Utah FOUNDATION Executive Summary

Report Number 681, October 2007

SCHOOL TESTING RESULTS, 2006 & 2007
HOW UTAH COMPARES TO OTHER STATES

Since 1990, Utah Foundation has analyzed the results of national standardized tests administered to Utah school students. This document summarizes a much larger report, available online, which provides these test scores for each Utah public school and district. It also analyzes other tests that allow comparison of Utah to its demographic peers.

Previously, these reports examined the results of the various editions of the Stanford Achievement Test. However, the Iowa Test of Basic Skills has now replaced the Stanford tests as Utah's norm-referenced test. These norm-referenced tests compare Utah students to an estimate of what the average American student at that grade level would score on that exam.[1]

This report provides a complete listing of Iowa test results for each school in the state. However, this executive summary can only show some of the overview graphs. **For the complete report with scores for every school in Utah, please go online to www.utahfoundation.org/research/rr681.html**.

This report also includes results from the National Assessment of Educational Progress (NAEP), which collects data on academic performance in the context of demographic and other factors. NAEP tests a number of subject areas and collects demographic data from test takers. By comparing Utah to its demographic peers, we can obtain a better sense of how Utah is performing academically than by only comparing Utah to the national average or using percentile ranks, as with the Iowa tests.

COMPARING UTAH TO STATES WITH SIMILAR DEMOGRAPHICS

When compared to measures of national academic performance, such as standardized tests, Utah often scores near or slightly above average. These national averages can be misleading in some respects, because they do not reflect demographic differences among states, which may significantly affect academic performance.

Educational research demonstrates that non-school factors have a large impact on students' academic achievement. For example, a 2003 meta-analysis conducted by one of the U.S. Department of Education's Regional Educational Laboratories concluded that student characteristics, as opposed to school-level and teacher-level factors, account for 80 percent of the variance in student achievement.[2]

If the student populations of two states differ with respect to student characteristics related to achievement, a straightforward comparison of the achievement levels of the two states can be misleading. In order to compare the effectiveness of state public school systems, then, it is important to consider differences outside of the control of the public schools that nonetheless significantly affect student achievement.

Student characteristics such as family income, the education level of parents, and ethnicity are each significantly correlated with academic performance and must be taken into account in research on academic achievement. Researchers suggest that wealthier and more educated parents provide children with academic advantages because they are more likely to be involved in their children's schools, more likely to read with children, help with homework, communicate high academic expectations, and because they act as role models for academic achievement.[3]

Educational research on the achievement gap between Whites and minorities demonstrates that ethnicity influences academic achievement, even after disadvantages associated with family income and parental education level have been taken into account. Researchers suggest that ethnicity influences academic achievement due to the fact that minorities more often attend schools of concentrated poverty, because of the unequal distribution of school resources (including teacher quality), and due to institutional barriers such as low expectations and a deficit view of minority children.[4]

Utah has significant demographic characteristics that should lead to high test scores, rather than merely average performance. Therefore, it is important to compare Utah to states that also have similar economic, educational, and ethnic populations and thereby have similar expected academic performance.

For the complete report on this topic and other reports, please visit our website at www.utahfoundation.org

To determine Utah's peer states, three demographic factors collected from the NAEP results were considered: the percentage of students eligible for free or reduced-price school lunch programs (a common measure of poverty in academic settings), the percentage of students with at least one parent who graduated from college, and the ethnic makeup of a state, measured by the percentage of White students taking the NAEP exams.

The eight states that were closest to Utah according to those factors (the four states immediately above and below Utah, in terms of percentages) were then selected for comparison. These statistics were obtained from NAEP results for 8th grade students in 2007 and 2005. The subjects chosen were mathematics and reading for 2007, and science for 2005, the latest available tests for these subjects. The full report provides graphs of test scores for each of these comparison groups; this summary provides the graphs for only the states considered close overall comparisons to Utah.

STATES WITH SIMILAR POVERTY RATIOS

Utah benefits from a fairly low student poverty rate, the 13th lowest rate in the nation for the percentage of students eligible for free or reduced-price school lunch. The states most similar to Utah by this measure are Colorado, Delaware, Iowa, Ohio, Maine, Pennsylvania, South Dakota, and Wisconsin. These are generally high-scoring states, with an average national rank of 16th in math, 14th in reading, and 13th in science. Utah scored the lowest among these states in math and reading, ranking 30th in the nation for math and 29th for reading. In the science test, Utah performed better nationally and within the peer group, ranking 18th in the nation.

STATES WITH SIMILAR PARENTAL EDUCATION LEVELS

Utah has the 9th highest rate of students with at least one parent who graduated from college. The states which were most similar to Utah were Iowa, Maryland, Montana, Nebraska, New Jersey, South Dakota, Vermont, and Wisconsin. These states are high performers, with four of them scoring in the top 10 states for math, reading, and science. Again, Utah's math and reading scores were the lowest among these peers, while its science scores were below the peer average but not the lowest.

STATES WITH SIMILAR ETHNIC PROFILES

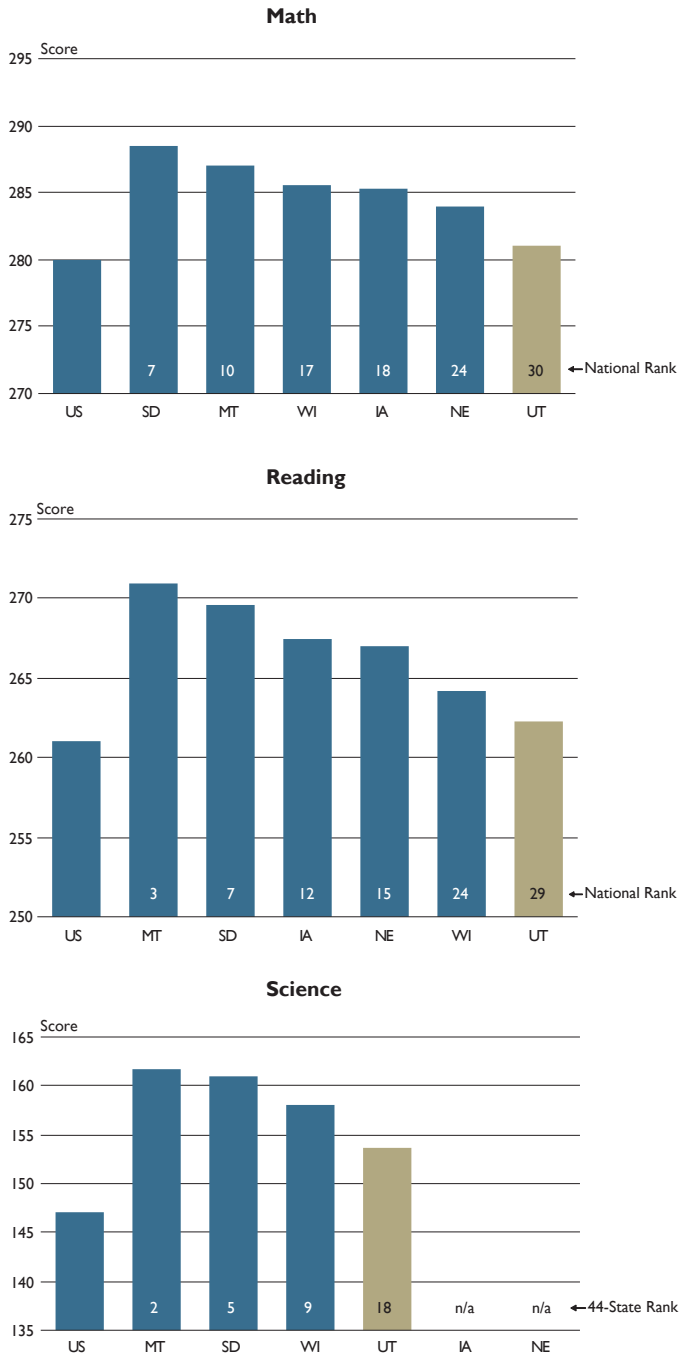
Utah has the 11th lowest proportion of ethnic minority students among the states. The states most similar to Utah included Idaho, Kentucky, Minnesota, Montana, Nebraska, South Dakota, Wisconsin, and Wyoming. These peer states had an average national ranking of 16th in both math and reading and an average science rank of 9th. Utah ranked second lowest among these peers on each test, with only Kentucky scoring lower. Kentucky suffers from a very low proportion of college-graduate parents and a high poverty rate, yet its test scores and rankings are very close to Utah's.

UTAH'S OVERALL DEMOGRAPHIC PEERS

Those states that were Utah's peers in at least two of the three demographic factors described above were chosen as Utah's overall demographic peers. These most similar states were Iowa, Montana, Nebraska, South Dakota, and Wisconsin.

Figure 1 shows how Utah compares to each of these states in the NAEP 8th grade math, reading, and science tests. The common finding in each graph is that Utah falls well below its demographic peers in each of the tests. Indeed, Utah is the lowest scoring state among these peer states.

Figure 1: Utah's Demographic Peer States and Their Performance on 8th Grade NAEP Math, Reading, and Science Tests

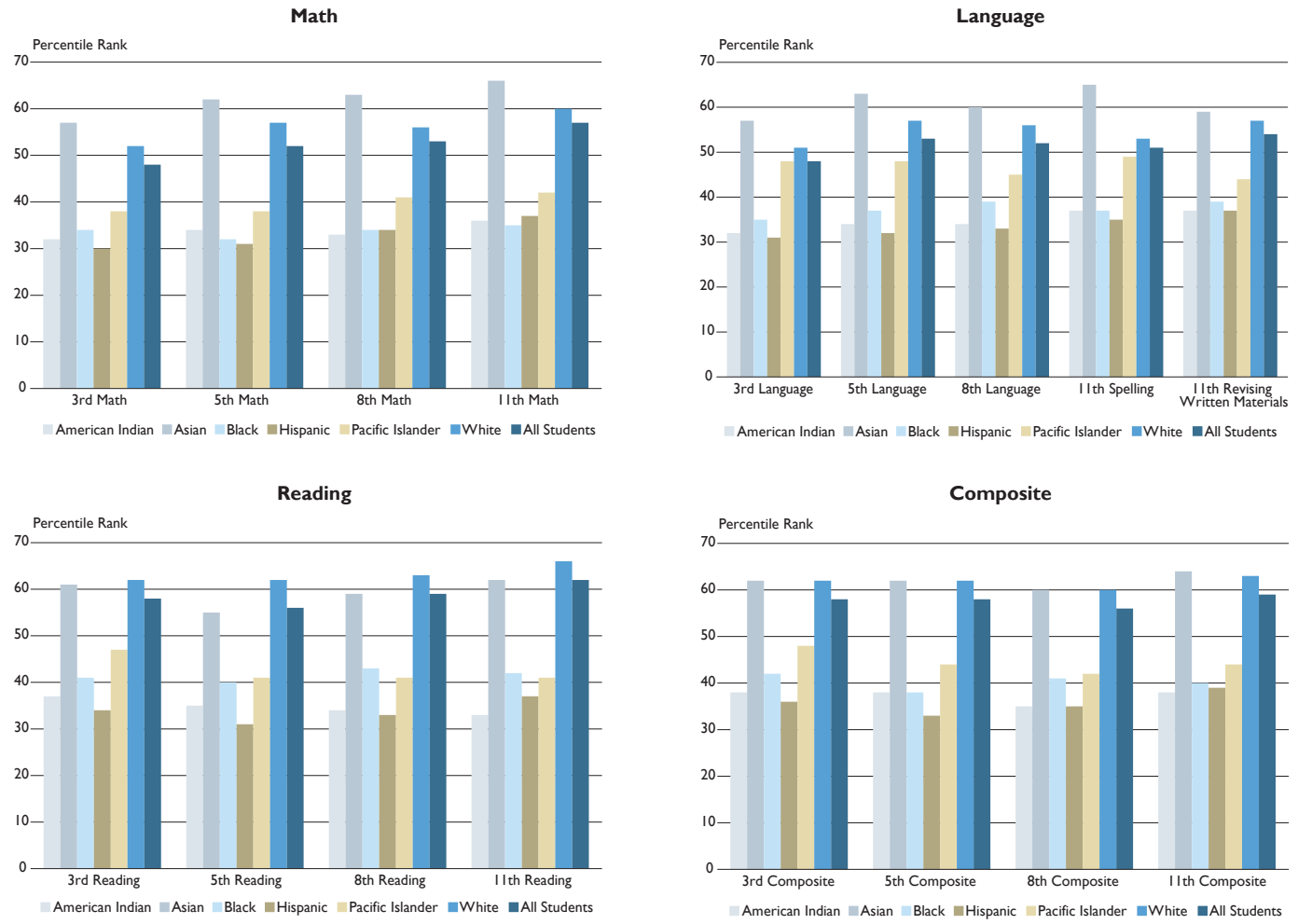


Source: National Center for Education Statistics, National Assessment of Educational Progress, using 2007 math and reading assessments and 2005 science assessment.

CONCLUSIONS ABOUT THE NAEP DATA

It is important, when reviewing the results of national tests such as NAEP, to compare "apples to apples." When Utah is compared to states which have more poverty, less-educated parents, and higher ethnic diversity, it is clear that Utah will seem to perform relatively well. However, when compared to other states that have similar demographic characteristics, it is apparent that Utah does not perform as well as expected.

Figure 2: Iowa Test Results for Utah Public Schools, 2007 School Year



Source: Utah State Office of Education.

If Utah ranked in the middle of its peer states, it would achieve in the top 10 or 15 states in the nation in math, reading, and science scores. In order to perform in the upper half of its peers, Utah would need to have scores near the top in the nation. Even in science, where it ranked 18th, Utah still was near the bottom of its peer group.

Clearly, something is limiting Utah's ability to perform at a level that would be expected with its demographic profile. One possible limiting factor is the significantly lower resources available to Utah's education system on a per-pupil basis. Utah's overall peer states shown in Figure 1 had an average 2005 per-pupil spending of $8,251, which is $3,000 per pupil more than Utah.[5] Other limiting factors could include teacher quality and training, curriculum differences, or even other non-school factors such as cultural attitudes toward educational achievement. More research is needed to try to pinpoint which factors may contribute the most to Utah's poor rankings among these peer states.

COMPARISON OF IOWA CORE-SUBJECT TEST SCORES

The Iowa tests provide another look at Utah's academic performance, including a breakdown of results by subject, grade and ethnicity. Figure 2 shows these results as percentile ranks for the core subjects of math, language, and reading, along with composite results, which are an average of the core subjects plus science and social studies.

In all grades and in all subjects, White and Asian ethnic groups in Utah had higher scores than their classmates of different ethnic groups and higher than the national average for all students. In most cases, Whites and Asians also scored higher than the state average for all students.

On the other hand, in almost all cases, the scores of American Indian, Black, Hispanic, and Pacific Islander ethnic groups in Utah were well below both the state and national average for all students combined. Hispanics and American Indians generally had the largest achievement gaps compared to White students.

The statewide scores for all students combined are, in most cases, at or above the national averages, although Utah third graders scored below the 50th percentile in math and language. With this Iowa test data, it is not possible to compare Utah to demographic peer states as was done above with the NAEP data. NAEP does not provide individual school or district test results, but the Iowa data is useful in making state, district, and individual school comparisons to national averages.

IOWA TEST SCORES FOR INDIVIDUAL UTAH SCHOOLS

In addition to providing statewide results, the Iowa tests also provide the national percentile ranks for each individual school in Utah, sorted by district and year. The complete report provides charts that

report these results for all of the Iowa subject tests administered in the fall of 2005 and 2006 (school years 2006 and 2007, respectively). **Please view the complete school-by-school test scores online at www.utahfoundation.org/research/rr681.html.**

ENDNOTES

[1] "Report of State Level Scores on the Iowa Tests: Tests Administered in Fall 2006," Utah State Office of Education, <http://www.schools.utah.gov/eval/Documents/Iowa_State_Level_Scores.pdf> (26 October 2007).

[2] Kirsten Miller, "School, Teacher, and Leadership Impacts on Student Achievement," MCREL Policy Brief, November 2003, <http://www.mcrel.org/PDF/PolicyBriefs/5032PI_PBSchoolTeacherLeaderBrief.pdf> (27 October 2007).

[3] Ginger M. Reynolds, "Bridging the Great Divide: Broadening Perspectives on Closing the Achievement Gaps Identifying and Eliminating the Achievement Gaps: A Research-Based Approach," Viewpoints Vol. 9, North Central Regional Educational Laboratory, 2002, <http://www.ncrel.org/policy/pubs/pdfs/bridging.pdf> (27 October 2007); Nancy Vaden-Kiernan and John McManus, Parent and Family Involvement in Education: 2002–03 (NCES 2005–043), U.S. Department of Education, National Center for Education Statistics, (Washington, DC: U.S. Government Printing Office, 2005), <http://nces.ed.gov/pubs2005/2005043.pdf> (27 October 2007).

[4] Reynolds; The Education Trust, Funding Gaps 2006, 2006, <http://www2.edtrust.org/edtrust/product+catalog/main> (27 October 2007); Enrique Alemán, Jr. and Andrea K. Rorrer, "Closing Educational Achievement Gaps for Latina/o Students in Utah: Initiating a Policy Discourse and Framework," Utah Education Policy Center, University of Utah, September 2006, <http://www.cdlfu.org/CDLFU%20docs/white%20paper> (27 October 2007); Gary Orfield and Chungmei Lee, "Why Segregation Matters: Poverty and Educational Inequality," The Civil Rights Project, Harvard University, 16 January 2005, <http://www.civilrightsproject.ucla.edu/research/deseg/deseg05.php> (27 October 2007).

[5] "Public Education Finances 2005," U.S. Census Bureau, April 2007, <http://ftp2.census.gov/govs/school/05f33pub.pdf> (29 June 2007).

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