

Are State and National Standards Leaving the Advanced Learners Behind? The Crisis Ahead

Sandra Watkins and Zhaohui Sheng

Sandra Watkins, Associate Professor, Western Illinois University
Zhaohui Sheng, Assistant Professor, Western Illinois University

Abstract

The study analyzes the achievement trends of all third grade students in the state of Illinois who scored in the Exceeds category in reading and mathematics on the Illinois Standards Achievement Test (ISAT) in the year 2000. ISAT performance of this cohort group of students was followed through the eighth grade. Descriptive analyses were utilized to describe the trend data and to explore the influence of various district characteristics on the trend data.

Results illustrate that the advanced learners are not making adequate achievement gains as they advance from earlier elementary grades to later grade levels. The declining achievement trends were persistent even when data were disaggregated based on district SES, district size, and district per pupil expenditures. Implications of the results of this study are discussed in relation to teachers, administrators, and policy makers at the state level.

Introduction

The genesis of the standards movement occurred when critics heralded the famous “*A Nation At Risk*” (National Commission on Excellence in Education, 1983) report claiming the educational system in the United States of America was at risk and “being eroded by a rising tide of mediocrity” (p. 1). The purpose of the report was to generate concern and reform and to renew a commitment of high quality schooling throughout the country. The report asserts that educational standards and expectations were focused on minimum requirements and states there should be a continuum of learning, and not an “incoherent outdated patch work quilt” (p. 7). One of the five major recommendations of the report focuses on standards and expectations and instructs educational institutions to adopt more rigorous and measurable standards and higher expectations. The advanced learner was also addressed in this document which cited that over one-half of the population of these students were not achieving comparable to their tested ability.

On January 8, 2002, President Bush signed into law the No Child Left Behind Act of 2001 (Public Law 107-110). This law not only changed the role of the federal government in public school education, it dictated to the states that they were required to establish standards for learning and assessments to measure the achievement of those standards. States then became accountable to report their standards and assessment instruments to the federal government and were required to report to the public the results of their assessments in a report card format. District and school assessment scores are currently used to measure adequate yearly progress (AYP) for all public schools in the United States. These data are disaggregated by major ethnic/racial groups, economically disadvantaged, limited English proficiency (LEP) and students with disabilities. Schools and districts that do not meet the desired achievement proficiency results as stated by their state plan, receive some type of sanction.

The majority of states adopted state learning standards and developed state assessments or utilized norm-referenced national achievement tests to report the achievement results of students, schools, districts and the state. The state of Illinois adopted the Illinois Learning Standards in 1997, five years before the federal mandate. The Illinois Standards Achievement Test, the state assessment, measures individual student achievement on the Illinois Learning Standard in grades three through eight. It was first developed in 1997 and revised in 2006.

Results are given to students, parents, and teachers and are available to the general public. Results are also aggregated by grade, school and the district.

Standards—The Advanced Learner

On the twenty-fifth anniversary of the *A Nation at Risk* (1983) report, another document, *A Stagnant Nation: Why American Students Are Still at Risk* (Strong American Schools, 2008) was issued. The document evaluated selected reforms recommended by *A Nation at Risk* and found “stunningly few of the Commission’s recommendations have actually been enacted” (p.3). The report asserts that key recommendations related to time, teaching, and standards have not been realized. The report states that the National Commission of 1983 recommended states and districts adopt more rigorous and measurable standards and expectations, and claimed that grades should reflect actual learning. According to the 2008 report, just the opposite has happened. “Students are earning better grades in “tougher” courses, yet actual learning is either stagnant or in decline. At the same time, states have failed to set rigorous academic standards in the lower grades” (p. 4). The report also states that out of 32 states, none have set performance benchmarks for the 4th grade reading that are high enough to meet the proficient level on our nation’s test, the National Assessment for Educational Progress (NAEP). The 2008 report attests that, 24 states have set the standards so low that students could not even reach the most basic level on the NAEP assessment. The 2008 report card on the reforms recommended by *A Nation at Risk* gave the Standards area a grade of *F*.

Cronin, Dahlin, Adkins, and Kingsbury (2007) in a recent study of states’ expectations for proficiency in comparing the rigor of standards and proficiency, state that the entire rationale for standards-based reform was to make expectations for student learning more rigorous and uniform. The closing sentence in the study summarizes the findings by stating that not only has the rigor of standards and proficiency set forth by the states not happened, but the present status indicates this movement is now as far as ever from achieving its original objective. This is not a new phenomenon. Webb (1999) concludes in a study of the alignment of standards and assessments in four states that the structure of the standards and assessments vary greatly among the states and that a high percentage of the standards and assessments failed to achieve depth of knowledge consistency. He also concluded that specific feedback should be provided to states to improve the alignment process.

It appears that because of low expectations and low level standards set forth by the states, advanced learners become at risk for under achievement the day they enter the schoolhouse door. Tomlinson (2002) suggests that the No Child Left Behind act is aiming the nation’s attention and resources toward those students who are not proficient and trying to move these students toward proficiency. She claims at the present time there is no incentive for schools to attend to the academic growth of students after they attain proficiency or to challenge those students who far exceed proficiency and move them on to higher levels of learning. Porter and Polikoff (2007) expressed similar concerns regarding the NCLB focus on raising the average achievement levels and doing so at the expense of the students who are at the top (advanced learners) and the bottom of the achievement distribution. They claim that because schools and districts are assessed on percent proficient, teachers are motivated to work with the students who are on the bubble or just below proficiency.

Neal and Schanzezenback (2007) echo the same conclusions. In their study based on the fifth grade test scores from the Chicago Public Schools in Chicago, Illinois, the authors state that,

based on the current accountability system, NCLB provides weak incentives to devote extra resources to the most advanced students because it is perceived that these students are going to be proficient. The authors also found weak evidence of systematic gains from accountability among the high achievers. Sanders and Horn (1998) cautioned state and district administrators a decade ago that as states codified their standards and assessments and clearly determine what students were expected to learn, they must take into account the differing abilities to learn that students possess. They were very clear with their assertion that advanced learners must be afforded the opportunity to learn at their own pace.

In Britain, Koshy and Casey (1998) found that having national benchmarks was not necessarily universally accepted in terms of effective provisions for the high ability learner. Teachers in the study articulated that attention and intensive planning were needed to achieve average levels of performance and little time during the school day was left to support the advanced learners. The study also indicated that in monitoring visits in mathematics in the primary schools, concern was noted on the amount of repetition of concepts and the use of commercial materials, all of which created a deleterious effect on the advanced learner.

The current investigation utilizes large sets of data to present the influence of NCLB on the achievement gains of advanced learners. It differs from prior studies in that it focuses solely on the high achievers and collects multi-year district level data to document the performance of those students across the elementary years.

School/District Characteristics Related to Student Achievement

A number of school/district characteristics have been identified in prior studies as relating to student achievement; hence, it is necessary to control these school/district characteristics in the evaluation of achievement trends for the advanced learners. The district characteristics that are examined in the study include district socioeconomic status, district enrollment size, and district per pupil expenditures.

Socioeconomic status is perhaps the variable that is consistently found to influence academic achievement. In a meta-analytic review, Sirin (2005) states “of all the factors examined in the meta-analytic literature, family SES at the student level is one of the strongest correlates of academic performance. At the school level, the correlations were even stronger” (p.438). In the discussion of the overall findings of this review, family SES becomes an important factor in the academic achievement level of students due to the resources that are provided by the parents as well as the social capital that becomes an important ingredient in the student’s success at school. The socioeconomic status of the family also helps to determine the type of school the student will enroll in as well as the type of classroom, the teacher and the instruction that will be delivered.

There are few recent studies available that focus solely on district size and student achievement. One of the most recent studies by Hewitt (2002) compared district size and performance of students on the state achievement test in Texas. She compared districts with less than 500 students, districts with 500-2000 students and large districts with over 2000 students. Findings from the study suggest that students in districts with less than 500 students do not perform better than students from the medium and large size districts.

Other studies documented that large district size has a negative impact on student achievement. Abbott, Joireman and Stroh’s (2002) findings suggest “that large district size is detrimental to achievement in Washington 4th and 7th grades in that it strengthens the negative

relationship between school poverty and student achievement” (p.16). Findings from Driscoll, Halcoussis and Svony’s (2001) research on California school district size and student achievement indicate school district size is a very important determinant of program quality. Their findings suggest that large district size has a negative effect on students’ performance on standardized tests in California. Larger school districts did not perform as well as smaller districts and middle schools had the greatest negative impact on student achievement.

Students’ academic performance is thought to be highly influenced by the level of per pupil expenditures in schools and districts; however, not many studies on school expenditures support this assumption. Leuthold (1999) explored the funding levels and pupil performance in 138 school districts in Tennessee and found no significant relationship between expenditures per pupil and pupil achievement. Sharp (1993) examined the relationship between per pupil school expenditure and student achievement in the state of Illinois. Results of this study showed a small but statistically significant negative correlation between spending and achievement in every subject (reading, mathematics, language arts) in the grades 3, 6, 8 configuration. Another study, Christmann and Badget (1999) on the correlation between scores in mathematics and reading and districts per pupil expenditures found that as expenditures became higher the scores became lower.

Purpose of the Study

The purpose of this longitudinal investigation is to identify the achievement trends of advanced learners and to explore the relationship between district characteristics and the losses or gains in the percentage of students who scored in the Exceeds category in Illinois school districts. The district characteristics examined in the study include district socioeconomic status, district per pupil expenditures, and district enrollment size.

Methods

Participants

Elementary and unit schools districts in Illinois are utilized in the study because they include elementary and middle/junior high schools. Altogether, the sample consists of 754 school districts with 364 elementary school districts and 390 unit school districts. The 3rd grade students within these school districts during the school year 1999-2000 formed the cohort groups that were followed longitudinally through the 8th grade. The percentage of students scoring in the Exceeds category (this category will be explained in the next section) was obtained at the 3rd, 5th, and 8th grade levels for the cohort groups in 2000, 2002, and 2005 respectively.

Measures

Illinois Standards Achievement Test (ISAT). The ISAT is a criterion-referenced test aligned with Illinois Learning Standards that examines students’ knowledge and skills in three subject areas: reading, mathematics and science (Illinois State Board of Education, 2000, 2002, 2005). The ISAT scaled scores for reading and mathematics range from 120 to 200 and remain the same from grade to grade. Based on the performance on the ISAT, students are divided into four categories using cutoff scores: Exceeds, Meets, Below Standards, and Academic Warning.

According to the ISAT performance level descriptions, Exceeds Standards are defined as student work that demonstrates advanced knowledge and skills in the subject¹.

District Percent Exceeds in reading. The percentage of students who scored in the Exceeds category on ISAT reading for a given grade level in a school district.

District Percent Exceeds in math. The percentage of students who scored in the Exceeds category on ISAT mathematics for a given grade level in a school district.

Socioeconomic status. The proportion of students receiving free and reduced lunch in a school district was obtained in 2000, 2002, and 2005. Higher percentage means there are more socioeconomically challenged students in the school district. Because these percentages do not vary much from year to year (correlations for district percent low income between these years range from .940 to .968), these percentages were averaged over the three years to obtain a single number to index district socioeconomic status.

District enrollment size. The average number of students enrolled in a school district in 2000, 2002, and 2005. The Illinois State Board of Education collects student enrollment annually from school districts. District enrollment size is fairly consistent over the years. The correlations for district enrollment size are all close to 1 for the years 2000, 2002, and 2005.

District per pupil expenditures. The average operating cost per pupil in a school district in 2000, 2002, and 2005. The Illinois State Board of Education also collects financial data annually from school districts. The per pupil expenditures in a school district remain stable over the years. The correlations for district per pupil expenditures range from .807 to .892 for the years 2000, 2002, and 2005.

The means and standard deviations of the variables are presented in Table 1.

Analysis

Because Illinois districts that have elementary and middle/junior high schools were used in the study, descriptive analyses were conducted with the purpose of describing the data rather than to generalize the findings to a larger population. The district percent Exceeds data were disaggregated according to district socioeconomic status, district enrollment size, and district per pupil expenditures to document if district characteristics influence the achievement gains or losses on ISAT reading and math for the advanced learners.

Results

District Achievement Trends for Advance Learners

The achievement trends in ISAT reading and mathematics for the advanced learners from the 3rd grade to the 8th grade were presented in Table 1 under the reading and math columns. The percentage of students scoring in the Exceeds category in reading is on average at about the same level between Grades 3 and 5, but from Grade 5 to Grade 8 it declined as much as half (i.e., a average 13 percentage point drop in the Exceeds category). Given the average variability in the

¹ Throughout the paper, the term “advanced learners” and “Exceeds students” are used interchangeably.

percentage of Exceeds students at the district level- the average standard deviation in ISAT reading for the three grade levels is around 10.62² percentage points (Table 1), the decline between Grades 5 and 8 in the Exceed category means that the percentage of students scoring in the Exceeds category in Grade 8 is on average about 1.25 standard deviation unit below that in Grade 5.

The achievement trends on ISAT mathematics illustrate a different pattern: school districts experience on average nearly a 19 percentage point drop between Grades 3 and 5 but an average 10 percentage point gain between Grades 5 and 8. However, the amount of loss in the percentage of students scoring in the Exceeds category from Grade 3 to Grade 5 is greater than the amount of gain from Grade 5 to Grade 8. Considering the average variability in the district percent Exceeds students on ISAT math over the three years – the average standard deviation is around 11.70³ percentage points (Table 1), Illinois school districts experienced on average about 1.62 standard deviation unit reduction in the percentage of students scoring in the Exceeds category from Grade 3 to Grade 5 and about .82 standard deviation unit gain from Grade 5 to Grade 8.

Because both elementary school districts and unit school districts were utilized in the study, the trend data were collapsed by district type and results (Table 2) show similar trends as observed in Table 1. For ISAT reading, both types of districts experienced a sever loss in the percentage of students who scored in the Exceeds category between Grades 5 and 8. For ISAT mathematics, the decline occurred from Grade 3 to Grade 5 followed by a gain from Grade 5 to Grade 8; however, the amount of gain is on average less than the amount of loss. The data indicates that regardless of district type, the achievement trends for students in the Exceeds category at the district level is declining from the earlier elementary grades to later grade levels.

District Socioeconomic Status and Achievement Trends

To analyze the influence of district socioeconomic status on achievement trends of the Exceeds students, district socioeconomic status data were broken down by quartile. The top quartile consists of districts that have less than 12% students receiving free and reduced lunch and those are considered high-SES districts. The bottom quartile consists of districts that have more than 36% students receiving free and reduced lunch and those are low-SES districts. The middle two quartiles are districts that have more than 12% but less than 36% students receiving free and reduced lunch and those are the districts that have moderate SES status.

Achievement trends in reading and math for districts with different levels of economic status were presented in Table 3. It is clear from the table that no matter at what level the district SES is, there is a sharp drop in the percentage of students who scored in the Exceeds category from Grade 5 to Grade 8 in reading and a drop from Grade 3 to Grade 5 for math. It is also

² This is the average of the district percent of Exceeds students in ISAT reading at the three grade levels:
 $(11.67+12.15+8.04)/3=10.62$

³ This is the average of the district percent of Exceeds students in ISAT math at the three grade levels:
 $(15.38+7.76+11.95)/3=11.70$.

evident that within each of the grade levels, on average, the lower the district SES is, the lower the percentage of students scoring in the Exceeds category for the school district.

District Enrollment Size and Achievement Trends

In Illinois, school enrollment size ranges from a minimum of 67 to a maximum of 421,320. Of the 754 school districts, over 50% of the districts have less than 1,000 students and over 75% of the districts have enrollment sizes that are less than 2,000 students, so the district size variable is highly skewed in a positive direction. To analyze the influence of district size on the achievement patterns for Exceeds students, school districts were collapsed into five categories: districts with enrollment less than 500, those with enrollment between 500 and 999, those between 1000 and 2499, those between 2500 and 4999, and those with at least 5000 student enrollment.

Results (Table 4) indicate that for ISAT reading, regardless of the level of enrollment, a decline in the percentage of students scoring in the Exceeds category was evident from Grade 5 to Grade 8. Districts generally lose as much as half by Grade 8 in district percent Exceeds students. For ISAT math, the proportion of students scoring in the Exceeds category declined from Grade 3 to Grade 5 but a gain was realized from Grade 5 to Grade 8, which was less than the amount of loss. The district enrollment size does not influence the gains or losses of Exceeds students because the achievement patterns in reading and math are similar for large or small districts in Illinois. Table 4 also illustrates that small districts do not typically have higher percentage of students who scored in the Exceeds category.

District Per Pupil Expenditures and Achievement Trends

The operating cost per pupil in the 754 school districts ranges from a low of \$4,267 to a high of \$19,387. Half of the school districts have per pupil expenditures less than \$6,700. Since the district per pupil expenditures variable is positively skewed, it was broken down into four categories: districts with per pupil expenditures less than \$6,000, those with expenditures between \$6,000 and \$8,000, those with expenditures between \$8,000 and \$10,000, and those with expenditures over \$10,000.

Results (Table 5) show that for both reading and math, within each of the grade levels districts with the highest level of expenditures have on average the highest percentage of students scoring in the Exceeds category. Districts with per pupil expenditures between \$8,000 and \$10,000 have slightly higher percentage of Exceeds students than districts with less expenditure. Across the grade levels, the same trends of achievement for advanced learners were observed regardless of the level of district per pupil expenditures, i.e., in reading the loss occurs from Grade 5 to Grade 8 and in math the decline starts from Grade 3 to Grade 5. The influence of per pupil expenditures on the percentage of students scoring in the Exceeds category becomes present when district per pupil expenditures reach over \$8,000, and is more evident for ISAT math than for ISAT reading.

To sum up the findings, in the 754 Illinois districts that have elementary and middle/junior high schools, on ISAT reading, the 3rd and 5th grades have on average about similar proportion of students who scored in the Exceeds category, but the proportion of Exceeds students is on average much lower (about 1.65 standard deviation unit lower) at the 8th grade that it was at the 3rd grade. On ISAT math, between the 3rd and the 5th grades, Illinois districts

generally experienced a sharp decline (about 1.62 standard deviation unit reduction) in the percentage of students scoring in the Exceeds category and then a gain (an average .82 standard deviation unit gain) between grades 5 and 8; however, the amount of gain is less than the amount of loss in Exceeds students.

The data demonstrate the following findings regarding the percentage of students who scored in the Exceeds category: 1) District socioeconomic status is strongly related to district percent Exceeds students. Districts with higher socioeconomic status have a higher percentage of Exceeds students than districts with lower socioeconomic status. 2) District enrollment size does not seem to be related to percent Exceeds students. Large and small districts have similar percentage of students scoring in the Exceeds category. 3) District per pupil expenditure impacts the percentage of Exceeds students when district spending reaches over \$8,000, and is more evident for ISAT math than for ISAT reading.

Discussion

This longitudinal study focused on the gains or losses of a cohort group of students in grades 3, 5, and 8, in the state of Illinois who scored in the Exceeds category on the Illinois Standards Achievement Test (ISAT) in the years 2000, 2002 and 2005. Further emphasis of the study was to investigate how district characteristics influence the achievement trends in reading and mathematics. The district characteristics analyzed in the study include district's socioeconomic status, district enrollment size, and district per pupil expenditures.

Under the No Child Left Behind Act of 2001, advanced learners are not counted as a separate group in terms of calculation for AYP. In Illinois, districts group the Exceeds category in with the Meets category. Most schools and districts fail to disaggregate the data by category, as long as the student meets standards. The deciding factor to achieve state and district AYP is the percentage of students scoring in the Meets and Exceeds category. Even prior to NCLB, advanced learners had been reported as not making adequate achievement progress. Sanders and Rivers (1996) studied the cumulative and residual effects of teachers on present and future academic achievement and found that teachers who were in the fifth quintile of effectiveness (based on quintiles from 1-5 with 5 being the most effective) achieved gains with all students but the high-achieving students. Findings from our data reveal that the highest achieving students in Illinois made less than adequate gains. However, whether this declining trend for advanced learners exists before NCLB is beyond the scope of the study. What is crucial is that the State Board of Education focuses attention on the decline and takes actions to address this issue.

Gains and Losses in Reading Achievement

The advanced learners demonstrated a significant drop (13%) from the earlier elementary grade levels to later grade levels. Similar trends persisted when the district level advanced learner achievement data were disaggregated based on district socioeconomic status, enrollment size, and per pupil expenditures. The alarming decline in reading is contrary to the essence of the NCLB act and demands further investigation and prompt interventions. It is evident that the needs of the advanced learners are not met at the elementary and middle/junior high grade levels. Studies on the advanced learners (Gentry, 1999; Rogers, 2004) have pointed out that these students need accelerated and differentiated instruction based on their unique characteristics, instructional needs, interests and learning styles. The data from the study indicate urgent need

to evaluate the instructional practices for advanced learners at the elementary and middle/junior high grades.

Gains and Losses in Mathematics Achievement

Students in the Advanced Learner/Exceeds category in mathematics from grade 3 to grade 5 demonstrated a significant drop (19%) in achievement; however, a gain of 10 percent was realized from grade 5 to grade 8, which is less than the amount of loss. Again, the achievement pattern persists when district characteristics were taken into account. The decline in math achievement for the advanced learners demands explanations. If whole group instruction is the modus operandi in grade 4 and grade 5, these students become bored because many of these students have mastery of the standards before they enter the classroom. If instruction is geared toward the middle, towards the students on the bubble, or towards the struggling learner and no accommodations are made for the students who have mastered the standards, achievement scores of the advanced learners decline. Goodkin (2005) asserts that schools' inattention to high performers who originally score in the Advanced Learner category in math in the elementary school frequently regress to proficient scores. "In recent years the percentage of California students scoring in the "advanced" math range has declined by as much as half between second and fifth grade"(p.2).

The gains in mathematics from grades 5 to grade 8 could be attributed to fully certified mathematics teachers, required by NCLB; these teachers have either a major or minor in mathematics and feel competent at teaching mathematics. Honors classes and grouping in mathematics does take place in many schools at the middle school and junior high level. At grades 4 and 5, the intermediate self contained teachers are usually not certified mathematics teachers, and many feel challenged by advanced learners. In some cases these students are grouped together with a teacher who feels adept and enjoys teaching mathematics, but this has become the exception rather than the rule.

District Characteristics and the Advanced Learners

Though the achievement trends for advanced learners after disaggregation according to various district characteristics remain similar to the trends for the aggregated data, some district characteristics were found out to be related to district percent of advanced learners. Consistent with prior studies on socioeconomic status and achievement (Sirin, 2005), findings from the study indicate that socioeconomic status did influence the percentage of students scoring in the Exceeds category. Affluent districts tend to have a higher percentage of high-achieving students than less affluent districts and the percent high-achieving students are nearly doubled in affluent districts than in the least affluent districts. Considering the achievement decline for the advanced learners from the earlier elementary grades to later grade levels, by the 8th grade, poor districts have on average an alarmingly low percentage of high-achieving students. These data draw attention to the high-performing students in the low-income districts.

Unlike findings from other studies on school size and achievement, the district's enrollment size was not found to influence the percentage of students who scored in the Exceeds category. These data indicate that large and small districts have a similar percentage of students scoring in the Exceeds category at each grade level. District per pupil expenditures seem to influence the percent Exceeds students when district per pupil expenditures comes to a certain level (\$8,000 or higher). Students who reside in the high per pupil expenditure districts have a

higher percentage of peers who scored in the Exceeds category on the ISAT. However, it should be noted that the district per pupil expenditures may interact with district socioeconomic status. Districts that serve affluent communities may tend to have higher operating cost per pupil.

Conclusions

The study analyzes the achievement trends for advanced learners in the state of Illinois. Descriptive analyses were utilized to describe the trend data and to explore the influence of various district characteristics on the trend data. Results illustrate that advanced learners in Illinois are not making adequate gains. The data illustrates that it is paramount that advanced learners in the state of Illinois become a high priority in the state's educational system. This population will become the future leaders in the state of Illinois and in the United States of America. District and school leaders must take the leadership with this endeavor. The state and federal government must assume leadership in designing a method to disaggregate the data of this population to ensure that these students are not left behind.

References

- Abbot, Martin. L., Joireman, Jeff., and Stroh, Heather. R. 2002. *The influence of district size, school size and socioeconomic status on student achievement in Washington: A replication study using hierarchical linear modeling*. Seattle: Seattle Pacific University, Washington School Research Center.
- Christman, Edwin. P., and Badgett, John. L. 1999. *A three-year analytic comparison of eleventh grade academic achievement in the Slippery Rock Area High School, and district pupil expenditures*. Harrisburg, PA: Pennsylvania State Department of Education.
- Cronin, John, Dahlin, Michael, Adkins, Deborah, & Gage, Kinsbury. G. 2007. *The proficiency illusion*. Washington, DC: Thomas B. Fordham Foundation & Institute
- Driscoll, Donna, Halcoussis, Dennis, and Svorny, Shirley. 2003. School district size and student performance. *Economics of Education Review*, 22: 193-201.
- Gentry, Marica. L. 1999. *Promoting student achievement and exemplary classroom practices through cluster grouping: A research-based alternative to heterogeneous elementary classrooms*. Storrs, CT: The National Research Center on the Gifted and Talented.
- Goodkin, Susan. 2005. Leave no gifted child behind. *The Washington Post*, December 27, 2005. <http://www.nagc.org/index.aspx?id=1132>.
- Hewitt, Sarah M. 2002. Texas school district size: Does it affect TAAS scores? *Electronic Journal of the Center for Research and Doctoral Studies in Educational Leadership*, no. 2, http://www.shsu.edu/~edu_elc/journal/Issue2/Hewitt.pdf
- Illinois State Board of Education. 2000. *ISAT: Guide to the 2000 Illinois State Assessment*. Springfield, IL: Author.
- Illinois State Board of Education. 2002. *ISAT: Guide to the 2002 Illinois State Assessment*. Springfield, IL: Author.
- Illinois State Board of Education. 2005. *ISAT: Guide to the 2005 Illinois State Assessment*. Springfield, IL: Author.
- Koshy, Valsa, and Casey, Ron. 1998. A national curriculum and the sovereignty of higher ability learners. *Gifted Child Quarterly*, 42: 253-60.
- Leuthold, Frank. O.1999. *Is the level of student academic performance in Tennessee public school systems related to level of expenditures for school systems?* Paper presented at the annual meeting of the Rural Sociological Society, August 4-8, in Chicago, IL.
- National Commission on Excellence in Education. 1983. *A nation at risk: the imperative for educational reform*. Washington, DC: National Commission on Excellence in Education. <http://www.ed.gov/pubs/NatAtRisk/index.html>.
- Neal, Derek, & Schanzenbach, Diane. W. 2007. Left behind by design: Proficiency counts and test-based accountability. *NBER Working Paper*, no. 13293, http://www.aei.org/docLib/20070716_NealSchanzenbachPaper.pdf.
- No Child Left Behind Act of 2001, Pub. L. No. 107-110. 2002. U.S. Department of Education. <http://www.ed.gov/nclb/landing.jhtml?scr=mr>.

- Porter, Andrew C., and Polikoff, Morgan S. 2007. NCLB: State interpretations, early effects, and suggestions for reauthorization. *Social Policy Report*, 21: 3-10.
- Rogers, Karen B. 2004. The academic effects of acceleration. In *A nation deceived: How schools hold back America's brightest students*, edited by Nicholas Colangelo, Susan G. Assouline, and Miraca U. M. Gross. Iowa city, Iowa: University of Iowa.
- Sanders, William L., & Rivers, June C. 1996. *Cumulative and residual effects of teachers on future student academic achievement*. University of Tennessee: Value-Added Research and Assessment Center.
- Sharp, William.L.1993. *School spending: is there a relationship between spending and student achievement? A correlation study of Illinois schools*. Paper presented at the annual meeting of the American Education Finance Association, March 19-21, in Albuquerque, NM.
- Sirin, Selcuk R. 2005. Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75: 417-53.
- Strong American Schools. 2008. *A stagnant nation: why American students are still at risk*. Washington, DC: Strong American Schools.
- Tomlinson, Carol A. 2002. Proficiency is not enough. *Education Week*, 22: 36-38.
- Webb, Normal L. 1999. *Alignment of science and mathematics standards and assessments in four states*. Madison, WI: National Institute for Science Education.

Published by the Forum on Public Policy

Copyright © The Forum on Public Policy. All Rights Reserved. 2008.

Appendix

Table 1 Means and Standard Deviations for District Percent Exceeds Students in Reading and Math for 754 Districts

	READ3	READ5	READ8	MATH3	MATH5	MATH8	Socioeconomic Status	Enrollment Size	Per Pupil Expenditures
Mean	25.79	25.47	12.11	26.71	7.76	17.79	26.45	2356.14	6951.86
Std. Deviation	11.67	12.15	8.04	15.38	7.76	11.95	18.81	15561.32	1447.55

Table 2 Means and Standard Deviations for District Percent Exceeds Students in Reading and Math by District Type

TYPE		READ3	READ5	READ8	MATH3	MATH5	MATH8
Elementary	N	364	364	364	364	364	364
	Mean	26.15	26.68	13.25	28.86	8.96	20.32
	Std. Deviation	13.15	13.77	9.14	16.78	8.82	13.77
Unit	N	390	390	390	390	390	390
	Mean	25.46	24.34	11.05	24.70	6.64	15.43
	Std. Deviation	10.09	10.30	6.69	13.66	6.43	9.38

Table 3 Means and Standard Deviations for District Percent Exceeds Students in Reading and Math by District Socioeconomic Status (SES)

SES		READ3	READ5	READ8	MATH3	MATH5	MATH8
High SES	N	188	188	188	188	188	188
	Mean	33.71	35.99	18.01	37.10	13.44	27.72
	Std. Deviation	11.06	11.79	8.83	14.74	9.19	13.19
Middle SES	N	378	378	378	378	378	378
	Mean	25.85	24.57	11.57	26.08	6.92	16.87
	Std. Deviation	9.74	9.28	6.73	13.18	6.73	9.50
Low SES	N	188	188	188	188	188	188
	Mean	17.76	16.74	7.29	17.59	3.78	9.71
	Std. Deviation	10.33	9.61	5.65	13.85	4.11	7.24

Table 4 *Means and Standard Deviations for District Percent Exceeds Students in Reading and Math by District Enrollment Size*

Size		READ3	READ5	READ8	MATH3	MATH5	MATH8
<500	N	199	199	199	199	199	199
	Mean	25.55	24.46	10.99	25.04	6.27	15.43
	Std. Deviation	14.35	13.42	9.11	18.00	8.33	11.90
500-999	N	199	199	199	199	199	199
	Mean	26.11	25.50	12.22	26.27	7.26	17.84
	Std. Deviation	11.08	11.36	8.02	15.00	7.68	11.96
1000-2499	N	221	221	221	221	221	221
	Mean	26.37	25.94	12.50	28.00	8.23	18.61
	Std. Deviation	10.16	11.30	7.04	14.23	7.21	11.87
2500-4999	N	82	82	82	82	82	82
	Mean	25.07	26.20	13.04	27.49	9.44	20.38
	Std. Deviation	10.01	12.30	7.83	13.04	7.37	12.33
≥5000	N	53	53	53	53	53	53
	Mean	24.25	26.04	12.81	28.02	10.75	19.04
	Std. Deviation	11.02	13.39	7.87	13.78	7.39	10.67

Table 5 *Means and Standard Deviations for District Percent Exceeds Students in Reading and Math by District Per Pupil Expenditures (PPE)*

PPE		READ3	READ5	READ8	MATH3	MATH5	MATH8
<\$6,000	N	156	156	156	156	156	156
	Mean	26.83	26.28	12.58	27.03	7.54	17.71
	Std. Deviation	11.71	10.68	6.52	15.65	6.90	10.18
\$6,000-\$8,000	N	474	474	474	474	474	474
	Mean	24.71	23.63	10.88	24.69	6.54	15.97
	Std. Deviation	10.431	11.11	7.29	13.71	6.57	10.44
\$8,000-\$10,000	N	93	93	93	93	93	93
	Mean	27.02	29.62	14.13	31.72	11.18	21.57
	Std. Deviation	14.694	14.60	9.40	17.97	9.76	13.56
≥\$10,000	N	31	31	31	31	31	31
	Mean	33.52	37.06	22.49	40.87	17.32	34.69
	Std. Deviation	15.46	16.46	12.01	19.13	11.71	19.40