed for children to learn English because a bilingual education program provides instruction in academic subjects in both English and Spanish.

Policy Implications

The central implication of the present discussion relates to the desired effects of the English-only law and the restrictive manner in which it has been implemented and enforced in Arizona. Although the state's data have not been useful for program comparison purposes, a substantial amount of rigorous and scientifically designed evaluation research now exists that suggests structured English immersion (SEI) may have negative effects on student learning relative to bilingual alternatives. A review of the state's English language proficiency data suggests that students are not achieving English fluency at the rate anticipated by proponents of Proposition 203 and that the theory underlying the model is false. Other research evidence suggests that children in Arizona's bilingual education programs learned English at a reasonable rate while receiving instruction in academic subjects in their native language. As Arizona continues to study realistic options for ELLs, the state should move toward a more tolerant policy for different theoretically and empirically defensible approaches to the education of ELL students. The current climate is one that not only prevents justifiable alternatives, but also makes serious and meaningful study of alternative programs essentially impossible.

Similarly, in the important arenas of teacher preparation and educational funding, continued work must be done to determine appropriate funding levels to ensure quality programs, and the availability of teachers appropriately trained to meet the needs of ELL students. Current policy trends appear to have the potential of lowering overall quality of ELL teacher preparation far below pre-*Flores* requirements.

Recommendations

What follows are suggestions for improving statewide efforts to collect data and evaluate policy, building on recommendations from last year's brief.[44]

It is recommended that:

1. The Arizona Department of Education (ADE) continue to refine and expand the statewide student database. Longitudinal studies will provide optimal data for addressing policy questions, so it is critical to have accurate and thorough data collected annually and linked across years. ADE has implemented a unique student identification code for each student, which will permit more reliable tracking of students across multiple years of schooling.

   In addition to student achievement scores and general demographic indicators (such as socioeconomic status and ethnicity), evaluation of educational policy for English Language Learners (ELLs) requires the collection and coding of richer program-specific information. Reliable coding procedures are required to collect data such as ELL status (including length of time classified as ELL and criteria met for exiting ELL status), program placement, and language proficiency scores. One of the initial complaints in the *Flores* case was that ELLs were being mainstreamed into regular classrooms without the language skills needed to compete with their native English speaking peers. Creating a system of evaluation that includes multiple measures of success over time will support examination of this and many other unanswered policy questions.

2. ADE make qualitative and quantitative data more accessible to researchers. A system of accessibility that makes data available to researchers and is permanent, remaining in place through administration changes, is likely to encourage rigorous and well-designed research projects.

3. ADE engage in collaborative ventures with the state's university research communities. The policy community, research community, and general public are all concerned with the academic success of ELLs. How is

Proposition 203 being implemented? Is SEI effective? How should academic progress be measured for ELLs? Arizona's public university resources offer the state an opportunity to assist in deriving meaningful answers to important policy questions regarding ELL students.

4. The Arizona State Legislature commission a scientifically rigorous evaluation study of Proposition 203. In May of 2000, two years after the passage of Proposition 227 – a measure essentially identical to Arizona's Proposition 203 – the California State Legislature commissioned and funded an evaluation study of the effectiveness of the new law. The study could provide much-needed input to help the Legislature evaluate its options to modify Proposition 203 as more is discovered about its effects.

5. ADE and the State Board of Education require alternatives to standardized language testing for the statewide accountability system. Relatively little is known about the Stanford English Language Proficiency (SELP) test, now the state's official instrument for measuring language development among ELLs. A language test has far-reaching consequences for ELL students. It determines their eligibility to qualify for services, exit from services, and to quality for a waiver from the English-only law. The validity of the SELP and its usefulness for these discrete purposes must be carefully examined over the next several years. Having a single measure for all students in the state may help policy makers compare students and schools, but policy makers should remain wary of the problem of potential measurement error and misuse of scores for such tests. Arizona would be better served by collecting multiple measures of language ability for each ELL, and might benefit by using separate tests for distinct assessment purposes.

Notes and References

[1] Flores v. Arizona, 48 F. Supp. 2d 937 (D. Ariz. 1999).

[2] English Language Education for Children in Public Schools: Definitions, A.R.S. § 15-751.

English Language Education for Children in Public Schools: English Language Education, A.R.S. § 15-752.

English Language Education for Children in Public Schools: Parental Waivers, A.R.S. § 15-753.

English Language Education for Children in Public Schools: Legal Standing and Parental Enforcement, A.R.S. § 15-754.

English Language Education for Children in Public Schools: Standardized testing for monitoring education progress, A.R.S. § 15-755.

All statutes were retrieved May 20, 2005, from http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=15

[3] See "Minority Participation" brief in this report for additional information regarding ELLs in the state.

[4] English Language Education for Children in Public Schools: English Language Education, A.R.S. § 15-752. Retrieved May 20, 2005, from http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=15

[5] Equal Educational Opportunities Act, 20 U.S.C. § 1703 (1997).

[6] English Language Education for Children in Public Schools: Standardized testing for monitoring education progress, A.R.S. § 15-755. Retrieved May 20, 2005, from http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=15

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The Condition of Special Education in Arizona: 2005

Executive Summary

Students in the state of Arizona receiving special education services have a legal right to equal access to an appropriate education, effective education programming in the least restrictive environment, and evaluation in an unbiased manner. Ensuring these rights has proven difficult because of the differing goals and methods of the No Child Left Behind Act (NCLB) and the Individuals with Disabilities Education Act (IDEA). NCLB's achievement goals are focused on implementing academic programs for all special education students, but IDEA demands differentiated instruction based on an individual's needs. This conflict (group vs. individualization) has created widespread frustration for educators and policy makers. For Arizona's special education programs to overcome the problems created by this conflict, the authors of this brief assert that teachers must be able to collaborate on the education plans of special-education students, all educators should receive professional development in addressing behavior problems and methods for identifying students with disabilities, and the Arizona Department of Education (ADE) should compile more data on the teacher hiring practices employed by schools.

Recommendations

It is recommended that:

- ADE in collaboration with Institutions of Higher Education create a comprehensive database to track patterns of hiring practices of schools.
- ADE; public, private, and charter schools; and teacher and school psychologist training programs implement response to intervention (RTI) methods to improve achievement and prevent misidentification of students with disabilities.
- ADE work with individual districts and schools to provide students with disabilities access and opportunities to participate and progress in the general education curriculum through collaboration by special and general education teachers in the student's educational planning.
- Arizona schools improve the academic and social behavioral outcomes of challenging students who are at serious academic or behavioral risk.
- Arizona guarantee effective instructional options, and specialized programming, mental health services, and vocational rehabilitation for students with special needs.
- ADE open a statewide dialogue concerning suspension and expulsion, and their alternatives for promoting a productive learning climate in Arizona schools.

The Condition of Special Education in Arizona: 2005

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Background

Schools throughout the nation are making every attempt to provide the basic provisions of Individuals with Disabilities Education Act (IDEA): Free Appropriate Public Education (FAPE), Least Restrictive Environments (LRE), Individualized Education Programs (IEP), and last, a continuum of alternative placements. Such provisions are intended to ensure that every student with special needs has access to effective instruction that results in positive outcomes. The types of services provided are based on the individual learning needs of students and are specified in each student's IEP.[1] IDEA and its subsequent amendments provide the foundation for special education. Implementing these laws requires schools to provide objective and meaningful assessments of individual needs and implement interventions designed to enhance the performance of students with special needs.

The 2002 reauthorization of the Elementary and Secondary Education Act, known as the No Child Left Behind Act (NCLB), sets as its stated goal raising the bar of academic achievement for all students which creates a risk of compromising the extent and quality of services for students with special needs. With the advent of NCLB and the start of the high-stakes accountability movement, Arizona finds itself having to address

the needs of students in special education who are required to take the Arizona Instrument to Measure Standards (AIMS) test. When students in special education took the AIMS exam at grade level with no accommodations, many special education students were not successful. To make the process of evaluation equitable, alternate assessments and accommodations must be available for students with special needs.

IDEA demands differentiated instruction based upon individualization,[2] whereas NCLB demands equal treatment for all students. The dichotomy of the two concepts, accountability standards for all vs. individualization, is creating widespread frustration within schools and among the personnel who work with students with special needs. IDEA 2004 emphasizes pre-referral interventions and assistive technology to be used by general educators and special educators.

Professionals and parents are finding it challenging to compromise the individualization model that has been the foundation of special education for years. Promoting multiple content expertise for all special education teachers, requiring high-stakes testing of all students that may preclude graduation, and full inclusion of all students in the general education classroom, seems virtually certain to deny students with disabilities access to the free, appropriate public education that has been mandated for more than 30 years.[3]

Recent Policy Developments

The most recent reauthorization of the Individuals with Disabilities Education Improvement Act of 2004 (H.R. 1350) continues to mandate that all children with special needs receive a free and appropriate public education, and schools *must* provide special education and related services at no cost to the child or the child's parents or guardians.[4] The first enactment of the law in 1975, the Education for All Handicapped Children's Act or Public Law 94-142, mandated public schools to provide free and appropriate public education to students with special needs ranging from 3 to 21 years of age in the least restrictive environment possible. This landmark legislation had four specific purposes:

- To ensure that all school-age children with disabilities have access to a free appropriate public education that emphasizes special education and related services;
- To guarantee that children with special needs and their parents are protected by due process rights;
- To assist state departments of education in providing special education and related services to children with disabilities;
- To assure the effectiveness of efforts related to the education of all children with disabilities.[5]

The reauthorization in 1990 renamed the law the "Individuals with Disabilities Education Act" (IDEA). It replaced the term handicap with disability, outlined an array of service delivery models, mandated transition services and supports for youth with disabilities, defined assistive technology, and added autism and traumatic brain injury as separate eligibility categories for special services. The 1997 reauthorization (P.L. 105-17) added changes to the discipline sections of the law; it required schools and school districts to develop and implement functional behavioral assessments and positive behavioral interventions when students with disabilities exhibit or are at risk for behavior problems.

The Individuals with Disabilities Education Improvement Act of 2004 (H.R. 1350) responded to the findings of President Bush's Commission on Excellence in Special Education (PCESE), which in 2002 called for special education reform that emphasized paperwork reduction, accountability, school choice, and positive outcomes for students. Advocates for students with disabilities have criticized the PCESE report suggesting that it devalues special education and threatens to dismantle services for children and youth with disabilities.[6] In addition to cuts in the mandatory funding, IDEA 2004 has raised the following concerns:

- It is unclear where the burden of proof now will fall to prove that behavior requiring disciplinary action was caused by or had a direct and substantial relationship to the disability. Prior to IDEA 2004, in order for school

personnel to use the same disciplinary procedures applied to children without disabilities, the school district had to prove that the behavior resulting in a disciplinary action was not a manifestation of the child's disability.

- IDEA 2004 authorizes schools to use up to 15 percent of IDEA funds to develop comprehensive educational support systems for students not yet identified disabilities in grades K-12 who need additional academic and behavioral support to succeed in a general education environment. In addition to the 15 percent of all IDEA funds that a local school district can spend on students without disabilities, 50 percent of all new IDEA money can be spent by a local school district on meeting the requirements of NCLB, which may not necessarily include specialized interventions or individualized programming.

- Coupled with the use of IDEA funds being used for non-disabled students, districts will be given the option of creating "risk pools" of funds to pay for the education of students who are considered especially costly to maintain and educate. The development of such funds is not mandatory, and Arizona needs to define what a high-need student is and how the district will apply for those funds.

- IDEA 2004 eliminates the requirement of developing short-term objectives in Individualized Education Programs (IEPs) for most students. It only requires schools to provide short-term objectives for students with significant disabilities. For most students with disabilities, providing quarterly reports to parents on their child's progress toward meeting annual IEP goals and how that progress is being measured is sufficient under the law. Additionally, IEPs can be modified or revised without the need to convene and have a formal meeting, if the parent agrees. This may result in some schools not making appropriate efforts to involve IEP teams and parents.[7]

The findings of these policy changes are discussed in the following six areas: preparing and retaining highly qualified teachers, Response to Intervention (RTI), access to the general education curriculum at the grade level, acceptance of positive behavior supports, continuity of programming, and suspension and expulsion.[8]

Highly Qualified Teachers

A significant issue pertaining to the implementation of the No Child Left Behind Act (NCLB) is the preparing, recruiting, and retaining of "highly qualified" special education teachers. To ensure all children learn from high quality teachers, NCLB calls for a highly qualified teacher in every public school classroom by the 2005-2006 school year. According to H.R. 1350, special education teachers must obtain full State certification in special education. In addition, a special education teacher who teaches core academic subjects exclusively to children who are assessed against alternate achievement standards must meet the requirements as they apply to any elementary school teacher. In the case of instruction above the elementary level, a special education teacher must show that they have subject matter knowledge appropriate to the level of instruction being provided.[9]

New special education teachers who are just entering the profession must demonstrate competence in all the core academic subjects in which they teach in the same manner as is required for an elementary, middle, or secondary school teacher. New special education teachers who are teaching multiple subjects must also meet the NCLB "highly qualified" standard in at least one core subject area (language arts, math, or science) within two years from the date of employment to comply with NCLB's High Objective Uniform State Standard of Evaluation (HOUSSE), a method to measure competence in core subject areas.

The requirement to be "highly qualified" applies only to teachers providing direct instruction in core academic subjects. Special education teachers who do not directly instruct students in core academic subjects or who provide only consultation to highly

qualified teachers in providing adaptations do not need to demonstrate subject-matter competency in those subjects. Within HOUSSE, states can develop procedures for the existing teachers to demonstrate they are "highly qualified" based on criteria that may combine teaching experience, professional development, and knowledge.[10] NCLB and Individuals with Disabilities Education Act (IDEA) require special and general educators to work together to ensure positive outcomes for students with special needs. The "highly qualified" teacher requirements emphasize special education instructional models based on co-teaching, consultation, and collaboration with general educators. Due to the present teacher shortages, it is imperative that schools do not establish arbitrary definitions of "highly qualified" teachers to meet their short-term needs.

Response to Intervention (RTI)

The milestone decisions in special education (classification; Individualized Education Program, or IEP; development; progress monitoring; reevaluation; and reintegration) are not typically made using a common, valid data set connected across decisions.[11] RTI is a most promising method of alternative identification because it closes the gap between identification and treatment of students with disabilities. Identification of students with learning disabilities has typically been done through analysis of the discrepancy between their achievement and ability as measured by their scores on norm-referenced tests (Discrepancy Model). RTI is an alternative method for identifying learning disabilities which involves measuring student's responses to scientifically-validated academic instruction (known as interventions) as the measure of whether that student has learning disabilities. The RTI process starts by using assessment criteria to determine whether a child is performing at grade level. If a student is behind, he or she receives scientifically-based instruction while being observed closely by a teacher. If the student does not respond to the instruction, further evaluations are conducted to see if the student needs special education services.

IDEA 2004 states that a local educational agency shall not be required to take into consideration whether a child has a severe discrepancy between achievement and intellectual ability. A local educational agency may use the RTI process to determine if the child responds over a length of time to a scientific, research-based intervention as a

part of required evaluation procedures.[12] The law allows for the development of new procedures to identify students with specific learning disabilities by clarifying that schools are not limited to using the IQ-achievement discrepancy model. By examining student's response to various interventions, schools can determine which of the evidence-based interventions may work better than others for a specific student with learning disabilities.

Researchers have called for the expansion of RTI assessment procedures to the identification, education, and monitoring of other students with disabilities in addition to those with learning disabilities.[13] Districts are emphasizing RTI for general educators to implement before referring students for special education services. The RTI model bases decisions on intensifying, modifying, or changing the intervention on a student's response to evidence-based interventions. RTI is based on the notion of discrepancy between pre- and post-intervention levels of performance.

In the RTI model, for example, a student should be considered for identification as Emotionally Disturbed (ED) if the student's behavior does not change adequately in response to an evidence-based intervention. Unlike current practices, this approach to the identification of ED requires implementation of an intervention prior to making an eligibility determination. Current practice is based on a refer-test-place model, in which students are not exposed to systematic, evidence-based interventions to improve behavior problems. The RTI model is seen as an improvement over the current practice of eligibility determination that excludes application of evidence-based interventions.[14]

From the standpoint of identification of children with learning disabilities, there are some concerns about the complexity of RTI and how it can be implemented with integrity. If implemented correctly, it will require additional dollars and extensive training for school personnel. Despite multiple models for RTI, there is a concern about the limited research on their effectiveness. There needs to be a limit on how long RTI can be implemented before referring a student for special education. Without a time limit, schools may use RTI to postpone or prevent identification of a child who has a learning disability. If a student is not identified, the student will have no special education rights and can be more easily removed from school.

Access to the General Education Curriculum

According to the IDEA amendments of 1997, students with disabilities must access, participate, and progress in the general education curriculum. The IEP must include accommodations, modifications, and any supplementary aids or services that the child needs to access the general education curriculum, as well as identify the supports that service providers need to carry out the child's individualized program.[15] Because general education and special education stakeholders do not have a shared understanding of the IDEA provisions related to access, participation, and progress in the general education curriculum, there is a great variation in how these terms currently are being used. Moreover, professionals need to agree on what constitutes the general education curriculum. Access to curriculum without specialized instruction is ineffective and, therefore, wasted effort. In addition, it is often difficult to meet the individualized educational needs of students with disabilities in the general education curriculum. General educators often fail to apply instructional practices and assessment techniques that are reflective of current research on best practices; they often expect students with special needs to perform under the same conditions as their non-disabled peers. The issue of access, participation, and progress becomes more complex because little is known about how students with disabilities acquire, maintain, and apply knowledge and skills in general education curriculum settings. Moving special education students into general education classes calls for a paradigm shift where special and general education teachers must collaborate in the student's educational planning so as to improve learning in the general education curriculum. Accomplishing these objectives will require technical assistance and training for administrators, general educators, and other school personnel to improve instructional effectiveness and the school climate. Additionally, the state needs to review the academic content standards to ensure that they are reasonable, fair, and appropriate for all Arizona students and teachers.

System-Wide Change: Positive Behavior Supports (PBS)

Schools have a responsibility to improve the academic and social behavioral outcomes of their students, especially those students who are at serious behavioral risk and

who present the greatest daily challenges.[16] The Arizona Superintendent of Education commissioned a study to gather ideas from teachers across the state regarding discipline issues. Teachers consistently expressed their need for support for positive and constructive student behavior. Teachers also expressed a need for consistently enforced schoolwide discipline plans which begin with explaining behavioral expectations to students. Continuous teacher training and techniques for dealing with student behavior as well as alternatives for students with more chronic or severe problems are also of high concern among teachers.[17]

IDEA 1997 mandates the use of Functional Behavioral Assessment (FBA) and Behavior Intervention Plans (BIPs) for students with disabilities or students suspected of having disabilities who demonstrate behavioral concerns that place them at risk for suspension and expulsion. These tools ensure that the intervention is based on linking the *purpose* of the student's behavior with the demands of the student's current setting. The Individualized Educational Plans (IEPs) of students with special needs who are at-risk for challenging behaviors must be based on FBAs and include proactive, positive behavioral interventions and supports.

IDEA 2004 amendments continue to support conducting FBA and developing a BIP for students with challenging behaviors. Research on best practices has produced positive findings through initiatives such as the Center on Positive Behavioral Interventions and Supports (PBIS)[18] and the Arizona Behavior Initiative (ABI),[19] which provide technical assistance to U. S. and Arizona schools in positive behavior supports and behavioral interventions.

Changes in IDEA emphasize the need for state and local educational agencies to ensure that superintendents, principals, teachers, and other school personnel are equipped with the knowledge and skills that will enable them to appropriately address behavior problems when they occur.[20]

Continuity of Programming

Continuity and effectiveness of educational and transition programming are essential to promote student self-determination and independence, and to facilitate

movement from school to postsecondary activities. Although Arizona State University is seeking funding from the Arizona State Legislature to relate student ID's (Student Accountability Information System ID's) with resultant data (e.g., demographics, needs, assessment and progress, enrollment, etc.), it may take from one to two years before these data are accessible to the appropriate stakeholders. Student outcomes measured by student learning levels, graduation rates and dropout rates, and participation levels in post-secondary opportunities indicate that students with special needs require predictability and continuity in services.[21] Most importantly, services for these students should immediately follow the students. Many students with special needs go back and forth between public schools and juvenile corrections or mental health facilities, which often results in failure to provide services in a timely fashion.[22] If the justice systems had the ability to use the SAIS, the state would be able to track these students more efficiently and provide services. Additionally, students who transfer from district to district within the state often are faced with fragmented special education services being provided upon arrival in the new setting.[23] An adequate system for transferring educational records and services would facilitate a reliable and timely exchange of relevant information and the provision of a seamless continuum of services. A statewide tracking system would improve the educational system's ability to understand and address educational, behavioral, and transition-related concerns of children and youth with disabilities.

Suspension and Expulsion

Schools often apply disciplinary policies of removal and/or placement in segregated settings when they deal with students who exhibit behavioral challenges. Although little evidence exists that proves zero tolerance policies improve school safety or behavioral climate, many schools still adopt suspension and expulsion procedures as disciplinary actions leading to interruptions or termination of education for these students.

Under IDEA 2004, a child's disability shall be considered unknown to the LEA if the parent of the child has not allowed an evaluation of the child or has refused services. The new law makes changes to the discipline provisions of Part B. Language has been added giving school personnel authority on a case-by-case basis to consider uniqueness of circumstances when deciding on change in placement for a child with a disability who

violates a code of conduct. The length of time that school personnel may remove a student to an interim alternative setting (without a hearing officer) has increased from 45 calendar days to 45 school days. In addition, school personnel may now remove a student who "has inflicted serious bodily injury upon another person while at school, on school premises, or at a school function" to an interim placement without requiring a hearing officer ruling. The criteria for determining whether a behavior is a manifestation of a student's disability have been narrowed to whether the conduct in question was caused by, or had a direct and substantial relationship to, the child's disability, or was the direct result of the LEA's failure to implement the IEP. Timelines have been added for an expedited hearing in matters related to placement during appeals. The length of time that a hearing officer can initially order a change in placement in the event of a finding that the current placement of the child is "substantially likely to result in injury to the child or to others" has increased from 45 calendar days to 45 school days. [24]

Arizona schools must provide fair and consistent opportunities when determining out of class or out of school placements on a case-by-case basis. Educational and related services must continue unless LEAs can show that these services are not required to provide free appropriate public education.

Policy Implications

The implications for these policy changes are discussed with regard to the following six areas: preparing and retaining highly qualified teachers, Response to Intervention (RTI), access to the general education curriculum at grade level, positive behavior supports, continuity of programming, and suspension and expulsion.

Highly Qualified Teachers

Several factors prevent Arizona from meeting No Child Left Behind's (NCLB's) mandates for highly qualified teachers, including confusion about how to apply the law to special education teachers and the need for additional assistance from the Arizona Department of Education (ADE) in identifying the High Objective Uniform State Standard of Evaluation (HOUSSE) implementation strategies. Pursuant to requirements

mandated by NCLB, ADE has provided a free online service to assist schools in hiring personnel. On the website, ADE provides information in an email newsletter about promising educational practices backed by research. In addition to these efforts, a certification task force consisting of a selected group of educators reviews certification requirements. Through Arizona State Improvement Grants, funded through Individuals with Disabilities Education Act (IDEA), the state is attempting to increase the ethnic diversity of fully certified special education teachers. The Teacher Education Partnership Coalition addresses pre-K-12 teacher recruitment and retention issues. The Coalition is developing a standards-linked document outlining the criteria for a quality teacher. The state of Arizona has developed the Arizona Highly Qualified Teachers evaluation form and rubric offering a clearly articulated path for Arizona teachers to be designated highly qualified by the end of the 2005-2006 school year.[25]

It is still unclear how special educators might meet the criteria for being highly qualified when they teach multiple subjects to students at the middle and high school levels. Due to special education teacher shortages, the subjects that special education teachers may teach often change from the time they are hired. A greater source of uncertainty is whether special education teachers should demonstrate competency for the assessment level or the grade level of the students being taught. Additional factors that interfere with meeting the NCLB requirements include: too short of a timeline for teachers to meet these requirements, the failure of colleges and universities to align their programs with NCLB structures because they do not emphasize majors or concentrations in core academic subjects, and uncertainty on how to reconcile NCLB and IDEA requirements for teachers.

Suspension and Expulsion

Given the controversy that has surrounded the discipline provisions, caution must be exercised over interpreting what these new requirements may mean until final federal regulations are issued. Examples of specific policy areas that need to be addressed during the regulatory process include: defining “unique circumstances” as they relate to the authority of school personnel to make a change in placement on a case-by-case basis; providing additional information on the revised criteria for determining whether a

behavior is a manifestation of a student's disability; and explaining the significance of deleting the definition of "substantial evidence" from the statue.

Although NCLB mandates the use of only those interventions that provide evidence of effectiveness, the national data raise serious questions about whether the use of suspension and expulsion can be considered effective disciplinary practices. In addition, the *Condition of Pre-K-12 Education in Arizona 2004* report[26] presents data from the Office for Civil Rights that raise serious concerns regarding overrepresentation of students of color among those who were suspended or expelled in Arizona public schools.

Continuity of Programming

Arizona is moving ahead with a technology initiative, Integrated Data for Enhancing Arizona Learning (IDEAL), which will begin with the release of online benchmark assessments for the high school Arizona Instrument to Measure Standards (AIMS) exam. Whether they are at home, in the classroom, or in a tutoring environment, students will have access to an online high school math assessment on which they can answer the questions and have their responses automatically graded and reported. As the year progresses, ADE intends to move on from benchmark assessments (an assessment that shows where a student stands) to formative assessments and also to provide resources that students and teachers can link to for help in the learning process. ADE has developed the Student Accountability Information System (SAIS), a program to replace the existing internal School Finance System. SAIS is to improve school finance processes and services to local education agencies (LEAs), build a Student Database System to reduce the reporting burden from LEAs, and improve the accuracy and timeliness of student counts required for state and federal funding and reporting.[27]

SAIS will allow schools to electronically submit raw student and school data as they are being collected rather than summary reports on paper or diskette. As a result, it is hoped that SAIS will provide data on budgets, expenditures, and achievement levels leading to true equity, providing true local control through financial and academic accountability at the level closest to the student. All these changes are on the horizon and

may require more commitment from and training for teachers and administrators working in schools and other agencies that serve students with special needs.

Positive Behavior Supports

In cooperation with Arizona State University, the University of Arizona, and Northern Arizona University, ADE has developed the Arizona Behavior Initiative (ABI) to help Arizona schools develop systems of positive behavior supports for students with challenging behaviors. ABI provides training and technical assistance to schools to support students at the primary, secondary, and tertiary levels of intervention. In addition, the Deputy Associate Superintendent for Discipline at ADE has begun to develop inservice training opportunities for Arizona teachers in effective classroom behavior management procedures. Arizona's teacher training institutions need to provide pre-service, classroom behavior management opportunities, particularly for general education teachers. This will promote general educators' knowledge of and skills in how to develop and implement a behavioral plan for a student with special needs and adopt effective ways of addressing behavior.

By combining ABI, in-service training in classroom behavior management opportunities through Integrated Data for Enhancing Arizona Learning (IDEAL), and developing opportunities for teachers and schools statewide to manage student behavior, Arizona's teachers will be able to deal effectively with challenging behaviors of students with and without disabilities. Carrying out these efforts in concert with Arizona's teacher training institutions would enable all preservice teachers to learn the skills necessary to manage student classroom behavior before their first teaching assignment. Promoting a balance between research and practice in conjunction with efforts to provide positive behavior supports and effective classroom behavior management would increase the likelihood of teachers applying behavioral interventions with fidelity and validity.

Response to Intervention

Although RTI is a promising method of alternative identification to close the gap between identification and treatment of students with disabilities,[28] it still needs research to justify its widespread adoption. It also may be a useful tool for identifying those

students who are not eligible for special education but who still need access to quality interventions. IDEA 2004 has mandated that rather than measures of discrepancy between achievement and intellectual ability scores on standardized tests, RTI may be used to identify students with learning disabilities. The law allows for the development of new procedures to identify students with specific learning disabilities by clarifying that schools are not limited to using the IQ-achievement discrepancy model. By examining responses to various interventions, schools can determine which of the interventions may work better than others for a specific student with learning disabilities.

RTI is a tool for identifying students with disabilities other than those with specific learning disabilities. Students with disabilities and their teachers would benefit if ADE and institutions of higher education collaborate in providing in-service and pre-service training opportunities. This training would expose current and future teachers and school psychologists to systematic, evidence-based interventions to identify students with disabilities and to help overcome educational problems.

Access to the General Education Curriculum

The IDEA Amendments of 1997, reiterated in IDEA 2004, require schools to provide students with disabilities the opportunity to participate and progress in the general education curriculum. The Individual Education Program (IEP) must include accommodations, modifications, and any special services that the child needs to access the general education curriculum; it must also identify the service providers needed to carry out the child's individualized program.

Access to the general education curriculum without specialized instruction will not provide appropriate and meaningful education for many students with disabilities. By developing effective collaborative efforts, ADE, district directors of special education, school administrators, and other school personnel can ensure access to the general education curriculum through a continuum of special education services ranging from inclusion to self-contained programs depending upon the individual needs of the student.

Recommendations

In light of the foregoing, it is recommended that:

1. The Arizona Department of Education (ADE) in collaboration with Institutions of Higher Education create a comprehensive database to track patterns of hiring practices of schools. Collaboratively, they should explore software that can be used to track patterns of employment of teachers in Arizona schools. Such tracking would also include how the school environment encourages the use of research- and evidence-based practices; how schools confirm they are hiring quality educators who have knowledge of both content and pedagogy; how teachers apply evidence-based instructional practices and inform researchers and policy makers of advantages and limitations in practice; and how schools assess the efficiency and effectiveness of special education programming.
2. ADE; public, private, and charter schools; and teacher and school psychologist training programs implement response to intervention (RTI) methods to improve achievement and prevent misidentification of students with disabilities.
3. ADE work with individual districts and schools to provide students with disabilities access and opportunities to participate and progress in the general education curriculum through collaboration by special and general education teachers in the student's educational planning.
4. Arizona schools improve the academic and social behavioral outcomes of challenging students who are at serious academic or behavioral risk. State and local education agencies must ensure that superintendents, principals, teachers, and other school personnel are provided professional enhancement experiences to develop knowledge of and skills in implementing positive behavior supports that will enable them to appropriately address behavior problems when they occur.

5. Arizona guarantee effective instructional options, and specialized programming, mental health services, and vocational rehabilitation for students with special needs. Students with special needs must have access to a full continuum of special education options to recognize unique needs and individualized approaches to enable them to achieve both academically and socially.

6. ADE open a statewide dialogue concerning suspension and expulsion, and their alternatives for promoting a productive learning climate in Arizona schools. The No Child Left Behind mandates that all educational practices employed in schools must maximize the opportunity to learn for all children without compromising safety for all students.

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The Condition of Minority Access and Participation in Arizona: 2005

Executive Summary

Arizona works to comply with a range of federal and state mandates, including the No Child Left Behind Act (NCLB), the *Flores Consent Orde*r (2000), Proposition 203, The Safe and Drug Free Schools Program, and the State Safety Program. Children with limited English, African American children, and Native American children continue to trail their Anglo and Asian American counterparts on all available achievement indicators. The state's delays in adequately funding the education of English language learners only serve to further exacerbate these gaps in achievement. State dropout data report the percentage of dropouts for each subgroup, but it fails to reveal the motive or rationale for the students' actions. With these limited data, minority access and participation can be assessed, but neither explained nor resolved.

Recommendations

It is recommended that:

- The Arizona Department of Education (ADE) identify, document, and when appropriate, replicate conditions that contribute to student achievement and discourage students from dropping out of school.
- Universities and schools foster, and the state support, partnerships based on best practices.
- The state focus resources on underachieving schools.
- ADE employ a combination of well-researched and cutting-edge strategies as part of a comprehensive, long-term plan that improves student achievement.

The Condition of Minority Access and Participation in Arizona: 2005

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Background

This report is written as an addendum to *The Condition of Minority Access and Participation in Arizona: 2004,* to provide an overview of recent developments that affect the educational achievement of minority students in Arizona. The definition of *minority* found in the 2004 report remains appropriate. Characterized as "anyone other than non-Hispanic White native speakers of English," *minority* here refers to all aspects of minority identity, including language minority, ethnic minority, racial minority, and recent immigrant.

Comparative research on educational achievement suggests that minority group membership, in and of itself, does not predict academic performance. [1] "Some minority groups do well in school even though they do not share the language and cultural backgrounds of the dominant group that are reflected in the curriculum, instructional style, and other practices of the schools."[2] Yet, as noted in the 2004 report, in Arizona, "minority students are regularly overrepresented in negative measures of student outcome and regularly underrepresented in positive measures of student outcomes."[3] Since that report, a variety of initiatives have sought to address this imbalance and the effect on the educational outcomes of the state's minority students. A comprehensive history of the legislative acts and court cases that set the stage for these initiatives can be found in *The Condition of Minority Access and Participation in Arizona: 2004*.

Recent Policy Developments

Throughout 2004 and early 2005, Arizona has continued to work toward compliance with a range of federal and state mandates, including the federal government's *No Child Left Behind* (NCLB) legislation, the *Flores Consent Orde*r (2000), and the requirements of Proposition 203.

In response to *NCLB*[4] legislation mandating proficiency standards for all English Language Learners (ELLs), the Arizona Department of Education's (ADE's) English Acquisition Services Unit developed ELL Proficiency standards in listening and speaking, reading, and writing that were approved by the Arizona State Board of Education in January 2004[5]. A related NCLB mandate, the development of a uniform language proficiency assessment, was also addressed. ADE contracted with Harcourt Assessment to adopt the Stanford English Language Proficiency (SELP) Test as the English proficiency assessment tool to be used in schools across the state.[6]

During 2004, the Board of Education also addressed a stipulation of the *Flores Consent Order* (2000) concerning the adoption of rules "addressing the training, background and qualifications for teachers of ELLs under Proposition 203" (codified as A.R.S. § 15-571 through 15-755) and House Bill 2010's requirement to adopt a Structured English Immersion endorsement (see A.R.S. § 15-756(A)(5)).[7] A plan, developed by an ADE task force and approved by the State Board of Education and the state's Attorney General, requires all classroom teachers, supervisors, principals, and superintendents to obtain a Provisional Structured English Immersion (SEI) endorsement by August 31, 2006. After August 31, 2006, all classroom teachers, supervisors, principals, and superintendents will be required to obtain an SEI, English as a Second Language (ESL), or bilingual endorsement, consisting of 45 clock hours of professional development or three university credits.[8]

A motion, filed with the District Court, contested the plan, arguing that the proposed endorsement did not comply with the stipulation, and requested an increase from 45 to 272 clock hours of required training. In February 2005, the court ruled in favor of the State Board of Education.[9]

The *Flores Consent Order* also required that the state conduct two cost studies on the education of ELLs. The National Conference of State Legislatures (NCSL), which was contracted to complete the second study by no later than August 2004, presented a five-page summary to the state in August. The summary maintained that approximately $2,000 is required for each limited English speaker living in poverty to ensure both English proficiency and success in other subject areas.[10] In January 2005, a federal judge ruled that "Arizona's lawmakers are shortchanging" the state's ELL students, and ordered the legislature to ensure adequate funding of English language programs by the end of its 2005 session.[11] The NCSL cost study, released in mid-February 2005, five months after the original deadline, found the current state expenditure of $355 per student insufficient and proposed an increase to an average of $1,195 per student.[12]

Arizona voters enacted Proposition 200 (the "Arizona Taxpayer and Citizen Protection Act") in the November 2, 2004 election by a 56 to 44 percent margin. The act requires "all public agencies within this state to cooperate with federal immigration authorities to discourage illegal immigration" by requiring proof of U.S. citizenship for voter registration and the receipt of "certain" public benefits, and compelling government employees to report "immigration law violations by applicants for public benefits."[13] Although federal law exempts kindergarten to 12th grade education from its provisions, passage of Proposition 200 appears to have affected minority participation nonetheless. A few public schools posted dramatic decreases in school attendance immediately after the Fall election, reporting that undocumented workers feared public schools would report their children to immigration authorities.[14] Questions have also been raised concerning whether the definition of "public benefits" includes school nurse visits and free or reduced-price lunches.

School safety is also relevant for minority participation. Two programs, The Safe and Drug Free Schools Program (Title IV of NCLB) and the state-funded School Safety Program, both housed in the ADE School Safety and Prevention Unit, address school safety.[15] School Safety Program funds are primarily used to pay salaries and benefits of school resource officers and/or juvenile probation officers. Safe and Drug Free Schools (Title IV) funds are provided to districts to develop, implement, and evaluate comprehensive programs and activities that foster a safe and drug free environment that

supports academic achievement. In 2004-2005, 112 districts, representing 302 school sites, received School Safety Program funds and 360 districts received Title IV money. During the same period, the School Safety Program revised its *School Safety Program Guidance Manual* and subsidized the Arizona Foundation for Legal Services & Education's Law Related Education (LRE) Academy for School Safety Officers.

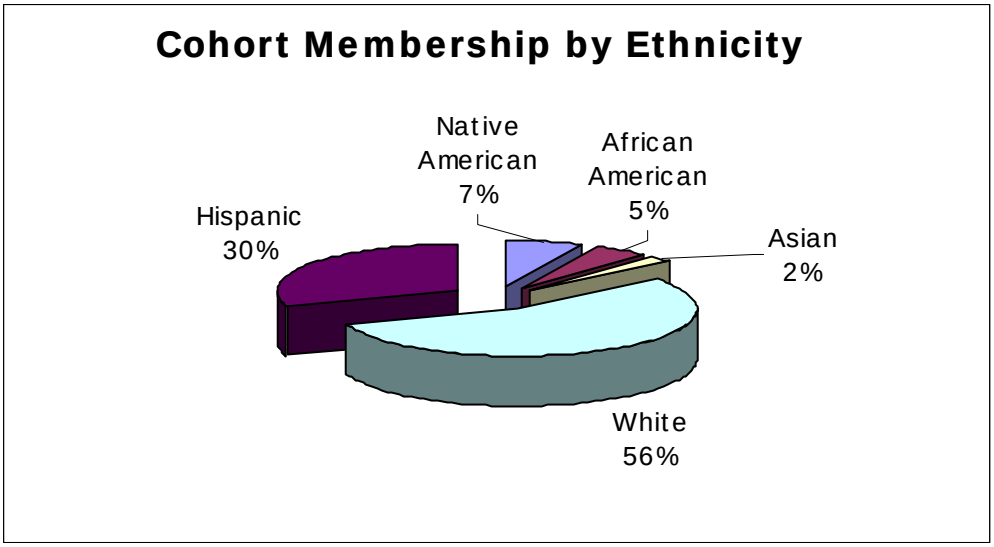
An additional local attempt to maintain safe schools also involved school resource officers. Six school districts in the state have granted permission for school resource officers to be armed with Tasers; most recently, Tempe's nine school resource officers acquired the stun guns. Taser use is dictated by individual law enforcement agencies who issue them to officers.[16]

Findings

The 2004 report drew on Census 2000 data to underscore the significant presence of minorities in Arizona's schools; data generated by the Arizona Department of Education (ADE) for the fiscal year 2002-2003 corroborate this presence. While over the one-year period from 2002 to 2003, the number of Limited English Proficient (LEP) students increased only 0.5 percent in all programs across the state's 163 districts, it is important to note that minority students continue to represent almost half of all students in Arizona.[17]

How does this significant minority population fare in the state's schools? This report will first address this question by examining two commonly recognized indicators of student access and participation: graduation and drop-out rates. Compelled by No Child Left Behind (NCLB) accountability mandates and state accountability legislation, ADE collects data on these performance measures in order to rigorously assess school performance. ADE's most recent report (2004) measures the longitudinal graduation and drop-out rates of the 62,045 members of the cohort class of 2003.[18] Figure 1 illustrates the ethnic make-up of the 2003 cohort.

Figure 1



The report reveals significant differences in the graduation rates of students in the cohort's five ethnic groups. As illustrated in Table 1, whether comparing graduation rates over five years, four years, or graduation with a GED, the discrepancy among ethnic group outcomes remains constant. While 91.1 percent of Asian students and 84.3 percent of White students graduated within a five-year period, only 65.9 percent of Native American and 68.8 percent of Hispanic students graduated within the same five-year period.[19]

Table 1: Statewide Graduation Rates by Race/Ethnicity: Cohort Class 2003

	Class Membership	4-year graduation rates	5-year graduation rates	GED
White	34,514	81.9%	84.3%	1.7%
Hispanic	18,694	63.1%	68.8%	1.2%
Native American	4,362	58.5%	65.9%	0.8%
African American	3,003	66.4%	71.2%	1.0%
Asian	1,472	88.7%	91.1%	*

Source: Graduation Rate Report, Arizona Department of Education.
* Data reflecting fewer than ten students have been replaced with an asterisk (*) to protect student privacy.

Drop-out rates of cohort members, as displayed in Table 2, illustrate similar patterns.[20] Considerably fewer Asian (4.5 percent) and White high school students (6.1 percent) drop out of school than their Hispanic (13.3 percent), Native American (15.5 percent), and African American (11.9 percent) counterparts.

Table 2: Statewide Dropout Rate by Race/Ethnicity: Cohort Class of 2003

	Class Membership	Four Year Dropout	Four Year Status Unknown
White	34,514	4.6%	6.1%
Hispanic	18,694	8.6%	13.3%
Native American	4,362	13.3%	15.5%
African American	3,003	7.7%	11.9%
Asian	1,472	2.8%	4.5%

Source: Graduation Rate Report, Arizona Department of Education.

Results of the state's AIMS test provide yet another way of examining the educational access and participation of Arizona's minority population in the state's schools. In reporting the test results, the state divides students into two categories. Category One comprises students who take the test without non-standard accommodations (including those who are proficient in English or who have been in an English language program for four years or more); Category Two contains all English Language Learners (ELLs), regardless of the time they have been classified as ELL.[21]

Tables 3 through 5 compare the math, reading, and writing test results of students in Categories 1 and 2 when grouped by ethnicity.

Table 3: AIMS Spring 2004 – High School Writing

	Number Tested		Falls Far Below Standard		Approaches Standard		Meets Standard		Exceeds Standard	
Category	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Asian	2,175	314	29%	48%	15%	14%	29%	23%	28%	15%
African American	4,741	148	64%	84%	17%	9%	15%	6%	4%	1%
Hispanic	36,989	9,829	68%	78%	18%	13%	13%	8%	4%	1%
Native American	7,588	2,268	69%	78%	17%	14%	11%	7%	3%	1%
White	46,215	355	35%	63%	20%	16%	27%	14%	18%	7%
Total	***98,208[a]***	***12,934[b]***	***52%***	***77%***	***18%***	***13%***	***20%***	***8%***	***11%***	***2%***

Source: Arizona Department of Education.
a: This total includes 500 students who did not indicate their ethnicity.
b: The total includes 20 students who did not indicate their ethnicity.

Table 4: AIMS Spring 2004 – High School Reading

	Number Tested		Falls Far Below Standard		Approaches Standard		Meets Standard		Exceeds Standard	
Category	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Asian	2,230	344	15%	47%	20%	34%	54%	18%	10%	1%
African American	4,816	144	29%	70%	31%	19%	38%	10%	2%	0%
Hispanic	36,928	10,189	37%	58%	32%	31%	29%	11%	2%	0%
Native American	7,665	2,352	34%	41%	38%	43%	27%	15%	1%	0%
White	45,440	376	12%	44%	19%	30%	58%	24%	10%	2%
Total	***97,646[a]***	***13,442[b]***	***24%***	***55%***	***26%***	***33%***	***43%***	***12%***	***6%***	***0%***

Source: Arizona Department of Education.
a: The total includes 587 students who did not indicate their ethnicity.
b: The total includes 37 students who did not indicate their ethnicity.

Table 5: AIMS Spring 2004 – High School Writing

	Number Tested		Falls Far Below Standard		Approaches Standard		Meets Standard		Exceeds Standard	
Category	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
Asian	2,218	332	15%	44%	12%	15%	64%	40%	8%	1%
African American	4,524	132	30%	61%	19%	20%	50%	18%	1%	0%
Hispanic	34,759	9,573	39%	61%	20%	18%	40%	20%	1%	0%
Native American	7,174	2,167	38%	43%	22%	24%	39%	33%	1%	0%
White	44,822	357	17%	47%	15%	17%	64%	36%	4%	1%
Total	***94,052[a]***	***12,591[b]***	***28%***	***57%***	***18%***	***19%***	***52%***	***23%***	***2%***	***0%***

Source: Arizona Department of Education.
a: The total includes 555 students who did not indicate their ethnicity.
b: The total includes 30 students who did not indicate their ethnicity.

A similar order of achievement, Asian, White, African American, Hispanic, and Native American, is reflected in the scores of each of the three AIMS tests. In other words, a greater percentage of Asian and White students "meet" the standards than do African American, Hispanic, and Native American students. Meanwhile, the percentage of African American (30 percent), Hispanic (39 percent), and Native American (38 percent) students who "fall far below" the standards is roughly twice as large, or more, of the percentage of Asian (15 percent) and Whites (17 percent). In addition, English proficient students in Category 1 outscored ELLs in Category 2 across all AIMS tests and ethnic groups. Separating scores by gender does not alter these achievement differences; both English proficient boys and girls in Category 1 outscored English proficient boys and girls in Category 2 by rates ranging from 1.39 percent to 5.3 percent.[22]

An ADE report released in August 2004 addresses a related question concerning minority access and participation.[23] The report investigated which program, Structured English Immersion (SEI) or bilingual education, is more advantageous for ELLs. The state's data, based on the Stanford-9 achievement test scores of the state's approximately

70,000 ELLs, compared students enrolled in bilingual programs with those enrolled in SEI programs. According to the ADE report, students in SEI programs consistently outscored bilingual-program students, with the achievement gap widening after grade six. Critics of the report, however, argue that the study did not account for the effects of initial English proficiency, length of time in the U.S., or poverty.[24]

A policy report released by the Goldwater Institute in May 2004 addresses an additional barrier faced by the state's minority students. Drawing on data collected by the U.S. Department of Education's Office of Civil Rights (OCR) on race and special education in all schools in the U.S., the report confirms previous findings that "minority students attending predominantly White public schools in Arizona are significantly more likely to be placed in special education than their peers."[25] The study discusses possible causes–financial incentives, manipulation of standardized test results by district officials, and the intentional segregation of minority children–for this pattern of placement. Three potential remedies are offered: changing the state's special education formula, instituting a universal screening for the identification process, and creating a parental choice program for parents of children with disabilities.

Policy Implications

Prompted by No Child Left Behind (NCLB) mandates, the Arizona Department of Education (ADE) has begun to collect data on a wider range of achievement indicators. However, reports are not easily accessible to the lay consumer, and explanations of data displays are often omitted, therefore the information is not particularly useful to practitioners and policy makers. Equally important, available data are limited to test results and participation rates which are detached from the complex workings of school systems. Numbers and percentages of graduates and drop-outs are reported, for example, but they reveal neither motive nor rationale for the students' actions. The data serve summative rather than formative purposes; minority access and participation can be assessed, but they can be neither explained nor resolved.

Minority group categories are composed of students with varied linguistic and socio-economic backgrounds. State and district-level reporting, however, treats these

English Language Learners (ELLs) as though they are a homogeneous group. The information collected does not indicate what works best with which students, or how students' first languages, countries of origin, length of time in the U.S., or social and cultural environments correlate with their achievement in school.

Recommendations

Despite these limitations, the data nonetheless paint a portrait of minority achievement and participation that remains problematic. Children with limited English, African American children, and Native American children continue to trail their White and Asian American counterparts on all available achievement indicators. The individual and social cost of these gaps in achievement is considerable. Lower incomes and decreased civic participation of poorly achieving students and drop-outs, for example, result in nearly $48 million dollars lost in annual tax revenue.[26]

The state's delay in providing sufficient funds for the education of ELLs only serves to further exacerbate gaps in achievement. ELLs are expected to perform on par with their counterparts on the state's AIMS assessment, even though the tests are designed for native English speakers and must be taken in English. To borrow from a previous document on No Child Left Behind (NCLB) and language minority students, "To identify a group of students who, by definition cannot meet the standards, treat that group as static, and then require that group to attain 100 percent proficiency in those standards" without adequate program funding, is not reasonable.[27]

Given that the state's minority students continue to lag behind their counterparts on all achievement measures, the Arizona Department of Education (ADE) would be better served by moving beyond its current policy of simply highlighting deficiencies through standardized high-stakes testing. Fostering university/school partnerships, identifying school characteristics that contribute to student achievement or dropping out of school, focusing resources on underachieving schools, and employing a combination of "well researched and cutting edge strategies … as part of a comprehensive, long term plan that improves student achievement" would be far more productive in improving minority access and participation.[28]

It is recommended that:

1. The Arizona Department of Education (ADE) identify, document, and when appropriate, replicate conditions that contribute to student achievement and discourage students from dropping out of school.
2. Universities and schools foster, and the state support, partnerships based on best practices.
3. The state focus resources on underachieving schools.
4. ADE employ a combination of well-researched and cutting-edge strategies as part of a comprehensive, long-term plan that improves student achievement.

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[4] The re-authorization of the federal Elementary and Secondary Education Act (known as the No Child Left Behind Act of 2001 [NCLB]) and the adoption of Arizona LEARNS (Arizona Revised Statute 15-241), the state plan for participating in NCLB, requires that states establish accountability systems and schools meet Adequate Yearly Progress (AYP) in order to continue receiving federal funds. Title I of the Act (Improving the Academic Achievement of the Disadvantaged) requires schools test at least 95 percent of their students, including low-income students, students from major racial and ethnic groups, and students with limited English proficiency in order to make adequate yearly progress. See:

Arizona LEARNS. Retrieved January 25, 2005, from: http://www.ade.az.gov/azlearns

[5] NCLB, Sec. 1111(b)(7) requires states to develop English language proficiency standards and assessments to measure students' progress in attaining those standards. Both standards and assessments are to be based on the "four domains of speaking, reading, listening, and writing." Arizona English Language Proficiency Standards can be found at: http://www.ade.az.gov/sbtl/otherstandards.asp.

See also:

Wright, W. (2005, January). *Evolution of federal policy and implications of No Child Left Behind for language minority students* (Doc. # EPSL-0501-101-LPRU). Tempe, AZ: Language Policy Research Unit, Education Policy Studies Laboratory, Arizona State University. Retrieved May 4, 2005, from: http://www.asu.edu/educ/epsl/EPRU/documents/EPSL-0501-101-LPRU.pdf

Moreno, I. (2004, March). Memo: Update-language proficiency test and data request. Retrieved February 20, 2005 from: www.ade.az.gov/asd/lep/Update_Language_Proficiency_Test_and_Data_Request.doc

[6] SELP became the state's English proficiency assessment in August 2004. In addition to procurement of SELP, a K-12 paper-and-pencil group administered test scored by Harcourt's Central Scoring, the state's contract with Harcourt includes pre-test regional training workshops and access to Harcourt's Stanford English Language Proficiency Rapid Reports, a web based tool that generates Individual Student Reports, Classroom Proficiency Reports, and Group Reports. Retrieved February 1, 2005, from: http://www.ade.az.gov/asd/lep/

[7] The Flores Consent Order is the outcome of Flores v. State of Arizona, which was filed in the U.S. District Court in 1992. The order requires the state to develop new reassessment procedures of English Limited Language (ELLs) speakers, increase monitoring of district compliance with EEOA and other pertinent federal and state laws, and conduct two cost studies on the education of ELLs.

See also:

Arizona Department of Education (2001, September). *Guidance regarding the implementation of A.R.S. §15-751-755 and Flores Consent Order* (CIV 92-596 TUC ACM). Retrieved February 10, 2005, from: http://www.ade.az.gov/asd/dowloads/EASQAfinal9-9-02.pdf

[8] Teachers, supervisors, principals, and superintendents certified before August 31, 2006, must attend one semester hour or fifteen clock hours of professional development in Structured English Immersion methods of teaching ELL students. The coursework is to focus on four content areas: ELL proficiency standards, assessment, foundations of SEI, and SEI strategies in a training program that meets the requirements of A.R.S. §15-756(A)(5). Teachers, supervisors, principals and superintendents certified on or after August 31, 2006, will require three semester hours or forty-five clock hours in six content areas: ELL proficiency standards, data analysis and application, formal and informal assessment, SEI foundations, learning experiences/SEI strategies, and parent/home/school scaffolding.

See also:

Arizona Department of Education. (2004, November). Summary of the SEI-45 Endorsement Training Criteria Task Force. Retrieved January 25, 2005, from: http://www.ade.state.az.us/stateboard/agendaitems/agendaitems/Item7H2.pdf

[9] Arizona Department of Education. (2005, February). Court rules in favor of state Board of Education on training of teachers for English language learning students. Retrieved February 1, 2005, from: http://www.ade.state.az.us/

[10] NCSL News. (2004, August 12). New study addresses cost of Arizona's English Language Learner program. Retrieved February 15, 2005, from: http://www.ncsl.org/programs/press/2004/prazstudy.htm

[11] Scutari, C. (2005, January 26). Judge: State shorting English ed. *The Arizona Republic*. Retrieved February 21, 2005, from: http://www.azcentral.com/arizonarepublic/news/articles/0126bilingual-flores26.html

[12] Fischer, H. (2005, February 19). Bill for teaching non-English speakers the language will top $200 M. *Arizona Daily Sun*, p. A3.

[13] Arizona Proposition 200. Ballot Proposition. Retrieved April 22, 2005, from http://www.azsos.gov/election/2004/info/PubPamphlet/english/prop200.pdf

[14] Directly after the fall election, Head Starts in Phoenix reported dramatic declines in attendance; Spanish teachers and staff members in Maricopa Head Start Centers telephoned the parents of 2,700 students to ensure them that their children were safe in school.

See also:

Seper, J. (2004, November 10). Arizona initiative inspires others. *The Washington Times*. Retrieved February 17, 2005, from: http://www.washingtontimes.com

Reid, B. (2004, November 12). Districts deal with Prop. 200 aftermath. *The Arizona Republic*, p. 1.

[15] "The Safe and Drug Free Schools Program (Title IV of NCLB) is the federal government's effort to reduce violence and the use of drugs, alcohol, and tobacco through education and prevention activities in schools. Title IV supports initiatives which promote school environments that are free from drugs and violence and the unauthorized presence of firearms and alcohol, and offer a disciplined environment conducive to learning. The programs must be research-based and proven to be effective or show promise of being effective." The state-funded School Safety Program, established in 1994 by ARS §15-154, placed School Resource Officers (SRO) and Probation Officers (PO) on school grounds to "deliver Law Related Education (LRE) in the classroom as well as develop positive interactions and relationships with the students, the staff, and the community that they serve." Law-Related Education is "the teaching of rules, laws and the legal system that actively involves students to prepare them for responsible citizenship."

See also:

Arizona Department of Education (2004). School safety program guidance manual and School Safety Program Administrator Training announcement. Arizona Department of Education School Safety & Prevention and School Safety Program and Arizona Foundation for Legal Services & Education. Retrieved February 19, 2005, from: http://www.ade.state.az.us/schooleffectiveness/health/schoolsafety/

[16] Nelson, K. (2004, December 17). Tempe OKs taser guns for 9 schools. *The Arizona Republic*, p. B5.

The Arizona Department of Education does not collect data on number of schools that allow tasers.

[17] Arizona Department of Education's Student Accountability Information System. (2004, January 6). Limited English Proficient (LEP) Students ARS 15-754 Percent of Increase/Decrease for all programs (SAIS LEP216-2).

[18] The cohort class of 2003 includes students who entered grade 9 in fall 1999 and graduated from grade 12 by the end of the 2003-2004 school year. A four-year graduation rate is the percentage of the class that received a diploma by their fourth year spring commencement in 2003. A five-year graduation rate reflects the proportion of the class that received a high school diploma by the fifth year spring commencement in 2004. The report also includes students who obtained a General Educational Development Certificate (GED) within five years.

See also:

Melton, D. (2004, December). *Graduation rate report: Four and five year graduation rates for the cohort class of 2003: Arizona public high schools*. Phoenix, AZ: Arizona Department of Education. http://www.ade.state.az.us/researchpolicy/grad/2003_Cohort-5_Yr_Graduation_Report.pdf

[19] The cohort class of 2003 includes students who entered grade 9 in fall 1999 and graduated from grade 12 by the end of the 2003-2004 school year. A four-year graduation rate is the percentage of the class that received a diploma by their fourth year Spring commencement in 2003. A five-year graduation rate reflects the proportion of the class that received a high school diploma by the fifth year Spring commencement in 2004. The report also includes students who obtained a General Educational Development Certificate (GED) within five years.

See also:

Melton, D. (2004). *Graduation rate report: Four and five year graduation rates for the cohort class of 2003: Arizona public high schools*. Phoenix, AZ: Arizona Department of Education. http:www.ade.state.az.us/researchpolicy/grad/2003_Cohort-5_Graduation_Report.pdf

[20] *Ibid.*

The report also measures the four year dropout rate, the percentage of the class that left within the first four years of high school and did not return, transfer, obtain a GED, or die, and the status unknown rate, the percentage of the class that left within the first four years of high school and did not return, transfer, obtain a GED, or die, and whose status and location are unknown to the schools from which the students left.

[21] Category 1 and 2 are not mutually exclusive, since all English Language Learners are included in Category 2. See Accountability Division, Research and Evaluation Section. Arizona's Instrument to Measure (AIMS) Results. Retrieved February 22, 2005, from: http://www.ade.az.gov/profile/publicview/Download.asp

[22] *Ibid.*

[23] Arizona Department of Education (2004, July). *The Effects of bilingual education programs and structured English immersion programs on student achievement: A large-scale comparison.* Phoenix, AZ: Author. Retrieved February 20, 2005, from: http://www.asu.edu/educ/epsl/EPRU/articles/EPRU-0408-66-OWI.pdf

[24] Krashen, S. (in press). Did immersion triumph in Arizona? The ELL outlook. Retrieved February 17, 2005, from: http://www.sdkrashen.com/articles/arizona/all.html

[25] Ladner, M. (2004, May). *Race to the bottom: Minority children and special education in Arizona public schools* (Policy report No. 193). Phoenix, AZ: Goldwater Institute. http://www.goldwaterinstitute.org/pdf/materials/442.pdf

[26] Drake, T.M. & Forester, C.A. (2003). *Arizona minority student success report.* Arizona Minority Education Policy Analysis Center, Arizona Commission for Postsecondary Education.

[27] *Ibid.*

[28] Wright, W. (2005, January). *Evolution of federal policy and implications of No Child Left Behind for language minority students* (Doc. # EPSL-0501-101-LPRU) (p. 41). Language Policy Research Unit, Education Policy Studies Laboratory, Arizona State University. Retrieved May 4, 2005, from: http://www.asu.edu/educ/epsl/EPRU/documents/EPSL-0501-101-LPRU.pdf

The Condition of Teacher Quality in Arizona: 2005

Executive Summary

Over the past 14 months, the Arizona State Board of Education's discussions and actions have had an impact in five key areas: structured English immersion (SEI), early childhood teacher certification, program review, tiered certification, and performance assessment. As SEI implementation began, the State Board instituted requirements for all educators without an English as a Second Language (ESL) Endorsement or a Bilingual Education Endorsement to have a full SEI Endorsement by 2009, adding to teachers' training and professional development needs. New certification requirements for pre-school teachers and child care workers are likely to impose new costs and could lead to losses of long-term, uncertified staff. The implementation of a standards-based teacher-quality evaluation program is likely to be felt around the state as teacher-training institutions re-examine their programs. A program of tiered certification is moving ahead, offering educators an opportunity to aspire to Master Teacher certification. A teaching standards portfolio and rubric to assess teacher performance is in the final stages of development. The definitions of quality, competency, and professionalism in education are being discussed, debated.

Recommendations

It is recommended that:

- The Arizona State Board of Education amend its rules to institute an attendance policy to ensure that major stakeholders are represented and part of policy decision making.
- The Arizona Department of Education (ADE) establish a database of information listing K-12 classroom teachers' program preparation, date of certification, and years of teaching experience as well as any transfer experience and certification from other states.
- ADE continue and expand its already considerable effort to include major stakeholders in committee and subcommittee work that eventually appears before the State Board, so that all committees engage a broad base of representation across the state.

The Condition of Teacher Quality in Arizona: 2005

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Background

The mission of the Arizona State Board of Education is "to aggressively set policies that foster excellence in public education."[1] The department's website notes that Arizona's education code, Title 15, "charges the Board with 24 specific powers and duties" in its oversight of nearly one million students from kindergarten through 12th grade.[2] The State Board has 11 members with very specific categories of membership. Ten of these members are appointed by the governor and approved by the senate for four year terms. The 11th member is the State Superintendent of Public Instruction, who is an elected official.[3] The State Board has serious responsibilities to all aspects of education in Arizona. Only by following the link to the Arizona Administrative Code, however, does one come to appreciate the extent of the Arizona State Board of Education's reach inside and outside the K-12 public education system.[4] This brief explores the far-reaching impact of State Board policies related to teacher quality in Arizona. The brief will focus on how changes in State Board requirements for certification affect college and university programs that prepare teacher candidates.

In addition to specific powers over and responsibilities for curriculum and instruction within Arizona's public schools, the State Board and the Arizona Department of Education (ADE) are charged with the responsibility for teacher certification, school administrator certification, guidance counselor and school psychologist certification,

professional teaching standards, and the evaluation and approval of professional preparation programs of institutions in Arizona that prepare candidates for these certificates. State Board Rules, specifically those related to Professional Teaching Standards, define quality teaching in the state. The State Board, through ADE, determines what college courses or alternative routes can lead to certification and what counts as professional development after certification.

The State Board sets rules following the procedures outlined in the Arizona Rulemaking Manual.[5] According to the Rulemaking Manual, a rule is an agency statement of general applicability that implements, interprets, or prescribes law or policy or describes the procedure or practice requirements of an agency. State Board Rules are the guidelines and procedures for administering education policy enacted by the legislature and ordered by the courts. Rules also set standards and limits for the exercise of discretion. Policies are different from rules. Policies are set for internal, departmental procedures while rules directly and substantially affect the public. The Administrative Procedure Act requires the Secretary of State's office to publish summaries of proposed policies and rules. Public comment is invited during the notice and comment process. It is the responsibility of the public to take advantage of the opportunities to comment on the proposed rules and policies. The Attorney General gives final approval and it becomes a State Board Rule 60 days after filing with the Secretary of State, and it is published in the Register and the quarterly Code Supplement.

Recent Policy Developments

This section of the brief includes a review of five areas that directly affect teacher quality and were major discussion and action points for the State Board for the past 14 months. These five areas are: (1) structured English immersion (SEI) and the mandatory training requirement; (2) changes in certification requirements for early childhood educators (pre-K-first grade); (3) changes in the program review and approval process for institutions and their professional education programs within the state; (4) tiered certification; and (5) "performance assessment" to allow teachers to move from provisional certification to standard certification.

Structured English Immersion

The Office of the Attorney General gave final approval to the SEI Endorsement on October 18, 2004. This policy requires all persons holding a valid Elementary, Secondary, Principal, Superintendent, Supervisor, Career and Technical, or Special Education Arizona State Certificates to get the course work or training necessary to qualify for the endorsement. The only exceptions are educators from the above categories who hold a full English as a Second Language (ESL) Endorsement or a full Bilingual Endorsement. The full SEI Endorsement is required to be completed by August 31, 2009, and will be added when educators renew their certificate with the Arizona Department of Education (ADE). The certificate renewal is the gate keeper; educators who have not complied with the full SEI requirements will not have their certificates renewed.

On January 24, 2005, the State Board approved the curricular framework for a Provisional SEI Endorsement, requiring 15 clock hours of professional development, and the Full SEI Endorsement, requiring an additional 45 clock hours of professional development; the framework had been recommended by the SEI Task Force. In addition, the checklist for SEI training, including instructor qualifications, was approved.

Early Childhood Teacher Certification

Early Education (kindergarten through third grade) is one of Governor Napolitano's top educational priorities. The Governor presented her ideas, which are based on the research and recommendations by the School Readiness Board, to the State Board on January 26, 2004. Additionally, the governor followed the State Board's deliberation of Early Childhood Teacher Certification, sending a representative to present on the topic at 6 of the 20 Board meetings reviewed for this brief. At the March 29, 2004, State Board meeting, a Notice of Supplemental Rulemaking for the Arizona Early Childhood Education Certification and Endorsement, R7-2-612 and R7-2-613, was approved.[6] At the meeting, Karen Woodhouse, ADE Director of Early Childhood Education, chronicled the history of the three-year effort to require pre-school teachers to

be certified and to have college degrees. This supplemental rulemaking includes modifications to allow grandfathering provisions for existing kindergarten teachers.

At the August 30, 2004, meeting, the State Board was asked by Woodhouse to consider and approve a Notice of Supplemental Rulemaking for the Arizona Early Childhood Education Certification and Endorsement R7-2-612 (I)(J) and R7-2-613(L). This rule stipulated that teachers who serve children from birth through kindergarten in a public school setting become certified teachers. Educators already certified in another area may add the Early Childhood Endorsement to an existing certification to meet the requirements and enhance their qualifications as early childhood educators. This proposal was approved by the State Board at the December 6, 2004, meeting.

Program Review

Teacher preparation programs approved by the State Board contain an Institutional Recommendation (IR) that teacher candidates submit to the Certification Unit at ADE for teacher certification. The criteria for State Board approval of teacher preparation programs is intimately connected with questions about teacher certification, quality preparation, and quality teachers. At the February 23, 2004, meeting, Kathy Wiebke, ADE Deputy Associate Superintendent for the Highly Qualified Professionals Division, presented the problem of IRs currently issued for professional preparation programs that have changed over time and are different from the original application approved by the State Board. The old rubric and requirements of this review had a lack of standard quality criteria. It is extremely difficult to judge the quality of a program using the old system, and the review team members relied on the teacher certification rule, which required 45 semester hours of education course work for elementary teachers and 30 for secondary teachers. Adding to this challenge is the lack of records of past program evaluations and approvals. Currently, there are 16 institutions of higher education (IHEs) that have received IR status.[7]

At the March 29, 2004, meeting, the State Board agreed to cease providing IRs for endorsements and courses that are not part of a "program." At the May 24, 2004, meeting, the State Board ruled that new programs submitted by State Board approved

institutions will be evaluated according to the old, existing rubric and, if appropriate, granted conditional approval with the approval date of December 31, 2005. The State Board will not accept applications for new institutions or new program approvals after June 30, 2004, until a better scoring guide is designed. A team of stakeholders in the different teacher preparation programs was authorized to work on developing the rubric over the summer. The proposed Teacher Preparation Program Evaluation was presented to the State Board on October 25, 2004. This draft proposed seven components and three ratings for each standard. This encompasses a three-part process: preliminary review, program evaluation, and a site visit.

The shift to requiring evidence of proficiency in those areas that need to be mastered was a noteworthy change. This evaluation is a standards-based system with the measure of mastery aligned with the following:

- Arizona Professional Teaching Standards
- Arizona Professional Administrator Standards
- Interstate New Teacher Assessment and Support Consortium (INTASC)
- Interstate School Leaders Licensure Consortium (ISLLC) Administrator Standards

The proposed procedures for the approval of professional preparation programs were given final approval by the State Board on February 28, 2005.

Tiered Certification

Tiered certification is a means to recognize years of service, outstanding performance, and contributions to the teaching profession. Governor Napolitano's vision of a Master Teacher focuses on individuals who not only excel in their own classroom, but also help others as they step through their own professional development.

On September 27, 2004, the Governor sent a representative, Becky Hill, to present a Recommended Definition and Framework for the Governor's Master Teacher initiative. The method for nominating candidates for this program includes self-nominations, but all nominations would be required to go through a selection committee. [8]

The program recognizes, rewards, and advances skills of Master Teachers and would develop a new core of Master Teachers through mentoring, funding professional development opportunities, and providing the opportunity for a national board certificate. The area needing to be clarified is how to credential the Master Teacher. The emphasis is to start on a small scale as lessons are learned along the way in order to grow into a successful program.

On October 25, 2004, the State Board reviewed a presentation and discussion regarding certification reform. This included updates from the Performance Assessment Subcommittee. The committee is working on a possible four-level tiered certification system:

- Initial
- Proficient
- Standard
- Master

This is an ongoing initiative within ADE and the State Board. At the time of publication of this brief, the Master Teacher designation has been lifted from the proposed certification system. This is a tacit recognition of the emotional and critical definition baggage around the use of the term Master Teacher. Key to these discussions, embedded within this topic, is the last item, performance assessment for teachers. It is in the best interests of children, parents, teachers, and administrators that this performance assessment is a fair measure.

Performance Assessment

One of the primary issues in most discussions about certification this past year at State Board meetings was performance assessment. Performance assessment is required by State Board Rules to move from a provisional to a standard certificate, but the requirement has never been implemented. The definition is vague and needs to be more clear and specific about what it is, how it is measured, and whether it should be the principal's job to perform the assessment.

At the October 25, 2004, meeting, the Performance Assessment Subcommittee reported that it was examining models from other states and that a teacher excellence through compensation model would coordinate with existing professional development strategies and resources within the state. Another important component under consideration by the subcommittee was the planning and implementation of training for mentors and assessors. Some cost would be incurred by local districts, and the subcommittee recommended piloting this program in volunteer districts. This model is based on Arizona's professional teaching standards and includes:

- Specified portfolio requirements (i.e. evidence of use of Arizona Teaching Standards and examples of good teaching).
- A redefined assessment rubric.
- Responsibilities of the involved education entities.
- Rationale for meeting each sub-objective of the Professional Teaching Standards in Board Rules, R7-2-602.
- Recommended implementation timeline.

The subcommittee is clear that the assessment needs to be doable, sustainable, and flexible. The implementation timeline, imposed by the Attorney General's ruling, is June 2005.

Available Data

The analysis in this brief is based on an in-depth review of the online minutes of the Arizona State Board of Education meetings from January 19, 2004, to March 14, 2005. These State Board meetings are open to the public; minutes from each meeting are public record and are published online.[9] As noted in the introduction of this brief, the mission for the State Board encompasses almost all aspects of public education. Decisions made at the meetings and changes in State Board Rules affect students and institutions pre-K through college. The time period under analysis, 15 months, was particularly productive with critical changes made to State Board Rules and initiatives begun that will in turn make more changes to Arizona's educational system and

definitions of teacher quality. The discussions at the State Board meetings and the subsequent changes in State Board Rules were key indicators that this was an overlooked source of current information concerning issues of teacher quality in the state. Careful study of the detailed minutes of each meeting with an analysis of the topics under discussion highlighted the focus of the State Board's concerns. Mapping the topics across each meeting for content, substantive changes, and frequency of presentations yielded the five areas discussed in this brief that directly affect teacher quality. These were the five most frequent issues discussed relating to teacher quality as measured by number of times presented and action items taken. Once these five topics were identified, each State Board presentation on each topic was analyzed. A synthesis of State Board discussions on each topic was mapped across a timeline framework set up for individual topics and analyzed for scope and progression of development. The results from the analysis highlighted the background conversations and emerging policy decisions. Most have been codified into State Board Rules.

Findings/Policy Implications

Structured English Immersion

The impact of the State Board's decision to require all educators without an English as a Second Language (ESL) Endorsement or a Bilingual Education Endorsement to have a full Structured English Immersion (SEI) Endorsement by 2009 has extensive ramifications for the training and professional development of teachers. Teacher quality now has a new and very specific component as determined and ruled by the State Board: training in SEI. The Arizona Department of Education (ADE) now requires the local educational agencies (LEAs)—in other words, schools—to report the number of SEI endorsed teachers, ESL endorsed teachers, and Bilingual endorsed teachers on their Arizona School Report Card.

The State Board's policies also will affect institutions of higher education (IHEs), requiring them to add a new course to their preparation programs for educators. In turn, this will require IHEs to submit course syllabi for approval to ADE's English Acquisition Services Division. The curricular framework approved by the State Board has specific

guidelines.[10] The Provisional and Full Endorsements include objectives with specific content and clock hours assigned to them. The ADE Certification Unit's "SEI Endorsement K-12 Requirements" information sheet notes that all coursework must be on the Arizona English Acquisition SEI Approval List. IHEs across the state are following the curricular framework guides, submitting proposed course syllabi for approval, and making the appropriate program changes within their institutions. LEAs may also provide professional development course work in SEI under the same rules.

Early Childhood Teacher Certification

Pre-school teachers and child care workers have been some of the lowest paid workers in the state. These personnel can least afford the tuition necessary to obtain a certificate, as the State Board will require of all early education personnel. It was pointed out by Becky Hill from the Governor's office that the School Readiness Board targets how to provide scholarships and has a partnership with one university with a grant award of $1.6 million to train early childhood educators.[11]

Concerns were raised by State Board member Joanne Hilde about (1) the possible loss to programs of long-term but not certified staff, (2) unintended consequences, and (3) the increased cost of certified teachers. Further discussion revealed that a five-year time frame was built into the plan to provide time for compliance. With this action, the nexus of change within the state came out of a consortium of the Governor, an ad-hoc committee, the ADE Early Childhood Unit, and the State Board. The result has completely changed the definition within the state of what a quality early childhood educator/teacher is. [12]

Program Review

A standards-based evaluation is a major change from the old method of teaching program review. The impact will be felt around the state as institutions and faculty engage in the process of re-examining their own programs in light of the new evaluation system. The significance of a standards-based program for teacher quality involves the change in focus from the number of course hours to course content and program alignment to standards with evidence of mastery. Discussions of this issue focused on

what content knowledge, skills, and pedagogies were gained from teacher education programs as well as professional habits and dispositions. Several times across the sample of meeting minutes, a State Board member stressed the importance of teachers learning how to write lesson plans based on the Arizona Standards. That message has been forcefully sent in this standards-based evaluation method.

Tiered Certification

Governor Napolitano requested that public forums be held on a four-tiered certification system that would offer teachers who wish to distinguish themselves in the profession an opportunity to demonstrate their effectiveness. It is significant that professional development was recognized as necessary to attain this level of achievement. There has been a positive year one review of the pilot program.

Advanced certification will be available for exemplary performance in the profession and for those who adhere to and pursue licensure standards determined by the state. Having a Master Teacher certification would give educators something to work toward and to aspire to. While not all teachers may wish to engage in this pursuit, some certainly would. At present, there are very few incentives for teachers to continue professional development through graduate courses, professional workshops, or self study. While many teachers participate in professional development activities, these are seldom recognized or rewarded.

Performance Assessment

At the December 6, 2004, State Board meeting, the Performance Assessment Subcommittee presented a draft of the teaching standards portfolio and rubric. The final draft of the performance assessment materials is scheduled to be presented to the State Board by the end of this year. This is an extremely complex task with many stakeholders involved. It is yet another example of another definition of teacher quality being worked out in collaboration with practitioners, IHEs, ADE, and the State Board. There are many voices in this discussion, and the outcome is especially important to teachers as well as their students. It is equally important to teacher preparation institutions as another dimension of assessment is put forward to measure teacher quality.

These five recurring topics in presentations and discussions at the State Board are indicators of change in teacher quality in the state and were chosen because they are indicators of a quiet revolution. These five topics demonstrate that definitions of quality, competency, and professionalism are being discussed and debated. As a result of this, State Board Rules are being made that will have an impact on students, teachers, parents, and institutions of higher education. The investigation of the State Board minutes revealed that this is an important lens to examine current trends and policy decisions concerning education in our state. All stakeholders need to be critically informed of these conversations of policy and practice; it is important that many voices are represented.

Recommendations

After reviewing the relevant State Board minutes and examining the data within them, it is recommended that:

1. The Arizona State Board of Education amend its rules to institute an attendance policy to ensure that major stakeholders are represented and part of policy decision making.
2. The Arizona Department of Education (ADE) establish a database of information listing K-12 classroom teachers' program preparation, date of certification, and years of teaching experience as well as any transfer experience and certification from other states. Such data, currently unavailable, are critical to determining the quality of teachers in the state. For example, one hypothesis for low student performance on standardized testing in Arizona is that there are far more new teachers in classrooms than in other states. Is the revolving door to the classroom swinging faster in Arizona? Without such a database, answers to these questions are speculation at best.
3. ADE continue and expand its already considerable effort to include major stakeholders in committee and subcommittee work that eventually appears before the State Board, so that all committees engage a broad base of representation across the state.

Notes & References

[1] Arizona State Board of Education. (n.d.). *Mission and program description.* Retrieved May 2, 2005, from http://www.ade.state.az.us/stateboard/mp.asp

[2] *Ibid.*

[3] Article XI: Education, 3. Arizona Constitution. Retrieved April 11, 2005, from http://ade.state.az.us/stateboard/

Article XI reads:

The state board of education shall be composed of the following members: the superintendent of public instruction, the president of a state university or a state college, four lay members, a president or chancellor of a community college district, a person who is an owner or administrator of a charter school, a superintendent of a high school district, a classroom teacher, and a county school superintendent.

[4] Board Rules can be found at:

Education: State Board of Education, Arizona Administrative Code, Title 7, Chapter 2. Retrieved May 10, 2005, from http://www.azsos.gov/public_services/Title_07/7-02.htm .

[5] Rulemaking in General, Arizona Rulemaking Manual, Section 1. (2002, November). Retrieved March 11, 2005, from http://www.azsos.gov/public_services/rulemakingmanual/2001/section1.pdf

[6] Education: State Board of Education—Early Childhood Education Certification, Arizona Administrative Code, Title 7, Chapter 2, Article 6. Retrieved May 10, 2005, from http://ade.state.az.us/stateboard/downloads/EarlyChildhoodEducationCertification.pdf

[7] The 16 institutions with IR status are: ASU Tempe, ASU East, ASU West, Arizona Teachers Institute, Apollo, Grand Canyon University, Northern Arizona University, Ottawa University, Pima Community College, Prescott College, Rio Salado College, Scottsdale Community College, Southwestern College, University of Arizona, University of Phoenix, and Western Governor's University.

See:

Wiebke, K. (2004, February 23). *Presentation and discussion regarding R7-2-604: Professional preparation programs, teacher preparation program requirements, and teacher certification task force discussions* [Powerpoint presentation]. Presented to the Arizona State Board of Education board meeting. Summary of presentation available in the meeting minutes, p. 3. Retrieved March 19, 2005, from http://ade.state.az.us/stateboard/minutes/02-23-04.pdf

[8] Hill, B. (2004, September 27). *Presentation and discussion and consideration to approve a recommended definition and framework for the governor's "master teacher" initiative to forward to the governor.* Special presentation to the Arizona State Board of Education board meeting. Summary of presentation available in the meeting minutes, pp. 7-8. Retrieved March 19, 2005, from http://ade.state.az.us/stateboard/minutes/09-27-04.pdf

According to Hill, the benefits and responsibilities in the master teacher program include:

- Mentor peers in the classroom and out of the classroom
- Three years of service as a master teacher
- May stay in their own districts
- May decide to continue mentoring or return to their own classroom

- Help teachers advance to a higher level
- Refinement in skills
- Funding for up to 10 teachers at a time
- Districts supported partial financial support to hire a new teacher when moving a master teacher out of the classroom
- Invest in National Board Certification keeping Arizona competitive at the national level
- Requires teachers to build portfolio

[9] Arizona State Board of Education. (n.d.). *State board minutes.* Available at: http://ade.state.az.us/stateboard/minutes/default.asp

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[11] Woodhouse, K. (2004, March 29). *Presentation, discussion, and possible consideration to approve notice of Supplemental Rulemaking for R7-2-612 and R7-2-613 regarding early childhood education certificates and endorsements.* Summary of presentation available in the meeting minutes, pp. 11-12. Retrieved March 19, 2005, from http://ade.state.az.us/stateboard/minutes/03-29-04.pdf

[12] Arizona State Board of Education. (2004, December 6). *Board meeting minutes*. Retrieved March 10, 2005, from http://ade.state.az.us/stateboard/minutes/default.asp

For the rule change, see:

Education: State Board of Education—Early Childhood Education Certification, Arizona Administrative Code, Title 7, Chapter 2, Article 6. Retrieved May 10, 2005, from http://ade.state.az.us/stateboard/downloads/EarlyChildhoodEducationCertification.pdf

The Condition of School Administration in Arizona: 2005

Executive Summary

Contrary to common misperceptions, the relative percentage of administrative costs in Arizona's public schools has declined since 2001 and is below national and state peer-group averages. Because of this fact, Arizona would benefit from a comprehensive study to identify whether an administrator shortage is looming, and its dimensions. A trend where retired or retiring school administrators return to schools as *leased employees* has implications both for the cost in lost innovation and for the cost to the state's retirement system. Finally, district unification (combining elementary and secondary school districts into one district) remains a subject of consideration at the state level, but does not appear to enjoy significant local or community support.

Recommendations

It is recommended that:

- Absent evidence of its validity, Arizona abolish its administrator-testing program.
- The Arizona Department of Education (ADE) commission a study to provide data to ADE and to administrator training programs in Arizona that can be used to estimate a potential administrator shortage.
- Researchers undertake an inquiry to estimate the effects of leasing retired educators to fill teacher and administrative vacancies beginning with the initial collection of data reporting the number of districts, administrators, and teachers involved, the salary savings to school districts, and the fiscal impact on the Arizona State Retirement System.
- Appropriate entities study the potential impact of district unification on the Phoenix metro area.

The Condition of School Administration in Arizona: 2005

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Background

The brief on School Administration in the 2004 *Report* reminded readers that the Latin word for principal means "first teacher." This definition was used to suggest a new emphasis on the importance of teaching and learning in the field of school administration. In this year's brief, it is suggested that school administration is also to be understood in terms of leadership. The root word of *leadership* is *leith*, which means "to go forth" or "to cross the threshold."[1] In 2005, school administrators find themselves between a rock and a hard place. They are held accountable for the collective labeling of their schools and student populations on the one hand, and subject to individual sanctions including loss of job, on the other hand. These new realities imply changes in the role of school administrators and the crossing of a threshold into uncharted territories. At the same time, there is growing recognition that the significance of school administration to student learning is second only to the quality of teaching.[2]

Most indicators suggest that the state of public education in Arizona is dismal. The state has consistently scored below the national average on the National Assessment of Educational Progress (NAEP) mathematics, reading, science, and writing tests. The

results are even more troubling if student scores are separated by ethnicity. The average scores for Anglo students in Arizona are also consistently lower than the national average for Anglo students on the same tests. Although some states appear to be raising achievement levels overall and reducing the gap between majority and minority students, Arizona suffers the dual problem of overall decrease in achievement and a widening gap between Anglo and African American students.[3] On the state-administered assessment, the Arizona Instrument to Measure Standards (AIMS), which serves as a high school exit exam for 10th grade students starting with the class of 2006, only 36 percent of all students passed the math portion and 59 percent passed the reading portion on their first attempt. The state also has one of the highest dropout rates nationally, with an average high school dropout rate of about 12 percent over the previous five years.[4]

These conditions present daunting challenges for school administrators. In 2001, the National Association of Secondary School Principals predicted that more than 40 percent of public school principals would retire within the next decade.[5] Moreover, increasing job stress, dissatisfaction with school funding, and increased responsibility without adequate incentives have exacerbated an exodus of school administrators from the ranks of an experienced workforce.

This brief begins with consideration of recent policy developments in Arizona, with reference to school administration based on the No Child Left Behind Act and Arizona LEARNS (ARS 15-241). The brief discusses some of the ways these new measures are being implemented and consequences for district and site-based administrators based on Adequate Yearly Progress (AYP). There is also a discussion of proposed changes related to administrative certification and of recent policy developments related to proposed legislation on school district unification. The "Findings" section provides data from which to view the condition of school administration in Arizona. This section provides data specific to school administration (employee counts), the number of currently certified individuals at the three different levels of certification (supervisor, principal, and superintendent), data related to ethnicity, and gender, salary data, and administrator testing data. This section is followed by a discussion of the policy implications and recommendations.

Recent Policy Developments

Current policy topics in Arizona school administration encompass licensure and certification, state intervention, school district unification, and opportunities for leadership professional development. Data concerning supply of and demand for school administrators are presented in the "Findings" section, which examines the availability of administrative positions in Arizona.

Licensure and Certification

Since the 2004 Report, there have been no changes in the certification requirements for school administrators. Title VII of the Arizona Administrative Code, Section R7-2-614, lists three different administrative certificates: *supervisor certificate*, *principal certificate*, and *superintendent certificate*. All three certificates require a minimum of three years of teaching experience, a practicum in educational administration at the appropriate level, and a specified number of credit hours or courses related to school administration, which varies by certificate.[6]

At this writing, a sub-committee of the Arizona Board of Education is meeting to examine certification requirements for school administrators in the state. While no new recommendations have been released, there is a discussion at the state level to provide for a waiver of teaching experience for superintendent certification. The rationale is that superintendents of large districts are frequently not the instructional leaders of that district and therefore teaching experience should not be required. The recommendation of the Sub-Committee on Administrative Certification called for the following change. "A process should be developed by which school districts that cannot find a qualified and acceptable certified candidate for superintendent may apply to the Arizona Department of Education for a waiver to allow them to hire a non-certified superintendent, and to have that person continue as long as his or her performance is deemed acceptable to the governing board."[7]

State Intervention

The consequences for administrators in underperforming and failing schools include increased scrutiny from the Arizona Department of Education (ADE), public announcements to the community served by the school or district, site visits by a state-sponsored *Solutions Team,* participation in voluntary and mandated professional development activities, and possible replacement. Arizona Revised Statutes (ARS) 15-241 requires that an achievement profile be prepared for every Arizona school and used to classify each school as excelling, highly performing, underperforming, or failing to meet academic standards. At this writing, ADE[8] lists 112 schools as "underperforming" and lists 11 schools as "failing to meet academic standards." Each of these designations triggers certain events affecting the schools and administrators in those schools.[9]

According to ADE,[10] if a school is designated *Underperforming,* the following shall occur:

- Within 30 days of receiving notice of the designation, the governing board of non-charter schools shall notify each resident in the attendance area of the school's designation. Charter schools shall likewise notify parents of the students attending the school. The notice shall explain the improvement plan process and provide information regarding the public meeting at which the improvement plan will be presented.
- Within 90 days of receiving notice of the designation, the governing board shall develop an Arizona School Improvement Plan (ASIP), submit a copy of it to the Superintendent of Public Instruction, and supervise its implementation.
- Schools identified as *Underperforming* in 2003 may wish to update their existing ASIP, but do not submit the revisions to the ADE.
- The governing board of non-charter schools shall hold a public meeting in each school designated *Underperforming* and shall present the respective ASIP that has been developed for each school within 30 days of submitting that plan to the Superintendent of Public Instruction.

- For charter schools, the charter holder shall submit the ASIP to the Superintendent of Public Instruction and present it to the charter sponsor at a public meeting within 90 days of receiving the designation.
- The Superintendent of Public Instruction, based on need, shall assign a Solutions Team to the *Underperforming* school.

The school district is required to submit a detailed school improvement plan, which then must be approved by the state Superintendent of Public Instruction and ADE. A three-day visit by an ADE-trained Solutions Team is part of this process.

ADE's Accountability Division, Intervention Section, has recently announced two opportunities for administrators to work with schools failing to meet the academic standards as outlined in Arizona LEARNS: the *Turnaround Principal* and the *Mentor Principal*. According to the Service Contracts on the ADE[11] website:

> A Mentor Principal will be assigned to a School Failing to Meet the Academic Standards. He/she will mentor/supervise the current principal. His mission will be to 1) help the principal gain the knowledge and skills necessary to transform a school from a Failing to Meet Academic Standards school to a Performing school; and to 2) help develop an infrastructure in order to ensure sustainability at a Performing level.
>
> Specifically, the Mentor Principal will be authorized to teach and assist the principal in making decisions regarding operations, budget, personnel, instruction, assessment, and professional development at the assigned school site in accordance with employee contract, governing board policy, state statute, and federal guidelines.

ADE pays $500 per day for consultation by the Mentor Principal.

> A Turnaround Principal will be assigned to a School Failing to Meet the Academic Standards. He/she will replace the current principal and become the educational leader of the school. His mission will be to 1) transform the school from a Failing to Meet Academic Standards school to a Performing school; and to 2) develop an infrastructure in order to ensure sustainability at a Performing level.

> Specifically, the Turnaround Principal will be authorized to make decisions regarding operations, budget, personnel, instruction, assessment, and professional development at the assigned school site in accordance with employee contract, governing board policy, state statute, and federal guidelines.

The contract from ADE pays the difference between the school district contract and $70,000. ADE pays an additional $20,000 for the first contract year, $25,000 for the second contract year, and $30,000 for the third contract year. The types of schools labeled as "failing" and the evidence for these procedures as benefiting children and raising achievement are discussed in the previous section on State Intervention.

School District Unification

A.R.S. 15-458 and 15-459 set out the conditions for elections to approve the unification and consolidation of school districts. Unification refers to a new unified school district formed from common elementary school district or districts, and a high school district. School districts that unify receive an extra 10 percent of their budget the first year, 7 percent the second year, and 4 percent the third year.

Senate Bill 1068 was introduced in the 2005 Legislative session. The bill would create a 13-member school district redistricting commission, with four members appointed by president of the senate, four by the speaker of the house of representatives, and four by the governor with the superintendent of public instruction or designee serving as the 13th member. According to SB 1068, the commission "shall review all current common school districts that are not part of a unified school district and consider combining these common school districts into a new unified district or combining common school districts with a union high school district to create unified districts… The commission shall design and submit to the governor on or before December 31, 2006, a proposed school district unification plan."[12] Voters in all the districts must approve a proposed unification plan. "If any of the affected districts fail to approve the proposed unification plan, the plan is void. The commission may revise the original unification plan and resubmit the plan to the qualified electors of each affect district."[13]

At this time, however, it is unclear how much local support there is for unification. According to *The Arizona Republic*,[14] there is sentiment that elementary school districts do not come to the bargaining table as equal partners with the high school district involved, which deters support for unification. The history of district consolidation efforts in Arizona suggests that voters have not been inclined to give up local school districts, and for the most part, defeated such efforts, despite the additional revenues that go along with consolidation. Whether there will be a different outcome for unification remains to be decided. *The Arizona Republic* reports that Phoenix Union high school district is holding meetings with 13 feeder elementary districts to discuss unification.[15] Proponents argue that district unification will result in more efficient operations and reduced costs. A recent editorial supports this view with the headline, "Unifying school districts will mean better education for kids."[16] School district unification is discussed in greater detail in the implications section of this brief.

Leadership Development Opportunities

Noted educational administration scholar Kent Peterson argues that training and professional development serve a critical role during these turbulent times in which school administrators are facing increasing job demands and increased accountability.[17] In response, a number of professional development initiatives for school administrators have emerged in Arizona during the past few years. These enterprises include: 1) AZLEADS^3: Arizona Leaders in Education for the Advancement and Development of Student and School Success, 2) Arizona State University's Learner Centered Leadership Program, and 3) The Southern Arizona Educational Leadership Consortium (SAELC).

The AZLEADS^3 project emerged in 2004, after three years of planning by a cadre of organizations and individuals interested in furthering the cause of school leadership in Arizona. ADE assumed leadership of the project and spearheaded a successful grant application from the Wallace Foundation's State Action for Education Leadership Project (SAELP II). This grant will provide $3,600,000 over three years to enhance educational leadership in the state. The initial focus of AZLEADS^3 has been to identify a diverse group of seven demonstration school districts to pilot the professional development opportunities.

In October 2002, the Division of Educational Leadership and Policy Studies at Arizona State University, in collaboration with the Southwest Center for Educational Equity and Language Diversity and four urban school districts (Alhambra, Creighton, Roosevelt, and Phoenix Union), was awarded a $1.8 million federal grant under the U.S. Department of Education- sponsored School Leadership Grant Program. The School Leadership Grant Program assists high-need local educational agencies in developing, enhancing, or expanding programs to recruit, train, and mentor principals, including assistant principals. Program participants are now in the third year of a three-year training and mentoring program titled, "Learner Centered Leadership for Language and Diverse Schools in High Needs Urban Settings." The grant draws from both University knowledge and theory and the applied expertise of the four participating school districts by 1) recruiting and training new candidates for school leadership positions, 2) enhancing expertise of beginning principals and assistant principals based on new knowledge and new understandings of the commitments required of educational leaders, and 3) encouraging the retention of expert school principals through participation in mentoring and coaching activities. Approximately 100 aspiring, rising, and experienced school administrators participate in the Learner Centered Leadership program.[18]

The Southern Arizona Educational Leadership Consortium (SAELC) was made possible through a U. S. Department of Education grant. With the support of the Arizona K-12 Center, this grant provides assistance to five southern Arizona school districts to develop and train 45 new and aspiring school administrators to take over leadership positions in their home districts as a large number of practicing administrators retire.

Findings

Recent policy developments suggest new demands are being placed on school administrators with increased pressure for accountability. This section of the brief examines data related to the availability of administrative positions, administrative salaries, and administrative costs.

Administrative Positions in Arizona

Table 1 reports Full Time Equivalent Employee Count for Arizona school administrators. According to the ADE School District Employee Report (SDER) (Fiscal Year 2003-04),[19] there were 2,987 administrative positions as listed below. This number represents 95 more administrative employees than last year's SDER statistics, an increase of approximately three percent. Most of the increase comes from additional school principals, where there are 81 more principals this year than last year, the likely result of new schools opening in Arizona.

Table 1: FTE and Employee Count by Main and Second Position

Position Number	Position Name	Position 1 Employees	Position 2 Employees	Total Positions
100	Superintendent	188	2	190
101	Administrative Assistant	18	7	25
102	Assistant Superintendent	116	0	116
103	Principal	1,258	12	1,270
104	Assistant Principal	714	9	723
105	Curriculum Coordinator	89	2	91
106	Personnel Director	21	1	22
107	Supervisor	99	2	101
108	Head Teacher	50	8	58
109	Other	325	18	343
110	Vocational Ed. Admin	28	4	32
111	Business Manager	14	2	16

Source: Arizona Department of Education, *School District Employee Report*, 2003-2004 Phoenix, AZ: Author.

The Arizona Department of Education also collects self-report data on ethnicity of the approximately 2,620 individuals holding administrative certificates and currently working in administrative positions. Of this number, 324 are identified as Hispanics, 102 as African American, 2,000 as Anglo, 57 American Indian/Alaska Native, and 12 as Asian/Pacific Islander, 5 listed as Other, and 120 listed as Unknown.

State Testing of Administrators

Table 2 looks at the results of administrator testing in Arizona, which began in 2000. Since 2000, when the state licensing exam began, 3,603 exams have been administered, resulting in 3,267 passing scores and 336 failures (approximately 10 percent). The failure rate went up in 2002, after the initial phase-in of the exams. No routinely reported information compares in-state and out-of-state applicants, or compares test results for applicants who have gone through approved certification programs with those from applicants who apply directly to the ADE.

Table 2: Administrator Certification Tests Results, 2000 to 2004

	2000	2001	2002	2003	2004	Total
Superintendent Pass	119	115	46	44	108	432
Superintendent Fail	0	3	5	3	3	14
Principal Pass	675	613	347	411	642	2688
Principal Fail	0	12	77	99	105	293
Supervisor Pass	30	33	26	21	37	147
Supervisor Fail	0	1	1	3	4	9

Data are based on tests administered through February 2005.[20]

The increase in the failure rate of principals beginning in 2002 bears closer examination, since it is widely acknowledged that the cut-off scores used to determine Pass/Fail results are subjectively and arbitrarily determined.

Salary Ranges for School Administrators

Table 3 looks at the salary range of school administrators based on data collected by the Arizona School Boards Association. Table 3 compares the median salaries of superintendent, elementary and secondary assistant principals and principals, separated by district size.

Table 3: Median Salary for School Administrators, 2004-2005

District Size	Superintendent	Elementary Principal	Elementary AP	Middle School Principal	Middle School AP	High School Principal	High School AP
Under 500 n=41	65,000	50,078	N/A	55,500	N/A	57,000	34,023
500-5,000 n=68	87,562	64,000	56,161	62,448	54,145	67,785	57,814
5,001-10,000 n=19	105,082	77,847	58,880	77,375	62,614	79,380	68,093
10,001-20,000 n=9	115,000	82,577	68,053	81,749	68,512	88,913	79,410
Above 20,000 n=7	149,100	84,217	62,987	83,116	75,233	88,205	77,159

Source: provided by the Arizona School Boards Association, *Salary Survey 2004-2005*.
Note: 'n' means number of districts

Not surprisingly, larger school districts pay higher salaries than smaller districts. Administrator salaries are likely a function of not only district size, but also geographic location and type of district (unified, elementary, or high school district). There is also a likely to be some relationship between salary and the experience level of the individual holding the administrative position. The data indicate, however, that in most cases, larger

districts pay school administrators more than smaller districts. Implications for this salary data are explored in the Policy Implications section.

District Spending on Administration

The final table in this section looks at Arizona school district spending and the percentage of dollars spent on administration and other functional areas. There is a common misconception that administrative costs dominate education spending, and that spending is rising. Table 4 however, challenges these misconceptions.

Table 4: Comparison of Arizona District Spending to National and Peer Group Averages, by Functional Area

Functional Area	U.S. 2001	10-State Peer Group 2001	Arizona 2001	Arizona 2004
Classroom Dollars	61.5%	61.5%	57.5%	58.6%
Plant Operation and Maintenance	9.7%	9.5%	12.5%	11.7%
Administration	10.9%	10.7%	10.5%	9.5%
Student Support Services	5.0%	4.4%	6.4%	7.0%
Instruction Staff Support	4.6%	4.2%	4.2%	4.3%
Food Service	4.0%	5.4%	4.8%	4.7%
Transportation	4.1%	4.1%	3.6%	4.0%
Other Non-Instructional	0.2%	0.2%	0.3%	0.2%

Source: State of Arizona, Office of the Auditor General. (2005, February). *Dollars Spent in the Classroom.* Phoenix, AZ: Author.[21]

Table 4 indicates that the relative percentage of administrative costs has declined since 2001, from 10.5 percent to 9.5 percent, which is below national and state peer-group averages. School districts spend 58.6 percent of dollars in the classroom, which is the same as reported in Fiscal Year 2003. While the percentage of monies spent on Classroom Dollars is still below the national average, this is largely attributed to higher

costs associated with plant operation (above the national and peer group average) and student support services.

Policy Implications

This section considers issues related to licensure and certification with reference to the underlying issues related to administrator supply and demand. There is also discussion of the implications of the pending legislation for school district unification.

Administrator Licensure and Certification

The data presented in Table 2 show that the passing rate for principals changed significantly in 2002, which suggests that the passing score was changed. With no evidence reported by Arizona Department of Education (ADE) to explain this higher failure rate, and with the low failure rates at the supervisor and superintendent levels (5.76 percent and 3.13 percent respectively), the need for the administrator testing program is questionable. The cost to educators in terms of time and money ($250-$300/applicant) is considerable for what seems to be a small and arbitrary outcome.

Supply and Demand of School Administrators in Arizona

According to leading expert Kent Peterson, nationwide, "Over the next five years, districts are expected to replace more than 60 percent of all principals."[22] According to Peterson, the implication of this turnover is that a new cohort of principals will lead their schools over the next 15 to 20 years. Therefore, he argues, it is crucial to provide high-quality preparation programs for these principals and carefully designed professional development programs throughout the careers of these leaders.[23]

The question of interest to policy makers in Arizona is whether an administrator shortage looms on the horizon. ADE reports that 7,304 valid administrative certificates have been issued at one of three levels (supervisor, principal, and superintendent) in the state. Some individuals hold multiple certificates; others have retired or moved out-of-state. During 2004 and the first two months of 2005, approximately 787 administrator exams were successfully completed, likely resulting in newly certified candidates. As

Table 2 reports, a total of 2,987 administrative positions are currently filled statewide. The number of certified administrators does not indicate an administrator shortage. Some school district administrators, however, report difficulties finding qualified applicants to fill positions. These districts report shallow applicant pools, with a small number of desirable applicants getting multiple offers. Administrator shortages may selectively occur in a few of the rural areas around the state. There may be additional shortages in areas where highly skilled school administrators are needed to serve urban education communities, which serve higher percentages of students and families in poverty, or students and families with limited English proficiency.

One trend, which may be indicative of an administrator shortage, comes from evidence that retired or retiring school administrators are returning to work for 80 to 90 percent of current salaries, as *leased employees*. Leasing retired school administrators is possible because of permissive legislation related to the state Retirement System. Leasing employees at a reduced salary saves school districts' additional costs, because there is no district contribution to health care or retirement benefits.

On one hand, hiring new school administrators is a cause of anxiety, which requires additional effort to socialize new employees; on the other hand, however, new people bring new ideas, new energies, and new capacities for learning into an organization. At the very least, the decision to replace retiring administrators with leased administrators slows the entry of new people into the field. This outcome has implications not only for school districts, but also for the development of administrator training programs in the state. Therefore, while there are understandable financial incentives for school districts to hire leased employees, the cost to districts in loss of new energy, new ideas, and potential for innovation outweighs the benefits.[24]

In addition, leased employees present potential implications for the Arizona State Retirement System. A greater number of people are taking retirement earlier than anticipated, thereby putting additional pressures on the retirement system. For fiscal year 2005, the employee/employer contribution is being raised to between eight percent and 10 percent for the first time. These developments suggest long-term negative

consequences to school districts and to the Arizona State Retirement System, for hiring retiring school administrators back as leased employees

Arizona would appear to benefit from a comprehensive study to identify whether an administrator shortage is looming, where it might be located, and some of the challenges in matching administrators to the urban and rural populations served. An administrator supply-and-demand study could also help ADE estimate and prioritize the professional development needs of new and experienced school administrators, and fund exemplary approaches.

District Unification

District unification has been a consideration at the state level for at least the past 30 years. Conversations about district unification would appear to be less about spending and more about curriculum alignment, communication among various levels of schooling, difficulties for children in various transition points, and the potential impact on student learning. Some neighboring elementary, middle, and high schools are more successful at communicating important information and relevant student experiences than others; district unification does not guarantee that these important conversations will take place. In addition, the history of district consolidation and unification voting in the state does not indicate a great deal of local or community support for these plans.

While some believe that district unification means lower administrative costs and higher quality education, there is little evidence to support these claims. Table 3 indicates that larger districts generally pay administrators more at all levels than do smaller districts. Table 4 indicates that administrative spending in Arizona is below the national average already, and throughout the past three years, has gone down from 10.5 percent to 9.5 percent.

In the case of Phoenix, for example, it may be that 100,000-plus students now served by the 13 elementary school districts that feed into Phoenix Union High School District could be better served by a new configuration. Unification might mean one new school district, multiple school districts with a single high school and multiple feeder elementary and middle schools, or something else entirely. However, the greatest

savings may be found from unifying or consolidating rural districts composed of one school with a small number of students. Yet, cost efficiency is not the sole criterion by which the benefits of district unification, or any other reform, can be measured. Quality educational experiences for children and service to families, schools, and communities offer equally important standards to consider.

Recommendations

It is recommended that:

1. Absent evidence of its validity, Arizona abolish its administrator-testing program. The question that policy makers face is how to balance the benefits of the administrator-testing program with the costs. This brief argues that the decisions used to set and then raise the passing score of the principal licensure exam are based on subjective criteria and political considerations. The passing rate for the principal exam changed significantly between 2001 and 2002, from 98 percent in 2001, to 76 percent in 2002. No equivalent change is noted for the superintendent pass rate; in 2004-2005, less than 3 percent failed. Considering the time, energy, and costs to individual applicants, the limited impact on the applicant pools, and the arbitrary determination of passing scores, it is argued that the costs of the program outweigh benefits realized.

2. The Arizona Department of Education (ADE) commission a study to provide data to ADE and to administrator training programs in Arizona that can be used to estimate a potential administrator shortage. Up-to-date data and projections concerning supply and demand of school administrators are needed in order to insure that exemplary programs and resources are available to meet the demand for high-quality administrators. Without data, it is likely that entry and exit patterns will result in shortage areas, and the adoption of short-term solutions, which do not serve the long-terms needs of schools and districts.

3. Researchers undertake an inquiry to estimate the effects of leasing retired educators to fill teacher and administrative vacancies beginning with the initial collection of data reporting the number of districts, administrators, and teachers involved, the salary savings to school districts, and the fiscal impact on the Arizona State Retirement System. This trend may be an example of a short-term solution to a supply issue, which may damage schools and districts in the long term.

4. Appropriate entities study the potential impact of district unification on the Phoenix metro area. The study of district unification needs to consider impacts on local communities' commitment to and investment in local schools as well as the curricular and instructional issues that affect children's lives as they transition from one level of the education system to the next.

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The Condition of School Accountability in Arizona: 2005

Executive Summary

The most noticeable trend in the 2004 version of the state accountability system, Arizona LEARNS, is the large percentage (71 percent) of schools designated as "Performing." Also, 13 Arizona public schools have been designated as "Failing" and face further state intervention. According to summary statistics, "Failing" schools have the lowest average percentage of students meeting or exceeding the standards and school performance increases with each higher achievement profile. However, for individual schools classified within the same achievement profile, school performance varies widely. The inconsistent relationship between 2004 AIMS results and achievement profiles raises important policy implications about the utility of the achievement profiles as a tool to aid parents in school choice decisions. Clear and accurate school performance information is particularly important in Arizona, where parents have more educational freedom to choose their child's school than in any other state.

Recommendations

It is recommended that:

- The Arizona State Legislature authorize and fund an independent evaluation team composed of personnel who are not responsible for directing and managing the accountability program to review the accountability system.
- The State Board of Education and the Arizona Department of Education (ADE) maintain consistency in the school accountability system as the state transitions into the new "Dual Purpose Assessment."
- The State Board and ADE establish a consistent definition of the achievement profiles and Adequate Yearly Progress designations, and educate parents and the public on the meaning of these school labels.

The Condition of School Accountability in Arizona: 2005

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Background

Arizona LEARNS, the state's school accountability system, began with the passage of Proposition 301. In addition to school accountability provisions, Proposition 301 increased the sales tax by six-tenths of a cent, dedicating the money to public education. Arizona LEARNS is intended to improve public education through the development of achievement profiles for all schools, the public dissemination of the profiles, and escalating levels of state intervention in persistently low-performing schools. This section will highlight recent developments related to Arizona's school accountability systems—Arizona LEARNS and the federal No Child Left Behind Act (NCLB)—and evaluate the achievement profiles in the context of Arizona's market-oriented school choice policies.

Under Arizona LEARNS, the achievement profiles are labels intended to represent the academic standing of individual schools. The achievement profiles are derived according to a formula adopted by the Arizona State Board of Education. The achievement profiles are determined according to a compensatory model, and school performance targets are set according to a sliding scale: Schools with lower baseline test scores are required to make more progress than schools with higher baseline scores.[1]

Based on the outcome of the formula, schools are classified into one of the following achievement profiles: Excelling, Highly Performing, Performing, Underperforming, and Failing to Meet Academic Standards (Failing). Schools are provided an appeal process to dispute the formula results and the outcome can affect the school's classification. The Arizona Department of Education (ADE) considers a school with three consecutive years of "Underperforming" designations to be "Failing Pending Review." If ADE confirms the formula results, the school is classified as "Failing."[2]

In addition, Arizona, like other states, is required to implement the provisions of NCLB, the federal school accountability system.[3] The target achievement goals are based on the expectation that all students are proficient on Arizona's Instrument to Measure Standards by 2014. Schools and districts that do not meet the targeted achievement goals are considered as *not* having made Adequate Yearly Progress (AYP) and are subject to corrective actions.[4] The corrective actions become more extensive and intrusive as schools fail to make AYP for consecutive years.[5]

Recent Policy Developments

In 2004, the State Board developed a formula to calculate an achievement profile for schools serving grades K-2 exclusively, alternative schools, and small schools. Previously, these schools had not received an achievement profile. Alternative schools are defined as schools offering an Arizona high school diploma whose "sole and clearly stated mission is to serve specific populations of at-risk students."[6] Small schools have student populations of inadequate size to calculate the standard Achievement Profile formula—generally fewer than 16 students per grade level.

The formula for K-2 schools is based entirely on a combination of reading and mathematics Stanford 9 Achievement scores for second grade students in the most current academic year (2004).[7] The achievement profiles for alternative and small schools are based on the same academic indicators (Arizona's Instrument to Measure Standards scores, graduation and dropout rates, Adequate Yearly Progress determination, the Measure of Academic Progress) as other schools, where applicable. The small school formula is modified to account for the volatility of calculating statistics in circumstances

where school scores are sensitive to changes in the test scores of few students. The modified formula pools student scores across multiple school years and includes a "second look" at the test scores using a confidence interval before labeling any school as "Underperforming."

Available Data/Findings

Table 1 summarizes the results of the achievement profile formula for all years. In 2002, the first year of the achievement profiles, the most striking statewide result is the paltry number of "Excelling" schools according to the formula defined by state law. In 2003, the sweeping revisions to the Arizona LEARNS formula adopted by the state board resulted in a notably higher percentage of schools qualified as "Excelling" and a considerably lower percentage of schools classified as "Underperforming." The most noticeable trend in the 2004 achievement profiles is the large percentage (71 percent) of schools designated as "Performing." In addition, the State Board voted to intervene in 11 Arizona public schools which, based on a site confirmation from the Arizona Department of Education (ADE), were designated as "Failing."

Table 1: Achievement Profile Results, All Schools

	2002		2003		2004	
Achievement Profile	**Percent of Total**	**School Count**	**Percent of Total**	**School Count**	**Percent of Total**	**School Count**
Excelling	0.2%	3	12.0%	132	9.0%	150
Highly Performing	N/A	N/A	15.0%	167	12.5%	205
Performing	N/A	N/A	60.0%	663	71.0%	1161
Maintaining Performance**	43.0%	548	N/A	N/A	N/A	N/A
Improving**	35.0%	446	N/A	N/A	N/A	N/A
Underperforming	22.0%	275	13.0%	136	7.0%	109
Failing	0	0	0	0	1.0%	11
Schools Receiving Profile (Total)	***1272***		***1098***		***1636****	

Source: Arizona Department of Education, Arizona LEARNS and No Child Left Behind, Databases available online at: http://www.ade.az.gov/azlearns/
Note: Percentages may not add up to 100 because of rounding.
* The sharp increase in the total number of schools receiving a profile in 2004 is due to the initial achievement profile of schools serving grades K-2 only, small schools, and alternative schools.
** The legislature discontinued these achievement profile designations in 2003.

In addition to the achievement profiles, the public is presented another high-profile measure of school performance, the most recent Arizona's Instrument to Measure Standards (AIMS) scores. Given the visibility of the annual AIMS score, it is important to consider the extent to which the 2004 achievement profile and 2004 AIMS scores communicate a consistent message to the public, particularly parents. Table 2 lists the average percentage of students meeting or exceeding the standards on AIMS (reading, writing, and mathematics) by achievement profile. According to this summary statistic, the two measures of school performance (achievement profiles and 2004 AIMS scores) are congruent. The percentage of students meeting or exceeding the standards by achievement profile exhibits an expected pattern; a stair-step increase in school performance where "Failing" schools have the lowest average percentage of students

meeting or exceeding the standards and school performance ascends with each higher achievement profile.

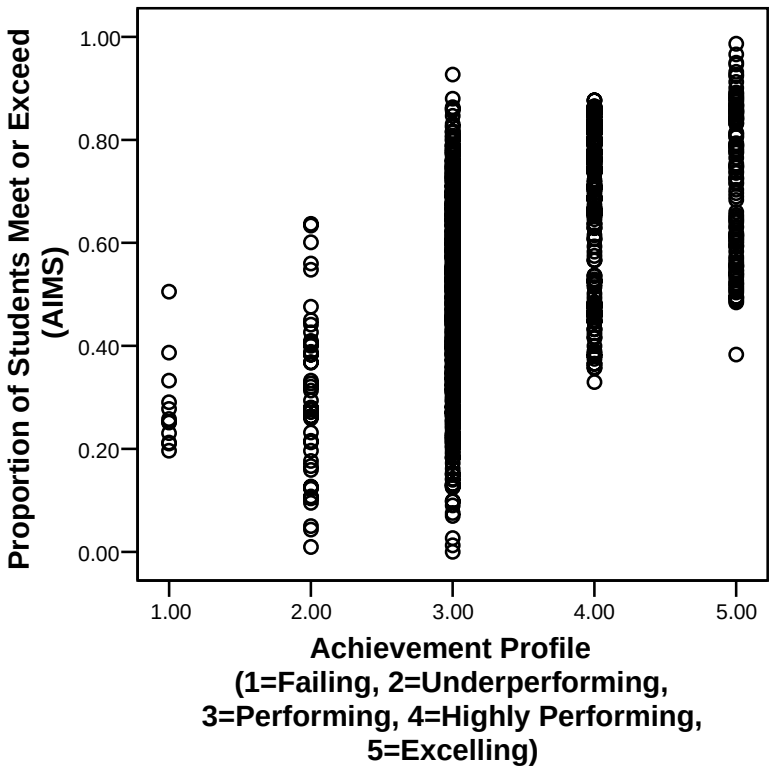
Table 2: Average Percent of Students Meeting or Exceeding the Standards on AIMS 2004 by Current Achievement Profile

Achievement Profile	Elementary Percent	School Count	High School Percent	School Count
Excelling (E)	72%	26	78%	24
Highly Performing (HP)	67%	170	64%	27
Performing (P)	51%	791	32%	274
Underperforming (U)	30%	47	16%	30
Failing Pending Review (F)	28%	126	0%	0

Source: This table was created from the merging of two data sources: Arizona Department of Education, *AIMS Report Wizard*, Retrieved December 23, 2004, from http://www.ade.az.gov/profile/publicview/ and Arizona Department of Education, *2003-2004 Achievement Profiles for All Schools*, Retrieved January 18, 2005, from http://www.ade.az.gov/profile/publicview/AZLEARNSSchoolList.asp?Year=2005,

The variability in school performance across individual schools within the achievement profile classifications presents a more confusing picture. Within each achievement profile category, the percentage of students per school meeting or exceeding the standards varies widely. The range is broadest among schools in the "Performing" category, the group where 7 in 10 schools are classified. At the elementary level, the range of AIMS scores for schools in the "Performing" category is nearly wide enough to eclipse the range of scores in the other categories (see Figure 1). At the two extremes, two elementary schools, one with zero percent of students meeting or exceeding the standards in 2004, and another school with 93 percent of students meeting the same standards, both received a "Performing" classification (see Table 3). Many of the "Performing" schools with low 2004 AIMS scores are either alternative or small schools.

Figure 1: Proportion of Students Meeting or Exceeding the Standards by Achievement Profile, Elementary Schools (2004)



The findings are similar at the high school level. The lowest and highest AIMS scores for schools in the "Performing" category vary from three percent to 79 percent of students meeting or exceeding the standards (see Table 3). The range of scores for schools in the "Performing" category encompasses the scores for schools in all achievement profile categories, except for "Excelling" (see Figure 2).

Figure 2: Proportion of Students Meeting or Exceeding the Standards by Achievement Profile, High Schools (2004)

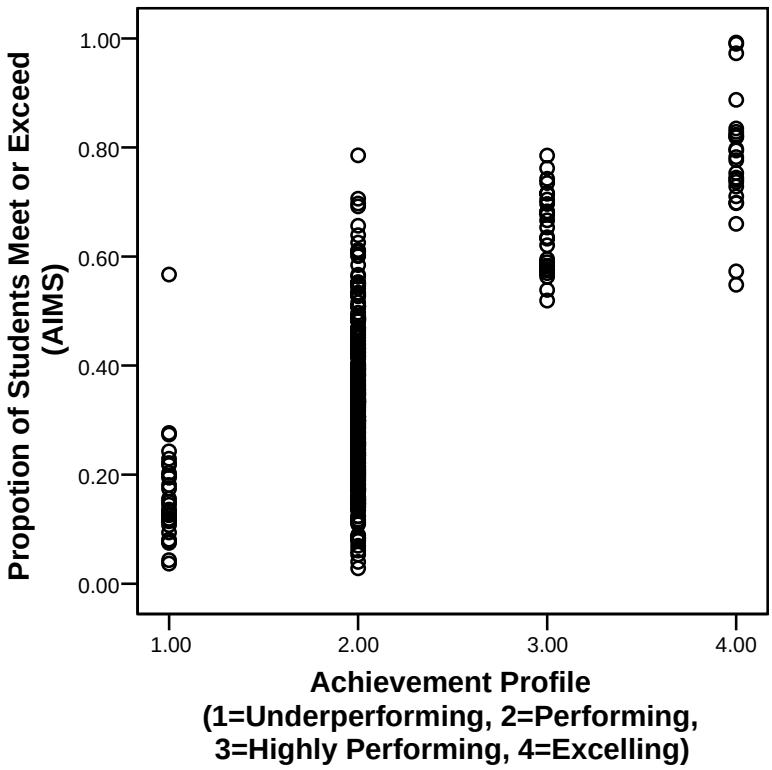


Table 3: Lowest and Highest 2004 AIMS Scores (% of Students Meets or Exceeds) by Achievement Profile

	Elementary		High School	
	Low	**High**	**Low**	**High**
Excelling	38%	99%	55%	99%
Highly Performing	33%	88%	52%	79%
Performing	0%	93%	3%	79%
Underperforming	1%	64%	4%	57%
Failing	20%	51%	N/A	N/A

Source: This table was created from the merging of two data sources: Arizona Department of Education, *AIMS Report Wizard*, Retrieved December 23, 2004, from http://www.ade.az.gov/profile/publicview/ Arizona Department of Education, *2003-2004 Achievement Profiles for All Schools*, Retrieved January 18, 2005, from http://www.ade.az.gov/profile/publicview/AZLEARNSSchoolList.asp?Year=2005.

Although each school can be considered a unique case, these are some general explanations for the discrepancy between the 2004 AIMS scores and 2004 Arizona LEARNS achievement profiles:

- School test scores dramatically improved or declined in the most recent year. The achievement profile is based on a multi-year average and current year scores may be inconsistent with the school's trend in AIMS scores from prior years.
- The students included in the achievement profile formula are not the same set of students reported in AIMS results. The achievement profile formula eliminates mobile students. Mobile students who do *not* begin the school year at the school in which they are tested are excluded from the achievement profile calculations. The AIMS scores reported publicly on the ADE website or in the newspaper include all students.
- The achievement profile includes an indicator of student growth. The Measure of Academic Progress, based on the percentage of students by school who make one year's progress, is a principal factor in the achievement profile formula. The AIMS results report the absolute level of student performance on the academic standards.
- The achievement profile formula weights school performance in favor of the school's academic strength, absolute achievement, or growth. Higher scores in one area compensate for lower scores in another area.

2004 NCLB Results

According to the federal NCLB accountability system, 76 percent of Arizona public schools met the federal criteria for AYP in 2003 (see Table 4).[8] The number of schools making AYP improved to 82 percent in 2004.[9] Currently, there are 12 schools in the first year of restructuring and they face the most severe corrective actions to date.[10] Eventually, schools in restructuring may be required to reopen as a charter school or replace school staff.[11]

Table 4: Number of Schools Per Stage According to NCLB Results, Least to Most Severe Corrective Actions

School Improvement - Year 1	School Improvement - Year 2	Corrective Action	Restructuring - Year 1
67	54	51	12

Source: Arizona Department of Education, *2004-2005 Title I School Improvement*, [Excel File] Retrieved December 14, 2004, from http://www.ade.az.gov/asd/Title1/AccountabilityGrants/2004-05TitleISchoolImprovement.xls

Policy Implications

Tom Horne, Arizona Superintendent of Public Instruction, encourages parents to focus on Arizona LEARNS because "the state system is more comprehensive and fair."[12] The inconsistent relationship between the 2004 Arizona's Instrument to Measure Standards (AIMS) test results and the achievement profiles, however, raises important policy implications about the clarity of the achievement profiles as a tool to aid parents in school choice decisions. For example, the extreme variability in AIMS scores for "Performing" schools calls into question the interpretation of that achievement profile classification. The mixed message is most egregious at the high school level because schools labeled as "Performing" enroll a substantial percentage of students who have not passed AIMS and may be in danger of not graduating.

Policy makers intended the achievement profiles to serve as an accessible and visible source of information for parents. In cases where AIMS scores and the achievement profile are incongruent, what resources are available to help parents reconcile the two conflicting indicators of school performance? The school report cards, created and disseminated by ADE, are of little assistance to parents due to the volume of data required under No Child Left Behind. The presentation of AIMS results in the typical K-8 school report card includes 2,835 individual statistics.

There are other threats to clear and consistent information on the horizon. Beginning in spring 2005, the state is administering a new standardized assessment, called the Dual Purpose Assessment. If the change in assessments disrupts the

achievement profiles, it could confuse parents and erode confidence in the school accountability system.

Clear and accurate school performance information is of particular interest in Arizona, where parents have more public school choice than in any other state.[13] In Arizona's market-oriented state policies, the achievement profiles are intended as key information to help parents make informed school choice decisions. In fact, some have argued that in a market-oriented environment, one of the state's exclusive roles should be to provide parents the necessary information to exercise school choice.[14] If the state is taking on the responsibility of labeling schools and providing information to parents, then careful attention should be paid to the consistency of such information.

Recommendations

It is recommended that:

1. The Arizona State Legislature authorize and fund an independent evaluation team composed of personnel who are not responsible for directing and managing the accountability program to review the accountability system.
2. The State Board of Education and the Arizona Department of Education (ADE) maintain consistency in the school accountability system as the state transitions into the new "Dual Purpose Assessment."
3. The State Board and ADE establish a consistent definition of the achievement profiles and Adequate Yearly Progress designations, and educate parents and the public on the meaning of these school labels.

Notes and References

[1] For a more detailed history of the accountability systems, see:

Garcia, D.R. and Ryan, J.M. (2004). The Condition of School Accountability in Arizona: 2004. In A. Molnar (Ed.), *The condition of Pre-K-12 education in Arizona: 2004* (Doc. # EPSL-0405-102-AEPI). Tempe, AZ: Arizona Education Policy Initiative, Education Policy Studies Laboratory, Arizona State University. Retrieved April 13, 2005, from http://www.asu.edu/educ/epsl/AEPI/AEPI_2004_annual_report.htm .

[2] School accountability; schools failing to meet academic standards, A.R.S. § 15-241 (2003). Retrieved February 2, 2004, from http://www.azleg.state.az.us/FormatDocument.asp?inDoc=/legtext/46leg/1r/bills/hb2277h%2Ehtm&DocType=B

[3] For a description of the federal accountability criteria, see:

United States Department of Education, Office of Elementary and Secondary Education. (2002, September). *No Child Left Behind: A desktop reference*. Washington, DC: Author.

[4] AYP determinations are included in the calculation of the Arizona LEARNS formula but play a minimal role.

[5] A list of corrective actions is available online at: http://www.ed.gov/nclb/accountability/schools/accountability.html#5.

[6] Schools must serve one of the following student populations: students with behavioral issues, students identified as dropouts, students in poor academic standing, pregnant and/or parenting students and adjudicated youth.

[7] Arizona Department of Education. (2004). *Proposed rubric for evaluating K-2 schools under AZ LEARNS.* Retrieved January 3, 2005, from http://ade.az.gov/azlearns/Rubric_for_Evaluating_K2_Schools_2004.pdf

No statewide assessment results are available for grades K-1.

[8] Technical manuals that detail the formula for each version of Arizona LEARNS and documents from the state board and legislative proceedings are available at the ADE website, (www.ade.az.gov) along with the underlying data for the achievement profiles and AYP determinations. The public files, however, are insufficient to recreate the formula and achievement profiles.

[9] Arizona Department of Education. (2004, September 1). *Arizona schools chief announces 82 percent of Arizona schools makes Adequate Yearly Progress (AYP).* Press Release. Author. Retrieved April 29, 2005, from http://www.ade.az.gov/pio/Press-Releases/2004/pr09-01-04.doc

[10] A list of all schools and the stage of corrective actions are available on the Arizona Department of Education website at: http://ade.az.gov/asd/Title1/AccountabilityGrants/2004-05TitleISchoolImprovement.pdf

[11] For more information on corrective actions under NCLB, see the U.S. Department of Education website: http://www.ed.gov/index.jhtml

[12] Arizona Department of Education. (2004, September 1). *Arizona schools chief announces 82 percent of Arizona schools makes Adequate Yearly Progress (AYP).* Press Release. Phoenix: Author. Retrieved April 29, 2005, from http://www.ade.az.gov/pio/Press-Releases/2004/pr09-01-04.doc

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[14] Finn, Jr., C.E. & Keegan, L.G. (2004). Lost at sea. *Education Next*. Retrieved April 13, 2005, from http://www.educationnext.org/20043/15.html

The Condition of Assessment of Student Learning in Arizona: 2005

Executive Summary

Reports on student achievement should assist policy makers in Arizona in making effective decisions about educational programs. The major source of achievement data available for 2005 is from Dual-Purpose Assessment (DPA). The idea behind DPA is that two tests are used to meet two different purposes. The first purpose is met by Arizona's Instrument to Measure Standards (AIMS); AIMS is intended to assess the degree to which students have met the standards of the Arizona curriculum. The TerraNova (TN), a standardized achievement test from CTB/McGraw-Hill, is intended to serve the second purpose: providing a comparison to other states in the nation. Another source of achievement data, the National Assessment of Educational Progress (NAEP), is used to compare the performance of a sample of Arizona students to other states in the nation. A key difference between TN and the AIMS/NAEP assessments is that TN is mandated by the state rather than the federal government. TN has questionable validity for its intended purpose and contributes little to the assessment of student learning in Arizona.

Recommendations

It is recommended that:

- The Arizona Department of Education (ADE) create state user norms for AIMS and the TN each year for grades 2 through 10.
- ADE clearly specify which measures are used for what purposes.
- ADE compare schools using norms for schools, not with norms for individual scores, when reporting the results of annual testing.
- ADE conduct a study to recommend the number of curricula that teachers are expected to use as guides to instruction.

The Condition of Assessment of Student Learning in Arizona: 2005

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Background

There are at least five purposes for assessment of educational achievement. Four of these purposes are used as a framework for discussing the measures relevant to the assessment of educational achievement in Arizona. A fifth purpose—accountability—is addressed in *The Condition of School Accountability in Arizona: 2005*. This report will review the following assessment purposes: instructional guidance for teachers providing instruction in a particular subject area, comparison of student performance across subjects, indication of a school's status within the state, and indication of a state's standing in the nation. A discussion of teaching to the test and a consideration of how instruction affects test performance are addressed in the Findings section.

Purpose I: Instructional Guidance for Teachers Providing Instruction in a Particular Subject Area

A teacher might use a student's test score to help determine the level of instruction necessary for a student to progress in a subject. It is essential that the score yield information regarding how well a student performs in the subject area of interest.

Purpose II: Comparison of Student Performance Across Subjects (Achievement Profiles)

This comparison may be made by the teacher, counselor, or parents who are interested in determining the strengths of the learner. The test scores in two or more areas of interest must be interpretable on the same scale, that is, the scores must be able to indicate the same level of performance if the student is equally proficient in the areas tested. A similar comparison may be desired to determine whether a class or larger group (school or state) has students who are more proficient in one subject than in another. For this comparison to be valid, it is necessary that equal scores reflect equal proficiency.

Purpose III: Indication of a School's Status Within the State

This indication often involves a comparison of average scores on a test with a distribution of averages for other schools. Unfortunately, in the absence of a distribution of averages for other schools, a less accurate measure is often used where a school's performance is compared to the distribution of individual student scores. Another indicator of school status involves comparing the percentage of students achieving a certain level of proficiency (e.g., "meets or exceeds standards") with the distribution of percentages for other schools. These status indicators may also be used for measuring growth when available at different times for the same groups; however, that use of achievement tests is covered in *The Condition of School Accountability in Arizona: 2005*.

Purpose IV: Indication of a State's Standing in the Nation.

This comparison is similar to Purpose III for schools except that the distribution of scores (averages or percentages) is for all the other states.

Recent Policy Developments

This section describes the types of scores that are used to report performance of students and schools and the development of standardized tests.

National standardized achievement tests were first developed based on the belief that states and school districts did not differ substantially in the general content of their curriculum guides, and the test blueprints were focused on the areas of agreement across these guides. It was expected that teachers would use state or local curriculum guides to determine what to include in classroom instruction and what to expect to be included in test blueprints.

Test Score Types

Test results are reported using scores that can be interpreted without knowledge of the particular items that are included in the tests, because the test items are secure. The number of items correct on a test, sometimes referred to as a concept score, provides no basis for comparing performances of students taking different forms of a test or taking tests in different subject areas.

There are two types of scores commonly used: developmental scores and within-group scores.[1] The developmental scores are in the form of scaled (or scale) scores that can be used to show performance across different grade levels—a common example is the grade equivalent score (e.g., performing at eighth-grade level). Grade equivalents have fallen from favor because they are misleading due to the different meanings attributed to units of growth, for example, one month of growth represents very different amounts of learning at different grade levels. A more common developmental measure is a scaled score that has meaning only for a given test, but can be used to measure growth when accompanied by other information provided by the publisher.

Scaled scores can also be used for determining cut scores (cut-off points) to represent desired levels of performance such as “meets standards” or “exceeds standards” or for deriving other within-grade scores such as percentile ranks. A percentile rank describes the percentage of scores in a distribution that fall below a given score. The percentile rank is similar to the rank of the score in a distribution, except that typically the best score is ranked ‘one’ whereas the best percentile rank is 99 (100 and zero are not used for percentile ranks). Differences in percentile ranks do not represent equal

measures of a difference within a group, but other within-group scores are available when equal-interval scores are needed. Those equal-interval scores are not discussed in this report.

Norms, Norming, and Norm-Referenced Tests

Providing meaning to a test performance requires referring a score to a distribution of scores from a group having taken the same test under the same conditions. These distributions of scores are called 'norms', and the process of obtaining the scores is called 'norming' a test. A sample of students in the nation is used to obtain a meaningful group for comparison for the national standardized tests, and these tests have become so closely identified with their scores referenced to norms that they are referred to as norm-referenced tests.[2] The percentile ranks reported on tests are considered objective measures of the relative achievement of students.

Standardized and Standards-Based Tests

Levels of performance are a more subjective representation of achievement based on a state or national committee's determination of how well a student should perform (e.g., to be considering mastering the subject matter of interest). These levels of performance are not usually emphasized (or even reported) with the national standardized tests, and the tests that do report performance levels are called standards-based tests to indicate that they are developed to report on mastery of content standards.

Some states purchased national standardized tests for statewide assessment, requiring all schools to give the same test. To better fit their state curriculum, states have more recently developed their own state assessments (often in collaboration with a test publisher). The No Child Left Behind legislation requires that states conduct annual testing to report on the progress of all students and schools, and to cooperate in the National Assessment of Educational Progress to monitor the learning of students in all the states. The results from any of these tests are reported using some type of comparison among states or schools—the common scores reported are within-groups measures such

as levels of performance (e.g., percentage of students who "meet or exceed standards') or the percentile rank of the average score.

Arizona has used national standardized tests for decades as part of statewide testing programs. Now Arizona administers a standards-based test statewide. The tests currently used in Arizona are described below.

- Arizona's Instrument to Measure Standards (AIMS) is Arizona's annual standards-based assessment. Grades 3, 5, 8, and 10 have been tested in mathematics, reading, and writing; grades 4, 6, and 7 will be included starting in 2005. AIMS scores are reported as within-grade scaled scores, concept scores (i.e., number of items correct), and as levels of performance based on certain cut scores. The four levels of performance are: exceeds standards, meets standards, approaches standards, and falls far below standards.

- TerraNova (TN) will be used as a national standardized test for grades 2 and 9 starting in 2005. TN scores will be reported as National Percentile Ranks. Previously, the Stanford 9 was used in Arizona to provide National Percentile Ranks for students in grades 2 through 9.

- The above two tests are being incorporated into a Dual-Purpose Assessment (DPA) for grades 3 through 8. The DPA is intended to decrease testing time by including some items from AIMS and some items from TN in a single test for each grade level. Some items will function as both TN and AIMS items, and contribute to scores for both tests.

- The National Assessment of Educational Progress (NAEP) is a national standards-based test that has been used in Arizona and is now required by No Child Left Behind (NCLB) for grades 4 and 8 in reading and mathematics. States have an option to include testing of science and writing. NAEP performance levels are: advanced, proficient, basic, and below basic.

Arizona's standing in the nation was a topic of much interest in the 2004 edition of this report. [3] A controversy arose because Stanford 9 and National Assessment of Educational Progress (NAEP) presented a different picture of the status of Arizona's students. An obvious difference was that the Stanford 9 results indicated that Arizona's students were making achievement gains whereas the NAEP indicated little or no gains. On the Stanford 9, Arizona students compared favorably with students in the nation, but on the NAEP they were below average when compared with students in other states. This year the Terra Nova (TN) will replace the Stanford 9 as the standardized achievement test for reporting the status of Arizona's students, but that does not ensure that there will be no discrepancy when NAEP and TN trends are compared.

Haladyna[4] suggested that the increase in Stanford 9 scores is reminiscent of Cannell's[5] "Lake Wobegon Effect" associated with states reporting pervasively above average test scores. The similarity of national standardized tests, both in content and methods of obtaining norms, results in similar long-term trends in student performance regardless of testing company. The trend indicates continuous improvement over consecutive years of administration of the same national standardized test while performance on NAEP appears to remain more consistent.[6]

The most publicized reason for the increase in test scores within a state is the possibility that teachers tailor their curriculum and focus to reflect the test's weighting of objectives. Along with teaching of testing skills, the conformity of curriculum to testing is often referred to as teaching to the test.[7] It is assumed that the curriculum becomes less comprehensive when students are "taught to the test," but a more important concern is that not all teachers place equal emphasis on teaching to the test, putting some students at a disadvantage. Also, because the national norms are not obtained from students who have been uniformly taught to the test, the differential focus on test preparation will distort the reported performance of students. At the extreme end, teaching *to* the test can become teaching *the* test, where teachers learn the specific test items that assess various

objectives, and teach those test items. Far fewer teachers use previous test scores to identify and remediate areas of weakness in their students, a practice that could be potentially more effective.[8]

Because of the increasing pressure on schools and states to perform, it is likely that teachers will feel pressure to use whatever resources they have available to produce student gains. Mehrens and Kaminski[9] describe seven points on a continuum ranging from teaching the curriculum without looking at what the test measures to having students practice on the same test they are to take in the testing program. If teachers chose the same point on this continuum for their instruction of all students, each student would have a fair chance to be measured validly by the test. What point should be chosen is a matter of debate. The reviewer of this report stated, "teaching to the test blueprint is teaching to the test. As the test is a sample of a larger domain, teaching to the test blueprint is an educationally unsound practice that leads to narrowing of the curriculum. Teachers should teach the Arizona content standards.[10]" That position on teaching to the test is quite conservative when compared to the following examples of guidelines available to educators outlining acceptable test preparation. The Standards for Educational and Psychological Testing state:

> (Standard 3.20) The instructions presented to test takers should contain sufficient detail so that test takers can respond to a task in the manner that the test developer intended. When appropriate, sample material, practice or sample questions, criteria for scoring, and a representative item identified with each major area in the test's classification or domain should be provided to the test takers prior to the administration of the test or included in the testing material as part of the standard administration procedures.[11]

Likewise, the Code of Fair Testing Practices in Education (Revised) includes statement D1: "Inform test takers in advance of the test administration about the coverage of the test, the types of question formats, the directions, and appropriate test-taking strategies. Make such information available to all test takers."[12]

Frameworks (or blueprints) and released/sample test items for Arizona's Instrument to Measure Standards (AIMS), TN, and the Dual-Purpose Assessment (DPA) are publicly available on the Arizona Department of Education (ADE) website.[13] CTB-McGraw Hill's website[14] also has information about the TN blueprints as well as a plethora of "teaching tools" marketed to help teachers teach to the test. Thus, it appears that ADE has taken a stance on teaching to the test by providing this information. The ultimate proof of the ADE position is that students have repeated opportunities to satisfy the graduation requirement of "meets or exceeds standards" on AIMS. Taking an alternate form of AIMS is the most extreme position on the continuum of test preparation except for the opportunity to practice on the actual test form. A high school senior taking the AIMS exam may have already practiced on several forms of the test, and the score might reflect practice effects in addition to proficiency in the area tested.

NAEP has been considered a more valid index of state achievement because of its low-stakes nature. Teachers and schools may have felt less pressure to improve performance on NAEP as compared to high-stakes tests such as AIMS. Although states may feel pressure to show relative improvement on NAEP, documentation of states encouraging districts or schools to improve does not exist.

It is not expected that teachers teach to a test that is not administered every year or in the same school every testing cycle. NAEP frameworks[15] are much more general and descriptive, and less instructional, compared to the other websites and supplemental materials. With the mandated state NAEP scores every two years for math and reading, it will be interesting to see if the increase in testing frequency and consistent participation of all states will lead to improvement in test scores in those subjects and not in optional subjects. It may be found that influences such as practice effects and teaching to the test that have affected national standardized tests will begin to influence NAEP as well, especially if NAEP becomes a criterion for state accountability.

It has become impossible to determine what is truly improvement in school, state, and national education. Burstein has suggested that more information on the background of test takers, including descriptions of the groups sampled for obtaining norms and the

test preparation allowed, be available with each test report. In addition, he suggested that "annual user norms" be used to report performance with respect to 'new norm' data. He warned "if we become too obsessed with measuring accurately the average performance of the students nationally, regionally, and locally, we may do a disservice to the educational improvement effort" because we corrupt the meaning of the measures. [16]

Reporting has been done poorly for school growth, especially because the Stanford 9 did not report "school norms." Instead, the schools' performances were reported using student norms (that is, comparing school averages to the percentile ranks for individual student scores in the nation). Because the TN does not have specified achievement levels, AIMS, using annual Arizona norms, would be the best source of information for comparing percentages of students at various performance levels across schools. Burstein's recommendation that information in addition to the average score be included should be heeded.[17]

AIMS cannot be used for national status reports because these comparisons are not possible for tests developed and given in individual states. Even if ADE provides validity data for AIMS, a state test can never satisfy the need for a standard measure for national comparisons. Because states choose different national standardized tests and different items from test publishers that align with different state standards, NAEP is essential for describing state progress in the scope of the nation.[18]

NCLB mandates state assessments as the index of state achievement, but it also requires state participation in NAEP. This requirement may be a way to keep states honest about achievement gains. NAEP trends are more believable and more nationally accepted than trends found from state tests. The consistent participation of all states in NAEP will also yield informative long-term trends in state achievement. Although schools and districts may not be as concerned with NAEP progress as they are with their state assessments, national writers for *Education Week*,[19] *Education Trust*,[20] and the Manhattan Institute[21] rely on NAEP to rank and evaluate states. Other tests, like advanced placement tests, SAT, and ACT, that are accepted by national writers are taken

by students with special reasons for being tested rather than by comparable groups, and thus are not valid for comparing states.

Tests in Arizona have yielded very different pictures of performance of students within the state. Stanford 9 showed higher performance in mathematics than in reading, with an inflated measure of overall performance. Because more students met the Arizona standards in reading than in math, many readers of reports on AIMS data believed that Arizona students are less proficient in math than in reading despite the contradictory Stanford 9 results. Although Arizona students are consistently below the national average on NAEP in both reading and mathematics, it is interesting to note that Arizona has shown improvement in the mathematics portion of NAEP—a gain that may truly matter.

Policy Implications

An important topic for consideration concerns the broadening of the instructional curriculum accompanying the use of three tests for state assessment. A finding from the Third International Mathematics and Science Study (TIMSS) may be relevant here. Nations that excelled in mathematics in the TIMSS assessments have a more narrow but focused curriculum than the United States. The U.S. curriculum appears to be unnecessarily broad, but shallow.[22] Arizona's teachers may face a broader but shallower curriculum in 2005 because they have three websites to visit for guidance on test preparation for their students. Given that the National Assessment of Educational Progress (NAEP) and Arizona Instrument to Measure Standards (AIMS) are mandated, the goal to better focus instruction may be served by the elimination of the TerraNova (TN) exam. Although instruction focused on a narrower curriculum may result in higher test scores, there is no evidence that overall student learning is improved by this focus.

National standardized norm-referenced tests (NRTs) are intended to provide information for a state about its students'/schools'/districts' performance relative to a national norm. However, because the validity of the information NRTs generate is in

question, its usefulness is also in question. Because NAEP is considered a more valid source of information about state assessment trends, NRTs that do not show trends similar to NAEP do not serve their intended purpose.

For comparing student performance across subjects, it is necessary to have scores that are comparable across subjects. The Arizona Department of Education (ADE) can provide comparable scores by creating state user norms for the AIMS scale scores and including this information when reporting the levels of performance. Because all schools within Arizona teach the same content standards and have the same information about test preparation, the students in Arizona comprise a well-defined group for creating norms. ADE could use other types of scores for the purpose of reporting comparable scores, but percentile ranks (PRs) are recommended. When norms are developed for this purpose and used by ADE, AIMS' PRs will be the preferred scores for comparing student performance across subjects. PRs included with each student's score will allow meaningful profile interpretation and reduce the misinterpretations that currently exist regarding school and student performance in mathematics, reading, and writing.

TN scores to can be used to compare performance across subjects; however, the full-length TN will only be administered at grades 2 and 9 in 2005. For other grades, only a subset of TN items will be used at any grade level, and the results will be less valid than those obtained with a full-length achievement test. However, if it is desired to use these scores for reporting student achievement profiles, state user norms should be used for that purpose.

To compare the averages of scores and the percentage of students at a specific performance level for a given school with other schools in the state, it is necessary to have norms for school comparisons. ADE will have the results of annual testing for developing those norms each year. All schools will administer the Dual-Purpose Assessment (DPA) at the same time and under the same conditions. The average scale score on AIMS and the percentage of students rated "meets or exceeds standards" for each school will be available soon after AIMS testing is completed each year. These averages and percentages can be compiled into distributions to produce PRs for schools;

these results are known as state user norms for schools. This information could be made available on the ADE website, but more importantly, should be included on each school's status report to enhance interpretability of the school achievement profiles.

Perhaps the diminishing role of NRTs is reflected in the scaling back of Arizona's NRT into a DPA. Because the norms are suspect, the financial cost of NRTs is difficult to justify. The underlying issue is, as Nitko suggested, "whether tests used in any improved accountability scheme will help students learn."[23] Until adequate evidence is available, showing that a heavy concentration on testing actually results in educational improvement and student learning, perhaps Arizona should allocate their resources more judiciously. Given the cost of the NRTs that are not federally mandated, the unintended consequences of high-stakes testing are important issues to consider.[24]

The addition of AIMS in grades 4, 5, and 7 is improvement not only because of the NCLB requirement, but also because testing in continuous grades provides information for a comprehensive database as suggested by Haladyna.[25] Arizona's interests are served by focusing on the testing mandated by No Child Left Behind (NCLB) and creating user norms for AIMS.

The status of Arizona students compared with students in other states is a more complicated issue. The use of NRTs creates a credibility gap; using the TN will not remove the problem that arose when the Stanford 9 was used. Because NAEP is the only test that has credibility with the national press, it makes sense to use NAEP to determine Arizona's standing within the nation. Although the federal funding of the NAEP assessment may be seen as saving the individual states the financial burden of additional assessment, NAEP does not yield the individual student or school information required by NCLB. The limited administration of the NAEP creates a dilemma that cannot be resolved by any state.

Recommendations

It is recommended that:

1. The Arizona Department of Education (ADE) create state user norms for AIMS and the TN each year for grades 2 through 10. These norms can be used to provide a percentile rank for each reported score, an addition that will generate meaningful achievement profiles.

2. ADE clearly specify which measures are used for what purposes. For example, AIMS data are for student and school comparisons across subjects within Arizona, as well as for reporting how students and schools fare regarding the levels of performance. TN provides information for grades and subjects where National Assessment of Educational Progress (NAEP) tests are not available (if TN trends are found to fit NAEP trends), and supports comparisons between subjects from AIMS. NAEP data are for comparing Arizona with other states, and for verification of reasonable standards.

3. ADE compare schools using norms for schools, not with norms for individual scores, when reporting the results of annual testing. Demographic information on students and schools relevant to the interpretation of test results should be included.

4. ADE conduct a study to recommend the number of curricula that teachers are expected to use as guides to instruction. The state content standards are the focus of instruction, but the NAEP objectives cannot be ignored because NAEP is required by federal law. If it is determined that fewer curricula provide better focus for instruction, the Arizona State Legislature should consider legislation to eliminate the requirement for a national standardized test.

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The Condition of Technology in Arizona: 2005

Executive Summary

The use of computers and technology in the classroom is essential for preparing students for the future. Three of the most extensive studies regarding computers in the classroom conclude that when used properly, computers increase student achievement, allow students to learn more and to learn faster, and improve students' attitudes toward their classes. In 2003, the Arizona Department of Education (ADE) began to close the gap in technology access among public schools by wiring schools and installing computer equipment. The data show, however, that most Arizona teachers are not proficient at using computers in the classroom. While ADE offers teachers professional development opportunities and curriculum resources through ASSET (Arizona School Services through Education Technology), the author of this brief concludes it is not enough to bring teachers to the level of technological proficiency required by the dawn of the Information and Knowledge Age.

Recommendations

It is recommended that:

- The Arizona Department of Education (ADE) direct discretionary grants to schools to make up-to-date technology, fast connectivity, and teacher support on-site available for Pre-K-12 teachers.
- Pre-K-16 schools, with the financial support of ADE, develop an in-house corps of highly-qualified teachers in technology integration issues across content areas and grade levels at each school building to coach other teachers in their technology use.
- School principals, backed by school district superintendents, allow Pre-K-12 teachers time to learn how to use different technologies, including release time for training.
- ADE identify representative schools across the state to fund a 1-to-1 student-to-computer ratio to model best practices for technology integration on a statewide basis.
- The Arizona State Legislature and ADE plan for future state-level funding to build on lessons learned through technology use at model schools and at different technology initiatives to generalize the use of technology-rich environments in all public schools.
- The Arizona State Legislature and ADE, through monetary incentives, support schools in forming alliances and partnerships between high schools and colleges, and/or high schools and businesses, particularly those in the knowledge industries, to provide a specialized workforce that will enable the state to attract more knowledge and information industries.

The Condition of Technology in Arizona: 2005

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Background

Transitions in human history are marked by the development of different discoveries, inventions, or tools. The end of the Stone Age was marked by the development of bronze tools; the end of the Industrial Age was marked by the invention and availability of the Internet in 1983.[1] The ability to communicate almost instantaneously with others across the planet gave birth to virtual communities where differences of time and geographic location almost disappear, leading to what is today the early stages of the Information and Knowledge Age.

21st Century Skills

Among the results of the rapid evolution of technologies is the increase of the availability of cheap, digital storage. This, in turn, has allowed an exponential increase of accessible information.[2] Yet, while information has doubled in less than two years, our education system insists on teaching mainly memorization of facts to our students.[3] According to the *21st Century Literacy Summit*, "True learning [in the information society] requires being able to use new technologies, not simply to enhance the ability to memorize and repeat facts, but to gather, organize and evaluate information to solve problems and innovate practical ideas in real-world settings."[4] The document *enGauge®21st Century Skills: Literacy in the Digital Age* produced by The Metiri Group, a national consulting group that works with the North Central Regional

Educational Laboratory (NCREL), identified the following skills as necessary to success in this new era and notes that these skills must be accompanied by a solid knowledge base of reading, writing, mathematics, and science:[5]

- Digital Age Literacy: Basic, scientific, economic, and technological literacies; visual and information literacies; multicultural literacy and global awareness.
- Inventive Thinking: Adaptability and managing complexity; self-direction; curiosity, creativity, and risk taking; higher-order thinking and sound reasoning.
- Effective Communication: Teaming, collaboration, and interpersonal skills; personal, social, and civic responsibility; interactive communication.
- High Productivity: Prioritizing, planning, and managing for results; effective use of real-world tools; ability to produce relevant, high-quality products.

Schools face a big challenge to prepare the citizens that our society demands due to the extensive role that technology plays now and will play in the years to come. This report examines how Arizona schools are responding to this challenge.

Recent Policy Developments

No Child Left Behind Act and Technology

The No Child Left Behind Act (NCLB) was signed into law on January 8, 2002. Among other major changes in funding, NCLB consolidated two existing federal technology grant competitions into one state grant, the State and Local Technology Grant program. The activities funded with this money include training for educators (principals, vice principals, and teachers) to use and integrate technology into instruction.[6] This is important because, according to The Children Partnership:[7]

- An estimated 45 million Americans do not speak English at home versus 32 million in 2000. Many want information in languages other than English.

- An estimated 8.5 percent of Americans have at least one disability that requires special features on computers and access to the Internet to make these resources accessible.
- More Americans now (28.4 million versus 26 million in 2000) are foreign-born and look for information tailored to their unique cultural beliefs and practices.

Arizona schools educate almost one million students per year. Of these students, almost 145,000 are English Language Learners (ELL). This is nearly twice the number of ELL students enrolled in other states (80,000 on average).[8] Students in Arizona schools have a student-to-teacher ratio of almost 1:20, while the national average is 1:15. Finally, Arizona schools house almost 20 percent more American Indian students and almost 50 percent more Latino students than the average schools in the nation.[9] These statistics indicate the challenges Arizona's teachers face in providing equal education to all children. In terms of per student spending, which includes student instructional resources and teacher professional development, Arizona is 50th in the nation with only $5,197 dollars per student while the national average of per student spending is $7,875.[10] Whether through NCLB money or not, the resources available to Arizona teachers are scarce, adding to the difficulty of educating a diverse student population.

Importance of Professional Development

In 2003, Barton identified 14 variables that correlate to achievement. The achievement indicators that Pre-K-12 schools can influence are:

- Rigor of the curriculum.
- Teacher preparation.
- Teacher experience and attendance.
- Class size.
- Availability of appropriate technology-assisted instruction.[11]

Barton investigated the gaps on achievement between majority and minority students and, unsurprisingly, found such gaps in all indicators in schools with high minority enrollment. Among other things, he found that 61 percent of students in schools with lower minority enrollments were assigned to use the Internet to conduct research, while only 35 percent of students in high-minority-enrollment schools were similarly assigned. In the same way, Smerdon, *et al.,* found that students had greater access to computers and Internet-based education at schools where only 11 percent or less of the student population qualified for free or reduced price lunch.[12] By contrast, in schools where 71 percent or more of students qualified for free or reduced-price lunch, pupils were significantly less likely to have access to computers and Internet-based education (Table 1). As Barton points out, "It is not just a matter of hardware and connections to the Internet; it is also the kinds of assignments that students are asked to do."[13]

Table 1: Percent of Public School Teachers Reporting Varying Numbers of Computers Available in the Classroom, by Free/Reduced Price Lunch: 1999

School Characteristic	Number of Computers in the Classroom with Internet			
Percent of Students in School Eligible for Free or Reduced Price Lunch	**None**	**One**	**2 – 5**	**5 or More**
Less than 11%	34	47	14	5
11 to 30%	30	51	16	3
31 to 49%	29	51	15	5
50 to 70%	47	39	11	4
71% or more	49	39	9	3

Source: Table partially reproduced from Smerdon, *et al.* (2000). *Teachers' Tools for the 21st century: A report on teachers' use of technology* (NCES 2000-102), National Center for Education Statistics, p. 42.

For many economically disadvantaged students, their schools and public libraries are the main technology-access equalizers. Because poor students tend to be ethnic minorities who mostly attend schools with high percentages of students qualifying for free or reduced lunch, they can be expected to experience the achievement gaps that Barton identified.[14] The National Center for Education Statistics (NCES) Issue Brief, *Beyond School-Level Internet Access: Support for Instructional Use of Technology*,

reports the results of two short surveys that used the Fast Response Survey System (FRSS) in 1999. [15] The surveys asked public school teachers how they were using technology in their classrooms, the availability of technology in the classroom and in the schools, the professional development in technology they had received, and the barriers they perceived to using such technology. The results, discussed in the NCES Issue Brief, found no statistical difference in achievement between high-poverty and/or high-minority enrollment schools and low-minority enrollment schools when teachers report having three key resources: classroom Internet access, on-site training, and assistance in the use of the Internet for instruction.[16] This finding has major implications for Arizona where schools educate many minority students.

In 1994, after the White House's National Information Infrastructure challenged the U.S. Department of Education and the nation to have Internet connectivity in all schools and classrooms, the NCES was charged with tracking the rate at which schools and classrooms received Internet access. The NCES, every academic year, surveys a sample of approximately 1,000 schools considered representative of schools across the nation to track Internet access and, after 1996, to track the types of Internet connections used. This report indicated that, at the national level, the most frequently cited barriers to the use of computers and the Internet for teaching were: insufficient numbers of computers (78 percent), lack of release time for teachers to learn how to use computers or the Internet (82 percent), and lack of time in the schedule for students to use computers in class (80 percent).[17] The repeated complaint about lack of time is understandable in a teaching context in which new demands and mandates are assigned to teachers on top of the many obligations in their work day.

Findings

In the Progressive Policy Institute's *2002 State New Economy Index,* Arizona ranked 16th while Illinois ranked 17th.[18] The comparison is noteworthy because Illinois, like Arizona, is a vibrant state with many high-tech industries; the Illinois State Senate Majority Leader considered the use of technology in schools an important enough topic to bring to the attention of the rest of the State Senate members.[19]

Arizona in the Numbers

Technology Counts 2004, the seventh edition of *Education Week*'s annual report on educational technology, reports that in Arizona, the state average ratio of students per instructional computer is 4.5:1, and 3.6:1 in schools with a high percentage of minority students. [20] Although the state has a more favorable ratio of students to computers than California, the state with the highest ratio (5.5:1), it still falls far behind North Dakota, where there are 1.4 students to 1 computer.

Technology Counts 2004 also reports that 89 percent of Arizona schools have Internet access for one or more computer classrooms, but only 68 percent of teachers used the Internet for instruction.[21] In the summer of 2003, the Arizona Department of Education (ADE) finished much of the work toward closing the gap in technology access among public schools by wiring and installing equipment in the final schools with "Students First" program funds. Having connectivity at most public schools allowed ADE to shift the focus from classroom technology to technology used for school data analysis and organization. The purpose of the Student Accountability Information System (SAIS), built mostly with state technology money, is to make schools more accountable for money expenditures and to track student progress. ADE has promised that "SAIS will dramatically improve both the exchange of school finance data between local education agencies (LEAs) and ADE and overall accountability in the K-12 system. SAIS will, for the first time, provide essential information to educators, legislators, and parents about the budgets, expenditures, and achievement levels of schools. In addition, this information will help our elected officials make better decisions about funding for schools and assist parents in making the right choices about their child's education."[22]

The state's approach thus far might be summarized as, "put computers in the classroom and teachers will use them." This strategy, however, overlooks two main factors: teacher training and teacher understanding of how to integrate technology to support vital student skills.

Teacher Technology Knowledge

Teacher technology knowledge substantially influences at least two important uses of technology in the classroom: How and how much technology is used by the students. Since teachers are the architects of students' learning experiences during the school day, they affect not only what students learn but also how they learn it, with what tools, and in which learning environments. When teachers are prepared to use technology to facilitate students' construction of knowledge through inquiry-based projects, technology becomes a tool of empowerment that gives students access to more resources and allows them to spend more time on problem solving, thinking, and reflection.[23] On the other hand, when teachers are poorly prepared to use technology, they are more likely to direct students to use drill-and-practice software, usually leaving out important skills such as those discussed above. Furthermore, NCES survey findings indicate that teachers who have more professional development hours (at least 32 hours) in the use of computers and the Internet are almost three times more likely to assign problem-solving activities that use technology than teachers with zero hours of professional development in technology.[24]

When comparing technology proficiency between the national averages and the Arizona teacher's average, the disparity is not wide. That does not mean, however, that Arizona's teachers are well prepared to use technology for teaching. Table 2 presents the results, in percentages, compiled from the same NCES survey and a 2,400 Arizona teacher sample.[25]

Table 2: Teacher Preparedness to Use Computers and Computer Software

Teachers Prepared to Use Computers			
Location	**Not Well Prepared**	**Moderately Prepared**	**Well Prepared**
National	13%	61%	26%
Arizona	12%	57%	31%
Teachers Prepared to Use Telecommunications			
	Not Well Prepared	**Moderately Prepared**	**Well Prepared**
National	35%	49%	16%
Arizona	30%	48%	22%
Teachers Prepared to Use Software to Teach Reading			
	Not Well Prepared	**Moderately Prepared**	**Well Prepared**
National	55%	36%	9%
Arizona	53%	34%	13%
Teachers Prepared to Use Software to Teach Writing			
	Not Well Prepared	**Moderately Prepared**	**Well Prepared**
National	43%	42%	15%
Arizona	43%	40%	17%

Source: National Assessment of Educational Progress. (1998). Information available on the National Center for Education Statistics website. Retrieved May 25, 2005, from http://nces.ed.gov/nationsreportcard/naepdata/search.asp
On the search page, select "Writing," "Grade 8," "National Pubic" or "Arizona," and "Teacher Factors." Then view survey questions "Prepared in the use of computers," "Prepared in the use of Telecommunications," "Prepared in using software for teaching reading," and "Prepared in using software to teach writing."

Although the majority of teachers appear to report feeling "moderately prepared" in the use of computers and computer software, not even one in four report feeling "well prepared" for those tasks. The issue worsens when teachers are asked to report on how prepared they are to teach reading and writing using computer software (data do not address other content areas), yet these two subjects are the core skills for a well-educated and capable workforce.

How much teachers used technology also depends on how technologically proficient they feel. In the NCES survey, teachers reported they used computers and the Internet more frequently to create instructional materials (88 percent) if they reported

feeling "well or very well prepared" in its use. On the other hand, 50 percent of teachers who felt "not well prepared" used computers for the same purpose. For gathering information to create lesson plans, 71 percent of well-prepared teachers used the Internet, compared with 28 percent of the not-well-prepared teachers. The disparity between teachers' Internet uses according to levels of technology proficiency is remarkably wide. Only 11 percent of low-technology-proficient teachers used the Internet to access research and best practices for teaching, while 52 percent of technology-proficient teachers used technology for the same purpose. When creating multimedia presentations for their classes, 55 percent of technology-proficient teachers used technologies, compared with only 12 percent of low technology-proficient teachers.[26] Obviously, teachers who use technology less in the least advanced ways are the ones who need it the most to access resources that may help them improve their teaching strategies to better prepare their students.

Under the terms of No Child Left Behind (NCLB), teachers need to demonstrate that they are "highly qualified" to teach their subject. "Highly qualified" teachers are defined as those who hold at least a bachelor's degree from a four-year institution; hold full state certification; and demonstrate competence in their subject area.[27] Unfortunately, NCLB does not take into account technology use for instructional purposes. For instance, based on the National Report Card data from the NCES website,[28] it is clear that teachers minimally use technology to teach mathematics, as Table 3 shows.

Table 3: Use of Technology for Mathematics Instruction: 2000

Teachers Do Not Use Computers		
	4th Grade	**8th Grade**
National	24%	50%
Arizona	30%	66%
Teachers Use Computers for Drill and Practice		
	4th Grade	**8th Grade**
National	25%	17%
Arizona	26%	10%
Teachers Use Computers to Demonstrate New Topics		
	4th Grade	**8th Grade**
National	3%	8%
Arizona	2%	5%
Teachers Use Computers to Play Math Games		
	4th Grade	**8th Grade**
National	43%	14%
Arizona	35%	6%
Teachers Use Computers for Simulations and Applications		
	4th Grade	**8th Grade**
National	5%	12%
Arizona	7%	13%

Source: National Assessment of Educational Progress. (2000). Information available on the National Center for Education Statistics website. Retrieved May 25, 2005, from http://nces.ed.gov/nationsreportcard/naepdata/search.asp
On the search page, select "Mathematics," "Grade 4" or "Grade 8," "National" or "Arizona," and "Instructional Content and Practice," then view question "Primary use of computer for math."

Somewhat alarming is the difference between Arizona and the rest of the nation in the percentage of teachers who do not use computers to teach mathematics. While there is a six percent gap between the percentage of Arizona teachers and teachers nationwide who do not use computers to teach math in the fourth grade, the difference of 16 percent in the eighth grade between Arizona and the nation is unacceptable. Although the difference between the state and the national average in the rest of the above figures is not as wide, there is much room for improvement. Furthermore, when comparing state data from 1996 and 2000, the change in Arizona teachers' computer use is negative, with the exception of the year 2000 for fourth grade use of computers for simulations and applications and for eighth grade in the use of computers to demonstrate new topics,

which had no change in those years. Surprisingly, teachers used less computer technology for mathematics instruction in 2000 than they did in 1996. Table 4 shows this comparison for fourth and eighth grade data.

Table 4: Arizona Teachers' Use of Technology for Mathematics Instruction: 1996 and 2000

Teachers Do Not Use Computers		
	4th Grade	**8th Grade**
2000	30%	66%
1996	26%	52%
Teachers Use Computers for Drill and Practice		
	4th Grade	**8th Grade**
2000	26%	10%
1996	30%	12%
Teachers Use Computers to Demonstrate New Topics		
	4th Grade	**8th Grade**
2000	2%	5%
1996	3%	5%
Teachers Use Computers to Play Math Games		
	4th Grade	**8th Grade**
2000	35%	6%
1996	36%	16%
Teachers Use Computers for Simulations and Applications		
	4th Grade	**8th Grade**
2000	7%	13%
1996	5%	15%

Source: National Assessment of Educational Progress. (1996 & 2000). Information available on the National Center for Education Statistics website. Retrieved May 25, 2005, from http://nces.ed.gov/nationsreportcard/naepdata/search.asp
On the search page, select "Mathematics," "Grade 8" or "Grade 4," "Arizona," and "Instructional Content and Practice," then view survey question "Primary use of computer for math."

In all fairness, this negative trend needs to be evaluated in terms of technology availability, technology professional development opportunities for teachers, and technology investment in general; these topics are out of the scope of this manuscript.

ADE offers teachers professional development opportunities and curriculum resources through ASSET (Arizona School Services through Education Technology). These opportunities, however, are not enough to bring the teachers to the level of technological proficiency required by the dawn of the Information and Knowledge Age.

Policy Implications

In times of tight budgets, policy makers face challenges to distribute the amount of money they have. Increasingly, government agencies and others are demanding scientific research to justify spending decisions and priorities in the name of accountability. This section outlines the major impacts teaching and learning with technology has on student learning outcomes. The findings are based on three meta-analysis studies reported in two different publications of available research. Meta-analysis is a type of systemic review where the results of many studies that deal with the same topic are abstracted, summarized, and analyzed statistically to find the effect that one variable has over another variable.

In 1999, Schahter conducted a meta-analysis of 500 research studies whose outcome was the presentation of several case studies to illustrate the positive and negative impact of technology on student achievement.[29] Shahter's study showed the following major impacts of the use of technology for instruction:

Positive Impacts:

- On average, students who used computer-based instruction scored 14 percent more than non-computer users in achievement tests.[30]
- Students learn more and faster when they receive computer-based instruction.
- Students develop more positive attitudes toward their classes with computer-based instruction.

Negative Impacts:

- Computers did not have a positive impact in every area in which they were studied.

Shahter's study included the review of work done by Sivin-Kachala.[31] Sivin-Kachala's meta-analysis included more than 200 studies and found consistent patterns of the impact of technology in student achievement:

- Technology-rich environments positively impact student achievement in all major subject areas.
- Technology-rich instructional environments help increase achievement of regular and special need students in preschool to higher education.
- Students' learning and self-concept attitudes consistently improved with computer-based instruction.

In addition, a meta-analysis, conducted by Waxman, Lin, and Michko, estimates the effects of teaching and learning with technology on students' cognitive, affective, and behavioral learning outcomes.[32] The analysis of 42 different studies found that the overall effect of teaching and learning with technology on student learning outcomes was far greater than previously thought—nearly twice as large as other such analyses had found. Waxman *et al.* found that using technology for teaching and learning improved cognitive and affective outcomes, although not at a significant level; it also found that technology had a slight, non-significant impact on student behavioral outcomes.[33] Although the results of this study did not find statistical significance, it confirms the impact that technology has on student learning outcomes.

The public policy implications of the meta-analysis studies findings are far reaching. If "intellectual capital" will be *the* natural resource of the information and knowledge economy, it should be a state priority to invest in developing intellectual capital by providing adequate technology resources, classroom connectivity in schools, training teachers to meaningfully use technology for instruction, and promoting technology-based learning and teaching at state teacher preparation programs. Due to the large number of American Indian and Latino students in Arizona schools, it is imperative to have adequate resources in schools where their enrollment is high. Ignoring these underserved populations, or avoiding provisions of equal education to develop their intellectual capital will leave the state economically uncompetitive, given that Latinos are the largest minority in the state.[34]

Recommendations

In light of the foregoing, it is recommended that:

1. The Arizona Department of Education (ADE) direct discretionary grants to schools to make up-to-date technology, fast connectivity, and teacher support on-site available for Pre-K-12 teachers.

2. Pre-K-16 schools, with the financial support of ADE, develop an in-house corps of highly-qualified teachers in technology integration issues across content areas and grade levels at each school building to coach other teachers in their technology use.

3. School principals, backed by school district superintendents, allow Pre-K-12 teachers time to learn how to use different technologies, including release time for training.

4. ADE identify representative schools across the state to fund a 1-to-1 student-to-computer ratio to model best practices for technology integration on a statewide basis.

5. The Arizona State Legislature and ADE plan for future state-level funding to build on lessons learned through technology use at model schools and at different technology initiatives to generalize the use of technology-rich environments in all public schools.

6. The Arizona State Legislature and ADE, through monetary incentives, support schools in forming alliances and partnerships between high schools and colleges, and/or high schools and businesses, particularly those in the knowledge industries, to provide a specialized workforce that will enable the state to attract more knowledge and information industries.

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The Condition of School Funding in Arizona: 2005

Executive Summary

With the release of *Lead with Five: Five Investments to Improve Arizona Education,* the Rodel Foundation has brought attention to the funding with which Arizona supports its preK-12 schools and provides recommendations where future increases would result in increased student achievement. The *Lead with Five* report, based on an adequacy-of-funding study conducted by the nationally known firm of Picus and Associates, is the product of a process to determine the basic education necessary for Arizona students to meet the expectations established by the Arizona State Legislature when learning standards and assessment were passed into law. The recommendations are a roadmap to direct future funding and a recommendation to the legislature to consider increasing funding for education. This brief explores adequacy as a test to be applied to Arizona school funding, compares the Arizona study to adequacy studies focused on other states, and examines the question of education research supporting the policy recommendations contained in the *Lead with Five* publication. This report finds that policies promoted by the Arizona State Legislature appear to be focused on restricting funds for core instructional purposes to the greatest degree possible and financially promoting a competitive system that offers alternatives (charter schools, vouchers, tax credits) to traditional public schools.

Recommendations

It is recommended that:

- Policy makers develop a model for comprehensive school funding reform for public schools, incorporating into the model needed educational services that will enable all students to perform at the level required by Arizona's standards.
- Policy makers incorporate into a school funding reform model the concepts of adequacy in funding in lieu of the current policy of promoting equity among school districts.
- Arizona adopt a system of reporting and comparing school funding that focuses on core instructional support in order to minimize public confusion regarding the level of support for teaching and learning.

The Condition of School Funding in Arizona: 2005

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Background

The Rodel Foundation of Arizona released *Lead with Five: Five Investments to Improve Public Education* in February of 2005. The report is a distillation of a more extensive study of the adequacy of school funding in Arizona that was funded by the foundation. The Rodel report recommends five essential elements for improving public education and increasing student performance in Arizona. *Lead with Five* also provides cost estimates (totaling an additional $1,883 per student) for adopting these reforms as well as references to the education research that provided a background framework for the recommendations presented. The five recommended education reform investments are:

- Provide full-day kindergarten for all students.
- Prepare and recognize teachers for high performance.
- Create smaller schools.
- Reduce class size.
- Provide one-on-one tutoring and other extra help for struggling students.[1]

Inherent in these recommendations are two questions. First, is the funding provided by the Arizona State Legislature adequate to meet the needs presented by Arizona's existent and burgeoning student population? Second, and more fundamental

than the first question, does the level of funding make a difference in student learning? In order to explore these questions, a basic understanding of equity and adequacy as school funding concepts should be reviewed.

Equity, as a consideration in funding of public schools, is a well-established and well-litigated concept. Around the country, numerous judges, responding to lawsuits alleging a lack of equity in school funding, have ordered state legislatures to change the mechanisms of how schools are funded.[2] The concept of equity is a fairness issue that asks whether all students are being provided with *relatively the same* per pupil financial support.[3] The efforts to bring about equity in resources were related to the disparate local resources for school districts based on differing real property distribution and the reluctance of legislatures to balance school funding between property rich and property poor school districts.

The Arizona State Legislature responded to the pressure for equity in 1980 by reforming the way schools were funded with a new "equalizing" formula that greatly restricted local school boards' access to the local property tax and increased the state's role and control of funding education.[4] All things considered, Arizona has achieved a relative degree of equity in school funding over the past two decades as is evidenced by the narrowing of the gap in funding between rich and poor districts.

Adequacy, while imbedded in the concept of equity, has emerged as a more predominant force in school funding litigation and finance reform during the 1990s. The overall concept of "adequacy" is a sufficiency question: *Is the school funding allocated sufficient to provide the needed educational service for all students to achieve to a high minimum standard?*[5]

While equity is a model for input, i.e., resources are relatively equal, adequacy is more focused on outputs, i.e., resources supporting student achievement to a predetermined set of standards. Therefore, the expectations of an adequacy model are more aligned with the education accountability movement that has been put in place by state legislatures (including Arizona) for the past decade and more recently emphasized by the federal government's No Child Left Behind Act.[6] In Arizona, the accountability

movement is represented by the Arizona learning standards (Arizona LEARNS) and the Arizona Instrument to Measure Standards (AIMS).

In order to establish adequacy in school funding, multiple questions are involved. First, what are the standards of achievement to which students are to be held? Second, is the programming provided to support the expected achievement for all students? Third, is the funding provided sufficient for the necessary educational services for all students to reach this level of achievement? Fourth, how can adequacy in funding be determined? Before any of these questions are addressed, consideration must be given to the more fundamental question raised above: Does the level of funding make a difference in student learning?

Does the Level of Funding Matter in Student Achievement?

One strain of policy thinking holds that money does not matter in education. Although such assertions are both widespread and confidently made, this position is not supported by education research. Biddle and Berliner observe:

> In addition, reluctance to provide equal funds for American public schools has been fueled by claims from prominent researchers, reviewers, and others who have asserted that level of funding for schools does not affect student achievement. Such claims do not seem to have the evidence on their side, and often reflect ideologies hostile to public education.[7]

A state court judge in North Carolina put it more bluntly when he stated that "only a fool would find that money does not matter in education." [8]

Those who discount a relationship between school funding and student achievement consistently cite one or all of three arguments. First, the "Coleman Report" (Equality of Educational Opportunity) does not support it. Second, research reports by economists find no relation between spending and achievement. Third, education spending has doubled in the last 40 years and student performance on the SAT is lower. A summary of these issues is found in Table 1. As an example, in an opinion piece countering the *Lead with Five* recommendations, Robert Ladner of the Goldwater

Institute utilized the Coleman Report and doubled funding over time arguments in suggesting that the Rodel report was a recycling of old ideas.[9]

Table 1: Selected Research on Funding and Student Achievement

Study/Author and Conclusions	Status/Remarks
"The Coleman Report" after James S. Coleman or Title: "Equality of Educational Opportunity." Findings: school quality (and level of funding) had little to no impact once home and peer factors are taken into consideration.	1. Authors failed to use scaling techniques to validate their procedures and made mistakes in measuring crucial variables. 2. Study included no measures for teacher qualifications, classroom procedures, academic rigor, or sense of community, i.e., the study concentrated efforts on school processes that do not have an effect on student performance. 3. Study used nonstandard procedures for statistical analysis that generated falsely deflated estimates for school effects.
Econometric studies: Eric Hanushek, economist involved in numerous education studies, advances statement: level of funding is not related to achievement in the real world of education.	Data used by Hanushek have been subjected to meta-analysis by researchers such as Hedges *et al*. with the following findings: the data do show positive net effects for funding and pooled estimates show sizable effects of funding.
Funding over time: Funding for education has doubled since 1960 with no improvement in test scores.	Does not take into account cost impact of additional state and federally mandated programs: • Approximately 33 percent of new dollars has gone to special education. • Eight percent went to dropout prevention programs. • Eight percent went to expanded school lunch programs. • Twenty-eight percent went to teachers salaries for longevity (i.e., longer years of service).

Source: Biddle, B.J. & Berliner, D.C. (2003). What research says about unequal funding for schools in America. San Francisco, CA: WestEd.

For the past decade research has been designed to pinpoint how the level of funding can assist in improving the level of student achievement. "Overwhelmingly, the academic literature and court holdings have…strongly concluded that money spent on qualified teachers, smaller class sizes, preschool initiatives, and academic intervention programs does make a substantial difference in student achievement – especially for poor and minority students"[10]

Examination of the *Lead with Five* recommendations demonstrates an alignment with the findings of "academic literature and court holdings." For those interested in the supporting literature, the Rodel Foundation report provides education research literature that gives background and support for the specific recommendation in a "Digging Deeper" section.

Is the Issue of Adequacy Unique to Arizona?

The level of interest in studying state funding issues is demonstrated by the number of states that have performed cost studies, either by court order, state initiative, or by other interested parties within the state (in some instances by two or all three of these categories). Table 2 provides an overview of the 32 states involved in 41 different cost studies since 1991. It should be noted that not all of these studies were for adequacy, but they were all initiated by some demonstrable problems in the manner of funding schools.[11]

Table 2: States Involved in Education Cost Studies*

Court Ordered	State Initiated	Initiated by Others
Arizona (ELL only 2001, 2005) Arkansas (2003) New York (2004) Ohio (1995) Wyoming (1997-2002)	Alabama (not released) Alaska (1998) California (TBA) Colorado (not released) Hawaii (2004) Illinois (2001) Kansas (2002) Kentucky (2003) Maine (1999) Maryland (2001) Minnesota (2004) Mississippi (1993) New Hampshire (1998) New Jersey (1996) New York (2004) North Dakota (2003) Ohio (1997, 2004) Oregon (2000) Tennessee (1992) Texas (2004) Vermont (2004)	Arizona (2005) Connecticut (2005) Kentucky (2003) Maryland (2001) Massachusetts (1991) Missouri (2003) Montana (2002) Nebraska (2003) New York (2004) Ohio (1993) South Carolina (1998) Tennessee (2004) Texas (2004) Washington (2003) Wisconsin (2002)

Source: ACCESS, http://www.school.info
* Capital studies not included.

To provide a comparison between the adequacy study for Arizona and that of other states, four additional states where recent cost studies have occurred were selected. The additional four were selected because they represent a variety of reasons why the studies occurred. Together, all five of the studies represent a wide variation in current expenditures per pupil. To explain, Arkansas, New York, and Wyoming were all court-ordered studies, Maryland's study was state initiated, and the Arizona study was initiated by a non-governmental organization. These studies were coordinated by a variety of nationally known consulting firms, and all used methodology associated with determining adequate school funding. They also demonstrate that what is described as adequate funding, while usually resulting in a recommended increase in funding, is not due to a low starting point in the state per-pupil support. Rather it is based on costing

out, in a particular state's environment, what are necessary educational services for children from a diverse population to achieve academically at the level established by that state's standards.

Adequacy Is Not About How Much

Adequacy studies are not about how much a state spends. As demonstrated in Table 3, the states chosen to compare to Arizona's adequacy study are financially disparate in terms of per-pupil expenditures. The state of New York ranks second among the 50 states in expenditures per pupil at $11,216; Wyoming ranks 12th at $8,645 and Arkansas ranks 41st at $6,276, yet all of these states recently had their school funding systems overturned by their state judiciary on the basis of lacking adequacy.[12] Arizona, which ranks 49th[13] at $5,964, was the result of subject-to-subject litigation; the case (*Crane v. Arizona*) was dismissed recently. Maryland, ranking 10th ($8,692), is an example of a state reacting to a concern of potential litigation.

Table 3: Comparison of Per Pupil Expenditures in Selected States with Adequacy School Funding Studies

State	Instruc-tion*	% of Total	Support Services **	%of Total	Non-instruc-tion***	% of Total	Total	Rank of 50 States
Arizona	$3,387	57%	$2,201	37%	$376	6%	$5,964	49
Arkansas	$3,867	61%	$2,088	33%	$321	5%	$6,276	41
Maryland	$5,408	62%	$2,872	33%	$412	5%	$8,692	10
New York	$7,660	68%	$3,256	29%	$300	3%	$11,216	2
Wyoming	$5,263	61%	$3,096	36%	$286	3%	$8,645	12
U.S. Avg.	$4,775	62%	$2,657	34%	$302	4%	$7,734	n/a

Source: National Center for Education Statistics: Common Core of Data, 2001-2002 (percentages and ranks by author).
* Instruction includes: teacher's salaries and benefits; supplies (e.g., textbooks); and purchased services.
** Support services includes: operation and maintenance of buildings; school administration; transportation; student counseling; libraries; and health services.
*** Non-instruction includes: school meals; and enterprise activities such as bookstores and interscholastic activities.

If adequacy is not about how much money is spent on education, then what does it concern? "Schools are being adequately funded when the amount of funding provided is sufficient to allow students, schools, and school systems to meet prescribed state standards."[14] It would appear straightforward: the state adopts the standards and the means of measuring student accomplishment, and the state provides the means for all students to learn sufficiently to pass the adopted test at the expected minimum competency level.

The adequacy of a state's funding system can be determined using a variety of methodologies, summarized below.[15]

Successful Schools Method is also known as the empirical approach. It is used to identify *existing* schools that achieve specified levels of student performance and calculates the average level of expenditures that would be required to achieve the same results in other schools. This method also takes into consideration cost-of-living factors and the needs of extraordinary students. The Ohio study responding to a court order in *DeRolph v. Ohio* used this approach.

Professional Judgment Method relies on outside professional expertise. The primary idea is that an adequate cost estimate involves a large number of judgments and establishes a process that will comprehensively review the spectrum of factors involved. Typically, a panel of experts is assembled to identify the instructional components necessary to meet state standards and have economists price the identified components. This method is the most extensively utilized approach; examples include studies completed in Arizona, Wyoming, New York, Maryland, and Oregon, among others. A summary of comparisons of different state model education programs can be found in the Arizona adequacy study.[16]

Effective Strategies Method is also known as the expert judgment approach. This methodology incorporates the latest educational research to identify a set of specific educational programs and strategies that are included as necessary program elements for a school to be effective. These elements are standardized, and experts calculate the cost of each component. Sufficient funding is then provided for a school to select from among a number of effective programs. An example of use would be in Kentucky, where

high quality preschool and full-day kindergarten were identified as essential programs for students in poverty.

Statistical Modeling Method determines, through an analysis of performance measures and cost indices, what a school would need to spend in comparison to an average school to obtain performance of students at the targeted level established by the state standards. While not utilized exclusively as an independent methodology, this approach is often incorporated into the processes of the other three methodologies. Examples of this approach for New York State and Texas are found in *Developments in School Finance: 2001-2002*.[17]

While each of these methods of determining the programming, and cost of programming, for an adequate education are discussed separately, an actual study may incorporate several of the methods above. For example, Chambers, in his adequacy study for New York State, writes: "Four conventionally recognized analytic strategies exist for addressing this problem. … This study utilized a combination of the best features of all four strategies, with Professional Judgment Model playing a central role."[18]

The study of adequacy in Arizona also depended primarily on the Professional Judgment Model. Table 4 shows a compilation of the process, coordination, recommendations, and estimated costs of implementation for the Arizona study and the four comparison states' studies.

Table 4: Comparison of Methodology, Recommendations, and Costs of Five States' Adequacy Studies

	Arizona	Arkansas	Maryland	New York	Wyoming
Method	Professional Judgment	Professional Judgment	Successful Schools	Professional Judgment	Professional Judgment
Coordinator	Picus and Associates	Picus and Associates	Augenblick and Meyers	AIR/MAP**	MAP***
Major Findings	1, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13	1, 2, 3, 4, 6, 7, 8, 10, 11, 12, 13	1, 3, 4, 7, 10, 11, 12, 13	1, 2, 3, 4, 7, 9, 10, 11, 12, 13	1, 2, 3, 4, 6, 7, 8, 9,
Total Estimated Cost (in thousands)	$1,325,000*	$680,600	$1,300,000	$6,210,000	N/A
Estimated Cost Per Pupil	$1428*	$1513	$1510	$2162	N/A

Major Findings Index

1. Reduce class size in kindergarten and primary grades.
2. Reduce class size in intermediate and upper grades.
3. Expanded support for students in poverty, limited English, and Special Ed.
4. Increase, improve teachers' salaries.
5. Develop salary related accountability for teachers.
6. Maintain and/or develop small schools.
7. Additional support for disadvantaged learners.
8. Expand support for instructional professional development.
9. Geographic cost of education adjustments in funding.
10. Provide quality preschool experience.
11. Provide full-day kindergarten.
12. Enhance technology base and support for learning.
13. Increased focus on gifted and talented students.

* Figures are from Adequacy study not Rodel Foundation report ($1,883/pupil).

**AIR is American Institutes for Research

***MAP is Management Analysis and Planning, Inc.

Sources: Odden, A., Picus, L.O., Fermanich, M., & Goetz, M. (2004, June). *An evidence-based approach to school finance adequacy in Arizona.* North Hollywood, CA: Lawrence O. Picus & Associates.

Odden, A., Picus, L.O., Fermanich, M., & Goetz, M. (2003, September). *An evidence-based approach to school finance adequacy in Arkansas.* North Hollywood, CA: Lawrence O. Picus & Associates.

Chambers, J.G., *et al*. (2004). *The New York adequacy study: "Adequate" education cost in New York State*. New York, NY: American Institutes for Research/Management Analysis and Planning, Inc.

Smith, J.R. (2002, January 31). *Wyoming education finance: Proposed revisions to the cost-based block grant*. Davis, CA: Management, Analysis & Planning.

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What is remarkable, in reviewing Table 4, is that studies in five different states, conducted by different consultants, using somewhat differing methodologies, and involving different panels of experts, draw very similar recommendations on what is necessary to provide an adequate education. All five reports find that adequacy in educational opportunity involves:

- Reducing class size in kindergarten and primary grades (Item 1).
- Expanding support for students in poverty, limited English, and Special Education (Item 3).
- Increasing and improving teachers' salaries (Item 4).
- Providing additional support for disadvantaged learners (Item 7).

Additionally, four of the five added the following:

- Expanding support for instructional professional development (Item 8).
- Providing quality preschool experience for disadvantaged (Item 10).
- Providing full-day kindergarten (Item 11).
- Enhancing technology base and support for learning (Item 12).
- Offering increased focus on gifted and talented students (Item 13).

It would appear that the *Lead with Five* recommendations are consistent with the thinking of professionals throughout the states represented in these comparison studies. It is consistent in the means of providing an adequate education in which *all* students have the opportunity to learn and achieve at the level of Arizona's adopted standards.

Recent Policy Developments

Education funding policy in Arizona seems to be driven by the courts. In the past decade there have been three prominent lawsuits related to how Arizona funds schools. The first of these lawsuits regarded providing adequate facilities throughout the state; the other two were directly related to the issue of providing funding for an adequate education.

In *Roosevelt v. Bishop*, the Arizona Supreme Court held in 1994 that the manner in which school facilities were funded did not meet the "general and uniform" criteria established by the Arizona Constitution, and two years later ordered the legislature to develop an acceptable solution within two years. The Students FIRST (Fair and Immediate Resources for Students Today) legislation was signed into law in July of 1998.[19] In the interim between the *Roosevelt* decision and the enactment of Students FIRST legislation, a companion suit (*Hull v. Albrecht*) resulted in a court order that the state establish standards for buildings and equipment that are aligned with the state's academic standards.[20]

In *Crane Elementary School District v. Arizona*, filed in 2002, the plaintiffs asserted that the state is not providing sufficient funding for the education of at-risk students. The core argument in *Crane* was that students from low socio-economic backgrounds consistently perform poorly on the Arizona Instrument to Measure Standards (AIMS). The complaint further argues that this poor performance is a consequence of insufficient funding to provide supplemental programming for these children that would enable them to achieve at the level established by standards.[21] Although it was dismissed by a State court in the spring of 2004 before going to trial, *Crane* should not be considered an anomaly. As evidence continues to accumulate on the performance of at-risk students on the AIMS test, the potential for a similar suit looms on the horizon.

Flores v. State of Arizona, filed in U.S. District Court in 1992, is similar to the *Crane* suit but applies only to limited English students. This litigation, filed under the Equal Educational Opportunities Act and Title VI of the Civil Rights Acts on behalf of English Language Learners, alleges a disproportionately high failure rate on the AIMS test reflects discrimination against these students. The core argument is that sufficient programming is not provided for limited English students to learn at the level required by the Arizona learning standards (Arizona LEARNS). The court has ruled in favor of the plaintiffs, ordering a cost study in 2000 and a second cost study in 2003. The second study, released in November of 2004, has implications for funding increases in excess of a hundred million dollars and the plaintiff's threat to request the withholding of federal funding (primarily highway funding) should the legislature not act in the 2005 session.[22]

Findings

The conception of adequacy in school funding and the litigation regarding Arizona's funding model suggest an incompatibility between the funding policy promoted by the state and the programming requirements for Arizona's diverse student population demanded by the state's legislated learning standards. The policies promoted by the legislature appear to be twofold: (a) restricting funding for core instructional purposes to the greatest degree possible and (b) financially promoting a competitive system that is an alternative to traditional public schools.

The Condition of School Funding: 2004 provided a review of how the state's per-pupil funding has declined over the past two decades. Excluding capital expenditures, the per-pupil expenditure compared to other states declined to 49th out of the 50 states.[23] It should be noted that capital funding, while important, is a byproduct of a growing population, but does not address the needs of funding the core instructional process necessary for all students to progress academically as required by the Arizona Learning Standards. Regardless of whether the Arizona State Legislature funds the state's capital obligations from general revenues or through bonding, conflating capital funding with funding for core instruction tends to confuse the latter for the general public.

Arizona's charter school legislation has promoted the formation of more charter schools in the state than any other state in the union. Open enrollment policies allow students to travel to any public school within a 20-mile radius. Arizona's tuition tax credit legislation is considered pioneering. Meanwhile proposals to introduce private school vouchers are advanced in the Arizona State Legislature annually. The pursuit of a competitive market model in public education ignores indicators that, regardless of the educational setting, at-risk students and students of limited English skills do more poorly on the Arizona Instrument to Measure Standards test when compared to other students who take the test.[24] This gap is a subject of deep concern to the public. In the 36th annual Gallup poll of public attitudes toward public schools, 88 percent of respondents felt it was important to close the performance gap on standardized tests between African American and Hispanic students and their White counterparts.[25]

Policy Implications

Policy makers in Arizona remain focused on school funding equity, which is an input model. Adequacy of funding is an output model, emphasizing student performance against an established set of standards. With the adoption of learning standards, policy makers have not taken into consideration the two-edged nature of accountability. Developing a system of standards and measurements to hold schools (and students) accountable has also created a system by which the legislature may be held accountable. When student achievement data are examined to the degree that it is clear entire categories of students fall short in their achievement, it becomes obligatory for the state to provide a means of supporting teaching and learning for those lower-achieving groups. The current emphasis on equity seems likely to perpetuate such gaps. Differentiated funding that takes into account the varying needs and inherent advantages or disadvantages of diverse student population groups appears more likely to ensure that all are educated to the level expected. Failure to consider that possibility continues to invite judicial intervention into Arizona's school funding policy.

Recommendations

In light of the previously cited lapse in school funding policy, which includes a dwindling of per-pupil funding for core instructional purposes; promotion of a competitive system to the detriment of funding the existing public school system; lost lawsuits and poor performance by minority students and students who live in poverty on the Arizona Instrument to Measure Standards, it is recommended that:

1. Policy makers develop a model for comprehensive school funding reform for public schools, incorporating into the model needed educational services that will enable all students to perform at the level required by Arizona's standards.

2. Policy makers incorporate into a school funding reform model the concepts of adequacy in funding in lieu of the current policy of promoting equity among school districts.
3. Arizona adopt a system of reporting and comparing school funding that focuses on core instructional support in order to minimize public confusion regarding the level of support for teaching and learning.

Notes and References

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In a quote from David L. Shreve, Education Committee Director for the National Conference of State Legislatures: "We're very afraid, we're convinced that the long-term implications of No Child Left Behind are to call into question the adequacy of funding in every state in the union."

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[13] There is debate regarding whether Arizona ranks forty-ninth or higher. Studies which show Arizona ranking either 36th or 37th include capital (facilities) expenditures by the state which traditionally are not included in per pupil expenditure comparisons due to the variety of ways states provide local districts assistance for facilities and the fluctuation that can occur from year to year due to student growth, condition of existing facilities, etc. In "The Condition of Education: 2003 (NCES 2003-067)" the writers for NCES offer the following explanation: "Revenues from state sources include those that can be used without restriction; those for categorical purposes; and revenues in lieu of taxation." While not on a national level, an "in state" example of problems created by including capital expenditures in per pupil comparisons can be found in the controversy over the Goldwater Institute's recently released "A Guide to Understanding State Funding of Arizona Public School Students." This report has been criticized by representatives of the Arizona Association of School Business Officials and a writer for the *Arizona Daily Star* (January 30, 2005), who characterize the report as misrepresentative because it includes, in per-pupil expenditures, one-time building expenditures and revenues from bonding. See

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