EDITORIAL

Christopher H. Tienken, Editor
AASA Journal of Scholarship and Practice

Social Inequity and High School Test Scores: More Strong Correlations

I presented data illustrating the correlation between SAT scores and family income in the Summer 2010 issue. The correlations were strong and raise troubling questions about what the SAT really measures. The relationship between income and student test results is not relegated to SAT results. The same relationship plays out on every state test in the nation, at every grade level. In this commentary I present a sample of data I collected recently as part of a national study of state-mandated high school exams in Language Arts (LA) and Mathematics (M).

Table 1 presents data from select states to illustrate a national pattern of the achievement differences between students labeled as *Economically Disadvantaged* (ED) and *Non-Economically Disadvantaged* (Non-ED): (a) abbreviation for each state, (b) the proficiency cut-points, in scale scores, for the LA and M portions of the high school exams, (c) the mean scale scores for students categorized as (ED) and those categorized as (Non-ED), and (d) the effect size difference favoring the *Non-Disadvantaged* group.

In 37/50, (74%) of the states that reported mean scale-score data for the (ED) and (NonED) student sub-groups, in no instance did the ED subgroup ever achieve a higher mean score on the LA or M portions of the mandated high school state tests than the Non-ED subgroup. In all instances, in 100% of the 37 states that reported scale scores for ED and Non-ED sub-groups, the children in the ED subgroup scored closer, and in some cases, below the proficiency cut-score for their respective states' state mandated high school exams in LA and M. In 12/37 (37%) of the states that reported data, children in the ED subgroup scored below their state's proficiency cut-score in mathematics. In 13/37 (35%) of the states that reported data, the ED subgroup of students scored below their states' proficiency cut-points in LA.

Furthermore, the ED sub-group scored closer to their states' proficiency cut-point in every state that reported data. Because every state mandated test has measurement error (the reported score is not the true score), and no state accounts for it appropriately, students in the ED sub-group can be disproportionately mis-categorized as not proficient, compared to their Non-ED peers, due to the error inherent in all state test results. Because the ED sub-group score so closely to their states' proficiency cut-scores, even a few points of error (and the error in high school state test results ranged 3.3 scale-

score points to 89 scale-score points in a recent national study [Tienken & Rodriquez, 2010]) can make a big difference.

The achievement differences are striking in terms of scale score and effect sizes. The effect size differences in mean achievement between the students in the ED subgroup and their non-ED peers ranged from 0.39 to 1.05 in LA and 0.36 to 1.02 in M. The effect size was 0.50 or higher favoring the non-ED in LA an M in 27/37 (73%) states that reported data. To put a 0.50 effect size into perspective, it would mean the difference between a child scoring at the 50th percentile on a norm-referenced test and a student scoring at the 67th percentile. An effect size of 1.00 would translate to the difference between a student scoring at the 50th percentile compared to the 84th percentile.

These data make me wonder. Are these tests overly sensitive to out-of-school factors? If being Non-Economically Disadvantaged provides such a boost to student achievement, why are we not, as a Nation, focused on the factors that contribute to being disadvantaged instead of churning the education system?

Common Core Standards, merit pay, charter schools, more high-stakes testing, etc. are not going to eliminate poverty, inequity, poor neo-natal and child health care, limited sight vocabulary prior to entering kindergarten, chronic illnesses in children from poverty, and all the other impediments to high test scores, that as a group, ED students face more frequently and persistently than their Non-ED peers.

Table 1

A Representative Sample of Scale Score and Effect Size Differences in LA and M for Economically Disadvantaged and Non-Disadvantaged Students

State	Proficiency Cut-Score LA/Math		Economically Disadvantaged Scale Score	Non-Economically Disadvantaged Scale Score	Effect Size Difference Favoring Non-Disadvantaged
CA	(LA)	350	365.91	389.78	0.69
	(M)	350	370.68	391.55	0.57
CO	(LA)	663	650.38	692.47	0.68
	(M)	627	544.33	600.18	0.78
IL	(LA)	155	148.39	159.69	0.81
	(M)	156	147.62	160.60	0.94
KY	(LA)	1040	1039	1048	0.61
	(M)	1040	1127	1139	0.63
LA	(LA)	299	292	314	0.50
	(M)	305	309	337	0.65
ME	(LA)	1142	1134	1143	0.65
	(M)	1142	1136	1142	0.61
MI	(LA)	1100	1091	1110	0.58
	(M)	1100	1078	1098	0.63
MN	(LA)	1040	1048.3	1058.8	0.77
	(M)	1140	1129	1144.6	0.82
MT	(LA)	250	249.8	268.3	0.53
	(M)	250	245.3	261.7	0.61
PA	(LA)	1257	1220	1410	0.75
	(M)	1304	1210	1390	0.74
SC	(LA)	200	218.26	234.76	0.79
	(M)	200	215.19	232.27	0.74
TX	(LA)	2100	2217	2296	0.60
	(M)	2100	2115	2217	0.59

References

Tienken, C.H. & Rodriguez, O. (2010). The error of high school exit exams. *Academic Exchange Quarterly, 14*(2), 50-55.