IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

CHICAGO TEACHERS UNION, LOCAL 1, AMERICAN FEDERATION OF TEACHERS, AFL-CIO; DONALD L. GARRETT JR.; ROBERT GREEN and VIVONELL BROWN, JR., individually and on behalf of all similarly situated persons, *Plaintiffs*, v. BOARD OF EDUCATION OF THE CITY OF CHICAGO, a body politic and corporate, *Defendant*.	Case No. 12 C 10311 Judge Sara L. Ellis Magistrate Judge Young Kim

FED. R. CIV. P. RULE 26(a)(2)(B) REPORT OF DR. BRUCE BAKER

Racially Disparate Impact of Chicago School Turnarounds on Black and Hispanic Teachers

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I. INTRODUCTION & QUALIFICATIONS

I am a Professor in the Department of Educational Theory, Policy and Administration at Rutgers, The State University of New Jersey in New Brunswick, New Jersey.

For the past 20 years, since completing my doctorate at Teachers College, Columbia University (1997), I have engaged in research on education policy, school finance, teacher and administrator labor markets, and applied quantitative analysis.

I have published numerous peer reviewed empirical studies on the above topics and have also published law review articles on topics including racially disparate impact of state school finance policies and racially disparate impact related to measures employed in teacher evaluation systems.[1]

The vast majority of my peer reviewed research has involved applied quantitative analysis and econometric methods, typically using large national data sets and data from state administrative data systems, including personnel files.[2] I have also taught courses in applied data analysis, large data set management and analysis, at both the University of Kansas and Rutgers University, and serve on the editorial boards of the Journal of Education Finance and Education Finance and Policy where I am typically called upon to review quantitative submissions.

I have been retained by Robin Potter and Associates and the Edwin F. Mandel Legal Aid Clinic of the University of Chicago Law School to provide expert analysis and opinion in the case of Chicago Teachers Union v. Chicago Board of Education (No. 12 C 10311 (N.D. Ill.)). I am being compensated at an hourly rate of $500.

[1] Green III, P. C., Baker, B. D., & Oluwole, J. (2012). The legal and policy implications of value-added teacher assessment policies. *BYU Educ. & LJ*, 1.

Baker, B. D., Oluwole, J., & Green III, P. C. (2013). The legal consequences of mandating high stakes decisions based on low quality information: Teacher evaluation in the race-to-the-top era. *Education Policy Analysis Archives*, *21*(5).

Weber, M., & Oluwole, J. (2014). "One Newark's" Racially Disparate Impact on Teachers. In *New Jersey Education Policy Forum*.

[2] Clifford, M., Condon, C., Greenberg, A., Williams, R., Gerdeman, R. D., Fetters, J., & Baker, B. (2012). A Descriptive Analysis of the Principal Workforce in Wisconsin. Issues & Answers. REL 2012-No. 135. *Regional Educational Laboratory Midwest*.

Fuller, E., Young, M., & Baker, B. D. (2011). Do principal preparation programs influence student achievement through the building of teacher-team qualifications by the principal? An exploratory analysis. *Educational Administration Quarterly*, *47*(1), 173-216.

Baker, B. D., Punswick, E., & Belt, C. (2010). School leadership stability, principal moves, and departures: Evidence from Missouri. *Educational Administration Quarterly*, *46*(4), 523-557.

II. SUMMARY OF OPINIONS

In the report that follows, I provide a critique of common elements of school rating and accountability systems, a summary of the elements, design and application of the Chicago Public Schools performance rating system, and empirical analyses of publicly accessible extant data to validate the opinions below.

My findings and opinions are as follows:

- The racial composition of student enrollments in schools is strongly associated with the racial composition of the teacher workforce in schools.
    - Thus, when racially biased indicators are used to sanction schools that serve black, or black and Hispanic students, those same indicators disparately affect black, or black and Hispanic teachers.
    - Assignment to turnaround status has led to a *whitening* of the teacher workforce in affected schools.
- Many measures and indicators frequently used in school rating systems are not designed to isolate teacher or administrator effectiveness - That is, they have no manifest relationship to the employment of teachers or administrators.
    - Many of those measures (test scores, attendance rates, graduate and persistence rates) are well understood to be highly associated with or predicted by student background characteristics, including race, economic status and the intersection of the two.
- The Chicago Public Schools' indicator system used for rating school quality and imposing sanctions on schools, resulting in employment consequences, relies primarily on measures which make no attempt (on their face) to isolate employee effectiveness.
    - The existence and design of lesser weighted components like the value-added model is evidence that district officials are aware that the dominant measures are insufficient for the purpose for which they are being used.
    - Changes made to the school rating system beginning in 2014 provide further acknowledgement that district officials are aware that measures used previously were insufficient, but changes fail to resolve these problems.
- As could easily be predicted, student performance level measures which dominate the point calculations for school ratings are strongly associated with student race.
    - By contrast, measures which at least attempt to isolate (though insufficiently) school effects on student outcomes, are substantively less racially disparate.
    - The likelihoods that a school a) receives low point totals, b) is assigned "level 3" status and c) is placed on probation are each significantly associated with the racial composition of student enrollments.

These are the obvious results of a system built on measures of student performance levels inappropriately applied to determine school effectiveness and employment consequences, in a context that remains highly segregated for both teachers and students on the basis of race and income. The metrics used for determining both employee and school effectiveness are both inadequate and discriminatory.

III. ANALYSES

Introduction

Plaintiffs in the case allege that the School Board's policy for identifying schools for turnaround, thus displacing teachers, was racially discriminatory. The School Board's primary expert witness contends that turnaround decisions were made only on the basis of the school performance rating system. In this report, I show that even if that is the case, the decisions themselves remain discriminatory because the performance rating system itself is racially biased. Analyses herein focus generally on turnarounds occurring between 2009 and 2012 due to time constraints on compiling additional years of data.

In the Chicago Public School system, there exists a strong correlation between the racial makeup of the student population across schools and the racial makeup of the teacher workforce across schools. The school performance rating systems which have been used over time rely on measures, indicators and point tallies which are dominated by student test scores and other known racially biased measures.

Furthermore, I explain in this report that it is well understood that the measures used for rating schools have two major flaws:

- First, they are insufficient to reveal teacher competency/performance, and, as shown in this report, there is reason to believe that CPS officials know this to be the case;
- Second, the standardized tests on which the points are based produce racially biased results.

This means that schools that serve primarily black students will disproportionately be subject to low performance reviews and thus eligibility for turnaround. The correlation between black students and black teachers, furthermore, means that the faculty members at these schools will disproportionately be black.

1.0 The connection between school student population racial composition and teacher race

In this section, I use data from the statewide staffing reports (Teacher Service Record and later Educator Employment file) coupled with school enrollment demographics to illustrate the relationship between student race and teacher race, largely a product of the racial and economic segregation of the City of Chicago and its public school system. I have used publicly available (downloadable from ISBE web site) data from ISBE for purposes of these analyses such that they can be easily replicated.

1.1 Black and/or Hispanic teachers work in schools serving Black and/or Hispanic students

Table 1 provides summaries of the student population % black for teachers who are "not black" and teachers who are black. Black certified staff are in schools which, on average, have student populations that are 85% black. Non-black certified employees are employed in schools that, on average, have student populations which are just over 30% black and declining over time.

Table 1. Black teachers work in schools with disproportionately black student populations

year	Certified Employee is Not Black	Certified Employee is Black
2009	36.02	85.15
2010	34.91	84.98
2011	34.01	85.06
2012	33.54	85.50
2013	32.37	85.63
2014	32.14	83.89
2015	31.53	83.67
ISBE Educator Employment Files: http://www.isbe.net/research/htmls/educator-employment.htm ISBE School Enrollment Files: http://www.isbe.net/research/htmls/fall_housing.htm		

Table 2 shows the student enrollment composition for teachers who are a) neither black nor Hispanic, b) either black or Hispanic. Non-black/Hispanic teachers tend to work in schools marginally below 90% black and Hispanic enrollment. Black and Hispanic teachers tend to work in schools which serve approximately 100% black and Hispanic student populations.

Table 2. Black and Hispanic teachers work in schools with disproportionately black and Hispanic student populations

year	Certified Employee is Neither Black nor Hispanic	Certified Employee is Black or Hispanic
2009	91.12	99.98
2010	87.93	99.62
2011	87.17	99.30
2012	87.53	99.67
2013	89.48	100
2014	85.89	99.06
2015	85.92	99.08
ISBE Educator Employment Files: http://www.isbe.net/research/htmls/educator-employment.htm ISBE School Enrollment Files: http://www.isbe.net/research/htmls/fall_housing.htm		

Table 3 displays the odds ratios (from logistic regression) of the likelihood that a teacher is "black" given the student population characteristics. For each year of the data, a 1% increase in student population % black is associated with a 3% increase in likelihood that a teacher is black.

Table 3. As enrollment %black increases, the likelihood that a teacher is black increases

Year	Coeff	School Enrollment % Black	Intercept
2009	**Odds Ratio**	1.030***	0.077***
	SE	0.000	0.002
2010	**Odds Ratio**	1.030***	0.072***
	SE	0.000	0.002
2011	**Odds Ratio**	1.031***	0.058***
	SE	0.000	0.002
2012	**Odds Ratio**	1.031***	0.055***
	SE	0.000	0.002
2014	**Odds Ratio**	1.033***	0.050***
	SE	0.000	0.002
2015	**Odds Ratio**	1.033***	0.049***
	SE	0.000	0.002
note: *** p<0.01, ** p<0.05, * p<0.1			

Similarly, for black or Hispanic teachers, a 1% difference in the percent of students who are black or Hispanic is associated with a 3% difference (most recent two years) in the likelihood that the teacher is black or Hispanic.

Table 4. As enrollment %black or Hispanic increases, the likelihood that a teacher is black or Hispanic increases

		School Enrollment %Black or Hispanic	Intercept
2010	**Odds Ratio**	1.025***	0.085***
	SE	0.001	0.006
2011	**Odds Ratio**	1.031***	0.044***
	SE	0.001	0.003
2012	**Odds Ratio**	1.023***	0.085***
	SE	0.001	0.006
2013	**Odds Ratio**	1.008***	0.333***
	SE	0.001	0.018
2014	**Odds Ratio**	1.030***	0.043***
	SE	0.001	0.003
2015	**Odds Ratio**	1.031***	0.039***
	SE	0.001	0.003
note: *** p<0.01, ** p<0.05, * p<0.1			

1.2 Turnarounds are leading to a whitening of the teacher workforce in designated schools

Here, I provide a summary of the changes in racial composition of the certified staff workforce in schools identified for turnaround a) in 2009 & 2010 and b) separately in 2012. The following analyses include the schools and related staff counts (by Turnaround Year) listed in Table 5.

Table 5

School Name	2009	2010	2012	Total
Bradwell Comm Arts ..	0	157	0	157
Casals Elem School	0	0	98	98
Chicago Vocational ..	0	0	249	249
Crane Technical Pre..	0	0	57	57
Curtis Elem School	0	114	0	114
Deneen Elem School	0	112	0	112
Dulles Elem School	134	0	0	134
Dyett High School	0	0	43	43
Fenger Academy High..	122	0	0	122
Fuller Elem School	0	0	66	66
Herzl Elem School	0	0	111	111
Johnson Elem School	97	0	0	97
Marquette Elem School	0	0	231	231
Marshall Metropolit..	0	160	0	160
Phillips Academy Hi..	0	176	0	176
Piccolo Elem Specia..	0	0	109	109
Smith W Elem School	0	0	79	79
Stagg Elem School	0	0	111	111
Tilden Career Commu..	0	0	113	113
Woodson South Elem ..	0	0	98	98
Total	353	719	1,365	2,437

Figure 1 summarizes the percent black, and percent black and Hispanic teachers in schools targeted for turnaround at time "T." Prior to "turnaround" the schools had average percent black teachers around 68%, and percent black and Hispanic teachers just over 70%. Immediately after turnaround, percent black and Hispanic teachers dropped by about 20%, to around 50%, and percent black as low as 40%. Those figures rebound to just over 50% black, or black and Hispanic teachers by 5 and 6 years after turnaround, still far from the minority composition prior to turnaround.

Figure 1[3]

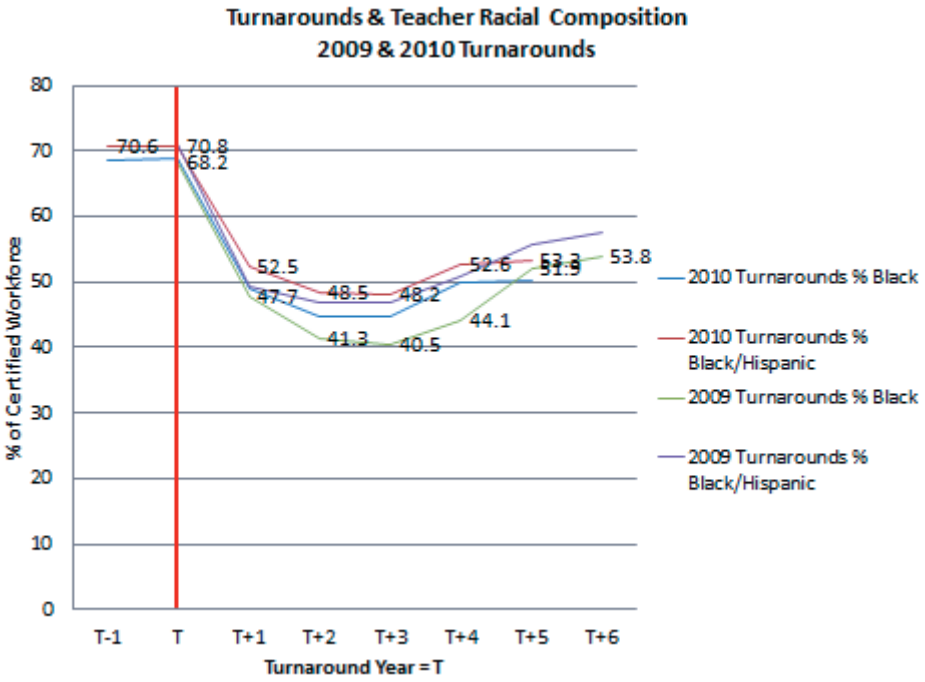


Figure 2 shows that for the most part, white teachers have filled that gap. Prior to turnaround, the schools included in this analysis had 241 black teachers and only 91 white teachers. By four years after turn around, black teacher counts were reduced to 177 and white teachers at 151.

[3] Includes 2009 turnarounds:

Figure 2

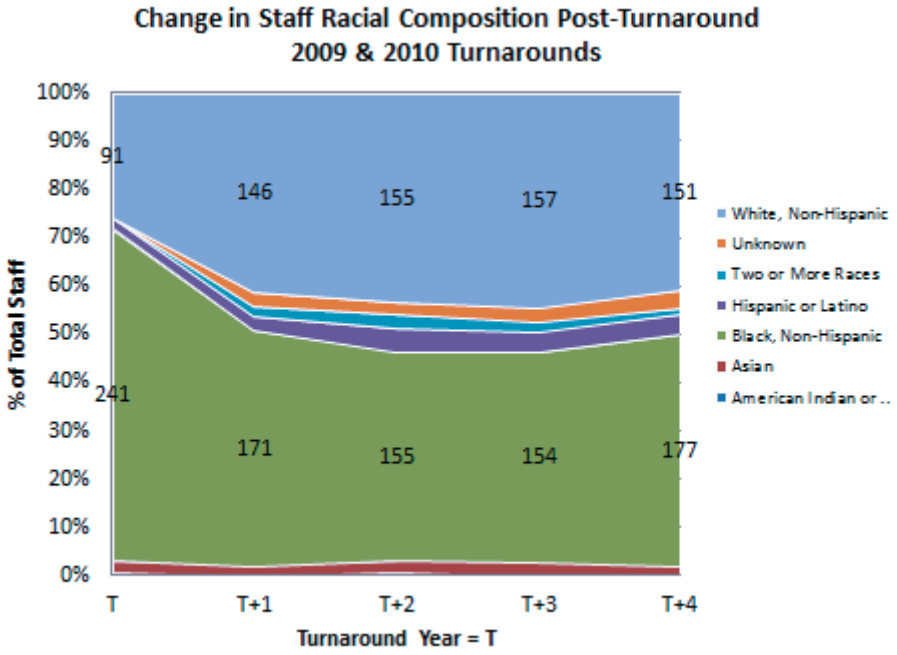


Figure 3 shows the reduction in black, and black and Hispanic teachers in Turnaround schools from 2012. This reduction is more subtle than the 2009/2010 turnarounds, but still a noticeable shift. For 2012 turnarounds, % of teachers who were black was reduced 10% from 55% to 45% post-turnaround. The reduction margin for black and Hispanic teachers is slightly less at 7% reduction, from 64% to 57% post-turnaround.

Figure 3

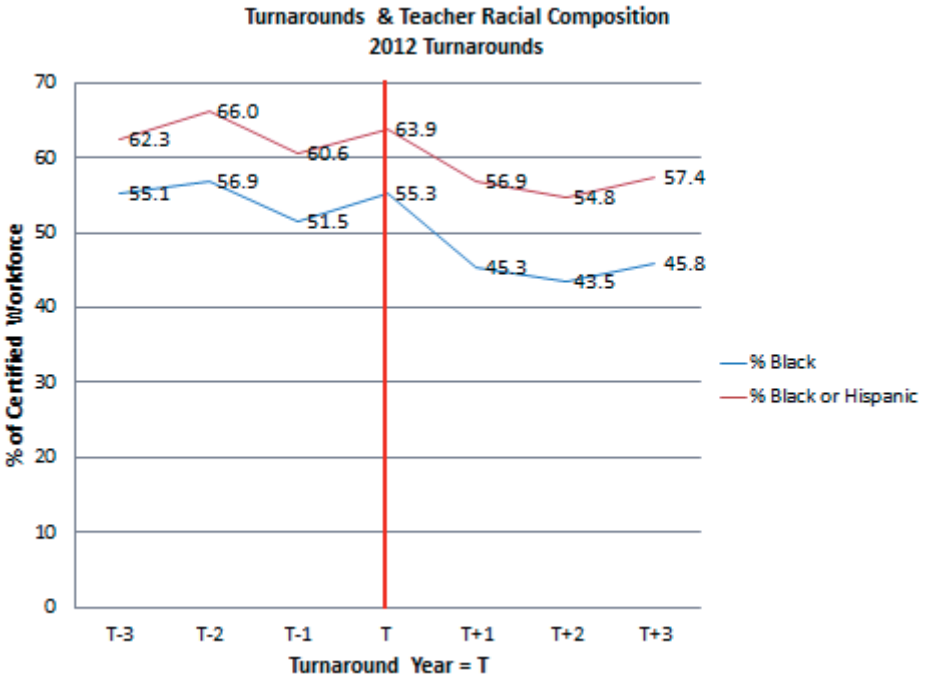
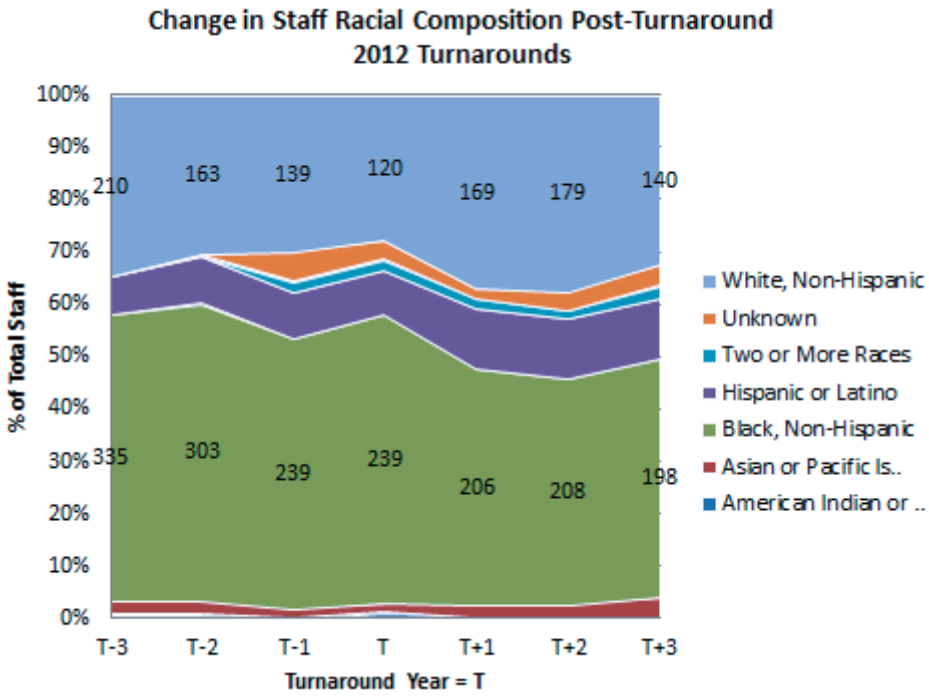


Figure 4 shows that again, the post turnaround reduction in black teachers specifically was offset by an increase in numbers of white teachers specifically. Total numbers of certified staff declined from over 600 to under 450. While total numbers of Black teachers declined (by about 40), total numbers of white teachers increase (by about 20 by year 3).

Figure 4



2.0 CPS school accountability measures do not attempt to measure employee effectiveness

In the section of this report, I provide an overview of measures and indicators used in many state and local school rating systems. To some extent, these rating systems are designed for compliance with federal statutes such as No Child Left Behind, reshaped by federal funding competitions such as Race to the Top, and restructured under federal coercion such as the most recent wave of state waiver requests under No Child Left Behind (prior to ESSA adoption). While state and local systems for rating schools tend to take common forms, similar to those either suggested under Federal regulations, adopted by neighboring states or recommended by policy advocacy organizations, states and local districts have substantial flexibility in the design of the systems, the indicators they choose and how they attach consequences to those indicators. That is, there is no Federal statute, nor was there during the time period addressed herein, which specifically mandates that local districts must dismiss or displace all teachers in schools with the lowest proportions of children meeting or exceeding specific math and reading test score targets.

In section 2.1 of this report, specific attention is paid to whether and what extent various measures and indicators can or should be used for determining the effectiveness of schools or those who work in them. This is of particular interest because many of these measures and indicators, whether appropriate for determining effectiveness or not, are being used as the basis for making consequential employment decisions indirectly through the process of school closures, reconstitution or "turnaround."

In section 2.2, I address specifically which measures and indicators have been used by Chicago Public Schools for determining probationary status of schools, a preliminary step toward consequential interventions. I also address changes to the school rating program implemented in 2014 which acknowledge problems with prior rating components, but do substantially rectify them.

2.1 Types of measures & indicators in school accountability systems

I begin with a clarification of the distinction between "measures" and "indicators" in the context of elementary and secondary education policy:

> **Measures**: Measures are based on attributes of a system to which we apply some measurement instrument at a given point in time. Measures aren't the attributes themselves, but the information we gather from application of our measurement tool to the targeted attributes. For example, we construct pencil and paper, or computerized tests to "measure" achievement or aptitude in areas such as mathematics or language arts, typically involving batches of 50 items/questions/problems covering the intended content or skills. The measures we take can be referred to as "realizations" which are generated by underlying processes (all the stuff going on in school, as well as in the daily lives of the children attending and teachers working in those schools, inclusive of weather conditions, heating, cooling and lighting, home environments, etc.). Similarly, when we take a child's temperature we are taking a measure on that child which may inform us whether the child is suffering some illness. But that measure tells us nothing specific of the underlying process – that is, what is causing the child to have (or not have) a fever. If we wrongly assume the measure

is the underlying process, the remedy for a high temperature is simply to bathe the child in ice, an unlikely solution to whatever underlying process is actually causing the fever.

Indicators: Indicators are re-expressions of measures, often aggregating, simplifying or combining measures to make them understandable or more "useful" for interpreting, diagnosing or evaluating systems – that is, making inferences regarding what may be wrong (or right) regarding underlying system processes. Indicators are best used as "screening" tools, useful for informing how we might distribute follow-up diagnostic effort. That is, the indicators can't tell us what's wrong, or if anything really is wrong with underlying processes, but may provide us with direction as to which processes require additional observation.

Measures are only useful to the extent that they measure what we intend them to measure and that we use those measures appropriately based on their design and intent. Indicators are only useful to the extent that they appropriately re-express and or combine measures, and do not, for example, result in substantial information loss or distortion which may compromise their validity or reliability. One can too easily take an otherwise informative and useful measure, and make it meaningless through inappropriate simplification.

Expanding on the body temperature example, we might want to develop an indicator of the health of a group of 100 schoolchildren. Following typical school indicator construction, we might simplify temporal body temperature readings for a group of 100 children to a binary classification of over or under 98.6 degrees. Doing so, however, would convert otherwise potentially meaningful (continuously scaled) data into something significantly less meaningful (if not outright junk). First, applying this precise "cut-score" to the temperature ignores the margin of error in the measurement, establishing a seemingly substantive difference between a temperature of 98.6 and 98.7, where such a small difference in reading might result from imprecision of the measurement instrument itself, or our use of it. Second, applying this cut-score ignores that a temperature of 103 is substantively different from a temperature of 98.7 (more so than a difference between 98.6 & 98.7). Given the imprecision of measurement (where temperature measurement is generally more precise than standardized testing), if large shares of the actual temperatures lie between 98.6 and 98.7 degrees, then large numbers will likely be misclassified. The over/under classification scheme has resulted in substantial information loss, limiting our ability to diagnose issues/problems with underlying processes. We've taken an otherwise useful indicator, and converted it into meaningless junk.

Validity and Reliability

As noted above, for a measure to be useful it must measure what we intend it to measure, and we must be using/interpreting that measure based on what it actually measures. That is, the measure should be **valid**, which takes the forms of "face validity" and "predictive validity" (there are many additional distinctions, but I will limit the discussion herein to these two). A test of "algebraic reasoning" should measure a student's capacity to apply algebraic reasoning to test items which accurately represent the content of "algebraic reasoning." That is, content validity, which relates to face validity.

"Predictive validity" addresses whether the measure in question is "predictive" of a related, important outcome. This is particularly important in K-12 education systems where it is understood that successful test-taking is not the end-game for students. Rather, we hope these assessments will be

predictive of some later life outcome, starting, for example, with higher levels of education attainment (high school graduation, college completion) and ultimately becoming a productive member of and/or contributor to society.

Measures commonly used for evaluating students, schools and education systems can actually have predictive validity without face validity. Typically, how well students perform on tests of language arts is a reasonable predictor (highly correlated with) of how well they also do on tests of mathematics. But that doesn't mean we can or should use tests of language arts as measures of mathematics achievement. The measures tend to be highly correlated because they each largely reflect cumulative differences in student backgrounds.

The measures should also be reliable. That is, they should consistently measure the same thing – though they might consistently measure the wrong thing (reliably invalid). If measures are neither reliable nor valid, indicators constructed from the measures are unlikely to be reliable or valid. But, it's also possible that measures are reliable and/or valid, but indicators constructed from those measures are neither.

Often, conversion of measures to indicators compromises either or both face or predictive validity. Sometimes it's as simple as choosing a measure that measures one thing (validly) and expressing it as an indicator to measure something else, like taking a test score which measures a students' algebraic reasoning ability at a point in time, and using it as an indicator of the quality of a school, or effectiveness of that child's teacher.

Other times, steps applied to convert measures to indicators, such as taking continuous scaled test scores and lumping them into categories, can convert a measure which had some predictive validity into an indicator which has little or none. For example, while high school mathematics test scores are somewhat predictive of success in college credit bearing math courses, simply being over or under a "passing" cut-score may have little relation to later success in college math, in part, because students on either side of that "passing" threshold do not have meaningfully different mathematics knowledge or skill.[4]

Aggregating a simplified metric (to proportions of a population over or under a given threshold) may compound the information loss. That is, by looking at the percent of children over or under and arbitrary and likely meaningless precise bright-line cut-score through an imprecise though potentially meaningful measure provides little useful information about either the individuals or the group of students (no less the institution they attend, or individuals employed by that institution).

Misattribution, Misapplication & Misinterpretation

Far too often, face validity is substantially compromised in indicator construction. The problem is that the policymakers interpreting the indicators often assume they mean something they simply don't and never could. A common form of this problem is misattribution – or asserting that measure or derived indicator provides insights into a specific underlying process – where in fact, the measures chosen, their re-expression and aggregation provide little or no insight into that process. I, along with colleagues Preston Green and Joseph Oluwole explain the misapplication of student growth measures in the context of teacher evaluation. Student growth indicators (Student Growth Percentiles) are rescaled estimates of

[4] See for example, http://usny.nysed.gov/scoring_changes/MemotoDavidSteinerJuly1.pdf and/or Papay, J. P., Murnane, R. J., & Willett, J. B. (2010). The consequences of high school exit examinations for low-performing urban students: Evidence from Massachusetts. *Educational Evaluation and Policy Analysis*, *32*(1), 5-23.

the relative (to peers) change in student performance (in reading and math) from one point in time to another. They do not, by their creators' admission, attempt to isolate the contribution of the teacher or school to that growth. That is, they are not designed to attribute growth to teacher or school effectiveness and thus lack "face validity" for this purpose.[5] But many state teacher evaluations wrongly use these indicators for this purpose. In the same article, and second related article[6], professors Green, Oluwole and I explain how related approaches, like Value-added modeling at least attempt to isolate classroom or school correlates of growth, partially addressing face validity concerns, but still failing to achieve sufficient statistical validity or reliability.

Neither of our articles addresses the use of crude, school aggregate indictors, constructed with inappropriately reduced versions of assessment measures, to infer institutional (school) or individual (teacher) influence (effectiveness), leading to employment consequence. That is because these indicators clearly lack the most basic face validity for making such inferences or attribution, leading to employment consequence. As such, we felt it unnecessary to bother critiquing these indicators for this purpose. As noted above, proportions of children over/under arbitrary thresholds on assessments tell us little about the achievement of those children. These indicators are aggregations of meaningless distinctions made through otherwise potentially meaningful measures. These aggregations of meaningless distinctions surely provide no useful information about the institutions (and by extension the employees of those institutions) attended by the students on which the measures were originally taken.

In the best case, the un-corrupted measure – the appropriately scaled test score itself – may be an indicator reflecting ALL of the underlying processes that have brought the child to this point in time in their mathematics or language arts achievement, knowledge or skills. Those processes include all that went on from maternal health through early childhood interactions, community and household conditions, general health and wellbeing along the way (& related environmental hazards), and even when entering school, the greater share of hours per day spent outside of the schooling environment. Point in time academic achievement measures pick up cumulative effects of all of these processes and conditions, which are vastly disparate across children and their neighborhoods, which is precisely why these measures continue to reveal vast disparities by race and income, and by extension, across schools and the often highly segregated neighborhoods they serve.[7]

2.1.1 The usual indicators, what they mean & don't mean

Here, I provide an overview of the types of indicators often used in state school report cards and large district school rating systems. Simply because they are often used does not make them valid or reliable. Nor does it provide the excuse for using these indicators inappropriately – such as misattribution

[5] Baker, B. D., Oluwole, J., & Green, P. C. (2013). The legal consequences of mandating high stakes decisions based on low quality information: Teacher evaluation in the race-to-the-top era. *Education Evaluation and Policy Analysis Archives*, *21*, 1-71.

[6] Green III, P. C., Baker, B. D., & Oluwole, J. (2012). Legal and Policy Implications of Value-Added Teacher Assessment Policies, The. *BYU Educ. & LJ*, 1.

[7] Duncan, G. J., & Murnane, R. J. (Eds.). (2011). *Whither opportunity?: Rising inequality, schools, and children's life chances*. Russell Sage Foundation.

Coley, R. J., & Baker, B. (2013). *Poverty and education: Finding the way forward*. Educational Testing Service Center for Research on Human Capital and Education.

Reardon, S. F., & Robinson, J. P. (2008). Patterns and trends in racial/ethnic and socioeconomic academic achievement gaps. *Handbook of research in education finance and policy*, 497-516.

to underlying processes – when the inappropriateness of such application is well understood. Table 6 provides a summary of common indicators. The majority of indicators in Table 1 are constructed from measures derived from standardized achievement tests, usually in math and English language arts, but increasingly in science and other subject areas. State and local school rating systems also tend to include indicators of graduation and attendance rates.

Of all of the indicators listed in Table 6, only one – Value-Added estimates – attempts attribution of "effect" to schools and teachers, though, with questionable and varied success. Most are well understood to reflect both socio-economic and racial bias, at the individual level and in group level aggregation. More detailed discussion of these indicators follows Table 6.

Table 6. Conceptual Overview of School Performance Indicators

Measure Type	**Indicator Type**	**Facial**	**Notes**	**Attribution / Effect**	**Used by CPS?**
Academic assessment (e.g. reading/ math standardized test)	Scale score or group mean scale score	Student or group status/ performance level	• All such measures norm referenced to an extent, even if attached to supposed criteria (content frameworks)	Makes NO attempt to isolate influence of schools or teachers ***[no manifest relationship]***	No
	Percent "proficient" or higher (or above/below any status cut-point)	Status of a group of students relative to an arbitrary "cut-score" through distribution	• Ignores that those just above/below threshold not substantively different. • Substantially reduces information (precision)	Makes NO attempt to isolate influence of schools or teachers ***[no manifest relationship]***	**Yes**
	Cohort Trend/ Change	Difference in status of groups sequentially passing through a system	• Typically measures whether subsequent group has higher share over/under threshold than previous. • Influenced by differences in group makeup, • and/or differences in test administration from one year to next.	Makes NO attempt to isolate influence of schools or teachers ***[no manifest relationship]***	**Yes**
	Growth Percentiles	Change in student test score from time=t to time=t+1	• Usually involves rescaling data based on student position in distribution of student scores. • Does not account for differences in student background, school or home context (resources)	Makes NO attempt to isolate influence of schools or teachers ***[no manifest relationship]***	No
	Value-Added	Change in student	• Uses regression	**Attempts** to	**Yes**

Measure Type	Indicator Type	Facial	Notes	Attribution / Effect	Used by CPS?
		test score from time=t to time=t+1 conditioned on student and school characteristics	models to attempt to compare growth of otherwise similar students in otherwise similar settings. • Ability isolate classroom/school "effects" highly dependent on comprehensiveness, precision & accuracy of covariates.	isolate relationship between influence gains and classroom factors (teachers) and schools. **Suspect in terms of manifest relationship**.[8]	
Persistence & Completion	Graduation Rates / On-Time Progress / Dropout Rates	Student Status / Performance Level	• Tracks student pathways through grade levels, courses against expectations (on track)	Makes NO attempt to isolate influence of schools (resources, etc.) or teachers ***[no manifest relationship]***	**Yes**
Attendance	Proportion of "enrolled" students "attending" per day, averaged over specified time period	Status of a group of students relative to an arbitrary "cut-score" through distribution	• Typically does not discriminate between types/causes of absences. • Known to be disparate by race/SES, in relation to chronic health conditions.[9]	Makes NO attempt to isolate influence of schools (resources, etc.) or teachers ***[no manifest relationship]***	**Yes**

Common indicators constructed with standardized assessment measures are summarized below:

- **"Proficiency" Shares:** Shares of children scoring above/below assigned cut-scores on standardized assessments. Few states or districts have conducted thorough (if any) statistical analysis of the predictive validity of the assigned cut-points or underlying assessments.[10] Raw scores underlying these indicators capture primarily cumulative differences in the starting points and backgrounds of students, individually and collectively in schools and classrooms. Proportions of children over/under thresholds depend on where those arbitrary thresholds are set.
    - Whether raw scores or proficiency shares, these indicators are well understood to substantially (if not primarily) reflect racial and socio-economic disparity across students and schools.

[8] Baker, B. D., Oluwole, J., & Green, P. C. (2013). The legal consequences of mandating high stakes decisions based on low quality information: Teacher evaluation in the race-to-the-top era. *Education Evaluation and Policy Analysis Archives*, *21*, 1-71.

Green III, P. C., Baker, B. D., & Oluwole, J. (2012). Legal and Policy Implications of Value-Added Teacher Assessment Policies, The. *BYU Educ. & LJ*, 1.

[9] http://www.changelabsolutions.org/sites/default/files/School-Financing_StatePolicymakers_FINAL_09302014.pdf

[10] Some concordance analyses relating ISAT scores to ACT "college ready" benchmarks have been produced. See: http://www.k12accountability.org/resources/Early-Intervention/Early-intervention-targets.pdf & http://evanstonroundtable.com/ftp/P.Zavitkovsky.2010.ISAT.chart.pdf

- **Change in "Proficiency" Shares (Cross-Cohort Percent Over/Under):** For example, comparing the proficiency rate of this year's 4th grade class to last year's 4th grade class in the same school, perhaps calculating a trend over multiple cohorts/years. These indicators capture primarily a) changes in the starting points and backgrounds of incoming cohorts of students (demographic drift), and b) changes in the measures underlying the accountability system (test item familiarity, item difficulty, etc.), whether by design or not. In many cases, year over year changes in shares over/under proficiency cut-scores are little more than noise (assuming no substantive changes to tests themselves, or cohort demography) created by students shifting over/under arbitrary cut-scores with no substantive difference in their achievement level, knowledge or skill.
    - These indicators do not tend to reflect racial or socio-economic disparity (except for trends in those disparities) in large part because these indicators usually reflect nothing of substance or importance, and are often simply noise (junk).[11]
- **Student Achievement Growth (Student Growth Percentiles):** Constructed by comparing test score growth of each student, with respect to others starting at similar points in the distribution, among their peers. These indicators include only prior scores and do not include other attributes of students, their peers or schooling context. These indicators capture differences in student measures from one point in time to another, and are most often (read always, in practice) scaled relative to other students, so as to indicate how a students' "growth" compares with an average student's growth. These indicators may also capture primarily the conditions under which the student is learning, both at home and in school.
    - These indicators tend to be racially and socio-economically disparate because they control only for differences in students' initial scores, and not for students school and peer context, or students' own socio-economic attributes.[12]
- **Value-Added Model Estimates:** Based on statistical modeling of student test scores, given their prior scores, and various attributes of the students, their peers and schooling context (breadth of factors included varies widely, as does the precision with which these factors are measured). These measures are the "best attempt" (as I often say "least bad" alternative) to isolate the school and/or classroom related factors associated with differences in student measures from one point in time to another, but cannot, for example differentiate between school resources including instructional materials, building heating, cooling and lighting and/or the "effectiveness" of employees.[13]
    - These indicators may substantively reduce racial and economic disparity of the measures on which they are based, by using rich data to compare growth of similar students in similar contexts.

[11] See, for example: http://www.shankerinstitute.org/blog/if-your-evidence-changes-proficiency-rates-you-probably-dont-have-much-evidence

[12] See also: Ehlert, M., Koedel, C., Parsons, E., & Podgursky, M. (2014). Choosing the right growth measure. *Education Next*, *14*(2) & https://njedpolicy.wordpress.com/2014/06/02/research-note-on-teacher-effect-vs-other-stuff-in-new-jerseys-growth-percentiles/ & http://www.shankerinstitute.org/blog/does-it-matter-how-we-measure-schools-test-based-performance

[13] Baker, B. D., Oluwole, J., & Green, P. C. (2013). The legal consequences of mandating high stakes decisions based on low quality information: Teacher evaluation in the race-to-the-top era. *Education Evaluation and Policy Analysis Archives*, *21*, 1-71.

Green III, P. C., Baker, B. D., & Oluwole, J. (2012). Legal and Policy Implications of Value-Added Teacher Assessment Policies, The. *BYU Educ. & LJ*, 1

School rating reports also often include indicators of student attendance and attainment and/or progress toward goals including graduation. It must be understood that even these indicators are subject to a variety of external influences, making "attribution" complicated. For example, one might wrongly assume that attendance rates reflect the efforts of schools to get kids to attend. If schools do a good job, kids attend and if they don't, kids skip. If this is the case, there should be little difference in attendance rates between "rich schools" and "poor schools" unless there is actually different effort on the part of school staff. This assertion ignores the well understood reality that children from lower income and minority backgrounds are far more likely to suffer from chronic illness including asthma, obesity or both, which is a strong predictor of chronic absence (>10).[14] Additionally, neighborhood safety affects daily attendance.[15] These forces combine to result in significant racial and economic disparities in school attendance rates which are beyond the control of local school personnel.

2.2 Measures used by Chicago Public Schools for determining school and employee consequences

In this section, I provide a brief overview of the measures used in the Chicago Public Schools rating system, but prior to and after 2014. This report focuses on factors determining school classification, including assignment to probationary status in 2012 and years prior. I address subsequent changes to the rating system because those changes indicate that district officials are aware of the shortcomings of prior measures, even though changes to the rating system fail to fully rectify the problems.

2.2.1 Measures included in point calculation are facially invalid for determining school quality and employee effectiveness

Table 7 summarizes the indicators and their relative weight in overall school rating, used for elementary schools (top) and secondary schools (bottom) in Chicago based on the 2010 rating scheme. For both elementary and secondary schools, the bulk of the weighting is placed on measures of proportions of children over/under cut scores on reading, math and science assessments. Only one measure, and only for elementary schools, attempts attribution to school effectiveness (value-added measure).

EPAS "Growth" measures in high school ratings are based on student year-over-year gains on a series of tests without controlling for outside influences on that growth. Further, gains are arbitrarily cut into an over/under expectations classification scheme without consideration for the imprecision of the underlying measures.

[14] http://www.changelabsolutions.org/sites/default/files/School-Financing_StatePolicymakers_FINAL_09302014.pdf

[15] Sharkey, P., Schwartz, A. E., Ellen, I. G., & Lacoe, J. (2014). High stakes in the classroom, high stakes on the street: The effects of community violence on students' standardized test performance. Sociological Science, 1, 199-220.

1 ***Table 7. Component of the 2010 School Ratings***

Measure	# Points	Components	Notes
Elementary Indicators			
1. ISAT Math	6	Current status	
		Trend (with ceiling at 90%)	
2. ISAT Reading	6	Current status	
		Trend (with ceiling at 90%)	
3. ISAT Science	6	Current status	
		Trend (with ceiling at 90%)	
4. ISAT Composite (All Grades)	6	Current status	
		Trend (with ceiling at 90%)	
5. ISAT Composite (Highest Grade)	6	Current status	
		Trend (with ceiling at 90%)	
6. Attendance	6	Current status	
		Trend (with ceiling at 90%)	
7. Value Added ISAT Reading	3		
8. Value Added ISAT Math	3		
High School Indicators			
1. One Year Drop Out Rate	6	Current status	
		Trend (with ceiling at .5%)	
2. Freshman On-Track	6	Current status	
		Trend (with ceiling at 90%)	
3. ACT Score	6	Current status	
		Trend (with ceiling at 23)	
4. PSAE Reading	2		
5. PSAE Math	2		
6. PSAE Science	2		
7. Attendance	6		
8. Students Enrolled in AP or IB	3	Trend (with ceiling at 35%)	Increase in % Enrolled
9. Students Scoring 3+ on AP or 4+ on IB Exams	3	Trend (with ceiling at 90%)	Increase in % Scoring
10. Students Making Expected EPAS Reading Gains	3	Status	
11. Students Making Expected EPAS Math Gains	3	Status	
Source: https://www.cpsboe.org/content/actions/2010_07/10-0728-PO4.pdf			

2

Figure 5. School Rating Component Weighting[16]

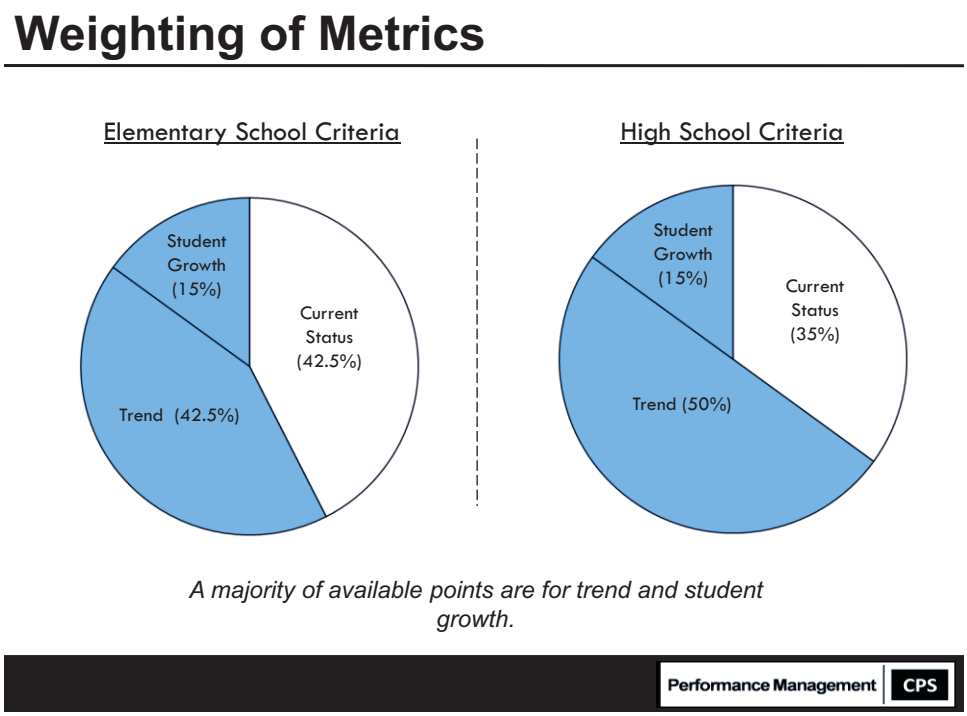


Figure 5 presents the relative weighting of broad categories of indicators as presented by CPS, for the 2011-12 school year. To summarize:

- 42.5% of weight for elementary school ratings is placed on measures which a) make no attempt at attribution to school (and by extension, teacher) effectiveness and b) are well understood to be racially and socio-economically disparate.
- Another 42.5% of the weight is placed on indictors that also make no attempt at attribution to school effectiveness, and are well understood to be little more than noise, or junk, to the extent they aren't picking up shifting demographics or changes in test administration.
- Only 15% weight at the elementary level is placed on indicators which attempt to isolate school effect on the underlying measures.
- At the high school level, even the "growth" indicator, the *% making expected gains on EPAS*, does not attempt to attribute (via statistical modeling) that growth (or the share of kids making expected growth) to schools.

Thus, the rating system consists of 42.5% racial/socioeconomic bias, 42.5% junk, and 15% questionably sufficient statistical attempt at the capturing school or employee effectiveness (for elementary schools only).

[16] http://cps.edu/SiteCollectionDocuments/PerformancePolicy_Tutorial.ppt

2.2.2 Recent changes to the performance rating system acknowledge the inappropriateness of measures which dominated prior ratings which determined probationary status

Table 8 reflects changes made to components of the school rating system for elementary schools for 2014[17] and Table 9 reflects changes made to the components of the school rating system for high schools. The changes reflect some positive developments while remaining insufficient for valid attribution to school effectiveness. For example, far greater emphasis has been placed on achievement growth, but the growth measure now appears to be merely a school relative "growth percentile" measure as described here:

> *Average spring-to-spring scale score growth of students on the NWEA MAP assessment, compared to average national growth for schools with the same average pretest score. The school is assigned a percentile representing where it would fall on the national distribution.(p. 26)*[18]

As explained previously herein, growth percentile measures make no attempt to attributed growth to the effectiveness of the school or those employed within. As such, while shifting some emphasis to growth rather than status, the new rating system includes no measure which even on its face attempts to isolate school or teacher effectiveness. The new system places substantial weight on the *known-to-be racially and economically disparate* measure of average daily attendance, but with some adjustment for "students with qualifying medically fragile conditions."(p. 22) This exemption excludes prevalent chronic health conditions (asthma, obesity) associated with race and poverty which are strongly predictive of chronic absence.

The high school "growth" measure also fails to (even try to) isolate school effect on student outcomes. The high school growth measure uses 8th grade ISAT scores to predict the likely ACT score (grade 11) for students with similar 8th grade ISAT scores (similar to a typical "growth percentile" calculation, but using two different tests, 3 years apart, rather than a simple year over year comparison using a supposedly similar test). School average predicted ACT scores are compared with school average actual ACT scores (for the same students) to determine relative growth (where actual ACT is greater than predicted, positive growth is assumed) (p. 31). To the extent that usual growth percentile measures reveal racial and economic disparity (because they fail to control for other background factors), one can certainly expect these measures to be racially and socio-economically disparate (perhaps compounded by the 3 year gap). This factor alone accounts for 20% of high school rating.

[17] See http://www.cpsboe.org/content/documents/sy14-15_school_quality_rating_policy.pdf & http://cps.edu/Performance/Documents/OverviewAccountabilityMetrics_June2014.ppt & http://cps.edu/Performance/Documents/SQRPHandbook.pdf

[18] http://cps.edu/Performance/Documents/SQRPHandbook.pdf

Table 8. Updated Components of Evaluation System (Elementary) [19]

Standard Elementary School Model

Elementary School Indicator	Weight
National School Growth Percentile on the NWEA Reading Assessment	12.5%
National School Growth Percentile on the NWEA Math Assessment	12.5%
Priority Group National Growth Percentile on the NWEA Reading Assessment	Up to 5%^
Priority Group National Growth Percentile on the NWEA Math Assessment	Up to 5%^
Percentage of Students Meeting or Exceeding National Average Growth Norms	10%
National School Attainment Percentile on the NWEA Reading Assessment for Grade 2	2.5%
National School Attainment Percentile on the NWEA Math Assessment for Grades 2	2.5%
National School Attainment Percentile on the NWEA Reading Assessment for Grades 3-8	5%
National School Attainment Percentile on the NWEA Math Assessment for Grades 3-8	5%
Percentage of Students Making Sufficient Annual Progress on the ACCESS Assessment	5%
Average Daily Attendance Rate	20%
My Voice, My School 5 Essentials Survey	10%
Data Quality Index Score	5%

^The priority group percentile is measured separately for African-American students, Hispanic students, EL and Diverse Learners. Each priority group calculation is worth 1.25% in reading and 1.25% in math. If there are fewer than 30 students in the priority group, the indicator is not used and the weight is reallocated to whole-school NWEA growth indicators.

Table 9. Updated Components of Evaluation System (High School) [20]

Standard High School Model

High School Indicator	Weight (2014-2015)	Weight (2015-2016 and 2016-2017)
ACT Growth Differential*	20%	10%
Priority Group ACT Growth Differential*	Up to 10%^	Up to 5%^
National School Attainment Percentile on the ACT Assessment**	10%	10%
Average Daily Attendance Rate	10%	12.5%
Freshman On-Track Rate	10%	12.5%
1-Year Dropout Rate	5%	6.25%
4-Year Cohort Graduation Rate	10%	12.5%
Percent of Graduates Earning a 3+ on an AP Exam, a 4+ on an IB Exam, an Approved Early College Credit and/or an Approved Career Credential	5%	6.25%
College Enrollment Rate	5%	6.25%
College Persistence Rate	5%	6.25%
My Voice, My School 5 Essentials Survey	5%	6.25%
Data Quality Index Score	5%	6.25%

* Previously the National School Growth Percentile based on the EXPLORE, PLAN, and ACT Assessments.

** Previously the National School Attainment Percentile based on the EXPLORE, PLAN, and ACT Assessments.

^ This is measured separately for African-American students, Hispanic students, EL and Diverse Learners. Each priority group calculation is worth 1.25%. If there are fewer than 30 students in the priority group, the indicator is not used and the weight is reallocated to whole school growth indicator.

[19] http://cps.edu/Performance/Documents/SQRPHandbook.pdf
[20] http://cps.edu/Performance/Documents/SQRPHandbook.pdf

2.2.3 The design of CPS own value-added model acknowledges the inappropriateness of measures which dominate current and prior ratings

Finally, Chicago Public Schools has but no longer uses in its current ratings, school and teacher value-added model estimates. These estimates were included in the previous ratings but with relatively low weighting. At face value, because they attempt to isolate school or teacher (classroom) influence on student outcomes, VAM based estimates are superior to a) all elements of the current system and b) all other non-VAM elements of the previous system. That said, they are not without their flaws, especially when used for the rating and ranking of individual teachers for the purpose of imposing employment consequences.[21]

The elements of the CPS VAM convey a cognizance among district officials regarding factors which must be included in a model intended to isolate school or classroom influences on student outcomes. One cannot logically, simultaneously assert that the factors in this model are important for isolating school and teacher effects on student outcomes, while supporting a school quality rating system where the majority of weight is placed on indicators which account for NONE of these factors.

Those elements are summarized in Table 10, as drawn from the district's own 2013 overview of the technical specifications of their VAM. Like the growth measures used in the present system, the VAMs include prior performance. But the VAM models include a variety of other student characteristics including gender, race, language proficiency (scaled by varied degrees of English language proficiency), income status, homelessness and mobility. Some of these measures are likely insufficiently precise to differentiate among CPS students, most notably, the free lunch indicator as a measure of income status. Very large shares of CPS students would be assigned a value of "1" for this measure (qualifying for free lunch), with no further differentiation among those living in deep, intergenerational poverty versus those just at the threshold for qualifying for free lunch. This may leave behind some socio-economic bias in the model estimates, which may also be racially correlated (even though race indicators are included in the model).

While still not entirely sufficient, the value-added model goes several steps beyond all other measures employed by CPS for characterizing school performance, and serves as acknowledgment by CPS leadership that they know full well that more complicated modeling is required for measuring effectiveness. A value-added model of this type might at least be used as a noisy, preliminary screening tool to identify schools for further observation. As Preston Green, Joseph Oluwole and I explain:

> *Arguably, a more reasonable and efficient use of these quantifiable metrics in human resource management might be to use them as a knowingly noisy pre-screening tool to identify where problems might exist across hundreds of classrooms in a large district. Value-added estimates might serve as a first step toward planning which classrooms to observe more frequently. Under such a model, when observations are completed, one might decide that the initial signal provided by the value-added estimate was simply wrong. One might also find that it produced useful*

[21] Green III, P. C., Baker, B. D., & Oluwole, J. (2012). Legal and Policy Implications of Value-Added Teacher Assessment Policies, The. *BYU Educ. & LJ*, 1.

Baker, B. D., Oluwole, J., & Green, P. C. (2013). The legal consequences of mandating high stakes decisions based on low quality information: Teacher evaluation in the race-to-the-top era. *Education Evaluation and Policy Analysis Archives*, *21*, 1-71.

insights regarding a teacher's (or group of teachers') effectiveness at helping students develop certain tested skills.

School leaders or leadership teams should clearly have the authority to make the case that a teacher is ineffective and that the teacher even if tenured should be dismissed on that basis. It may also be the case that the evidence would actually include data on student outcomes – growth, etc. The key, in our view, is that the leaders making the decision – indicated by their presentation of the evidence – would show that they have reasonably used information to make an informed management decision. Their reasonable interpretation of relevant information would constitute due process, as would their attempts to guide the teacher's improvement on measures over which the teacher actually had control. (p. 19)[22]

Table 10. Components of CPS Value-Added Regression Model[23]

Category	Measure	Operationlized
Prior Performance	Prior Reading	Students are only included in the model if they have a pretest score. Model controls for reading and math pretest scores in the calculation for both subjects. Continuous variable using ISAT scale score or NWEA RIT score
	Prior Math	
School Covariates	Grade Level	Regressions are estimated separately for each grade and subject. Therefore each of the coefficients has a different value in each grade and subject. Aggregation to school or teacher level occurs after grade-level scores are standardized.
Student Covariates	Gender	Male = 0, Female = 1
	Race/Ethnicity	**White** **African-American** **Hispanic** **Asian/Pacific Islander** **Native American** **Other**
	Low-Income Status	FRL-eligible = 1, non-eligible = 0
	ELL Status	Students excluded from the model if: For the ISAT model, the student was in ELL Program Years 0-5 for either the pretest or posttest. For the NWEA model, the student's most recent ACCESS Literacy score was less than 3.5. Model controls for the most recent ACCESS score. Set of four indicator variables: ACCESS score between 0 and 2 ACCESS score between 2 and 3 ACCESS score between 3 and 4 ACCESS score 4 or higher
	IEP Status	Six indicators for IEP codes LD Speech 504 plan

[22] Baker, B. D., Oluwole, J., & Green, P. C. (2013). The legal consequences of mandating high stakes decisions based on low quality information: Teacher evaluation in the race-to-the-top era. *Education Evaluation and Policy Analysis Archives*, *21*, 1-71. http://epaa.asu.edu/ojs/article/view/1298/1043

[23] September 2013 presentation: Understanding Value-Added. Lesson 3: Technical Specifications of the Value-Added Regression Model

Category	Measure	Operationlized
		EBD EMH Other
	Homelessness	Based on participation in Student in Temporary Living Situations (STLS) program during the most recent school year. Indicator variable Participated = 1, Did Not Participate = 0
	Mobility	Based on whether the student moved schools between the pretest and posttest. Three continuous variables Number of moves during the spring Number of moves during the summer Number of moves during the winter

2.2.4 Facially inappropriate measures with well understood demographic correlates dictate school ratings and thus, employment consequences

Here, I address briefly the application of the accountability metrics to schools, classification of schools using those measures, labeling of schools on probationary status and subsequent targeting for intervention. CPS accountability model provides a relatively straight line between the indicators described above, performance classifications and probationary status, and eventual sanctions. Points are tallied, achievement levels are designated, and probationary status determined from those achievement levels. The process becomes murkier and less well documented when moving from the broad set of schools classified as on probation, to those specifically targeted for corrective action.

Compiled Points →Level 3 Classification → Probationary Status → Corrective Action

As described in the 2010 guide:

> Achievement Level 1: Shall mean the rating for:
> - an elementary school that obtains a total performance score of thirty (30) or above or with at least 71% of the available performance points; or
> - a high school that obtains a total performance score of twenty-eight (28) or above or with at least 66.7% of the available performance points.
>
> Achievement Level 2: Shall mean the rating for:
> - an elementary school that obtains a total performance score of twenty-one (21) to twenty-nine (29) or with 50%-70.9% of the available performance points; or
> - a high school that obtains a total performance score of eighteen and two-thirds (18.67) to twenty-seven and two-thirds (27.67) or with 44%-66.6% of the available performance points.
>
> Achievement Level 3: Shall mean the rating for:
> - an elementary school that obtains a total performance score of twenty (20) or below or with less than 50% of the available performance points; or
> - a high school that obtains a total performance score of eighteen and one-third (18.33) or below or with less than 44% of the available performance points.

https://www.cpsboe.org/content/actions/2010_07/10-0728-PO4.pdf

Below is a list of corrective measures which may follow from being classified as on probation, which is a function of being classified primarily as Achievement Level 3, but also includes some Achievement Level 2 schools.

> 3. Additional Corrective Measures: Schools placed on Probation that, after at least one year, fail to make adequate progress in correcting deficiencies are subject to the following actions by the approval of the Board, after an opportunity for a hearing:
>
> a. Ordering new local school council elections;
> b. Removing and replacing the principal;
> c. Replacement of faculty members, subject to the provisions of Section 24A-5 of the Illinois School Code;
> d. Reconstitution of the attendance center and replacement and reassignment by the CEO of all employees of the attendance center;
> e. Intervention under Section 34-8.4 of the Illinois School Code;
> f. Operating an attendance center as a contract turnaround school;
> g. Closing of the school; or
> h. Any other action authorized under Section 34-8.3 of the Illinois School Code
>
> The Law Department shall develop and disseminate hearing procedures for hearings required before taking any of the corrective actions specified above.

https://www.cpsboe.org/content/actions/2010_07/10-0728-PO4.pdf

Items 3b through 3g all include the possibility of staff dismissal and/or reassignment including both principals and teachers. These corrective measures are a direct consequence of probationary status (as stated in the policy), which is a direct consequence of low point totals on the indicators addressed previously. A school does not get to this last step – intervention – unless first classified as "Level 3" (in some cases Level 2) and assigned to probation status, classifications which are determined by point accumulation on the indicators. Thus, the connection between these indicators and any employment consequences that follow from being targeted for interventions such as "turnaround," matters.

The majority of these corrective measures involve employment action, including dismissal. Yet, the measures used for getting to this stage, as previously explained, involve:

- 42.5% of weight is on measures which largely capture disparities in student racial, ethnic and socio-economic backgrounds;
- Another 42.5% of weight is placed on measures which capture a) changes in student backgrounds from one cohort to the next, b) changes in the tests (or items) and/or familiarity with them, or c) statistical noise/junk;
- Only 15% weight at the elementary level is placed on indicators which attempt (though insufficiently) to isolate school effect on the underlying measures.
- At the high school level, even the "growth" indicator, the *% making expected gains on EPAS*, does not attempt to attribute (via statistical modeling) that growth (or the share of kids making expected growth) to schools.

At best, 15% of the weight for elementary schools only, in determining probationary status is placed on a measure which on its face attempts to isolate school effectiveness (at influencing student outcomes). And even that measure is problematic in terms of its precision or accuracy for isolating school, and especially

employee, effectiveness. The vast majority of measures used for determining school effectiveness leading to employment consequences make no attempt whatsoever to evaluate teacher effectiveness. For schools for which value-added measures are unavailable, the school evaluation system in its entirety makes no attempt to discern teacher effectiveness, but nonetheless imposes employment consequences.

3.0 Measures unrelated to job performance are determining employment consequences

Here, I begin my statistical summary of data on Chicago Public Schools. To summarize, the accountability indicators used, as outlined above, are largely reflective of variations in student race and socio-economic status, in this highly racially and economically segregated city and school district. Those accountability indicators, as explained above, determine accountability status, inclusive of probationary status, which in select cases leads to specific interventions and employment consequences. If the schools identified for probationary status are racially disproportionate, if follows that any subset of those schools will be racially disproportionate with respect to the citywide student population. But these are student demographics, not teacher demographics.

Section 3.1 illustrates the correlations between each indicator used and school level student demographics (across years 2009-2013). Section 3.2 applies logistic regression analysis to illustrate the extent to which school level student demographics are predictive of a school a) receiving fewer total points, b) being assigned level 3 status, c) being put on probation and d) being among those schools assigned to turnaround status (cumulatively between 2009 and 2013) among those schools originally classified as "level 3."

Of concern in this report is how Chicago Public Schools ends up applying these accountability indicators in ways that yield racially disparate employment consequences, as illustrated in Figure 4 of the report provided by Jonathan Walker (2016.8.12). Defendant's witness Blanchflower's statistical finding that the policy is not racially disparate when accounting for "performance points" (2016.9.15, p.20) accumulated under the rating system is akin to saying the policy doesn't discriminate against minority teachers, but instead relies on a performance point scheme that discriminates against low income and minority children who are disproportionately taught by minority teachers. These are precisely the well understood connections which I validate statistically in this section.

3.1 Measures used by CPS for determining school ratings are racially disparate

Table 11 summarizes the demographic correlates (partial correlations, across years) of each indicator for elementary schools. The table applies "conditional formatting" (reds and greens to lower and higher values) to highlight higher and lower correlations. The last column of the table shows the r-squared value for a regression model including each of the demographic measures.

- Demographics alone explain 73% of the variation in the ISAT Math and Reading Current Status Indicators
- Demographics alone explains 54% of the variation in the ISAT Science Current Status Indicator
- Demographics alone explains 72% of the variation in the ISAT Composite, all grades Current Status

- Demographics alone explains 56% of the variation in the ISAT Composite, Highest Grade Current Status

That is, school demographics are a major determinant of indicators of current status. Notably, demographics (and year) predict much less variation in trend indicators, largely because those indicators are junk, and likely do not reflect any meaningful variation.

Demographics also predict much less variance in the value-added measures, in part, because those measures directly control for demographics in their statistical attempt to isolate school effects on student outcomes.

Correlations between race and current status measures are all negative and sizeable.

- ISAT Math, Reading and Science all have partial correlations with school percent black below -.50
- ISAT Math, Reading and Science all have partial correlations with school percent black or Hispanic below -.50
- ISAT composite measures have partial correlations with school percent black or Hispanic below -.60

Correlations between racial composition and trend measures are a mixed bag.

The negative correlations between value-added estimates and race raise some concerns that the applied models fail to sufficiently isolate school effects, retaining some racial disparity which may or may not be valid representation of actual school effectiveness differences. But again, at least these measures have made some attempt. Further, the extent of negative racial correlation in the value added measures is much smaller than in the current status measures.

Table 11. Correlates of Elementary School Rating Components

			Partial Correlation (across years 2009-2013)						Regression
Measure	*# Points*	*Type*	*% Black*	*% Black or Hispanic*	*% FRL*	*% ELL*	*% Special Ed*		*Variance Explained (R2 ALL)*
1. ISAT Math	6	Current status	-0.54	-0.56	-0.55	0.21	-0.33		0.73
		Trend	0.20	0.15	0.17	-0.07	-0.05		0.04
2. ISAT Reading	6	Current status	-0.53	-0.63	-0.65	0.16	-0.29		0.73
		Trend	0.04	0.08	0.10	0.05	-0.04		0.03
3. ISAT Science	6	Current status	-0.57	-0.58	-0.56	0.24	-0.22		0.54
		Trend	0.14	0.12	0.17	-0.07	-0.02		0.04
4. ISAT Composite (All Grades)	6	Current status	-0.38	-0.71	-0.80	-0.03	-0.17		0.72
		Trend	-0.12	-0.22	-0.20	0.04	-0.15		0.09
5. ISAT Composite (Highest Grade)	6	Current status	-0.36	-0.64	-0.70	0.00	-0.15		0.56
		Trend	-0.06	-0.09	-0.10	0.02	-0.08		0.02
6. Attendance	6	Current status	-0.52	-0.35	-0.31	0.33	-0.49		0.55
		Trend	0.09	0.06	0.07	-0.08	-0.04		0.20
7. Value Added ISAT Reading	3		-0.24	-0.24	-0.22	0.07	-0.05		0.07
8. Value Added ISAT Math	3		-0.09	-0.16	-0.12	0.00	-0.08		0.03

Data Sources:
Performance Policy Results: http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls
Merges with School Demographics by year: http://www.cps.edu/SchoolData/Pages/SchoolData.aspx
Data and code provided as attachment

Table 12 shows the correlates for high school rating components.

- The dropout rate, as might be expected, is modestly positively correlated with race and income (in this case, a positive correlation not being a good thing);
- The freshman on track rate is modestly negatively correlated with race and income;
- The test-score based status measures are quite strongly, negatively correlated with school racial composition;
- Attendance, as expected, is modestly negatively correlated with school racial composition;
- EPAS gain measures are modestly negatively correlated with school racial composition, consistent with findings on similar growth modeling methods which fail to include richer sets of covariates.

The vast majority of high school indicators reflect, at least modestly, and in many cases quite strongly, racial and economic disparities across schools. None of these indicators is designed to isolate the effectiveness of schools from student backgrounds and community context.

Table 12. Correlates of High School Rating Components

			Partial Correlation (across years 2009-2013)						Regression
Measure	*# Points*	*Type*	*% Black*	*% Black or Hispanic*	*% FRL*	*% ELL*	*% Special Ed*		*Variance Explained (R2 ALL)*
1. One Year Drop Out Rate	6	Current status	0.27	0.21	0.20	-0.14	0.05		0.11
		Trend	0.10	0.04	-0.04	-0.07	0.05		0.03
2. Freshman On-Track	6	Current status	-0.29	-0.29	-0.34	-0.05	-0.36		0.25
		Trend	0.04	0.09	0.13	0.09	0.10		0.04
3. ACT Score	6	Current status	-0.43	-0.69	-0.74	-0.07	-0.62		0.73
		Trend	-0.23	-0.22	-0.20	0.00	-0.29		0.13
4. PSAE Reading	2	Current status	-0.39	-0.67	-0.74	-0.12	-0.64		0.74
		Trend	-0.04	-0.05	-0.02	0.00	-0.09		0.09
5. PSAE Math	2	Current status	-0.48	-0.62	-0.66	-0.02	-0.60		0.65
		Trend	-0.14	-0.06	-0.04	0.00	-0.12		0.05
6. PSAE Science	2	Current status	-0.46	-0.70	-0.75	-0.07	-0.59		0.74
		Trend	-0.11	-0.08	-0.06	0.01	-0.14		0.12
7. Attendance	6	Current status	-0.33	-0.28	-0.32	0.12	-0.12		0.22
		Trend	0.02	0.04	0.04	-0.02	-0.02		0.01
8. Students Enrolled in AP or IB	3	Trend	-0.05	-0.02	-0.08	-0.08	-0.11		0.03
9. Students Scoring 3+ on AP or 4+ on IB Exams	3	Trend	-0.12	-0.08	-0.04	0.04	-0.08		0.05
10. Students Making Expected EPAS Reading Gains	3	Status	-0.35	-0.48	-0.55	-0.04	-0.48		0.47
11. Students Making Expected EPAS Math Gains	3	Status	-0.37	-0.32	-0.38	0.11	-0.43		0.33

Data Sources:
Performance Policy Results: http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls
Merges with School Demographics by year: http://www.cps.edu/SchoolData/Pages/SchoolData.aspx
Data and code provided as attachment

3.2 Student race remains a determinant of accountability status

Table 13 displays the results of a regression analysis relating school racial composition to the percent of possible points obtained under the rating system.

- For each 1% difference in the percent of student population that is black, the percent of possible points obtained goes down by .215 (such that a 5% difference in % black would be associated with greater than 1% decrease in percent possible points attained);
- For each 1% difference in the percent of student population that is black or Hispanic, the percent of possible points obtained goes down by .539 (such that a 2% difference in percent black or Hispanic would be associated with greater than 1% decrease percent possible points attained).

Both were statistically significant, and of important, policy relevant magnitude.

Table 13. Schools with higher shares of black, or black or Hispanic students have lower cumulative point totals

	% Black		% Black or Hispanic	
	coef	**se**	**coef**	**se**
% Black	**-0.215*** **	**0.009**		
% Black or Hispanic			**-0.539*** **	**0.016**
High School	-9.265***	0.959	-8.321***	0.889
2009 (Baseline)				
2010	3.758***	1.190	3.725***	1.101
2011	7.001***	1.182	7.042***	1.094
2012	7.152***	1.178	7.084***	1.089
2013	7.627***	1.179	7.545***	1.090
Intercept	62.669***	0.967	98.412***	1.597

note: *** p<0.01, ** p<0.05, * p<0.1
Data Sources:
Performance Policy Results: http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls
Merges with School Demographics by year: http://www.cps.edu/SchoolData/Pages/SchoolData.aspx
Data and code provided as attachment

Table 14 displays the logistic regression results predicting the likelihood that a school is assigned to "Level 3" status. Table 14 specifically explores the influence of racial composition above and beyond the value-added estimates for the school (the one attempt at isolating school effectiveness). That is, above and beyond CPS's own best attempt at isolating effectiveness, does school racial composition predict the likelihood that a school is assigned to "Level 3" status? Prior partial correlations suggest this would be the case, because the rating system is more heavily dependent on racially disparate status measures than it is on the value-added measures. Here, I find:

- For a 1% difference in school % black population, the likelihood of being assigned to level 3 increases by 2.3% (a school with 1% greater black enrollment share is 1.023 times as likely to be classified as level 3);
- For a 1% difference in % black and Hispanic population, the likelihood of being assigned to level 3 increases by 10.9% (a school with 1% greater black and Hispanic enrollment share is 1.109 times as likely to be classified as level 3).

Both were statistically significant, and of important, policy relevant magnitude. This racial disparity exists above and beyond the one measure which attempts to isolate "effectiveness" (as estimated by relative association with change in test scores).

Table 14. Schools with higher shares of black, or black or Hispanic students are more likely to achieve "Level 3" status, even when controlling for value-added

	% Black		% Black or Hispanic	
	Odds Ratio	**SE**	**Odds Ratio**	**SE**
% Black	**1.023*** **	**0.002**		
% Black or Hispanic			**1.109*** **	**0.011**
Reading VA	0.485***	0.034	0.472***	0.033
Math VA	0.515***	0.032	0.561***	0.033
2009 (Baseline)	.	.	.	.
2010	1.014	0.202	1.070	0.214
2011	0.525***	0.107	0.574***	0.116
2012	0.524***	0.107	0.577***	0.117
2013	0.673*	0.137	0.726	0.145
Intercept	0.187***	0.033	0.000***	0.000

note: *** p<0.01, ** p<0.05, * p<0.1
Data Sources:
Performance Policy Results: http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls
Merges with School Demographics by year: http://www.cps.edu/SchoolData/Pages/SchoolData.aspx
Data and code provided as attachment

Table 15 shows the results of logistic regression models predicting the likelihood of being assigned to probationary status, also with controls for value-added estimates. These results are similar to those for being assigned to level 3, but the racial disparities are slightly greater.

- For a 1% difference in school % black population, the likelihood of being assigned to Probation increases by 2.7% (a school with 1% greater black enrollment share is 1.027 times as likely to be put on probation);
- For a 1% difference in % black and Hispanic population, the likelihood of being assigned to level 3 increases by 14.5% (a school with 1% greater black and Hispanic enrollment share is 1.145 times as likely to be put on probation).

Both were statistically significant, and of important, policy relevant magnitude. This racial disparity exists above and beyond the one measure which attempts to isolate actual "effectiveness."

Table 15. Schools with higher shares of black, or black or Hispanic students are more likely to be assigned probation status, even when controlling for value-added

	% Black		% Black or Hispanic	
	Odds Ratio	**SE**	**Odds Ratio**	**SE**
Total Percent of Possible Points				
2011 (baseline)				
2012	0.928	0.161	0.930	0.160
2013	0.986	0.172	0.963	0.166
% Black	**1.027*** **	**0.002**		
% Black or Hispanic			**1.145*** **	**0.017**
Reading VA	0.581***	0.053	0.612***	0.056
Math VA	0.666***	0.056	0.736***	0.060
Intercept	0.159***	0.025	0.000***	0.000

note: *** p<0.01, ** p<0.05, * p<0.1
Data Sources:
Performance Policy Results: http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls
Merges with School Demographics by year: http://www.cps.edu/SchoolData/Pages/SchoolData.aspx
Data and code provided as attachment

Table 16 presents the logistic regression results of models predicting which elementary schools were, at any point during the period, assigned to turnaround status, among those schools which were assigned to Level 3 status. That is, above and beyond the first cut, to what extent is there additional racial disparity in the identification of turnaround schools? Table 16 shows:

- For a 1% difference in school % black population, the likelihood of being assigned to turnaround increases by 1.7% (a school with 1% greater black enrollment share is 1.017 times as likely to be identified for turnaround, among those assigned to Level 3);
- For a 1% difference in % black and Hispanic population, the likelihood of being assigned to level 3 increases by 41.7% (a school with 1% greater black and Hispanic enrollment share is 1.417 times as likely to be identified for turnaround, among those assigned to Level 3).

Here, the coefficients on the value-added indicators also provide some useful insights. While schools with higher reading value added were less likely to be identified for turnaround, schools with higher math value-added were actually more likely to be identified for turnaround. That is, among those schools with low average status performance (level 3 schools), those showing greater growth in mathematics (holding race and reading gains constant), were MORE likely to be classified for turnaround ($p<.10$).

Table 16. Elementary Schools with higher shares of black, or black or Hispanic students are more likely to be assigned turnaround status, even when controlling for value-added & among those already assigned Level 3 status

	% Black		% Black or Hispanic	
	Odds Ratio	**SE**	**Odds Ratio**	**SE**
% Black	**1.017*** **	**0.006**		
% Black or Hispanic			**1.417*** **	**0.190**
Reading Value Added	0.718***	0.091	0.712***	0.089
Math Value Added	**1.208***	**0.126**	**1.215***	**0.127**
2009	.	.	.	.
2010	1.435	0.583	1.420	0.572
2011	1.163	0.507	1.397	0.610
2012	0.793	0.394	1.010	0.504
2013	1.231	0.556	1.550	0.707
Intercept	0.018***	0.011	0.000***	0.000

note: *** p<0.01, ** p<0.05, * p<0.1
Data Sources:
Performance Policy Results: http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls
Merges with School Demographics by year: http://www.cps.edu/SchoolData/Pages/SchoolData.aspx
Data and code provided as attachment

Table 17 presents the logistic regression results of models predicting which high schools were, at any point during the period specified, assigned to turnaround status, among those schools which were initially assigned to Level 3 status. That is, above and beyond the first cut, to what extent is there additional racial disparity in the identification of turnaround schools? Table 12 shows:

- For a 1% difference in school % black population, the likelihood of being assigned to turnaround increases by 5% (a school with 1% greater black enrollment share is 1.050 times as likely to be identified for turnaround, among those assigned to Level 3);

- For a 1% difference in % black and Hispanic population, the likelihood of being assigned to level 3 increases by 17% (a school with 1% greater black and Hispanic enrollment share is 1.170 times as likely to be identified for turnaround, among those assigned to Level 3).

Table 17. High Schools with higher shares of black, or black or Hispanic students are more likely to be assigned turnaround status among those already assigned Level 3 status

	% Black		% Black or Hispanic	
	Odds Ratio	**SE**	**Odds Ratio**	**SE**
% Black	**1.050*** **	**0.016**		
% Black or Hispanic			**1.170** **	**0.087**
2009	.	.	.	.
2010	1.015	0.606	1.082	0.608
2011	0.714	0.449	0.880	0.527
2012	0.840	0.494	1.117	0.627
2013	0.626	0.410	0.847	0.534
Intercept	0.004***	0.006	0.000**	0.000

note: *** p<0.01, ** p<0.05, * p<0.1
Data Sources:
Performance Policy Results: http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls
Merges with School Demographics by year: http://www.cps.edu/SchoolData/Pages/SchoolData.aspx
Data and code provided as attachment

Schools (and their enrollments by year) included as turnarounds any time during the period are listed in Table 18.

In conclusion, student performance level measures which dominate the point calculations for school ratings are strongly associated with student race. By contrast, measures which at least attempt to isolate (though insufficiently) school effects on student outcomes, are substantively less racially disparate. The likelihoods that a school a) receives low point totals, b) is assigned "level 3" status and c) is placed on probation are each significantly associated with the racial composition of student enrollments.

Table 18

School Name	year 2009	2010	2011	2012	2013	Total
BETHUNE	353	377	351	363	0	1,444
BRADWELL	770	612	694	771	788	3,635
CASALS	511	488	507	504	463	2,473
CHICAGO VOCATIONAL HS	1,666	1,438	1,106	827	965	6,002
COPERNICUS	346	353	0	0	0	699
CRANE HS	666	720	513	476	387	2,762
CURTIS	470	464	455	501	474	2,364
DENEEN	511	492	480	550	549	2,582
DULLES	429	444	499	537	528	2,437
DYETT HS	569	530	431	318	168	2,016
FENGER HS	1,196	1,190	784	688	508	4,366
FULLER	283	245	211	239	270	1,248
FULTON	654	529	488	466	471	2,608
GUGGENHEIM	296	263	259	0	0	818
HARPER HS	911	771	669	622	518	3,491
HARVARD	519	463	455	475	441	2,353
HERZL	630	591	554	512	502	2,789
HOWE	540	548	579	574	610	2,851
JOHNSON	281	297	364	724	402	2,068
LANGFORD	0	0	334	339	325	998
LATHROP	322	164	116	0	0	602
MARQUETTE	1,579	1,511	1,435	1,385	1,332	7,242
MARSHALL HS	1,205	998	772	730	677	4,382
MORTON	284	278	317	344	355	1,578
PHILLIPS HS	784	746	687	593	647	3,457
PICCOLO	757	667	587	541	513	3,065
PRICE	196	185	144	0	0	525
REED	297	216	107	0	0	620
SHERMAN	584	520	450	461	440	2,455
SMITH	419	401	362	364	339	1,885
STAGG	614	561	565	538	535	2,813
TILDEN HS	899	680	467	463	400	2,909
WOODSON	0	388	398	329	370	1,485
WOODSON SOUTH	479	0	0	0	0	479
Total	20,020	18,130	16,140	15,234	13,977	83,501

SIGNATURE

Digitally signed by Bruce Baker
DN: cn=Bruce Baker, o, ou, email=educpolicy@gmail.com, c=US
Date: 2017.03.03 14:49:06 -05'00'

Bruce D. Baker

IV. ATTACHMENTS

A. Curriculum Vitae of Bruce D. Baker (2-10-17)

B. Stata Log of School Level Analyses (bbaker_cps_schlacctblty_2.10.17)

C. Stata Log of Teacher/Student Race Analyses (bbaker_stu_teacher_link_2.10.17)

D. Materials considered in preparation of this report

ATTACHMENT A

BRUCE D. BAKER

Professor
Educational Theory, Policy and Administration
Graduate School of Education
Rutgers, The State University of New Jersey
10 Seminary Place
New Brunswick, NJ 08901-1183
bruce.baker@gse.rutgers.edu
schoolfinance101@wordpress.com

A. EDUCATION

1997, Doctor of Education
Teachers College, Columbia University
Department of Organization and Leadership
Dissertation: *A Comparison of Statistical and Neural Network Models for Forecasting Educational Spending*
Advisor: Craig E. Richards

1989, Master of Arts
University of Connecticut
Department of Educational Psychology
Program in Teaching the Talented
Advisor: Joseph S. Renzulli

1987, Bachelor of Arts
Lafayette College
Biology

B. ACADEMIC APPOINTMENTS

2011 – Present: Rutgers, The State University of New Jersey
Professor I
Educational Theory, Policy and Administration

2008 – Present: Rutgers, The State University of New Jersey
Associate Professor
Educational Theory, Policy and Administration

2002 – 2008: University of Kansas, Lawrence
Associate Professor, Teaching and Leadership
Program in Educational Administration

1997 – 2002: University of Kansas, Lawrence
Assistant Professor, Teaching and Leadership
Program in Educational Administration
Research Associate: Policy Research Institute

1996 - 1997: Teachers College, Columbia University
Instructor, Organization and Leadership
Program in Educational Administration

C. RELATED TEACHING & ADMINISTRATIVE EXPERIENCE

1993 – 1997, The Ethical Culture Fieldston Schools, NY
Instructor of Science

1992 – 1993, Pocantico Hills Central School, NY
Coordinator of Gifted and Talented Programs

1989 – 1992, Mastricola Middle School, NH
Coordinator of Gifted and Talented Programs

1987 – 1988, Randolph-Macon Academy, VA
Instructor of Biology

1994 – 1997, College Gifted Programs, Summer Institute for the Gifted, NJ/PA/NY
Site Director

D. HONORS

2017 Ranked 92nd in RHSU Education Week Edu-Scholar Public Influence.

2016 Ranked 81st in RHSU Education Week Edu-Scholar Public Influence.

2015 Rutgers Graduate School of Education Distinguished Faculty Lecture. Invited by GSE Alumni Association

2015 Ranked 64th in RHSU Education Week Edu-Scholar Public Influence.

2014 Askwith Forum Presenter, *Is School Funding Fair?* Harvard Graduate School of Education

2014 Ranked 64th in RHSU Education Week Edu-Scholar Public Influence.

2013 – AERA Division L Policy Report Award for Baker, B. D., Sciarra, D. G., & Farrie, D. (2010). Is School Funding Fair?: A National Report Card. Education Law Center.

2013 – Ranked 40th in RHSU Education Week Edu-Scholar Public Presence.

2012 – School Finance 101 Blog nominated for Bammy Award, Education Commentators Category, Academy of Education Arts & Sciences, http://www.bammyawards.com/

2011 – Outstanding Faculty Research Award, Rutgers Graduate School of Education Alumni Association

2011 – Journal of Education Finance Scholarly Paper Award, National Education Finance Conference (Co-author, Matthew J. Ramsey)

2010 – Invited Lecturer: Jerry Miner Lecture Series. Maxwell School, Syracuse University. Center for Policy Research. http://www-cpr.maxwell.syr.edu/efap/Jerry_Miner/Lecture_Series.htm

2007 – Present: Appointed Research Fellow, Education Policy Research Unit/Education and the Public Interest Center (EPRU/EPIC)

2001, National Center for Education Statistics/American Education Finance Association

New Scholars Program

1998, National Center for Education Statistics/American Educational Research Association

Institute on Statistics for Policy Analysis

1996, University Council on Educational Administration

Graduate Student Research Seminar

E. SELECTED EXTERNALLY FUNDED RESEARCH (RECENT GRANTS & CONTRACTS)*

2017

1. Kahlenberg, R., Baker, B., Levin, J., Carnevale, A., Zuckerman, M., Shireman, R. (2017) Making Community Colleges Engines for Social Mobility: A Century Foundation Working Group on Financial Resources. William T. Grant Foundation ($30k subcontract)
2. Kim, B., Baker, B. (2017) Leveraging School Finance Research to Increase Education Equity and Opportunity for All Students. William T. Grant Foundation ($200,000)

2016

3. Levin, J., Baker, B.D. et al. (2016) Evaluation of "Commensurate Funding" for Maryland Charter Schools. Maryland Department of Education ($36k subcontract)

2015

4. Baker, B.D. (2015-2016) Indicators of Educational Inequality in the U.S. William T. Grant Foundation ($257,039)

2014

5. Baker, B.D., Levin, J. Research to Inform the Development of a Pennsylvania Basic Education Funding Formula. William Penn Foundation ($60k)
6. Levin, J., Chambers, J., Manship, K., Baker, B.D., Goertz, M. Feasibility Study on Improving the Quality of School Level Expenditure Data. Institute for Education Sciences, U.S. Dept. of Education [RFTO No. PEPP130018]

2013

7. Baker, B.D. Poverty, Children's Health and Public School Funding. With *ChangeLab Solutions* (Oakland, CA) Funded by Robert Wood Johnson Foundation [Grant I.D. 70352] ($20,000)
8. Baker, B.D., Miron, G. Organization for Economic Cooperation and Development. Education Indicators at a Glance. (€5,000)
9. Baker, B.D., Coley, R. Understanding Child Poverty: Implications for Education Policy. Educational Testing Service ($20,000)

2011

10. Baker, B.D., DiCarlo, M. Revisiting the Age Old Question: Does Money Matter in Education? (Shanker Institute, $6000)
11. Baker, B.D., Libby, K., Wiley, K. Evaluating Financial Resources and Equity Implications of *High Flying Charter School Networks.* (National Education Policy Center & Shanker Institute, $6000)
12. Stealth Inequities: Hidden Disparities in State School Finance Systems. Center for American Progress ($17,500). With Sean Corcoran of NYU.

* Does not include reports written as expert testimony for litigation or other support (testimony, etc.) for state constitutional or federal litigation.

13. Alternative Measures of Poverty. With Jay Chambers & Jesse Levin (American Institutes for Research) and Lori Taylor (Texas A&M University). West & Midwest Regional Labs. (approx. $200k total)

2009

14. Evaluation of Undergraduate Student Degree Completion Pathways and "Cost of Attainment". University of Texas at Austin. Co-Pi with Christopher Morphew, University of Iowa, Scott L. Thomas, Claremont Graduate School & Harrison Keller, University of Texas at Austin.
15. Evaluation of Spending Patterns and Philanthropic Contributions to New York City Charter Schools. Education and the Public Interest Center. $6,000
16. Evaluation of teacher workforce and labor markets in Newark New Jersey. Funded by the Ford Foundation in collaboration with Rutgers University at Newark. Alan Sadovnik, Project Director. ($18k subcontract on $125k grant)
17. Development of an alternative indicator system for evaluating state school funding systems. *Education Law Center of New Jersey & Educational Testing Service.* Funded by the Ford Foundation. ($25k subcontract)
18. Evaluating the principal preparation pipeline for Wisconsin public schools. With Matthew Clifford (Learning Point Associates) and Carolyn Brown (Fordham University). Midwest Regional Education Lab

2008

19. Evaluating the *Costs of Private Schooling in America.* Education and the Public Interest Center. University of Colorado/Arizona State University. $4,000.

2007

20. Barnett, W.S., Baker, B.D., Bausmith, J., Burzichelli, C., J., Firestone, W., Goertz, P., Mackey, P. Evaluating the Productivity and Efficiency of New Jersey's Public Schools.
21. Changing demography of rural communities: Implications for state education policy. Funding Source: U.S. Department of Agriculture. Subcontract with Tennessee State University (Gary Peevely, PI). $54,000 subcontract (through 2009)

2006

22. Evaluating wage variation and marginal costs associated with student needs and school and district characteristics in Washington. Funding Source: Washington Education Association. Subcontract with Education Policy Improvement Center (U. of Oregon, David Conley, PI). $50,000 subcontract (included course buy-out for Spring 2006)
23. Evaluation of Hawaii's Weighted Student Funding Program. Funding Source: Hawaii Board of Education. Co-PI with Scott Thomas, U. of Georgia. $24,440 total.

2005

24. Evaluating wage variation and marginal costs associated with student needs and school and district characteristics in Wyoming. Funding Source: Wyoming Legislature. Subcontract to Lawrence O. Picus and Associates. $40,000 subcontract ($1 million + total).

2004

25. Texas School Finance Project. Funding Source: Joint Select Committee on School Finance of the Texas Legislature. Co-PI with Lori Taylor, Tim Gronberg & Dennis Jansen of Texas A&M. $30,000+ subcontract.

2002-2003

26. Design and simulation of state school finance policy options for the State of Texas. Funding Source: Texas Governor's Office. (included 50% buyout of full-year salary + 45% KU indirect)
27. Estimating Instructional Costs for Academic Programs: A resource cost model approach. Funding Source: Association for Institutional Research. Co-PI with Christopher Morphew.

$28,108 total.

F. BOOKS

TBD 1. Baker, B.D. Financing America's Schools. Harvard Education Press.

2008 2. Baker, B.D., Green, P.C., Richards, C.E. (2008) *Financing Education Systems*. Upper Saddle River, NJ: Merrill/Prentice-Hall, 448 pages

2004 3. Baker, B.D., Richards, C.E. (2004) *The Ecology of Educational Systems: Data and Models for Improvisational Leading and Learning*. Upper Saddle River, NJ: Merrill/Prentice-Hall. 280 pages.

G. JOURNAL† & LAW REVIEW‡ ARTICLES

[i] invited, [lr] law review

2017 1. Weber, M., Baker, B.D. (in press) Do For-Profit Managers Spend Less on Schools and Instruction? A national analysis of charter school staffing expenditures. *Educational Policy*

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H. BOOK CHAPTERS

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I. POLICY BRIEFS/REPORTS

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K. MANUSCRIPTS UNDER REVIEW

Journal Articles: Under Review

1. Baker, B.D., Levin, J. (under review) Rethinking "Costing Out" and the Design of State School Finance Systems: Lessons from the Empirical Era in School Finance

L. MANUSCRIPTS IN PREPARATION

Journal Articles

Book Chapters & Policy Reports

1. Baker, B.D. (in progress) How long to the point of no return? Assessing charter school expansion in U.S. cities. Economic Policy Institute

M. MONOGRAPHS & OTHER MANUSCRIPTS

Edited Compilations[§§]

Baker, B.D. (ed.) State of the States and Provinces. Annual publication of the American Educational Research Association, Special Interest Group on Fiscal Issues

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Baker, B.D. (2012) The Texas School Finance System Fails to Provide Equal Educational Opportunity to Texas Schoolchildren

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Baker, B.D. (2011) Evaluation of Colorado State School Finance System. Lobato v. State of Colorado

Baker, B.D. (2010) Evaluation of Illinois State School Finance System. CUL v. State of Illinois

Baker, B.D. (2010) Evaluation of New York State School Finance System. NY Small City Schools v. State

Baker, B.D. (2009) Evaluation of New Jersey's School Finance Reform Act. Education Law Center.

Burzichelli, C., Barnett, W.S. et al. (2008) NJDOE Resource Allocation Study.

Baker, B.D. (2007) Arizona's State School Finance Formula Fails to Guarantee Equal Educational Opportunity. *Arizona Center for Law in the Public Interest*

Baker, B.D. (2006) Estimating the Costs of Meeting Educational Outcome Standards in Illinois: A Cost Function Approach. *The Chicago Reporter: Chicago Matters*

Baker, B.D. (2006) Missouri's State School Finance Formula Fails to Guarantee Equal or Minimally Adequate Educational Opportunity to Missouri Schoolchildren. Prepared for plaintiff districts in *Committee for Educational Equality v. State*

[§§] Served as editor for professional organization collection of policy briefs

Baker, B.D., Thomas, S.L. (2006) Review of Hawaii's Weighted Student Formula. Hawaii State Board of Education.

Baker, B.D. (2005 - Fall) Nebraska's State School Finance Policy Fails to Provide Equal Opportunity for Nebraska School Children.

Baker, B.D. (2005 – Fall) Using Econometric Methods to Reconcile School-Level Economies of Scale Adjustments in the Wyoming School Funding Model. Lawrence O. Picus & Associates, North Hollywood, CA.

Baker, B.D. (2005 – Fall) Development of an Hedonic Wage Index for the Wyoming School Funding Model. Lawrence O. Picus & Associates, North Hollywood, CA.

Baker, B.D. (2005 – Fall) Commentary on the Kansas "Cost of Living Adjustment." Prepared on behalf of plaintiff districts in the case of *Montoy v. Kansas.*

Wood, C.R., Baker, B.D. (2004) Evaluation of Texas School Finance Policy. Prepared for the Attorney General of the State of Texas in the Case of *West Orange Cove v. State*

Wood, C.R, Baker, B.D. (2004) Evaluation of Missouri School Finance Policy. Report to the Missouri State Legislature.

Baker, B.D., Taylor, L., Vedlitz, A. (2003) *Measuring Educational Adequacy in Public Schools.* Report to the Texas Select Joint Committee on Education Finance.

Baker, B.D. (2003) *Evaluation of the Suitability of the Kansas School District Finance Act. Expert Testimony in the Case of Montoy v. Kansas.* Report commissioned by Husch and Eppenberger (Wichita), Somers, Robb and Robb (Newton) and Schools for Fair Funding, Inc.

Baker, B.D. (2003) *Favoring District Needs over Student Needs: The Adverse Effects of the Kansas School District Finance Act on Minority Children and Children with Disabilities.* Expert Witness Testimony in the Case of Robinson v. Kansas. Report commissioned by Husch and Eppenberger (Wichita), Somers, Robb and Robb (Newton) and Schools for Fair Funding, Inc.

Baker, B.D. (2002) *Evaluating the Performance of Private Schools Receiving Scholarship Students from the Educational Choice Charitable Trust.* Indianapolis, IN.

Baker, B.D. (2002) *The Allocation of Fiscal and Human Resources in Kansas School Districts.* Prepared under contract for United School Administrators of Kansas. Topeka, KS.

Baker, B.D. (2001) *Living on the Edges of School Funding Policy: The Plight of At-Risk, Limited English Proficient and Gifted Children.* National Center for Education Statistics, U.S. Department of Education, Washington, DC.

Baker, B.D. (2001) Expert Witness Report. Analysis and Opinions on the Suitability of the School District Finance Act. *Montoy v. State of Kansas*, No. 99-C-1788 (Shawnee County Dist. Ct.)

Invited Reports

Brant, D. (Chair), Baker, B., Ballard, B., Ferguson, L., Jones, D., Vratil, J. (Drafting Team) (2000) Final Report of the Governor's 21st Century Vision Task Force. K-12 Education: Financing for Results. Presented to Governor Bill Graves, December 1, 2000.

Other Reports/Monographs

Baker, B.D. (1997) *A Comparison of Statistical and Neural Network Models for Forecasting Educational Spending.* Doctoral Dissertation. Teachers College, Columbia University. Sponsor: Craig E. Richards.

Baker, B.D. (1995) *The Economic Health of Gifted Education in Three Northeastern States: an analysis of public school opportunities and private programs in New York, Connecticut and New Jersey.* Unpublished Manuscript. Teachers College, Columbia University (Department of Organization and Leadership). ERIC Clearinghouse on Disabilities and Gifted Education. ED 419 321.

Baker, B.D. (1995) *The Economics of Privatized Management of Public Schools: The Case of Education Alternatives and the Baltimore City Public Schools.* Unpublished Manuscript. Teachers College, Columbia University (Department of Organization and Leadership). Data analyses eventually published in "Risky Business: The Private Management of Public Schools." Economic Policy Institute. 1996.

Policy Briefs

Baker, B.D. (2002) Financing "Adequate" Educational Services in Kansas. Prepared for the Kansas Economic Policy Conference. Policy Research Institute. University of Kansas. www.pri.ku.edu

Baker, B.D. (2002) Policy Brief on State Funding for Programs for the Gifted and Talented. Prepared for the State Legislative Policy Task Force of the National Association for Gifted Children. James Gallagher, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: School Performance-Based Incentive Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: Estimating and Funding an "Adequate" Education in Kansas. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: At Risk Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (2000) Policy Brief to the Governor's Task Force on Education Finance: Policy Options for Special Education Funding. Presented to the 21st Century Vision Task Force on Public Education: Financing for Results. State of Kansas. David Brant, Chair.

Baker, B.D. (1999) Policy proposals for the future of gifted education. *Brief solicited by Council for Exceptional Children (CEC).* Prepared for Jay McIntire, Policy Specialist for Governmental Relations.

Baker, B.D. & Richards, C.E. (1998) Equal Opportunity for Gifted Urban Kids: How Vouchers Can Help.

Baker, B.D. (1997) *Chain Reaction: Bad Research, Bad Policy, Implications for the Gifted.* New York State Association for Gifted and Talented Education (AGATE). ERIC Clearinghouse on Disabilities and Gifted Education.

N. NATIONAL & INTERNATIONAL CONFERENCE PRESENTATIONS

Master Classes

Baker, B.D., Friedman-Nimz, R.C. (2002 – Spring) *Designing and Evaluating State Policies for Meeting the Needs of Gifted Children.* Annual Meeting of The Council for Exceptional Children. New York, NY.

Baker, B.D., Friedman-Nimz, R.C. (2001 – Fall) *Designing and Evaluating State Policies for Meeting the Needs of Gifted Children.* Annual Meeting of The National Association for Gifted Children. Cincinnati, OH.

*Symposia****

(2009-Spring) Symposium on Litigation. With Kevin Welner (U. Colo.), Michael Rebell (Teachers College), Bill Koski (Stanford U.), Anne Newman (Wash. U.). American Education Research Association. San Diego, CA.

(2009-Spring) Symposium on the Distribution of Title I Funding. With Kevin Welner, Kevin Carey,

*** Entire session proposed by group of authors. Competitive acceptance, but often not blind review.

Marguerite Roza and Goodwin Liu. American Education Research Association. San Diego, CA.

(2009-Spring) Symposium on Within District Resource Allocation. With Ross Rubenstein and Larry Miller (Syracuse U.), Jesse Levin (AIR)

(2008-Spring) Presidential Session: Think Tanks and Educational Research. With David Berliner, W. Steven Barnett, Walter Farrell, Alex Molar and Kevin Welner.

Baker, B.D., Fuller, E., Young, M.D., Punswick, E., Belt, C., Liu, E. (2007-Fall) Understanding Principal Labor Markets. University Council on Educational Administration. Alexandria, VA.

Baker, B.D., Elmer, D., Slagle, M., Arbuckle, L. (2007-Fall) Racial Isolation and the Costs of Providing Equal Educational Opportunity. University Council on Educational Administration. Alexandria, VA.

Baker, B.D., Oluwole, J., Ramsey, M. (2007-Fall) Legal, Conceptual and Empirical Foundations of Vertical Equity. University Council on Educational Administration. Alexandria, VA.

Ed Fuller (U.T. Austin), Bruce Baker (U. of Kansas), Michelle Young (U.T. Austin), Margaret Terry Orr (Bank Street College) (2006-Fall) Examining the Impact of Principals and Principal Preparation Programs. University Council on Educational Administration. San Antonio, TX.

Margaret Terry Orr (Bank Street College), Bruce D. Baker (U. of Kansas) and others (2006 – Spring). *Leadership Preparation and Development.* Annual Meeting of the American Educational Research Association. San Francisco, CA.

Margaret Terry Orr (Bank Street College), Bruce D. Baker (U. of Kansas) and others (2005 – Fall). *Researching the Big Picture of Leadership Preparation Programs.* Annual Meeting of the University Council on Educational Administration. Nashville, TN.

Verstegen, D.A., Jordan, T., Jordan, K.F., Cooper, B.S., Addonizio, M. (2005 – Spring) *Adequacy: It's Measurement and Conceptualization.* Annual Meeting of The American Education Finance Association. Louisville, KY.

Picus, L.O., Conley, D., Baker, B., Mathis, W. (2005 – Spring) *Conceptions of Educational Adequacy.* Annual Meeting of the American Educational Research Association. Montreal, QE.

Baker, B.D., Duncombe, W.D., Reschovsky, A., Imazeki, J., Chambers, J.G. (2004 – Spring) *Striking the Right Balance between District and Student Needs in Cost Adjustments to State Aid: Findings from Research and Implications for Policy.* Annual Meeting of The American Education Finance Association. Salt Lake City, UT.

Baker, B.D.(c), Driscoll, L., Salman, R., Huff, B., Picus, L.O. (2001 – Spring) *Unlocking the Potential of Dynamic Systems Modeling*. Annual Meeting of The American Education Finance Association. Cincinnati, OH.

Baker, B.D. (2000 – Fall) *Exploring the Equitable Distribution of Resources for Gifted Children.* In Jenkins, R.C., McIntire, J. "Exploring Directions for G/T Policies: Twenty-first Century Implications." Symposium with Mary Ruth Coleman (UNC Chapel Hill), Davis Hendricks (Pulaski County Special School District, AR), Joseph S. Renzulli (University of Connecticut, National Research Center on the Gifted and Talented). Annual Meeting of the National Association for Gifted Children. Atlanta, GA.

Baker, B.D., Richards, C.E. (2000 – Spring) *Designed to Fail: Static School Funding Formulas in Dynamic Systems.* Interactive Symposium with Allan R. Odden (University of Wisconsin), Lawrence O. Picus (University of Southern California), Scott R. Sweetland (Ohio State University), "Data, Models and Simulations for Research, Practice and Teaching in School Finance." Annual Meeting of the American Education Finance Association. Austin, TX.

Cooper, B.S., Cilo, M.R., Baker, B.D. (2000-Spring) *Applying the Concept of K-16 Education in NYC: Bridging the Methodological Gaps between Schools and Colleges.* Symposium with Michael Kirst (Stanford University), Margaret Terry Orr (Teachers College), Sheri Ranis (Social Science Research Council), Deborah Sullivan (American Institutes for Research), Debra Bragg (University of Illinois), Donna Dare (University of

Illinois), David Brennaman (University of Virginia), Richard Hasselbach (CUNY), "Beyond High School: Negotiating the School-to-College Transition into the 21st Century."Annual Meeting of the American Educational Research Association, Division J. New Orleans, LA.

Paper Sessions

Baker, B.D. (2012 – Spring) Exploring the depth, breadth and drift of curricular offerings across school districts facing varied resource constraints. Association for Education Finance and Policy. Boston, MA. http://aefpweb.org/sites/default/files/webform/Baker.AEFP_.NY_IL.Unpacking.Jan_2012.pdf

Levin, J., Chambers, J., Blankenship, C., Taylor, L., Baker, B. (2012 – Spring) Towards a More Accurate Measure of Student Poverty: An Alternative Method for Calculating Cost-Adjusted Poverty. Association for Education Finance and Policy. Boston, MA.

Baker, B.D. (2011-Spring) Cheerleading, Ceramics and Inefficiency in High Poverty Schools: Are low performing school districts simply squandering resources on "non-essential" services? American Education Research Association. New Orleans

Baker, B.D., Peevely, G., Harrison, R. (2010-Spring) Competitive Wages and the Distribution of Teachers Across Demographically Diverse Micropolitan Schools. American Education Research Association.

Fuller, E., Young, M., Baker, B. (2009 - Spring) School Leadership, Entrance, Attrition and Migration. American Education Research Association. San Diego, CA.

Clifford, M., Brown, C., Baker, B. (2009 - Spring) The Relationship between Principals Attributes, School Level Teacher Quality and Turnover. American Education Research Association. San Diego, CA.

Peevely, G., Baker, B., Smith. S. (2009- Spring) Education and the Black Belt: The Need for Additional Capacity. American Education Research Association. San Diego, CA.

Baker, B.D., Ramsey, M. (2009-Spring) Census based funding in special education: Can it really provide equity for children with disabilities? American Education Research Association. San Diego, CA.

Baker, B. (2008-Spring) Wage Adjustments in State School Finance Policy: Doing more harm or good? American Educational Research Association. NY, NY.

Killeen, K, Baker, B. (2008-Spring) Addressing the moving target: Should measures of student mobility be included in education cost studies. American Educational Research Association. NY, NY.

Slagle, M., Yan, B., Baker, B.D. (2008-Spring) A Geographically Weighted Regression Approach for Explaining Spatial Variation Among School Districts in Education Demand. American Educational Research Association. NY, NY.

Fuller, E., Baker, B.D., Young, M.D. (2008-Spring) Examining the effect of school leaders and their preparation on teacher quality and student achievement. American Educational Research Association. NY, NY.

Baker, B. (2008-Spring) Within district budgeting policy and the allocation of resources across schools: What do we really know? American Education Finance Association, Denver, CO.

Slagle, M., Yan, B., Baker, B.D. (2008-Spring) A Geographically Weighted Regression Approach for Explaining Spatial Variation Among School Districts in Education Demand. American Education Finance Association, Denver, CO.

Punswick, E., Baker, B. (2008-Spring) Principal Backgrounds and School Leadership Stability: Evidence from Flyover Country. American Education Finance Association, Denver, CO.

Baker, B. (2007-Spring) The Politics of Teacher Wage Adjustments in State School Finance Policies. American Education Finance Association. Baltimore, MD.

Killeen, K, Baker, B. (2007-Spring) On the move: Evaluating the impact of measures of student population transiency on district level costs of improving educational outcomes. American Education Finance Association. Baltimore, MD.

Fuller, E., Young, M.D., Baker, B.D. (2007-Spring) Career Paths and the Influence of School Principals on Teachers. American Educational Research Association Chicago, IL

Baker, B.D. (2007-Spring) Black-White Funding Disparities in America's Major Metropolitan Areas: Implications for Teacher Labor Markets. American Educational Research Association Chicago, IL

Baker, B.D., Green, P.C. (2007-Spring) Evaluating the Effect of Racial Isolation on the Cost of Educational Outcomes in Two Midwestern States. American Educational Research Association Chicago, IL

Baker, B.D., Thomas, S.L. (2007-Spring) Toward what end? Comparing the costs of producing adequate test scores with the costs of improving college matriculation. American Educational Research Association Chicago, IL

Baker, B.D., Green, P.C. (2006-Fall) Black-White Funding Disparities in America's Major Metropolitan Areas. University Council on Educational Administration. San Antonio, TX.

Ng, J.C., Baker, B.D. (2006-Spring) Big Changes in Small Town America: A macro level analysis of micropolitan schooling. Annual Meeting of the American Educational Research Association. San Francisco, CA.

Slagle, M., Baker, B.D. (2006 – Spring) Application of Local Indicators of Spatial Association Modeling to Missouri Teacher Wages. Annual Meeting of the American Education Finance Association.

Baker, B.D., Green, P.C. Goin' to Kansas City: A critical empirical analysis of the *Urban Legends* of the aftermath of *Missouri v. Jenkins.* (2005 – Fall) Annual Meeting of the University Council on Educational Administration. Nashville, TN.

Morphew, C.C., Baker, B.D. (2005 – Spring) Sibling Rivals: Conceptualizing the Relationship between K-12 and Postsecondary Finance at the State Level. Annual Meeting of the American Educational Research Association. Montreal, QE.

Baker, B.D., Green, P.C. (2005 – Spring) The Re-Measurement of Equity (and Adequacy) in School Finance. Annual Meeting of the American Educational Research Association. Montreal, QE.

Morphew, C.C., Baker, B.D. (2005 – Spring) Sibling Rivals: Conceptualizing the Relationship between K-12 and Postsecondary Finance at the State Level. Annual Meeting of the American Education Finance Association. Louisville, KY.

Baker, B.D., Green, P.C. (2005 – Spring) The Re-Measurement of Equity (and Adequacy) in School Finance. Annual Meeting of the American Education Finance Association. Louisville, KY.Baker,

B.D., Green, P.C. (2004 – Fall) Race as a "Plus Factor" in School Finance Policy. Annual Meeting of the American Education Finance Association. Louisville, KY.

Baker, B.D., Green, P.C. (2004 – Fall) Race as a "Plus Factor" in School Finance Policy. Annual Meeting of the University Council on Educational Administration. Kansas City, MO.

Baker, B.D., Wolf-Wendel, Lisa E. (2004 – Fall) Exploring the Faculty Pipeline in Educational Administration: Evidence from the Survey of Earned Doctorates 1990 to 2000. Annual Meeting of the University Council on Educational Administration. Kansas City, MO.

Baker, B.D., Keller, H. (2004 – Spring) A Systematic Approach to Computer Simulation Development in School Finance: Application to the State of Texas. Annual Meeting of The American Education Finance Association. Salt Lake City, UT.

Wolf-Wendel, L.E., Baker, B.D., Twombly, S., Mahlios, M. (2004 – Spring) Who's Teaching the Teachers? An empirical analysis of predictors of doctoral degree attainment and faculty placement in teacher education. Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D., Markham, P. (2004 – Winter) A Comprehensive Legal and Empirical Framework for Evaluating State Financial Aid for the Provision of Services to English Language Learners. Annual Meeting of the National Association for Bilingual Education (NABE). Albuquerque, NM.

Baker, B.D., Green, P.C., Fusarelli, L. (2003 – Fall) Tricks of the Trade: Legislative Actions in School Finance that Disadvantage Minorities in the Post-Brown Era. Annual Meeting of the University Council on Educational Administration. Portland, OR.

Baker, B.D. (2003 – Fall) Principals' Academic Preparation and Experience and the Distribution of Quality Teachers? Evidence from the Schools and Staffing. Annual Meeting of the University Council on Educational Administration. Portland, OR.

Baker, B.D. (2003 – Spring) *The Collapse of the Kansas School District Finance Act*. Symposium on the Sate of the States and Provinces. Annual Meeting of The American Educational Research Association. Chicago, ILL.

Morphew, C & Baker, B.D. (2003 – Spring) *Measuring the Costs to Baccalaureate Degree Attainment: A Resource Cost Model Approach.* Annual Meeting of The Association for Institutional Research. Tampa, FL.

Baker, B.D. & Morphew, C (2003 – Spring) *Measuring the Costs to Baccalaureate Degree Attainment: A Resource Cost Model Approach.* Annual Meeting of The American Education Finance Association. Orlando, FL.

Green, P.C. & Baker, B.D. (2002 – Spring) *Circumventing Rodriguez: Alternatives for Seeking Federal Solutions to State School Finance Inequities.* Annual Meeting of The American Educational Research Association. New Orleans, LA.

Baker, B.D. (2002 - Spring) *Living on the Edges of School Funding Policy: The Plight of At-Risk, Limited English Proficient and Gifted Children.* Annual Meeting of The American Educational Research Association. New Orleans, LA.

Baker, B.D. (2002 – Spring) *Estimating the Adequacy and Effects of State Aid Allocations for Gifted, Limited English Proficient and At Risk Students.* Annual Meeting of The American Education Finance Association. Albuquerque, NM.

Baker, B.D. (2002 – Spring) *Determinants of Within and Between State Differences in the Internal Allocation of District Resources: Evidence from the Common Core of Data.* Annual Meeting of The American Education Finance Association. Albuquerque, NM.

Baker, B.D., Richards, C.E. (2001 - Spring) *Unlocking the Potential of Dynamic Systems Modeling in School Finance*. Proposal for a Demonstration/Consultation Session. SIG - Fiscal Issues. Annual Meeting of The American Educational Research Association. Seattle, WA.

Morphew, C.C., Baker, B.D. (2001 - Spring) *The Administrative Lattice and the New Research I Universities.* Division J – Higher Education. Division J. Annual Meeting of The American Educational Research Association. Seattle, WA.

Baker, B.D., Friedman-Nimz (2001 - Spring) *State Policy Influences Governing Equal Opportunity: The Example of Gifted Education.* American Education Finance Association Annual Meeting. Cincinnati, OH.

Baker, B.D., Green, P.C. (2001 - Spring) *Challenging School Finance Policy as Civil Rights Violation: The Application of Title VI to School Finance in Kansas.* American Education Finance Association Annual Meeting. Cincinnati, OH.

Baker, B.D. (2000-Spring) *Challenging Opportunities in Fiscally Challenged Schools?* Annual Meeting of the American Education Finance Association. Austin, TX.

Baker, B.D. (1999-Spring) *Searching for a "Rational Educational Explanation" for Spending Differences in Kansas Schools.* Annual Meeting of the American Education Finance Association. Seattle, WA.

Baker, B.D. (1999-Spring) *A Comparison of Linear and Non-linear Models for Testing the Sensitivity of Cost to Different Performance Expectations.* Annual Meeting of the American Education Finance Association. Seattle, WA.

Baker, B.D. (1999-Spring) *Effort, Burden, What do They Really Mean? Testing the Fairness of Formula Alternatives for Vermont.* Annual Meeting of the American Education Finance Association. Seattle, WA.

Baker, B.D. (1999-Spring) *Predicting the Cost of High Performance: A Sensitivity Simulation Using GMDH Neural*

Networks. Annual Meeting of the American Educational Research Association. Division L. Montreal, Quebec.

Baker, B. D., Keller-Wolf, C., Wolf-Wendel, L. (1999-Spring) *Dispelling Myths through Disaggregation: The relationship between race/ethnicity and student achievement.* Annual Meeting of the American Educational Research Association. Montreal, Quebec.

Baker, B.D. (1998-Fall) *Systems Thinking Applied: Moving Beyond Conversation with ITHINK.* Annual Meeting of the University Council on Educational Administration. St. Louis, MO.

Baker, B.D. (1998-Fall) *Enhancing our Understanding of the Complexities of Education: "Knowledge Extraction from Data" Using Neural Networks.* Annual Meeting of the University Council on Educational Administration. St. Louis, MO.

Wolf-Wendel, L., Baker, B.D., Morphew, C. (1998-Fall) *Dollars & $ense: Resources and the Baccalaureate Origins of Women Doctorates.* Annual Meeting of the Association for the Study of Higher Education. Miami, Florida.

Baker, B.D. (1998-Spring) *A Comparison of Linear and Flexible Non-Linear Regression Methods for Forecasting Educational Spending.* Annual Meeting of the American Education Finance Association. Mobile, Al.

Baker, B.D. (1998-Spring) *An Inductive Approach to Production-Function Modeling: A Comparison of Group Method of Data Handling (*GMDH*) and Other Neural Network Methods.* Annual Meeting of the American Education Finance Association. Mobile, Al.

Baker, B.D., Richards, C.E. (1997-Spring) *Equity Through Vouchers: The Special Case of Gifted Education.* Annual Meeting of the American Education Finance Association. Jacksonville, FL.

Richards, C.E., Baker, B.D., Cilo, M. (1996-Spring) *Is Privatization More Efficient? The Case of Education Alternatives inc. in Baltimore.* Annual Meeting of the American Educational Research Association. New York, NY.

Roundtables

Wolf-Wendel, L.E., Twombly, S., Baker, B.D. (2006 – Spring) Pathways to the Professoriate in Educational Administration: Are they different for men and women? Annual Meeting of the American Educational Research Association. San Francisco, CA.

Baker, B.D., Lacireno-Paquet, N. (2005 – Fall) Do the Smarter Kids get the Smarter Teachers? Evidence from the Schools and Staffing Survey on Teacher Sorting and Selective Magnet and Charter Schools. Annual Meeting of the University Council on Educational Administration. Nashville, TN.

Baker, B.D., Cooper, B.S. (2004 – Spring) Do Principals with Stronger Academic Backgrounds Hire Better Teachers? Policy Implications for High Poverty Schools. Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D., Dickerson, J. (2004 – Spring) Charter Schools and State Policies Regarding Teacher Certification: Using flexibility for "good" or "evil?" Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D. (2001 – Spring) *The State of School Finance in Kansas: State of the States Roundtable Series.* Annual Meeting of The American Educational Research Association. SIG - Fiscal Issues. Seattle, WA.

Reis, S.B., Baker, B.D., Pewewardy, C., Tippeconnic, J. (1999-Spring) *The Federal Government's Responsibility for Indian Education in an Era of Self-Determination.* Annual Meeting of the American Educational Research Association. SIG - Indian Education. Montreal, Quebec.

Baker, B.D. (1998-Spring) *Production-Function What's Your Function? A closer look at how the complexities of educational productivity evade traditional analytical techniques, and some new solutions.* Annual Meeting of the American Educational Research Association. San Diego, CA.

Baker, B.D., Richards, C.E. (1998-Spring) *Exploratory Application of Neural Networks to School Finance: Forecasting Educational Spending.* Annual Meeting of the American Educational Research Association. San Diego, CA.

O. OTHER PROFESSIONAL PRESENTATIONS

Guest Lectures

2002 (Fall) 2002 Kansas Economic Policy Conference: At the Crossroads: Can Kansas Afford its Future? Policy Research Institute of the University of Kansas, Lawrence.

2002 (Fall) State Policies, Educational Efficiency and the Internal Allocation of School District Resources. Southwest Educational Development Laboratory (SEDL) Annual Policy Conference. Little Rock, AR.

2002 (Summer) Simulation Modeling in School Finance. Fordham University Summer Institute on School Finance. Coordinator, Bruce S. Cooper.

2002 (Spring) Alternatives for Funding Special Education in Kansas. Kansas Special Education Advisory Committee. Topeka, KS.

2001 (Fall): School Finance in Kansas. School of Education Research Roundtable. University of Kansas.

2000 (Summer) Evaluation & Critique of Kansas School Finance Policy. To the Governor's Task Force on "K – 12 Education: Financing for Results."

1998 (Fall): School Finance Equity in Kansas. School of Education Symposium. University of Kansas.

1998 (Spring): State of the States Roundtable. Annual Meeting of the American Education Finance Association. Mobile, Al. *Invited*

1998 (Spring): Equity and Adequacy in Education. Invited presentation to graduate seminar on Economics and Education. University of Kansas (Coordinator: Barbara Phipps) *Invited*

1997 (Summer): *A Comparison of Statistical and Neural Network Models for Forecasting Educational Spending*. Research Seminar: The RAND Corporation.

1996 (Spring): Technology in the Science Classroom: Using Computers to Develop Analytical Reasoning Skills. NJ Association for Gifted Children Annual Conference (Princeton, NJ)

1995 (Summer): Report on the Economic Health of Gifted Education in the Northeast. An invited roundtable presentation to the elected chairs of the state associations of New Jersey, Connecticut, New York and Massachusetts.

1995 (Spring): Integrating technology into science through projects involving data collection and analysis. College Gifted Day (Montclair State University, NJ)

1994 (Spring) Overview of School Finance Policy in the United States. Korean Ministry of Education. An invited presentation at Teachers College, Columbia University.

1989 (Spring) Developing Scientific Research Projects with Gifted High School Students. Connecticut State Update Conference on Gifted Education. Southern Connecticut State University (New Haven, CT)

P. SERVICE PRESENTATIONS

Special Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Jeannie Trammel. Spring, 2003.

Financing an Adequate Education in Kansas. Lawrence Business Education Partnership. January, 2003.

Financing an Adequate Education in Kansas. Lawrence – Douglas County League of Women Voters.

November, 2002.

Evaluation of Augenblick & Myers Study on "The Cost of a Suitable Education in Kansas." Presented to the Governors Task Force. August 23, 2002.

Education Finance in Kansas. Invited presentation, University of Kansas Media Tour. Lawrence, KS. Fall, 2001.

Understanding Gifted Education Policy. Invited presentation, Gifted Education Advocacy Conference. Overland Park, KS. Summer, 2001.

Special Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Jeannie Trammel. Spring, 2000.

Special Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Jeannie Trammel. Spring, 1999.

Overview of Education Finance Policy. Invited Lecture, University of Kansas. Coordinator - Barbara Phipps. Spring, 1998.

Q. OTHER GRANTS

External: Not Awarded

Baker, B.D., (PI) The Influence of Resource Progressiveness on Achievement Gaps within Major Metropolitan Areas and Large Urban School Districts. Funding Source – Institute for Education Sciences, U.S. Dept. of Education ($89,907 for one year, commencing Summer 2007)

Baker, B.D., (PI) The Influence of Resource Progressiveness on Teacher Labor Markets within Major Metropolitan Areas and Large Urban School Districts. Funding Source – Institute for Education Sciences, U.S. Dept. of Education ($143,303 for two years, commencing Summer 2007)

Baker, B.D. (Subcontractor) Career Paths and Influence of School Administrators. PI – Michelle D. Young, University of Texas at Austin. Funding Source – Institute for Education Sciences, U.S. Dept. of Education (Subcontract = $40,045 for two years, commencing Summer 2007)

External: Awarded Small Grants

Baker, Bruce D. (PI) *Exploring the Rationality of State Aid for Fringe Populations: Evidence from the Common Core of Data.* 2001 NCES/AEFA New Scholars Program. ($5,000)

Baker, Bruce D.; Hatley, Richard.; Arney, Lynn. (Spring - 1998) *Technology for Effective Educational Leadership.* Regional Consortia Grants. University Council on Educational Administration. ($1,000)

Internal: Awarded

Baker, B.D. (2003 – Summer) Understanding the Nexus Between State Policies, Education Governance and Teacher Labor Markets. University of Kansas Policy Research Institute (Research Fellow).

Friedman-Nimz, R.C., Baker, B.D. (2001 - Summer) Estimating the Resource Costs of Opportunities for Gifted Children. Graduate Research Fund. ($10,000)

Baker, B.D., Friedman, R.C. (2000 - Summer) Assessing Resource Equity: Social Status and the Availability of Opportunities for Gifted Children. Graduate Research Fund (Award: $11,979)

Baker, Bruce D., Pewewardy, Cornel. (Spring - 1998) *Financing Indian Education in an Era of Self Determination.* New Faculty General Research Fund Grants, University of Kansas Center for Research. ($5,000)

R. OTHER CONSULTANCIES & CONTRACTED RESEARCH

2012: NEPC – Evaluating expenditures of charter schools in New York City, Texas and Ohio

2010: NEPC – Evaluating expenditures of New York City charter schools

2008: EPIC/Great Lakes Center - Evaluating expenditures of private schools

2008: National Research Council. National Academy of Sciences. Evaluation of methods for costing out common education standards. With Lori L. Taylor and Arnold Vedlitz.

2006 – Present: CG & SB v. Commonwealth of Pennsylvania

2007: Arizona Center for Law in the Public Interest

2006: NY State Office of the Attorney General

2004: Education Week – Quality Counts 2005. Consultant on feature article on *Educational Adequacy* ($2.5k)

2004: Expert witness for the State of Texas, Attorney General. *West Orange Cove Consolidated Independent School District et al. v. Nelson, et al.* ($12k subcontract)

2004 – Present: Expert witness for plaintiff districts in *Committee for Educational Equality, et al. v. State.* Husch & Eppenberger, Jefferson City.

2004 – Present: Expert witness for plaintiff districts in *Douglas County School District v. Heineman.* Baird, Holm, McEachen, Pedersen, Hamann & Strasheim, LLP, Omaha.

2002 (Spring - Summer) Project consultant to Southwest Educational Development Laboratory (SEDL). Zena Rudo, Project Coordinator. ($1.5k)

2002 (Spring – Summer) Evaluation of Student Gains in CHOICE Schools in Indianapolis. Educational Choice Charitable Trust. Tim Ehrgott, Project Coordinator. ($9k)

2001 - 2002 (Winter) Analysis of the Allocation of Fiscal and Human Resources in Kansas School Districts. United School Administrators of Kansas. Brilla Highfill-Scott, Project Coordinator. ($2k)

2001 (Summer). Analysis of State Funding Programs for Limited English Proficient Students. Project Director: Paul Markham, University of Kansas.

2001 (Winter - Present). Expert Witness for plaintiffs in case of *Robinson v. State of Kansas* (U.S. Dist. Ct. Case No. 99-1193-MLB). The federal case charges that the current Kansas school funding formula (a) violates the enactment provisions of Title VI of the Civil Rights Act of 1964 by creating disparate impact by race, ethnicity or national origin (b) violates the Americans with Disabilities Act by creating disparate impact on students with disabilities and (c) violates equal protection. Attorneys for the plaintiffs: John Robb of Somers, Robb & Robb, Newton, KS and Alan Rupe of Husch & Eppenberger, LLC, Wichita, KS.

2001 (Winter – Present). Expert Witness for plaintiffs in case of *Montoy v. State of Kansas* (No. 99-C-1788 (Shawnee County Dist.Ct.). The state case charges that the current Kansas school funding formula does not meet the state's constitutional requirement of providing for a "suitable" system of public education. Attorneys for the plaintiffs: John Robb of Somers, Robb & Robb, Newton, KS and Alan Rupe of Husch & Eppenberger, LLC, Wichita, KS.

1999 (Winter). Statistical Consultant, Mayor's Advisory Task Force on the City University of New York. Provided support on statistical analysis of predictors of remedial needs for students moving from NYC k-12 public schools to the City University system for *Bridging the Gap Between School and College: A Report on Remediation in New York City Education.* Commission Chair: Benno Schmidt. Research Project Coordinator: Miriam Cilo. Collaborating Researcher: Bruce S. Cooper, Fordham University.

1999 (Winter). Policy Consultant, Council for Exceptional Children. Prepared policy briefs for Council for Exceptional Children in support of federal legislation for gifted education. Briefs requested by Jay

McIntire, Policy Specialist for Governmental Relations, Department of Public Policy, CEC.

1996 – 1997. Research Assistant, Department of Organization and Leadership. Teachers College of Columbia University. NY, NY. Assistant to Dr. Craig E. Richards on *Developing Multidimensional Computer Simulations for Strategic Planning in Education* supported by an internal grant from Teachers College for curriculum development.

1994 – 1995. Research Assistant, Department of Educational Administration (Teachers College) & Economic Policy Institute. Assistant to Dr. Craig E. Richards on a grant from the Economic Policy Institute. Analyzed contractual issues and finances of Education Alternatives Inc. in Baltimore for a book titled Risky Business: Private Management of Public Schools.

S. EXPERT WITNESS TESTIMONY BY CASE

2010 – Present: *CCJEF v. State of Connecticut*

Reports Submitted - 2011 & 2013

Trial Testimony - February 2016

2009 – Present: *Maisto v. New York*

Trial Testimony - March 2015

Reports Submitted - 2011 & 2013

2012- ????: *Texas Taxpayer & Student Fairness Coalition v. Scott*

Position: The Texas school finance system fails to provide equal educational opportunity to Texas schoolchildren

Report Submitted – August, 2012

Deposition Taken – October, 2012

Trial Testimony – November, 2012

2012 – 2012: *Chester Upland School District v. Commonwealth of Pennsylvania*

Position: The Pennsylvania special education finance formula and charter school funding formula arbitrarily and capriciously disadvantage CUSD

Report Submitted – May 2012

Trial Testimony – May 2012

Eastern District Court of Pennsylvania (Federal)

2011 – ????: *Gannon v. Kansas*

Position: Plaintiffs against state on question of whether finance formula complies with judicial order in Montoy v. Kansas

Report Submitted – November, 2011

Deposition Taken – December, 2011

Trial Testimony – June, 2012

Shawnee County District Court (Kansas)

2010 – 2011: *Lobato v. State of Colorado*

Position: Plaintiffs against state on question of whether Colorado school finance formula complies with equity and adequacy provisions of state constitution.

Report Submitted – March 17, 2011

Deposition Taken – June 22, 2011

Trial Testimony – August 5, 2011

Contact, Kathleen Gebhardt, kgebhardt@childrens-voices.org

2009 – Present: *Chicago Urban League v. Illinois State Board of Education*

2009: *Abbott v. Burke*

Position: Plaintiffs against state on question of whether process used to derive School Finance Reform Act establishes sufficient link between mandated outcomes and resources needed for children attending high poverty urban districts.

Report Submitted - Jan 21, 2009

Deposition Taken - Jan 30, 2009

Trial Testimony - Feb 20, 2009

Contact: David Sciarra, Education Law Center, Newark, NJ.

2008 – Present: *C.G. vs. Commonwealth of Pennsylvania*

Position: Plaintiffs against state on question of inequities arising from census based financing of special education

Report Submitted - Dec 1, 2008

Contact: Evalynn Welling, Community Justice Project. Pittsburgh, PA.

Middle District Court of Pennsylvania (Federal)

2007 – 2008: *Espinoza v. State of Arizona*

Position: Plaintiffs against state on question of whether Arizona school funding formula provides equal educational opportunity for poor and non-English speaking children

Report Submitted - Fall 2007

Deposition Taken - Fall 2007

Trial Testimony - Summer 2008

Contact: Tim Hogan, Arizona Center for Law in the Public Interest. Phoenix, AZ.

2004 – 2007: *Committee for Educational Equality, et al. v. State of Missouri* [04CV 323022]

Position: Plaintiffs against state on question of whether Missouri school funding formula provides equal educational opportunity for poor and minority children

Report Submitted - Fall 2006

Deposition Taken - Fall 2006

Trial Testimony - Winter 2007

Contact: Alex Bartlett, Husch-Blackwell-Sanders. Jefferson City, MO.

2004 – Present: *Douglas County School District v. Heineman (Nebraska)*

Position: Plaintiffs against state on question of whether Nebraska school funding formula provides equal educational opportunity for poor and minority children

First Report Submitted - Fall 2005

Supplemental Report Submitted - Fall 2007

Deposition Taken - Winter 2008

Contact: Jill Robb Ackerman, Baird Holm Law Firm. Omaha, NE.

2003 – 2006: *Montoy v. Kansas.* No. 92,032

Position: Plaintiffs against state on question of whether Kansas school funding formula provides equal educational opportunity or educational adequacy for poor and minority children

First Report Submitted - Spring 2003

Additional Reports Submitted - Through 2006
Deposition Taken - Spring/Summer 2003
Trial Testimony - Fall 2003
Contact: Alan Rupe, Kutak Rock. Wichita, KS.

2003 – 2005: *Robinson v. Kansas.* 295 F.3d 1183
First Report Submitted - Winter 2003
Deposition Taken - Spring/Summer 2003
Contact: Alan Rupe, Kutak Rock. Wichita, KS.

T. PROFESSIONAL ORGANIZATIONS & SERVICE

National

2009 – Present: NEA Task Force on Indicators
2007 – Present: UCEA Task Force on Leadership Preparation.
2005 – Fall: Nominating Committee for candidates for the Executive Committee of University Council on Educational Administration.
2005 – Spring: AERA Division A Dissertation Award Committee
2003 – 2004: Program Chair - AERA Special Interest Group: Fiscal Issues and Policy
2002 – 2003: Member – State Policy Task Force, National Association for Gifted Children
2002 – 2003: Chair - AERA Special Interest Group: Charter Schools Research and Evaluation
2000 – 2002: Secretary/Treasurer - AERA Special Interest Group: Charter Schools Research and Evaluation.
2000 - Present: Webmaster - AERA Special Interest Group: Charter Schools Research and Evaluation. www.csre.org
1997 - Present: Plenum Representative, University Council on Educational Administration
1996 - Present: Member, American Educational Research Association (Divisions A & L)
1996 - Present: Member, American Educational Finance Association

Regional

1998: Coordinator: Technology for Effective Educational Leadership. Regional UCEA Seminar on the uses of Computer Technology for 1) Information Management 2) Content Delivery and 3) Decision Making Analysis. (Postponed)

State

2002: Governor's (Bill Graves) Vision 21st Century Task Force. Member of the subcommittee on *K-12 Education: Financing for Results.* Task Force Chair: Lieutenant Governor Gary Sherrer.
2000: Governor's (Bill Graves) Vision 21st Century Task Force. Member of the subcommittee on *K-12 Education: Financing for Results.* Task Force Chair: Lieutenant Governor Gary Sherrer.

University

2003 – 2008: Executive Committee, Graduate Council
2000 – 2008: Graduate Council
2001 (Spring) - Reviewer for Graduate Teaching Assistant awards

School

2004 – Present: Personnel Committee

Department

1998 – 2000: Personnel Committee

1998 – Present: Faculty Representative to KAW Valley Purchasing Coop.
1997 – 1999: Member, T&L Operations Committee
1997 – 1998: Ad-Hoc Planning Team, Instructional Leadership Program

U. EDITORIAL RESPONSIBILITIES

Editorial Boards

Journal of Education Finance. Editor: James Gordon Ward. Association of School Business Officials International
Journal of Education Finance and Policy. Editors: David Monk & David Figlio. MIT Press.
2001 – 2003 Leadership and Policy in Schools

Journal Reviewer

Teachers College Record
Leadership and Policy in Schools
Journal of Education Finance
Education Finance & Policy
Education Policy Analysis Archives
Educational Evaluation and Policy Analysis
Economics of Education Review
Educational Administration Quarterly
Journal of Statistics Education (2003)

Grant Reviewer

William T. Grant Foundation (2009)

Policy Review Panels†††

National External Policy Review Panel (Kevin Welner, Coordinator)
Texas School Finance Project 2005
School Finance Redesign Project (http://www.schoolfinanceredesign.org/)

V. TEACHING AND ADVISING

Doctoral Dissertations as Chair

University of Kansas

Brian Huff (2002) Systems modeling for integrated fiscal planning in education
Michael Sullivan (2004) The allocation of resources in Catholic schools
Pamela Best (2005) Benefit-cost analysis of the Kansas Computerized Assessment (KCA): Implications for equity and cost-effectiveness in the allocation and use of educational resources
Paul Wooten (2006) The impact of business and industry tax appeals on education funding in Missouri
Michele Norman (2006) How much leave do school employees utilize? An analysis of sick leave policies and their relationship to the amount of leave used by school employees in Missouri public schools
Carolyn Carlson (2007) An examination of secondary reading specialists: Demographic, training, and employment characteristics

††† Involve academic review of policy proposals and related policy research

Mike Slagle (2007) A geographically weighted regression approach for explaining spatial variation among school districts in a median voter model of education demand
Eric Punswick (2008) Elementary principals' backgrounds, stability, moves, and departures: Evidence from Iowa, Minnesota, Missouri, and Wisconsin

University of Kansas (while at Rutgers)

Charles Belt (2010) Factors affecting principal turnover: A study of three Midwestern cities (co-chaired with Mickey Imber)
Craig Correll (2010) Principal participation in induction programs: Evidence from the Schools and Staffing Survey
Gretchen Anderson (2010) The effect of participation in teacher induction and mentor programs and the assignment of mentor teacher on the satisfaction and retention of new teachers (co-chaired with Marc Mahlios)

Rutgers University

Rich, A. (2014) The Intervention and Referral Process: Purpose, Uses, and Implications
Palmieri, J. R. (2014). 21st century girls' schools: for what reasons are new independent girls' schools opening in the United States? (Doctoral dissertation, Rutgers University-Graduate School of Education).

Gristina, M. (2014). A descriptive analysis of the principalship in New Jersey, 1996-2011 (Doctoral dissertation, Rutgers University-Graduate School of Education).

Kolu, M. K. (2014). A longitudinal analysis of New Jersey school superintendents, their professional profiles and career paths (Doctoral dissertation, Rutgers University-Graduate School of Education).

Kirk, K. L. (2013). Personnel allocation in middle schools in the state of New Jersey: an examination of school context, accountability pressure, and teacher assignments (Doctoral dissertation, Rutgers University-Graduate School of Education).

Casarico, P. (2013). Factors affecting the distribution and access to athletic opportunities for New Jersey high school students (Doctoral dissertation, Rutgers University-Graduate School of Education).

Zengel, S. (2010). An analysis of athletic expenditures in New Jersey schools (Doctoral dissertation, Rutgers, The State University of New Jersey).

Doctoral Dissertations as Committee Member

Yuan Hong (2010) A comparison among major value-added models: A general model approach
Brian Smith (2005) An investigation of the use of canine searches in Kansas high schools
Darrell Stufflebeam (2005) Suspicionless drug testing of students in Kansas public schools
Jean McCally (2004) Educational administration doctoral recipients in the state of Kansas and their pursuit of the superintendency: A study of gender differences
Helen Jenkins (2003) A study of risk management practices in K--12 Kansas school districts
Frank Jones (2003) Endowed teaching chairs at independent schools: Two case studies
Scott Strawn (2003) Herding cats with carrots and sticks: Performance funding, governance structures and faculty productivity
Christine Keller-Wolf (2003) Moving forward or standing still? Progress in achieving wage equity for women faculty in the 1990s
Jill Smith (2003) Reference checking and reference giving practices of Kansas school districts: A legal analysis

Todd Covault (2001) Early retirement incentive programs in Kansas school districts: Issues of compliance with state and federal law
Glenn Walker (2000) The effect of block scheduling on mathematics achievement in high and low SES secondary schools

ATTACHMENT B

```
 1 . ****Import Performance High Schools****
         name:   <unnamed>
          log:   E:\Current Work\C1a-Chicago Litigation\CPS\bbaker_cps_schoolacctblty_2.10.17.smcl
     log type:   smcl
    opened on:    9 Feb 2017, 09:40:45

 2 .
 3 . ****Import Performance High Schools****
 4 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("High 2013") cellrange(A2:CV516) firs

 5 . rename e probation_status

 6 . label var f level

 7 . rename f level

 8 . rename totalpercentofpossiblepoints pct_possible

 9 . rename totalpointsreceived tot_points

10 . rename totalpointspossible tot_possible

11 . rename psaecomp psae_composite

12 . rename k act

13 . rename l act_l1

14 . rename m act_l2

15 . rename n act_l3

16 . rename currentstatus act_status

17 . rename trend act_trend

18 . rename currentstatuspoints act_points

19 . rename currentstatuspointspossible act_possible

20 . rename trendpoints act_trend_pts

21 . rename trendpointspossible act_trend_possible

22 . rename u dropout

23 . rename v dropout_l1

24 . rename w dropout_l2

25 . rename x dropout_l3

26 . rename y dropout_status

27 . rename z dropout_trend
```

```
28 . rename aa dropout_points
29 . rename ab dropout_possible
30 . rename ac dropout_trend_pts
31 . rename ad dropout_trend_possible
32 . rename ae freshman
33 . rename af freshman_l1
34 . rename ag freshman_l2
35 . rename ah freshman_l3
36 . rename ai freshman_status
37 . rename aj freshman_trend
38 . rename ak freshman_points
39 . rename al freshman_possible
40 . rename am freshman_trend_pts
41 . rename an freshman_trend_possible
42 . rename ao attend
43 . rename ap attend_l1
44 . rename aq attend_l2
45 . rename ar attend_l3
46 . rename as attend_status
47 . rename at attend_trend
48 . rename au attend_points
49 . rename av attend_possible
50 . rename aw attend_trend_pts
51 . rename ax attend_trend_possible
52 . rename ay psae_read
53 . rename az psae_read_l1
54 . rename ba psae_read_l2
55 . rename bb psae_read_l3
```

```
56 . rename bc psae_read_status
57 . rename bd psae_read_trend
58 . rename be psae_read_points
59 . rename bf psae_read_possible
60 . rename bg psae_read_trend_pts
61 . rename bh psae_read_trend_possible
62 . rename bi psae_math
63 . rename bj psae_math_l1
64 . rename bk psae_math_l2
65 . rename bl psae_math_l3
66 . rename bm psae_math_status
67 . rename bn psae_math_trend
68 . rename bo psae_math_points
69 . rename bp psae_math_possible
70 . rename bq psae_math_trend_pts
71 . rename br psae_math_trend_possible
72 . rename bs psae_sci
73 . rename bt psae_sci_l1
74 . rename bu psae_sci_l2
75 . rename bv psae_sci_l3
76 . rename bw psae_sci_status
77 . rename bx psae_sci_trend
78 . rename by psae_sci_points
79 . rename bz psae_sci_possible
80 . rename ca psae_sci_trend_pts
81 . rename cb psae_sci_trend_possible
82 . rename cc ap_enroll
83 . rename cd ap_enroll_l1
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```
 84 . rename ce ap_enroll_l2

 85 . rename cf ap_enroll_l3

 86 . rename cg ap_enroll_trend

 87 . rename ch ap_enroll_trend_pts

 88 . rename ci ap_enroll_trend_possible

 89 . rename cj ap_success

 90 . rename ck ap_success_l1

 91 . rename cl ap_success_l2

 92 . rename cm ap_success_l3

 93 . rename cn ap_success_trend

 94 . rename co ap_success_trend_pts

 95 . rename cp ap_success_trend_possible

 96 . rename reading epas_gain_read

 97 . rename readingpoints epas_gain_read_pts

 98 . rename readingpointspossible epas_read_possible

 99 . rename math epas_math_gain

100 . rename mathpoints epas_math_pts

101 . rename mathpointspossible epas_math_possible

102 . gen year=2013

103 . save hs2013.dta, replace
    file hs2013.dta saved

104 .
105 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("HS 2012") cellrange(A2:CV158) firstr

106 . rename e probation_status

107 . label var f level

108 . rename f level

109 . rename totalpercentofpossiblepoints pct_possible

110 . rename totalpointsreceived tot_points

111 . rename totalpointspossible tot_possible
```

```
112 . rename psaecomp psae_composite
113 . rename k act
114 . rename l act_l1
115 . rename m act_l2
116 . rename n act_l3
117 . rename currentstatus act_status
118 . rename trend act_trend
119 . rename currentstatuspoints act_points
120 . rename currentstatuspointspossible act_possible
121 . rename trendpoints act_trend_pts
122 . rename trendpointspossible act_trend_possible
123 . rename u dropout
124 . rename v dropout_l1
125 . rename w dropout_l2
126 . rename x dropout_l3
127 . rename y dropout_status
128 . rename z dropout_trend
129 . rename aa dropout_points
130 . rename ab dropout_possible
131 . rename ac dropout_trend_pts
132 . rename ad dropout_trend_possible
133 . rename ae freshman
134 . rename af freshman_l1
135 . rename ag freshman_l2
136 . rename ah freshman_l3
137 . rename ai freshman_status
138 . rename aj freshman_trend
139 . rename ak freshman_points
```

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140 . rename al freshman_possible
141 . rename am freshman_trend_pts
142 . rename an freshman_trend_possible
143 . rename ao attend
144 . rename ap attend_l1
145 . rename aq attend_l2
146 . rename ar attend_l3
147 . rename as attend_status
148 . rename at attend_trend
149 . rename au attend_points
150 . rename av attend_possible
151 . rename aw attend_trend_pts
152 . rename ax attend_trend_possible
153 . rename ay psae_read
154 . rename az psae_read_l1
155 . rename ba psae_read_l2
156 . rename bb psae_read_l3
157 . rename bc psae_read_status
158 . rename bd psae_read_trend
159 . rename be psae_read_points
160 . rename bf psae_read_possible
161 . rename bg psae_read_trend_pts
162 . rename bh psae_read_trend_possible
163 . rename bi psae_math
164 . rename bj psae_math_l1
165 . rename bk psae_math_l2
166 . rename bl psae_math_l3
167 . rename bm psae_math_status
```

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168 . rename bn psae_math_trend
169 . rename bo psae_math_points
170 . rename bp psae_math_possible
171 . rename bq psae_math_trend_pts
172 . rename br psae_math_trend_possible
173 . rename bs psae_sci
174 . rename bt psae_sci_l1
175 . rename bu psae_sci_l2
176 . rename bv psae_sci_l3
177 . rename bw psae_sci_status
178 . rename bx psae_sci_trend
179 . rename by psae_sci_points
180 . rename bz psae_sci_possible
181 . rename ca psae_sci_trend_pts
182 . rename cb psae_sci_trend_possible
183 . rename cc ap_enroll
184 . rename cd ap_enroll_l1
185 . rename ce ap_enroll_l2
186 . rename cf ap_enroll_l3
187 . rename cg ap_enroll_trend
188 . rename ch ap_enroll_trend_pts
189 . rename ci ap_enroll_trend_possible
190 . rename cj ap_success
191 . rename ck ap_success_l1
192 . rename cl ap_success_l2
193 . rename cm ap_success_l3
194 . rename cn ap_success_trend
195 . rename co ap_success_trend_pts
```

```
196 . rename cp ap_success_trend_possible

197 . rename reading epas_gain_read

198 . rename readingpoints epas_gain_read_pts

199 . rename readingpointspossible epas_read_possible

200 . rename math epas_math_gain

201 . rename mathpoints epas_math_pts

202 . rename mathpointspossible epas_math_possible

203 . gen year=2012

204 . save hs2012.dta, replace
    file hs2012.dta saved

205 .
206 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("HS 2011") cellrange(A2:CV157) firstr

207 . rename e probation_status

208 . label var f level

209 . rename f level

210 . rename totalpercentofpossiblepoints pct_possible

211 . rename totalpointsreceived tot_points

212 . rename totalpointspossible tot_possible

213 . rename psaecomp psae_composite

214 . rename k act

215 . rename l act_l1

216 . rename m act_l2

217 . rename n act_l3

218 . rename currentstatus act_status

219 . rename trend act_trend

220 . rename currentstatuspoints act_points

221 . rename currentstatuspointspossible act_possible

222 . rename trendpoints act_trend_pts

223 . rename trendpointspossible act_trend_possible
```

```
224 . rename u dropout
225 . rename v dropout_l1
226 . rename w dropout_l2
227 . rename x dropout_l3
228 . rename y dropout_status
229 . rename z dropout_trend
230 . rename aa dropout_points
231 . rename ab dropout_possible
232 . rename ac dropout_trend_pts
233 . rename ad dropout_trend_possible
234 . rename ae freshman
235 . rename af freshman_l1
236 . rename ag freshman_l2
237 . rename ah freshman_l3
238 . rename ai freshman_status
239 . rename aj freshman_trend
240 . rename ak freshman_points
241 . rename al freshman_possible
242 . rename am freshman_trend_pts
243 . rename an freshman_trend_possible
244 . rename ao attend
245 . rename ap attend_l1
246 . rename aq attend_l2
247 . rename ar attend_l3
248 . rename as attend_status
249 . rename at attend_trend
250 . rename au attend_points
251 . rename av attend_possible
```

```
252 . rename aw attend_trend_pts

253 . rename ax attend_trend_possible

254 . rename ay psae_read

255 . rename az psae_read_l1

256 . rename ba psae_read_l2

257 . rename bb psae_read_l3

258 . rename bc psae_read_status

259 . rename bd psae_read_trend

260 . rename be psae_read_points

261 . rename bf psae_read_possible

262 . rename bg psae_read_trend_pts

263 . rename bh psae_read_trend_possible

264 . rename bi psae_math

265 . rename bj psae_math_l1

266 . rename bk psae_math_l2

267 . rename bl psae_math_l3

268 . rename bm psae_math_status

269 . rename bn psae_math_trend

270 . rename bo psae_math_points

271 . rename bp psae_math_possible

272 . rename bq psae_math_trend_pts

273 . rename br psae_math_trend_possible

274 . rename bs psae_sci

275 . rename bt psae_sci_l1

276 . rename bu psae_sci_l2

277 . rename bv psae_sci_l3

278 . rename bw psae_sci_status

279 . rename bx psae_sci_trend
```

```
280 . rename by psae_sci_points

281 . rename bz psae_sci_possible

282 . rename ca psae_sci_trend_pts

283 . rename cb psae_sci_trend_possible

284 . rename cc ap_enroll

285 . rename cd ap_enroll_l1

286 . rename ce ap_enroll_l2

287 . rename cf ap_enroll_l3

288 . rename cg ap_enroll_trend

289 . rename ch ap_enroll_trend_pts

290 . rename ci ap_enroll_trend_possible

291 . rename cj ap_success

292 . rename ck ap_success_l1

293 . rename cl ap_success_l2

294 . rename cm ap_success_l3

295 . rename cn ap_success_trend

296 . rename co ap_success_trend_pts

297 . rename cp ap_success_trend_possible

298 . rename reading epas_gain_read

299 . rename readingpoints epas_gain_read_pts

300 . rename readingpointspossible epas_read_possible

301 . rename math epas_math_gain

302 . rename mathpoints epas_math_pts

303 . rename mathpointspossible epas_math_possible

304 . gen year=2011

305 . save hs2011.dta, replace
    file hs2011.dta saved

306 .
307 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("HS 2010") cellrange(A2:CQ133) firstr
```

```
308 . label var e level
309 . rename e level
310 . rename totalpercentofpossiblepoints pct_possible
311 . rename totalpointsreceived tot_points
312 . rename totalpointspossible tot_possible
313 . rename psaecomp psae_composite
314 . rename j act
315 . rename k act_l1
316 . rename l act_l2
317 . rename m act_l3
318 . rename currentstatus act_status
319 . rename trend act_trend
320 . rename currentstatuspoints act_points
321 . rename currentstatuspointspossible act_possible
322 . rename trendpoints act_trend_pts
323 . rename trendpointspossible act_trend_possible
324 . rename t dropout
325 . rename u dropout_l1
326 . rename v dropout_l2
327 . rename w dropout_l3
328 . rename x dropout_status
329 . rename y dropout_trend
330 . rename z dropout_points
331 . rename aa dropout_possible
332 . rename ab dropout_trend_pts
333 . rename ac dropout_trend_possible
334 . rename ad freshman
335 . rename ae freshman_l1
```

```
336 . rename af freshman_l2
337 . rename ag freshman_l3
338 . rename ah freshman_status
339 . rename ai freshman_trend
340 . rename aj freshman_points
341 . rename ak freshman_possible
342 . rename al freshman_trend_pts
343 . rename am freshman_trend_possible
344 . rename an attend
345 . rename ao attend_l1
346 . rename ap attend_l2
347 . rename aq attend_status
348 . rename ar attend_trend
349 . rename as attend_points
350 . rename at attend_possible
351 . rename au attend_trend_pts
352 . rename av attend_trend_possible
353 . rename aw psae_read
354 . rename ax psae_read_l1
355 . rename ay psae_read_l2
356 . rename az psae_read_status
357 . rename ba psae_read_trend
358 . rename bb psae_read_points
359 . rename bc psae_read_possible
360 . rename bd psae_read_trend_pts
361 . rename be psae_read_trend_possible
362 . rename bf psae_math
363 . rename bg psae_math_l1
```

```
364 . rename bh psae_math_l2
365 . rename bi psae_math_status
366 . rename bj psae_math_trend
367 . rename bk psae_math_points
368 . rename bl psae_math_possible
369 . rename bm psae_math_trend_pts
370 . rename bn psae_math_trend_possible
371 . rename bo psae_sci
372 . rename bp psae_sci_l1
373 . rename bq psae_sci_l2
374 . rename br psae_sci_status
375 . rename bs psae_sci_trend
376 . rename bt psae_sci_points
377 . rename bu psae_sci_possible
378 . rename bv psae_sci_trend_pts
379 . rename bw psae_sci_trend_possible
380 . rename bx ap_enroll
381 . rename by ap_enroll_l1
382 . rename bz ap_enroll_l2
383 . rename ca ap_enroll_l3
384 . rename cb ap_enroll_trend
385 . rename cc ap_enroll_trend_pts
386 . rename cd ap_enroll_trend_possible
387 . rename ce ap_success
388 . rename cf ap_success_l1
389 . rename cg ap_success_l2
390 . rename ch ap_success_l3
391 . rename ci ap_success_trend
```

```
392 . rename cj ap_success_trend_pts

393 . rename ck ap_success_trend_possible

394 . rename reading epas_gain_read

395 . rename readingpoints epas_gain_read_pts

396 . rename readingpointspossible epas_read_possible

397 . rename math epas_math_gain

398 . rename mathpoints epas_math_pts

399 . rename mathpointspossible epas_math_possible

400 . gen year=2010

401 . save hs2010.dta, replace
    file hs2010.dta saved

402 .
403 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("HS 2009") cellrange(A2:CI122) firstr

404 . label var e level

405 . rename e level

406 . rename totalpercentofpossiblepoints pct_possible

407 . rename totalpointsreceived tot_points

408 . rename totalpointspossible tot_possible

409 . rename psaecomp psae_composite

410 . rename j act

411 . rename k act_l1

412 . rename l act_l2

413 . rename m act_l3

414 . rename currentstatus act_status

415 . rename trend act_trend

416 . rename currentstatuspoints act_points

417 . rename currentstatuspointspossible act_possible

418 . rename trendpoints act_trend_pts

419 . rename trendpointspossible act_trend_possible
```

```
420 . rename t dropout
421 . rename u dropout_l1
422 . rename v dropout_l2
423 . rename w dropout_l3
424 . rename x dropout_status
425 . rename y dropout_trend
426 . rename z dropout_points
427 . rename aa dropout_possible
428 . rename ab dropout_trend_pts
429 . rename ac dropout_trend_possible
430 . rename ad freshman
431 . rename ae freshman_l1
432 . rename af freshman_l2
433 . rename ag freshman_l3
434 . rename ah freshman_status
435 . rename ai freshman_trend
436 . rename aj freshman_points
437 . rename ak freshman_possible
438 . rename al freshman_trend_pts
439 . rename am freshman_trend_possible
440 . rename an attend
441 . rename ao attend_l1
442 . rename ap attend_l2
443 . rename aq attend_l3
444 . rename ar attend_status
445 . rename as attend_points
446 . rename at attend_possible
447 . rename au psae_read
```

```
448 . rename av psae_read_l1
449 . rename aw psae_read_l2
450 . rename ax psae_read_l3
451 . rename ay psae_read_status
452 . rename az psae_read_points
453 . rename ba psae_read_possible
454 . rename bb psae_math
455 . rename bc psae_math_l1
456 . rename bd psae_math_l2
457 . rename be psae_math_l3
458 . rename bf psae_math_status
459 . rename bg psae_math_points
460 . rename bh psae_math_possible
461 . rename bi psae_sci
462 . rename bj psae_sci_l1
463 . rename bk psae_sci_l2
464 . rename bl psae_sci_l3
465 . rename bm psae_sci_status
466 . rename bn psae_sci_points
467 . rename bo psae_sci_possible
468 . rename bp ap_enroll
469 . rename bq ap_enroll_l1
470 . rename br ap_enroll_l2
471 . rename bs ap_enroll_l3
472 . rename bt ap_enroll_trend
473 . rename bu ap_enroll_trend_pts
474 . rename bv ap_enroll_trend_possible
475 . rename bw ap_success
```

```
476 . rename bx ap_success_l1

477 . rename by ap_success_l2

478 . rename bz ap_success_l3

479 . rename ca ap_success_trend

480 . rename cb ap_success_trend_pts

481 . rename cc ap_success_trend_possible

482 . rename reading epas_gain_read

483 . rename readingpoints epas_gain_read_pts

484 . rename readingpointspossible epas_read_possible

485 . rename math epas_math_gain

486 . rename mathpoints epas_math_pts

487 . rename mathpointspossible epas_math_possible

488 . gen year=2009

489 . save hs2009.dta, replace
    file hs2009.dta saved

490 .
491 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("HS 2008") cellrange(A2:CI114) firstr

492 . label var e level

493 . rename e level

494 . rename totalpercentofpossiblepoints pct_possible

495 . rename totalpointsreceived tot_points

496 . rename totalpointspossible tot_possible

497 . rename psaecomp psae_composite

498 . rename j act

499 . rename k act_l1

500 . rename l act_l2

501 . rename m act_l3

502 . rename currentstatus act_status

503 . rename trend act_trend
```

```
504 . rename currentstatuspoints act_points
505 . rename currentstatuspointspossible act_possible
506 . rename trendpoints act_trend_pts
507 . rename trendpointspossible act_trend_possible
508 . rename t dropout
509 . rename u dropout_l1
510 . rename v dropout_l2
511 . rename w dropout_l3
512 . rename x dropout_status
513 . rename y dropout_trend
514 . rename z dropout_points
515 . rename aa dropout_possible
516 . rename ab dropout_trend_pts
517 . rename ac dropout_trend_possible
518 . rename ad freshman
519 . rename ae freshman_l1
520 . rename af freshman_l2
521 . rename ag freshman_l3
522 . rename ah freshman_status
523 . rename ai freshman_trend
524 . rename aj freshman_points
525 . rename ak freshman_possible
526 . rename al freshman_trend_pts
527 . rename am freshman_trend_possible
528 . rename an attend
529 . rename ao attend_l1
530 . rename ap attend_l2
531 . rename aq attend_l3
```

```
532 . rename ar attend_status
533 . rename as attend_points
534 . rename at attend_possible
535 . rename au psae_read
536 . rename av psae_read_l1
537 . rename aw psae_read_l2
538 . rename ax psae_read_l3
539 . rename ay psae_read_status
540 . rename az psae_read_points
541 . rename ba psae_read_possible
542 . rename bb psae_math
543 . rename bc psae_math_l1
544 . rename bd psae_math_l2
545 . rename be psae_math_l3
546 . rename bf psae_math_status
547 . rename bg psae_math_points
548 . rename bh psae_math_possible
549 . rename bi psae_sci
550 . rename bj psae_sci_l1
551 . rename bk psae_sci_l2
552 . rename bl psae_sci_l3
553 . rename bm psae_sci_status
554 . rename bn psae_sci_points
555 . rename bo psae_sci_possible
556 . rename bp ap_enroll
557 . rename bq ap_enroll_l1
558 . rename br ap_enroll_l2
559 . rename bs ap_enroll_l3
```

```
560 . rename bt ap_enroll_trend

561 . rename bu ap_enroll_trend_pts

562 . rename bv ap_enroll_trend_possible

563 . rename bw ap_success

564 . rename bx ap_success_l1

565 . rename by ap_success_l2

566 . rename bz ap_success_l3

567 . rename ca ap_success_trend

568 . rename cb ap_success_trend_pts

569 . rename cc ap_success_trend_possible

570 . rename reading epas_gain_read

571 . rename readingpoints epas_gain_read_pts

572 . rename readingpointspossible epas_read_possible

573 . rename math epas_math_gain

574 . rename mathpoints epas_math_pts

575 . rename mathpointspossible epas_math_possible

576 . gen year=2008

577 . save hs2008.dta, replace
    file hs2008.dta saved

578 .
579 . append using hs2009.dta
    (note: variable schoolname was str34, now str36 to accommodate using data's values)
    (note: variable psae_read_points was str5, now str17 to accommodate using data's values)
    (note: variable psae_math_points was str5, now str17 to accommodate using data's values)
    (note: variable psae_sci_points was str5, now str17 to accommodate using data's values)

580 . append using hs2010.dta
    (note: variable tot_points was str5, now str6 to accommodate using data's values)

581 . append using hs2011.dta
    (note: variable attend_trend was str5, now str18 to accommodate using data's values)
    (note: variable psae_math_trend was str5, now str17 to accommodate using data's values)

582 . append using hs2012.dta
    (note: variable schoolname was str36, now str38 to accommodate using data's values)

583 . append using hs2013.dta
    (note: variable psae_math_trend was str17, now str18 to accommodate using data's values)
```

```
584 . egen school_year=concat(schoolid year), punct(_)

585 . gen hs=1

586 . save hs_panel.dta, replace
    file hs_panel.dta saved

587 .
588 . *****Import Performance Indicators ELEM****
589 .
590 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("Elem 2013") cellrange(A2:BY473) firs

591 .
592 . rename e probation_status

593 . label var f level

594 . rename f level

595 . rename totalpercentofpossiblepoints pct_possible

596 . rename totalpointsreceived tot_points

597 . rename totalpointspossible tot_possible

598 . rename isatcompositemeetsexcee isat_meet_exceed

599 . rename k isat_read

600 . rename l isat_read_l1

601 . rename m isat_read_l2

602 . rename n isat_read_l3

603 . rename currentstatus isat_read_status_pts

604 . rename trend isat_read_trend

605 . rename currentstatuspoints isat_read_curstatpts

606 . rename currentstatuspointspossible isat_read_crstatposs

607 . rename trendpoints istat_read_trendpts

608 . rename trendpointspossible isat_read_trendposs

609 . rename u isat_math

610 . rename v isat_math_l1

611 . rename w isat_math_l2

612 . rename x isat_math_l3
```

```
613 . rename y isat_math_status_pts
614 . rename z isat_math_trend
615 . rename aa isat_math_curstatpts
616 . rename ab isat_math_crstatposs
617 . rename ac istat_math_trendpts
618 . rename ad isat_math_trendposs
619 . rename ae isat_science
620 . rename af isat_science_l1
621 . rename ag isat_science_l2
622 . rename ah isat_science_l3
623 . rename ai isat_science_status_pts
624 . rename aj isat_science_trend
625 . rename ak isat_science_curstatpts
626 . rename al isat_science_crstatposs
627 . rename am istat_science_trendpts
628 . rename an isat_science_trendposs
629 . rename ao isat_exceeds
630 . rename ap isat_exceeds_l1
631 . rename aq isat_exceeds_l2
632 . rename ar isat_exceeds_l3
633 . rename as isat_exceeds_status_pts
634 . rename at isat_exceeds_trend
635 . rename au isat_exceeds_curstatpts
636 . rename av isat_exceeds_crstatposs
637 . rename aw istat_exceeds_trendpts
638 . rename ax isat_exceeds_trendposs
639 . rename highgrade higrade
640 . rename az isat_higrade
```

```
641 . rename ba isat_higrade_l1

642 . rename bb isat_higrade_l2

643 . rename bc isat_higrade_l3

644 . rename bd isat_higrade_status_pts

645 . rename be isat_higrade_trend

646 . rename bf isat_higrade_curstatpts

647 . rename bg isat_higrade_crstatposs

648 . rename bh istat_higrade_trendpts

649 . rename bi isat_higrade_trendposs

650 . rename bj attend

651 . rename bk attend_l1

652 . rename bl attend_l2

653 . rename bm attend_l3

654 . rename bn attend_status_pts

655 . rename bo attend_trend

656 . rename bp attend_curstatpts

657 . rename bq attend_crstatposs

658 . rename br attend_trendpts

659 . rename bs attend_trendposs

660 . rename reading va_read

661 . rename points va_read_pts

662 . rename pointspossible va_read_poss

663 . rename math va_math

664 . rename bx va_math_pts

665 . rename by va_math_poss

666 . gen year=2013

667 . save chi_schools2013.dta, replace
    file chi_schools2013.dta saved
```

```
668 .
669 . ****************************************
670 .
671 . import excel "2013_PerformancePolicy_Results_03262014.XLS", sheet("Elem 2012") cellrange(A2:BY520) firs

672 . rename e probation_status

673 . label var f level

674 . rename f level

675 . rename totalpercentofpossiblepoints pct_possible

676 . rename totalpointsreceived tot_points

677 . rename totalpointspossible tot_possible

678 . rename isatcompositemeetsexcee isat_meet_exceed

679 . rename k isat_read

680 . rename l isat_read_l1

681 . rename m isat_read_l2

682 . rename n isat_read_l3

683 . rename currentstatus isat_read_status_pts

684 . rename trend isat_read_trend

685 . rename currentstatuspoints isat_read_curstatpts

686 . rename currentstatuspointspossible isat_read_crstatposs

687 . rename trendpoints istat_read_trendpts

688 . rename trendpointspossible isat_read_trendposs

689 . rename u isat_math

690 . rename v isat_math_l1

691 . rename w isat_math_l2

692 . rename x isat_math_l3

693 . rename y isat_math_status_pts

694 . rename z isat_math_trend

695 . rename aa isat_math_curstatpts

696 . rename ab isat_math_crstatposs
```

```
697 . rename ac istat_math_trendpts
698 . rename ad isat_math_trendposs
699 . rename ae isat_science
700 . rename af isat_science_l1
701 . rename ag isat_science_l2
702 . rename ah isat_science_l3
703 . rename ai isat_science_status_pts
704 . rename aj isat_science_trend
705 . rename ak isat_science_curstatpts
706 . rename al isat_science_crstatposs
707 . rename am istat_science_trendpts
708 . rename an isat_science_trendposs
709 . rename ao isat_exceeds
710 . rename ap isat_exceeds_l1
711 . rename aq isat_exceeds_l2
712 . rename ar isat_exceeds_l3
713 . rename as isat_exceeds_status_pts
714 . rename at isat_exceeds_trend
715 . rename au isat_exceeds_curstatpts
716 . rename av isat_exceeds_crstatposs
717 . rename aw istat_exceeds_trendpts
718 . rename ax isat_exceeds_trendposs
719 . rename highgrade higrade
720 . rename az isat_higrade
721 . rename ba isat_higrade_l1
722 . rename bb isat_higrade_l2
723 . rename bc isat_higrade_l3
724 . rename bd isat_higrade_status_pts
```

```
725 . rename be isat_higrade_trend

726 . rename bf isat_higrade_curstatpts

727 . rename bg isat_higrade_crstatposs

728 . rename bh istat_higrade_trendpts

729 . rename bi isat_higrade_trendposs

730 . rename bj attend

731 . rename bk attend_l1

732 . rename bl attend_l2

733 . rename bm attend_l3

734 . rename bn attend_status_pts

735 . rename bo attend_trend

736 . rename bp attend_curstatpts

737 . rename bq attend_crstatposs

738 . rename br attend_trendpts

739 . rename bs attend_trendposs

740 . rename reading va_read

741 . rename points va_read_pts

742 . rename pointspossible va_read_poss

743 . rename math va_math

744 . rename bx va_math_pts

745 . rename by va_math_poss

746 . gen year=2012

747 . save chi_schools2012.dta, replace
    file chi_schools2012.dta saved

748 .
749 . ****************************************************
750 .
751 . import excel "2013_PerformancePolicy_Results_03262014.XLS", sheet("Elem 2011") cellrange(A2:BY522) firs

752 . rename e probation_status

753 . label var f level
```

```
754 . rename f level
755 . rename totalpercentofpossiblepoints pct_possible
756 . rename totalpointsreceived tot_points
757 . rename totalpointspossible tot_possible
758 . rename isatcompositemeetsexcee isat_meet_exceed
759 . rename k isat_read
760 . rename l isat_read_l1
761 . rename m isat_read_l2
762 . rename n isat_read_l3
763 . rename currentstatus isat_read_status_pts
764 . rename trend isat_read_trend
765 . rename currentstatuspoints isat_read_curstatpts
766 . rename currentstatuspointspossible isat_read_crstatposs
767 . rename trendpoints istat_read_trendpts
768 . rename trendpointspossible isat_read_trendposs
769 . rename u isat_math
770 . rename v isat_math_l1
771 . rename w isat_math_l2
772 . rename x isat_math_l3
773 . rename y isat_math_status_pts
774 . rename z isat_math_trend
775 . rename aa isat_math_curstatpts
776 . rename ab isat_math_crstatposs
777 . rename ac istat_math_trendpts
778 . rename ad isat_math_trendposs
779 . rename ae isat_science
780 . rename af isat_science_l1
781 . rename ag isat_science_l2
```

```
782 . rename ah isat_science_l3
783 . rename ai isat_science_status_pts
784 . rename aj isat_science_trend
785 . rename ak isat_science_curstatpts
786 . rename al isat_science_crstatposs
787 . rename am istat_science_trendpts
788 . rename an isat_science_trendposs
789 . rename ao isat_exceeds
790 . rename ap isat_exceeds_l1
791 . rename aq isat_exceeds_l2
792 . rename ar isat_exceeds_l3
793 . rename as isat_exceeds_status_pts
794 . rename at isat_exceeds_trend
795 . rename au isat_exceeds_curstatpts
796 . rename av isat_exceeds_crstatposs
797 . rename aw istat_exceeds_trendpts
798 . rename ax isat_exceeds_trendposs
799 . rename highgrade higrade
800 . rename az isat_higrade
801 . rename ba isat_higrade_l1
802 . rename bb isat_higrade_l2
803 . rename bc isat_higrade_l3
804 . rename bd isat_higrade_status_pts
805 . rename be isat_higrade_trend
806 . rename bf isat_higrade_curstatpts
807 . rename bg isat_higrade_crstatposs
808 . rename bh istat_higrade_trendpts
809 . rename bi isat_higrade_trendposs
```

```
810 . rename bj attend

811 . rename bk attend_l1

812 . rename bl attend_l2

813 . rename bm attend_l3

814 . rename bn attend_status_pts

815 . rename bo attend_trend

816 . rename bp attend_curstatpts

817 . rename bq attend_crstatposs

818 . rename br attend_trendpts

819 . rename bs attend_trendposs

820 . rename reading va_read

821 . rename points va_read_pts

822 . rename pointspossible va_read_poss

823 . rename math va_math

824 . rename bx va_math_pts

825 . rename by va_math_poss

826 . gen year=2011

827 . save chi_schools2011.dta, replace
    file chi_schools2011.dta saved

828 .
829 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("Elem 2010") cellrange(A2:BX511) firs

830 . rename e level

831 . rename totalpercentofpossiblepoints pct_possible

832 . rename totalpointsreceived tot_points

833 . rename totalpointspossible tot_possible

834 . rename isatcompositemeetsexcee isat_meet_exceed

835 . rename j isat_read

836 . rename k isat_read_l1

837 . rename l isat_read_l2
```

```
838 . rename m isat_read_l3
839 . rename currentstatus isat_read_status_pts
840 . rename trend isat_read_trend
841 . rename currentstatuspoints isat_read_curstatpts
842 . rename currentstatuspointspossible isat_read_crstatposs
843 . rename trendpoints istat_read_trendpts
844 . rename trendpointspossible isat_read_trendposs
845 . rename t isat_math
846 . rename u isat_math_l1
847 . rename v isat_math_l2
848 . rename w isat_math_l3
849 . rename x isat_math_status_pts
850 . rename y isat_math_trend
851 . rename z isat_math_curstatpts
852 . rename aa isat_math_crstatposs
853 . rename ab istat_math_trendpts
854 . rename ac isat_math_trendposs
855 . rename ad isat_science
856 . rename ae isat_science_l1
857 . rename af isat_science_l2
858 . rename ag isat_science_l3
859 . rename ah isat_science_status_pts
860 . rename ai isat_science_trend
861 . rename aj isat_science_curstatpts
862 . rename ak isat_science_crstatposs
863 . rename al istat_science_trendpts
864 . rename am isat_science_trendposs
865 . rename an isat_exceeds
```

```
866 . rename ao isat_exceeds_l1
867 . rename ap isat_exceeds_l2
868 . rename aq isat_exceeds_l3
869 . rename ar isat_exceeds_status_pts
870 . rename as isat_exceeds_trend
871 . rename at isat_exceeds_curstatpts
872 . rename au isat_exceeds_crstatposs
873 . rename av istat_exceeds_trendpts
874 . rename aw isat_exceeds_trendposs
875 . rename highgrade higrade
876 . rename ay isat_higrade
877 . rename az isat_higrade_l1
878 . rename ba isat_higrade_l2
879 . rename bb isat_higrade_l3
880 . rename bc isat_higrade_status_pts
881 . rename bd isat_higrade_trend
882 . rename be isat_higrade_curstatpts
883 . rename bf isat_higrade_crstatposs
884 . rename bg istat_higrade_trendpts
885 . rename bh isat_higrade_trendposs
886 . rename bi attend
887 . rename bj attend_l1
888 . rename bk attend_l2
889 . rename bl attend_l3
890 . rename bm attend_status_pts
891 . rename bn attend_trend
892 . rename bo attend_curstatpts
893 . rename bp attend_crstatposs
```

```
894 . rename bq attend_trendpts

895 . rename br attend_trendposs

896 . rename reading va_read

897 . rename points va_read_pts

898 . rename pointspossible va_read_poss

899 . rename math va_math

900 . rename bw va_math_pts

901 . rename bx va_math_poss

902 . gen year=2010

903 . save chi_schools2010.dta, replace
    file chi_schools2010.dta saved

904 .
905 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("Elem 2009") cellrange(A2:BX497) firs

906 . rename e level

907 . rename totalpercentofpossiblepoints pct_possible

908 . rename totalpointsreceived tot_points

909 . rename totalpointspossible tot_possible

910 . rename isatcompositemeetsexcee isat_meet_exceed

911 . rename j isat_read

912 . rename k isat_read_l1

913 . rename l isat_read_l2

914 . rename m isat_read_l3

915 . rename currentstatus isat_read_status_pts

916 . rename trend isat_read_trend

917 . rename currentstatuspoints isat_read_curstatpts

918 . rename currentstatuspointspossible isat_read_crstatposs

919 . rename trendpoints istat_read_trendpts

920 . rename trendpointspossible isat_read_trendposs

921 . rename t isat_math
```

```
922 . rename u isat_math_l1
923 . rename v isat_math_l2
924 . rename w isat_math_l3
925 . rename x isat_math_status_pts
926 . rename y isat_math_trend
927 . rename z isat_math_curstatpts
928 . rename aa isat_math_crstatposs
929 . rename ab istat_math_trendpts
930 . rename ac isat_math_trendposs
931 . rename ad isat_science
932 . rename ae isat_science_l1
933 . rename af isat_science_l2
934 . rename ag isat_science_l3
935 . rename ah isat_science_status_pts
936 . rename ai isat_science_trend
937 . rename aj isat_science_curstatpts
938 . rename ak isat_science_crstatposs
939 . rename al istat_science_trendpts
940 . rename am isat_science_trendposs
941 . rename an isat_exceeds
942 . rename ao isat_exceeds_l1
943 . rename ap isat_exceeds_l2
944 . rename aq isat_exceeds_l3
945 . rename ar isat_exceeds_status_pts
946 . rename as isat_exceeds_trend
947 . rename at isat_exceeds_curstatpts
948 . rename au isat_exceeds_crstatposs
949 . rename av istat_exceeds_trendpts
```

```
950 . rename aw isat_exceeds_trendposs
951 . rename highgrade higrade
952 . rename ay isat_higrade
953 . rename az isat_higrade_l1
954 . rename ba isat_higrade_l2
955 . rename bb isat_higrade_l3
956 . rename bc isat_higrade_status_pts
957 . rename bd isat_higrade_trend
958 . rename be isat_higrade_curstatpts
959 . rename bf isat_higrade_crstatposs
960 . rename bg istat_higrade_trendpts
961 . rename bh isat_higrade_trendposs
962 . rename bi attend
963 . rename bj attend_l1
964 . rename bk attend_l2
965 . rename bl attend_l3
966 . rename bm attend_status_pts
967 . rename bn attend_trend
968 . rename bo attend_curstatpts
969 . rename bp attend_crstatposs
970 . rename bq attend_trendpts
971 . rename br attend_trendposs
972 . rename reading va_read
973 . rename points va_read_pts
974 . rename pointspossible va_read_poss
975 . rename math va_math
976 . rename bw va_math_pts
977 . rename bx va_math_poss
```

```
 978 . gen year=2009

 979 . save chi_schools2009.dta, replace
     file chi_schools2009.dta saved

 980 .
 981 . import excel "2013_PerformancePolicy_Results_03262014.xls", sheet("ES 2008") case(lower) cellrange(A2:B

 982 . rename e level

 983 . rename totalpercentofpossiblepoints pct_possible

 984 . rename totalpointsreceived tot_points

 985 . rename totalpointspossible tot_possible

 986 . rename isatcompositemeetsexcee isat_meet_exceed

 987 . rename j isat_read

 988 . rename k isat_read_l1

 989 . rename l isat_read_l2

 990 . rename m isat_read_l3

 991 . rename currentstatus isat_read_status_pts

 992 . rename trend isat_read_trend

 993 . rename currentstatuspoints isat_read_curstatpts

 994 . rename currentstatuspointspossible isat_read_crstatposs

 995 . rename trendpoints istat_read_trendpts

 996 . rename trendpointspossible isat_read_trendposs

 997 . rename t isat_math

 998 . rename u isat_math_l1

 999 . rename v isat_math_l2

1000 . rename w isat_math_l3

1001 . rename x isat_math_status_pts

1002 . rename y isat_math_trend

1003 . rename z isat_math_curstatpts

1004 . rename aa isat_math_crstatposs

1005 . rename ab istat_math_trendpts
```

```
1006 . rename ac isat_math_trendposs
1007 . rename ad isat_science
1008 . rename ae isat_science_l1
1009 . rename af isat_science_l2
1010 . rename ag isat_science_l3
1011 . rename ah isat_science_status_pts
1012 . rename ai isat_science_trend
1013 . rename aj isat_science_curstatpts
1014 . rename ak isat_science_crstatposs
1015 . rename al istat_science_trendpts
1016 . rename am isat_science_trendposs
1017 . rename an isat_exceeds
1018 . rename ao isat_exceeds_l1
1019 . rename ap isat_exceeds_l2
1020 . rename aq isat_exceeds_l3
1021 . rename ar isat_exceeds_status_pts
1022 . rename as isat_exceeds_trend
1023 . rename at isat_exceeds_curstatpts
1024 . rename au isat_exceeds_crstatposs
1025 . rename av istat_exceeds_trendpts
1026 . rename aw isat_exceeds_trendposs
1027 . rename highgrade higrade
1028 . rename ay isat_higrade
1029 . rename az isat_higrade_l1
1030 . rename ba isat_higrade_l2
1031 . rename bb isat_higrade_l3
1032 . rename bc isat_higrade_status_pts
1033 . rename bd isat_higrade_trend
```

```
1034 . rename be isat_higrade_curstatpts

1035 . rename bf isat_higrade_crstatposs

1036 . rename bg istat_higrade_trendpts

1037 . rename bh isat_higrade_trendposs

1038 . rename bi attend

1039 . rename bj attend_l1

1040 . rename bk attend_l2

1041 . rename bl attend_l3

1042 . rename bm attend_status_pts

1043 . rename bn attend_trend

1044 . rename bo attend_curstatpts

1045 . rename bp attend_crstatposs

1046 . rename bq attend_trendpts

1047 . rename br attend_trendposs

1048 . rename reading va_read

1049 . rename points va_read_pts

1050 . rename pointspossible va_read_poss

1051 . rename math va_math

1052 . rename bw va_math_pts

1053 . rename bx va_math_poss

1054 . gen year=2008

1055 . save chi_schools2008.dta, replace
     file chi_schools2008.dta saved

1056 .
1057 .
1058 . append using chi_schools2009.dta
     (note: variable schoolname was str32, now str35 to accommodate using data's values)

1059 . append using chi_schools2010.dta

1060 . append using chi_schools2011.dta

1061 . append using chi_schools2012.dta
     (note: variable schoolname was str35, now str36 to accommodate using data's values)
```

```
1062 . append using chi_schools2013.dta

1063 . egen school_year=concat(schoolid year), punct(_)

1064 .
1065 . append using hs_panel.dta
     (note: variable schoolname was str36, now str38 to accommodate using data's values)
     (note: variable tot_points was str2, now str6 to accommodate using data's values)

1066 .
1067 . drop if schoolid==""
     (345 observations deleted)

1068 . drop if year==.
     (0 observations deleted)

1069 . save chi_schools_panel.dta, replace
     file chi_schools_panel.dta saved

1070 .
1071 . ********************IMPORT PARENT SURVEY**************************
1072 .
1073 . *import excel "parent_survey_results_2016.xlsx", sheet("School Level Data 2016") firstrow case(lower) a
1074 . *keep schoolid responserate schoolcommunityscore parentteacherpartnershipscor qualityoffacilitiesscore
1075 . *gen year=2016
1076 . *egen school_year=concat(schoolid year), punct(_)
1077 . *save survey16.dta, replace
1078 .
1079 . *import excel "parent_survey_results_2015_FINAL_LOCKED.xlsx", sheet("School Level Data 2015") firstrow
1080 . *keep schoolid responserate schoolcommunityscore parentteacherpartnershipscor qualityoffacilitiesscore
1081 . *gen year=2015
1082 . *egen school_year=concat(schoolid year), punct(_)
1083 . *save survey15.dta, replace
1084 .
1085 . *import excel "parent_survey_results_2014_FINAL.xlsx", sheet("School Level Data 2014") firstrow case(lo
1086 . *keep schoolid responserate schoolcommunityscore parentteacherpartnershipscor qualityoffacilitiesscore
1087 . *gen year=2014
1088 . *egen school_year=concat(schoolid year), punct(_)
1089 . *save survey14.dta, replace
1090 .
1091 . import excel "ParentSurveyResults_2013.xlsx", sheet("School Level Data 2013") firstrow case(lower) alls

1092 . keep schoolid responserate schoolcommunityscore parentteacherpartnershipscor qualityoffacilitiesscore h

1093 . gen year=2013

1094 . egen school_year=concat(schoolid year), punct(_)

1095 . save survey13.dta, replace
     file survey13.dta saved

1096 .
1097 . import excel "ParentSurveyResults_2012.xlsm", sheet("Survey_data_2012") firstrow case(lower) allstring

1098 . keep school_id response_rate school_community_score pt_partnership_score facilities_score
```

```
1099 . rename school_id schoolid

1100 . rename response responserate

1101 . rename school_comm schoolcommunityscore

1102 . rename pt_partner parentteacherpartnershipscor

1103 . rename facilities qualityoffacilitiesscore

1104 . gen year=2012

1105 . egen school_year=concat(schoolid year), punct(_)

1106 . save survey12.dta, replace
     file survey12.dta saved

1107 .
1108 . append using survey13.dta
     (note: variable responserate was str4, now str17 to accommodate using data's values)

1109 . order school_year year responserate schoolcommunityscore parentteacherpartnershipscor qualityoffaciliti

1110 . drop if schoolid==""
     (2 observations deleted)

1111 . drop schoolid

1112 . drop if schoolcommunityscore==""
     (529 observations deleted)

1113 . destring schoolcommunityscore- howlikelyareyoutorecommend, replace
     schoolcommunityscore: all characters numeric;    replaced as byte
     parentteacherpartnershipscor: all characters numeric;    replaced as byte
     qualityoffacilitiesscore: all characters numeric;    replaced as byte
     (1 missing value generated)
     howlikelyareyoutorecommend: all characters numeric;    replaced as double
     (416 missing values generated)

1114 . save survey_panel.dta, replace
     file survey_panel.dta saved

1115 .
1116 . ********************IMPORT FRL***********************************
1117 .
1118 .
1119 . import excel "lep_iep_frl_report_2013.xls", sheet("All Schools") cellrange(A2:J685) firstrow case(lower

1120 . rename f pct_ell

1121 . rename h pct_sped

1122 . rename j pct_frl

1123 . keep schoolid pct_ell pct_sped pct_frl
```

```
1124 . destring pct_ell pct_sped pct_frl, replace
     pct_ell: all characters numeric;   replaced as double
     (1 missing value generated)
     pct_sped: all characters numeric;   replaced as double
     (1 missing value generated)
     pct_frl: all characters numeric;   replaced as double
     (1 missing value generated)

1125 . gen year=2013

1126 . drop if schoolid==""
     (1 observation deleted)

1127 . save frl13.dta, replace
     file frl13.dta saved

1128 .
1129 . import excel "lep_iep_frl_report_2012.xls", sheet("All Schools") cellrange(A2:K686) firstrow case(lower

1130 . rename g pct_ell

1131 . rename i pct_sped

1132 . rename k pct_frl

1133 . keep schoolid pct_ell pct_sped pct_frl

1134 . destring pct_ell pct_sped pct_frl, replace
     pct_ell: all characters numeric;   replaced as double
     pct_sped: all characters numeric;   replaced as double
     pct_frl: all characters numeric;   replaced as double

1135 . gen year=2012

1136 . drop if schoolid==""
     (1 observation deleted)

1137 . save frl12.dta, replace
     file frl12.dta saved

1138 .
1139 . import excel "lep_iep_frl_report_2011.xls", sheet("All Schools") cellrange(A2:J716) firstrow case(lower

1140 . rename f pct_ell

1141 . rename h pct_sped

1142 . rename j pct_frl

1143 . keep unit pct_ell pct_sped pct_frl

1144 . destring pct_ell pct_sped pct_frl, replace
     pct_ell: all characters numeric;   replaced as double
     (226 missing values generated)
     pct_sped: all characters numeric;   replaced as double
     (32 missing values generated)
     pct_frl: all characters numeric;   replaced as double
     (32 missing values generated)
```

```
1145 . gen year=2011

1146 . drop if unit==""
     (32 observations deleted)

1147 . save frl11.dta, replace
     file frl11.dta saved

1148 .
1149 . import excel "lep_iep_frl_report_2010_revised_20130506.xls", sheet("All Schools") cellrange(A2:M681) fi

1150 . rename f pct_ell

1151 . rename h pct_sped

1152 . rename j pct_frl

1153 . keep unit pct_ell pct_sped pct_frl

1154 . destring pct_ell pct_sped pct_frl, replace
     pct_ell: all characters numeric;   replaced as double
     (189 missing values generated)
     pct_sped: all characters numeric;   replaced as double
     (5 missing values generated)
     pct_frl: all characters numeric;   replaced as double
     (5 missing values generated)

1155 . gen year=2010

1156 . drop if unit==""
     (4 observations deleted)

1157 . save frl10.dta, replace
     file frl10.dta saved

1158 .
1159 . ********************IMPORT RACE & ETHNICITY************************
1160 .
1161 . import excel "FY09_Racial_Ethnic_Survey.xls", sheet("All Schools") cellrange(A2:O669) firstrow case(low

1162 . rename no white

1163 . rename pct pct_white

1164 . rename h black

1165 . rename i pct_black

1166 . rename j native

1167 . rename k pct_native

1168 . rename l api

1169 . rename m pct_api
```

```
1170 . rename n hisp

1171 . rename o pct_hisp

1172 . gen year=2009

1173 . save cps_demog09.dta, replace
     file cps_demog09.dta saved

1174 .
1175 . import excel "FY10_Racial_Ethnic_Survey.xls", sheet("All Schools") cellrange(A2:O677) firstrow case(low

1176 . rename no white

1177 . rename pct pct_white

1178 . rename h black

1179 . rename i pct_black

1180 . rename j native

1181 . rename k pct_native

1182 . rename l api

1183 . rename m pct_api

1184 . rename n hisp

1185 . rename o pct_hisp

1186 . gen year=2010

1187 . merge 1:1 unit using frl10.dta
     (note: variable unit was str4, now str66 to accommodate using data's values)

         Result                           # of obs.
         -----------------------------------------
         not matched                             2
             from master                         1  (_merge==1)
             from using                          1  (_merge==2)

         matched                               674  (_merge==3)
         -----------------------------------------

1188 . drop _merge

1189 . save cps_demog10.dta, replace
     file cps_demog10.dta saved

1190 .
1191 . import excel "FY11_Racial_Ethnic_Survey.xls", sheet("All Schools") cellrange(A2:W683) firstrow case(low

1192 . rename no white
```

```
1193 . rename pct pct_white

1194 . rename h black

1195 . rename i pct_black

1196 . rename j native

1197 . rename k pct_native

1198 . rename l api

1199 . rename m pct_api

1200 . rename n hisp

1201 . rename o pct_hisp

1202 . rename p multi

1203 . rename q pct_multi

1204 . rename r asian

1205 . rename s pct_asian

1206 . rename t pacisl

1207 . rename u pct_pacisl

1208 . rename v na

1209 . rename w pct_na

1210 . gen year=2011

1211 . merge 1:1 unit using frl11.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                             3
        from master                         1  (_merge==1)
        from using                          2  (_merge==2)

    matched                               680  (_merge==3)
    -----------------------------------------

1212 . drop _merge

1213 . save cps_demog11.dta, replace
file cps_demog11.dta saved

1214 .
1215 . import excel "FY12_Racial_Ethnic_Survey.xls", sheet("All Schools") cellrange(A2:W687) firstrow case(low
```

```
1216 . rename no white

1217 . rename pct pct_white

1218 . rename h black

1219 . rename i pct_black

1220 . rename j api

1221 . rename k pct_api

1222 . rename l  native

1223 . rename m pct_native

1224 . rename n hisp

1225 . rename o pct_hisp

1226 . rename p multi

1227 . rename q pct_multi

1228 . rename r asian

1229 . rename s pct_asian

1230 . rename t pacisl

1231 . rename u pct_pacisl

1232 . rename v na

1233 . rename w pct_na

1234 . gen year=2012

1235 . drop if schoolid==""
(2 observations deleted)

1236 . merge 1:1 schoolid using frl12.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                             0
    matched                               683  (_merge==3)
    -----------------------------------------

1237 . drop _merge

1238 . save cps_demog12.dta, replace
file cps_demog12.dta saved

1239 .
```

```
1240 . import excel "FY13_Racial_Ethnic_Survey.xls", sheet("All Schools") cellrange(A2:W685) firstrow case(low
1241 . rename no white
1242 . rename pct pct_white
1243 . rename g black
1244 . rename h pct_black
1245 . rename i api
1246 . rename j pct_api
1247 . rename k native
1248 . rename l pct_native
1249 . rename m hisp
1250 . rename n pct_hisp
1251 . rename o multi
1252 . rename p pct_multi
1253 . rename q asian
1254 . rename r pct_asian
1255 . rename s pacisl
1256 . rename t pct_pacisl
1257 . rename u na
1258 . rename v pct_na
1259 . drop w
1260 . gen year=2013
1261 . drop if schoolid==""
(2 observations deleted)
1262 . merge 1:1 schoolid using frl13.dta
(note: variable schoolid was str6, now str15 to accommodate using data's values)

    Result                           # of obs.
    -----------------------------------------
    not matched                             1
        from master                         0  (_merge==1)
        from using                          1  (_merge==2)

    matched                               681  (_merge==3)
    -----------------------------------------
```

```
1263 . drop _merge

1264 . save cps_demog13.dta, replace
     file cps_demog13.dta saved

1265 .
1266 . append using cps_demog12.dta
     (note: variable network was str34, now str40 to accommodate using data's values)

1267 . append using cps_demog11.dta

1268 . append using cps_demog10.dta
     (note: variable area was str2, now str15 to accommodate using data's values)
     (note: variable unit was str4, now str66 to accommodate using data's values)
     (note: variable api was str3, now str5 to accommodate using data's values)
     (note: variable pct_api was str3, now str17 to accommodate using data's values)

1269 . append using cps_demog09.dta
     (note: variable school was str37, now str49 to accommodate using data's values)

1270 .
1271 . egen school_year=concat(schoolid year), punct(_)

1272 . drop if schoolid==""
     (5 observations deleted)

1273 . drop if schoolid=="District Totals"
     (1 observation deleted)

1274 . drop if year==.
     (0 observations deleted)

1275 . destring schoolid, replace force
     schoolid: all characters numeric;   replaced as long

1276 . drop if schoolid==.
     (0 observations deleted)

1277 . destring total- pct_na, replace
     total: all characters numeric;   replaced as int
     (1 missing value generated)
     white: all characters numeric;   replaced as int
     (1 missing value generated)
     pct_white: all characters numeric;   replaced as double
     (1 missing value generated)
     black: all characters numeric;   replaced as int
     (1 missing value generated)
     pct_black: all characters numeric;   replaced as double
     (1 missing value generated)
     api: all characters numeric;   replaced as int
     (1 missing value generated)
     pct_api: all characters numeric;   replaced as double
     (1 missing value generated)
     native: all characters numeric;   replaced as byte
     (1 missing value generated)
     pct_native: all characters numeric;   replaced as double
     (1 missing value generated)
     hisp: all characters numeric;   replaced as int
     (1 missing value generated)
     pct_hisp: all characters numeric;   replaced as double
     (1 missing value generated)
     multi: all characters numeric;   replaced as int
     (1341 missing values generated)
     pct_multi: all characters numeric;   replaced as double
     (1341 missing values generated)
     asian: all characters numeric;   replaced as int
     (1341 missing values generated)
```

```
pct_asian: all characters numeric;   replaced as double
(1341 missing values generated)
pacisl: all characters numeric;   replaced as byte
(1341 missing values generated)
pct_pacisl: all characters numeric;   replaced as double
(1341 missing values generated)
na: all characters numeric;   replaced as int
(1341 missing values generated)
pct_na: all characters numeric;   replaced as double
(1341 missing values generated)

1278 . label var pct_white "% White"

1279 . label var pct_black "% Black"

1280 . label var pct_hisp "% Hispanic"

1281 . gen pct_blackhisp=pct_black+pct_hisp
(1 missing value generated)

1282 . label var pct_blackhisp "% Black or Hispanic"

1283 . save chi_demog_panel.dta, replace
file chi_demog_panel.dta saved

1284 .
1285 . import delimited "CPS_Schools_2013-2014_Academic_Year.csv", clear
(37 vars, 672 obs)

1286 . rename ïschoolid schoolid

1287 . drop if schoolid==.
(3 observations deleted)

1288 . keep schoolid ncesid isbeid class schooltype s_type schoolcategory chartertype governance gradestructur
> eanumber latitude longitude

1289 . save idbridge.dta, replace
file idbridge.dta saved

1290 .
1291 . use chi_schools_panel.dta

1292 . destring schoolid, replace
schoolid: all characters numeric;   replaced as long

1293 . merge m:1 school_year using chi_demog_panel.dta
(note: variable area was str2, now str15 to accommodate using data's values)
(note: variable unit was str4, now str66 to accommodate using data's values)
(note: variable school_year was str12, now str21 to accommodate using data's values)

    Result                           # of obs.
    -----------------------------------------
    not matched                           804
        from master                       636  (_merge==1)
        from using                        168  (_merge==2)

    matched                             3,220  (_merge==3)
    -----------------------------------------
```

```
1294 . drop if schoolname==""
     (168 observations deleted)

1295 . destring pct_possible- va_math_poss, replace
     pct_possible: all characters numeric;   replaced as double
     tot_points: all characters numeric;   replaced as double
     tot_possible: all characters numeric;   replaced as byte
     isat_meet_exceed: all characters numeric;   replaced as double
     (847 missing values generated)
     isat_read: all characters numeric;   replaced as double
     (850 missing values generated)
     isat_read_l1: all characters numeric;   replaced as double
     (898 missing values generated)
     isat_read_l2: all characters numeric;   replaced as double
     (945 missing values generated)
     isat_read_l3: all characters numeric;   replaced as double
     (997 missing values generated)
     isat_read_status_pts: contains nonnumeric characters; no   replace
     isat_read_trend: all characters numeric;   replaced as double
     (946 missing values generated)
     isat_read_curstatpts: all characters numeric;   replaced as byte
     (850 missing values generated)
     isat_read_crstatposs: all characters numeric;   replaced as byte
     (843 missing values generated)
     istat_read_trendpts: all characters numeric;   replaced as byte
     (946 missing values generated)
     isat_read_trendposs: all characters numeric;   replaced as byte
     (843 missing values generated)
     isat_math: all characters numeric;   replaced as double
     (850 missing values generated)
     isat_math_l1: all characters numeric;   replaced as double
     (898 missing values generated)
     isat_math_l2: all characters numeric;   replaced as double
     (945 missing values generated)
     isat_math_l3: all characters numeric;   replaced as double
     (998 missing values generated)
     isat_math_status_pts: all characters numeric;   replaced as double
     (850 missing values generated)
     isat_math_trend: all characters numeric;   replaced as double
     (946 missing values generated)
     isat_math_curstatpts: all characters numeric;   replaced as byte
     (850 missing values generated)
     isat_math_crstatposs: all characters numeric;   replaced as byte
     (843 missing values generated)
     istat_math_trendpts: all characters numeric;   replaced as byte
     (946 missing values generated)
     isat_math_trendposs: all characters numeric;   replaced as byte
     (843 missing values generated)
     isat_science: all characters numeric;   replaced as double
     (908 missing values generated)
     isat_science_l1: all characters numeric;   replaced as double
     (954 missing values generated)
     isat_science_l2: all characters numeric;   replaced as double
     (999 missing values generated)
     isat_science_l3: all characters numeric;   replaced as double
     (1045 missing values generated)
     isat_science_status_pts: all characters numeric;   replaced as double
     (908 missing values generated)
     isat_science_trend: all characters numeric;   replaced as double
     (1003 missing values generated)
     isat_science_curstatpts: all characters numeric;   replaced as byte
     (908 missing values generated)
     isat_science_crstatposs: all characters numeric;   replaced as byte
     (844 missing values generated)
     istat_science_trendpts: all characters numeric;   replaced as byte
     (1003 missing values generated)
     isat_science_trendposs: all characters numeric;   replaced as byte
```

(843 missing values generated)
isat_exceeds: all characters numeric;   **replaced** as **double**
(847 missing values generated)
isat_exceeds_l1: all characters numeric;   **replaced** as **double**
(895 missing values generated)
isat_exceeds_l2: all characters numeric;   **replaced** as **double**
(943 missing values generated)
isat_exceeds_l3: all characters numeric;   **replaced** as **double**
(995 missing values generated)
isat_exceeds_status_pts: all characters numeric;   **replaced** as **double**
(847 missing values generated)
isat_exceeds_trend: all characters numeric;   **replaced** as **double**
(942 missing values generated)
isat_exceeds_curstatpts: all characters numeric;   **replaced** as **byte**
(847 missing values generated)
isat_exceeds_crstatposs: all characters numeric;   **replaced** as **byte**
(843 missing values generated)
istat_exceeds_trendpts: all characters numeric;   **replaced** as **byte**
(942 missing values generated)
isat_exceeds_trendposs: all characters numeric;   **replaced** as **byte**
(843 missing values generated)
higrade: all characters numeric;   **replaced** as **byte**
(847 missing values generated)
isat_higrade: all characters numeric;   **replaced** as **double**
(849 missing values generated)
isat_higrade_l1: all characters numeric;   **replaced** as **double**
(1006 missing values generated)
isat_higrade_l2: all characters numeric;   **replaced** as **double**
(1071 missing values generated)
isat_higrade_l3: all characters numeric;   **replaced** as **double**
(1155 missing values generated)
isat_higrade_status_pts: all characters numeric;   **replaced** as **double**
(849 missing values generated)
isat_higrade_trend: all characters numeric;   **replaced** as **double**
(1069 missing values generated)
isat_higrade_curstatpts: all characters numeric;   **replaced** as **byte**
(849 missing values generated)
isat_higrade_crstatposs: all characters numeric;   **replaced** as **byte**
(843 missing values generated)
istat_higrade_trendpts: all characters numeric;   **replaced** as **byte**
(1069 missing values generated)
isat_higrade_trendposs: all characters numeric;   **replaced** as **byte**
(843 missing values generated)
attend: all characters numeric;   **replaced** as **double**
(2 missing values generated)
attend_l1: all characters numeric;   **replaced** as **double**
(115 missing values generated)
attend_l2: all characters numeric;   **replaced** as **double**
(201 missing values generated)
attend_l3: all characters numeric;   **replaced** as **double**
(404 missing values generated)
attend_status_pts: all characters numeric;   **replaced** as **double**
(844 missing values generated)
attend_trend: all characters numeric;   **replaced** as **double**
(399 missing values generated)
attend_curstatpts: all characters numeric;   **replaced** as **byte**
(844 missing values generated)
attend_crstatposs: all characters numeric;   **replaced** as **byte**
(843 missing values generated)
attend_trendpts: all characters numeric;   **replaced** as **byte**
(923 missing values generated)
attend_trendposs: all characters numeric;   **replaced** as **byte**
(843 missing values generated)
va_read: all characters numeric;   **replaced** as **double**
(904 missing values generated)
va_read_pts: all characters numeric;   **replaced** as **byte**
(904 missing values generated)

```
va_read_poss: all characters numeric;   replaced as byte
(843 missing values generated)
va_math: all characters numeric;   replaced as double
(904 missing values generated)
va_math_pts: all characters numeric;   replaced as byte
(904 missing values generated)
va_math_poss: all characters numeric;   replaced as byte
(843 missing values generated)

1296 .
1297 . drop _merge

1298 . merge m:1 schoolid using idbridge.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                            375
        from master                        346  (_merge==1)
        from using                          29  (_merge==2)

    matched                              3,510  (_merge==3)
    -----------------------------------------

1299 . drop _merge

1300 . merge m:1 school_year using survey_panel.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                          3,091
        from master                      3,074  (_merge==1)
        from using                          17  (_merge==2)

    matched                                811  (_merge==3)
    -----------------------------------------

1301 . drop _merge

1302 . save chi_merged_panel.dta, replace
file chi_merged_panel.dta saved

1303 . pwcorr pct_blackhisp pct_possible isat_meet_exceed isat_read isat_math isat_science isat_exceeds isat_h
(analytic weights assumed)

             | pct_bl~p pct_po~e isat_~ed isat_~ad isat_m~h isat_s~e isat_~ds
-------------+---------------------------------------------------------------
pct_blackh~p |   1.0000
pct_possible |  -0.3270   1.0000
isat_meet_~d |  -0.5476   0.3755   1.0000
   isat_read |  -0.5637   0.3356   0.9801   1.0000
   isat_math |  -0.4545   0.3016   0.9703   0.9274   1.0000
isat_science |  -0.5782   0.5600   0.7258   0.6702   0.5917   1.0000
isat_exceeds |  -0.7371   0.4253   0.7761   0.7797   0.6939   0.6964   1.0000
isat_higrade |  -0.6664   0.4325   0.6999   0.6961   0.6299   0.6349   0.9083
      attend |  -0.2138   0.3509   0.6636   0.6251   0.6017   0.6885   0.5099
     va_read |  -0.2314   0.2242   0.3751   0.3733   0.3143   0.4118   0.3577
     va_math |  -0.1556   0.1773   0.2622   0.2087   0.2714   0.2777   0.2728

             | isat_h~e   attend  va_read  va_math
-------------+--------------------------------------
isat_higrade |   1.0000
      attend |   0.4911   1.0000
     va_read |   0.3574   0.3447   1.0000
     va_math |   0.3105   0.1863   0.5371   1.0000
```

```
1304 . gen probation=0

1305 . recode probation 0=1 if probation_status=="Probation"
     (probation: 699 changes made)

1306 . gen level3=0

1307 . recode level3 0=1 if level=="Level 3"
     (level3: 1460 changes made)

1308 . encode governance, gen(gov)

1309 . recode hs .=0
     (hs: 3059 changes made)

1310 . drop if unit==""
     (46 observations deleted)

1311 . replace pct_possible=pct_possible*100 if year==2009
     (614 real changes made)

1312 . destring psae_composite- psae_sci_trend_possible, replace
     psae_composite: all characters numeric;   replaced as double
     (3123 missing values generated)
     act: all characters numeric;   replaced as double
     (3125 missing values generated)
     act_l1: all characters numeric;   replaced as double
     (3207 missing values generated)
     act_l2: all characters numeric;   replaced as double
     (3263 missing values generated)
     act_l3: all characters numeric;   replaced as double
     (3315 missing values generated)
     act_status: all characters numeric;   replaced as double
     (3125 missing values generated)
     act_trend: all characters numeric;   replaced as double
     (3265 missing values generated)
     act_points: all characters numeric;   replaced as byte
     (3125 missing values generated)
     act_possible: all characters numeric;   replaced as byte
     (3013 missing values generated)
     act_trend_pts: all characters numeric;   replaced as byte
     (3265 missing values generated)
     act_trend_possible: all characters numeric;   replaced as byte
     (3013 missing values generated)
     dropout: all characters numeric;   replaced as double
     (3023 missing values generated)
     dropout_l1: all characters numeric;   replaced as double
     (3096 missing values generated)
     dropout_l2: all characters numeric;   replaced as double
     (3143 missing values generated)
     dropout_l3: all characters numeric;   replaced as double
     (3196 missing values generated)
     dropout_status: all characters numeric;   replaced as double
     (3023 missing values generated)
     dropout_trend: all characters numeric;   replaced as double
     (3147 missing values generated)
     dropout_points: all characters numeric;   replaced as byte
     (3023 missing values generated)
     dropout_possible: all characters numeric;   replaced as byte
     (3013 missing values generated)
     dropout_trend_pts: all characters numeric;   replaced as byte
     (3147 missing values generated)
     dropout_trend_possible: all characters numeric;   replaced as byte
     (3013 missing values generated)
     freshman: all characters numeric;   replaced as double
     (3235 missing values generated)
     freshman_l1: all characters numeric;   replaced as double
```

(3255 missing values generated)
freshman_l2: all characters numeric;   **replaced** as **double**
(3278 missing values generated)
freshman_l3: all characters numeric;   **replaced** as **double**
(3314 missing values generated)
freshman_status: all characters numeric;   **replaced** as **double**
(3235 missing values generated)
freshman_trend: all characters numeric;   **replaced** as **double**
(3290 missing values generated)
freshman_points: all characters numeric;   **replaced** as **byte**
(3235 missing values generated)
freshman_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
freshman_trend_pts: all characters numeric;   **replaced** as **byte**
(3290 missing values generated)
freshman_trend_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
attend_status: all characters numeric;   **replaced** as **double**
(3014 missing values generated)
attend_points: all characters numeric;   **replaced** as **byte**
(3014 missing values generated)
attend_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
psae_read: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_read_l1: all characters numeric;   **replaced** as **double**
(3208 missing values generated)
psae_read_l2: all characters numeric;   **replaced** as **double**
(3264 missing values generated)
psae_read_l3: all characters numeric;   **replaced** as **double**
(3399 missing values generated)
psae_read_status: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_read_points: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_read_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
psae_math: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_math_l1: all characters numeric;   **replaced** as **double**
(3208 missing values generated)
psae_math_l2: all characters numeric;   **replaced** as **double**
(3264 missing values generated)
psae_math_l3: all characters numeric;   **replaced** as **double**
(3399 missing values generated)
psae_math_status: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_math_points: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_math_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
psae_sci: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_sci_l1: all characters numeric;   **replaced** as **double**
(3208 missing values generated)
psae_sci_l2: all characters numeric;   **replaced** as **double**
(3264 missing values generated)
psae_sci_l3: all characters numeric;   **replaced** as **double**
(3399 missing values generated)
psae_sci_status: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_sci_points: all characters numeric;   **replaced** as **double**
(3126 missing values generated)
psae_sci_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
ap_enroll: all characters numeric;   **replaced** as **double**
(3183 missing values generated)

ap_enroll_l1: all characters numeric;   **replaced** as **double**
(3218 missing values generated)
ap_enroll_l2: all characters numeric;   **replaced** as **double**
(3253 missing values generated)
ap_enroll_l3: all characters numeric;   **replaced** as **double**
(3286 missing values generated)
ap_enroll_trend: all characters numeric;   **replaced** as **double**
(3270 missing values generated)
ap_enroll_trend_pts: all characters numeric;   **replaced** as **byte**
(3270 missing values generated)
ap_enroll_trend_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
ap_success: all characters numeric;   **replaced** as **double**
(3309 missing values generated)
ap_success_l1: all characters numeric;   **replaced** as **double**
(3339 missing values generated)
ap_success_l2: all characters numeric;   **replaced** as **double**
(3378 missing values generated)
ap_success_l3: all characters numeric;   **replaced** as **double**
(3424 missing values generated)
ap_success_trend: all characters numeric;   **replaced** as **double**
(3393 missing values generated)
ap_success_trend_pts: all characters numeric;   **replaced** as **byte**
(3393 missing values generated)
ap_success_trend_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
epas_gain_read: all characters numeric;   **replaced** as **byte**
(3141 missing values generated)
epas_gain_read_pts: all characters numeric;   **replaced** as **byte**
(3141 missing values generated)
epas_read_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
epas_math_gain: all characters numeric;   **replaced** as **byte**
(3141 missing values generated)
epas_math_pts: all characters numeric;   **replaced** as **byte**
(3141 missing values generated)
epas_math_possible: all characters numeric;   **replaced** as **byte**
(3013 missing values generated)
attend_trend_pts: all characters numeric;   **replaced** as **byte**
(3332 missing values generated)
attend_trend_possible: all characters numeric;   **replaced** as **byte**
(3245 missing values generated)
psae_read_trend: all characters numeric;   **replaced** as **double**
(3429 missing values generated)
psae_read_trend_pts: all characters numeric;   **replaced** as **double**
(3429 missing values generated)
psae_read_trend_possible: all characters numeric;   **replaced** as **byte**
(3245 missing values generated)
psae_math_trend: all characters numeric;   **replaced** as **double**
(3429 missing values generated)
psae_math_trend_pts: all characters numeric;   **replaced** as **double**
(3429 missing values generated)
psae_math_trend_possible: all characters numeric;   **replaced** as **byte**
(3245 missing values generated)
psae_sci_trend: all characters numeric;   **replaced** as **double**
(3429 missing values generated)
psae_sci_trend_pts: all characters numeric;   **replaced** as **double**
(3429 missing values generated)
psae_sci_trend_possible: all characters numeric;   **replaced** as **byte**
(3245 missing values generated)

```
1313 . save chi_merged_panel.dta, replace
     file chi_merged_panel.dta saved

1314 .
1315 . *****What Predicts Probation Status & Level 3 Status?*****
1316 . char gov [omit]  1

1317 .
1318 . logit probation pct_possible i.year if year>2010 & hs==0 & gov==3, or

     Iteration 0:   log likelihood =   -831.43255
     Iteration 1:   log likelihood =   -437.50861
     Iteration 2:   log likelihood =   -420.14968
     Iteration 3:   log likelihood =   -419.83943
     Iteration 4:   log likelihood =   -419.83887
     Iteration 5:   log likelihood =   -419.83887

     Logistic regression                             Number of obs     =          1,256
                                                     LR chi2(    3)        =      823.19
                                                     Prob > chi2       =         0.0000
     Log likelihood =  -419.83887                    Pseudo R2         =         0.4950
```

probation	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pct_possible	.8636248	.0073812	-17.15	0.000	.8492785	.8782135
year						
2012	.8829156	.1857418	-0.59	0.554	.584587	1.333488
2013	.7691296	.1656723	-1.22	0.223	.5042533	1.173141
_cons	2532.535	1264.599	15.69	0.000	951.734	6738.998

```
1319 . est store prob1, title("% Possible")

1320 . logit probation pct_black va_read va_math i.year if year>2010 & hs==0 & gov==3, or

     Iteration 0:   log likelihood =   -817.55681
     Iteration 1:   log likelihood =    -609.6454
     Iteration 2:   log likelihood =    -604.3184
     Iteration 3:   log likelihood =   -604.31048
     Iteration 4:   log likelihood =   -604.31048

     Logistic regression                             Number of obs     =          1,232
                                                     LR chi2(    5)        =      426.49
                                                     Prob > chi2       =         0.0000
     Log likelihood =  -604.31048                    Pseudo R2         =         0.2608
```

probation	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pct_black	1.027323	.0017801	15.56	0.000	1.02384	1.030818
va_read	.5805019	.0534293	-5.91	0.000	.4846846	.6952613
va_math	.6663	.0561363	-4.82	0.000	.564879	.7859305
year						
2012	.9281777	.161278	-0.43	0.668	.6602802	1.30477
2013	.9862664	.1719012	-0.08	0.937	.7008646	1.387888
_cons	.1589392	.0247411	-11.82	0.000	.1171466	.2156415

```
1321 . est store prob2, title("% Black & Value Added")

1322 . logit probation pct_blackhisp va_read va_math i.year if year>2010 & hs==0 & gov==3, or

Iteration 0:   log likelihood =   -817.55681
Iteration 1:   log likelihood =   -630.09251
Iteration 2:   log likelihood =    -592.7423
Iteration 3:   log likelihood =   -587.56942
Iteration 4:   log likelihood =    -587.4623
Iteration 5:   log likelihood =   -587.46209
Iteration 6:   log likelihood =   -587.46209

Logistic regression                             Number of obs     =          1,232
                                                LR chi2(   5)       =      460.19
                                                Prob > chi2       =         0.0000
Log likelihood =  -587.46209                    Pseudo R2         =         0.2814
```

probation	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pct_blackhisp	1.145323	.0168333	9.23	0.000	1.112802	1.178796
va_read	.6121056	.055722	-5.39	0.000	.5120811	.731668
va_math	.7363165	.0599987	-3.76	0.000	.6276311	.8638229
year						
2012	.9300775	.1601858	-0.42	0.674	.6636178	1.303528
2013	.9629299	.1658949	-0.22	0.826	.6869869	1.349711
_cons	2.02e-06	2.88e-06	-9.20	0.000	1.23e-07	.000033

```
1323 . est store prob3, title("% Black or Hispanic & Value Added")

1324 . xml_tab prob1(, or) prob2(, or) prob3(, or), save("Logit Models Probation.xml") replace


note: results saved to E:\Current Work\C1a-Chicago Litigation\CPS/Logit Models Probation.xml
 click here  to open with Excel

1325 .
1326 . logit level3 pct_black va_read va_math i.year if hs==0 & gov==3, or

Iteration 0:   log likelihood =    -1297.833
Iteration 1:   log likelihood =   -894.09896
Iteration 2:   log likelihood =   -866.91573
Iteration 3:   log likelihood =   -866.60163
Iteration 4:   log likelihood =   -866.60134
Iteration 5:   log likelihood =   -866.60134

Logistic regression                             Number of obs     =          2,035
                                                LR chi2(   7)       =      862.46
                                                Prob > chi2       =         0.0000
Log likelihood =  -866.60134                    Pseudo R2         =         0.3323
```

level3	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pct_black	1.022816	.0015051	15.33	0.000	1.019871	1.02577
va_read	.4847118	.0335847	-10.45	0.000	.423161	.5552156
va_math	.5147563	.0315093	-10.85	0.000	.45656	.5803706
year						
2010	1.013848	.2024747	0.07	0.945	.6854566	1.499566
2011	.5253442	.1065263	-3.17	0.002	.3530548	.7817101
2012	.5238322	.107031	-3.16	0.002	.3509717	.7818301
2013	.6733921	.1365931	-1.95	0.051	.4524884	1.002141

_cons	**.1869137**	**.0326259**	**-9.61**	**0.000**	**.1327587**	**.2631595**

```
1327 . est store level3b, title("% Black & Value Added")

1328 . logit level3 pct_blackhisp va_read va_math hs i.year if hs==0 & gov==3, or

note: hs omitted because of collinearity
Iteration 0:   log likelihood =    -1297.833
Iteration 1:   log likelihood =   -904.53777
Iteration 2:   log likelihood =   -848.02818
Iteration 3:   log likelihood =    -840.2852
Iteration 4:   log likelihood =   -840.15279
Iteration 5:   log likelihood =   -840.15277

Logistic regression                             Number of obs     =          2,035
                                                LR chi2(    7)        =      915.36
                                                Prob > chi2       =         0.0000
Log likelihood =  -840.15277                    Pseudo R2         =         0.3526
```

level3	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf.	Interval]
pct_blackhisp	**1.108591**	**.0108963**	**10.49**	**0.000**	**1.087439**	**1.130154**
va_read	**.4723008**	**.033052**	**-10.72**	**0.000**	**.4117665**	**.5417344**
va_math	**.5614039**	**.0334023**	**-9.70**	**0.000**	**.4996096**	**.6308412**
hs	**1**	(omitted)				
year						
2010	**1.070065**	**.2141695**	**0.34**	**0.735**	**.7228453**	**1.584072**
2011	**.5739987**	**.1160307**	**-2.75**	**0.006**	**.3862293**	**.8530542**
2012	**.5773152**	**.116644**	**-2.72**	**0.007**	**.3885362**	**.8578167**
2013	**.7263571**	**.1453381**	**-1.60**	**0.110**	**.4907176**	**1.075149**
_cons	**.0000388**	**.0000372**	**-10.60**	**0.000**	**5.94e-06**	**.0002537**

```
1329 . est store level3c, title("% Black or Hispanic & Value Added")

1330 . xml_tab level3b(, or) level3c(, or), save("Logit Models Level 3.xml") replace

note: results saved to E:\Current Work\C1a-Chicago Litigation\CPS/Logit Models Level 3.xml
 click here  to open with Excel

1331 .
1332 . reg pct_possible pct_black hs i.year if gov==3
```

Source	SS	df	MS	Number of obs	=	2,539
				F(6, 2532)	=	**132.25**
Model	**277077.442**	**6**	**46179.5737**	Prob > F	=	**0.0000**
Residual	**884112.329**	**2,532**	**349.175485**	R-squared	=	**0.2386**
				Adj R-squared	=	**0.2368**
Total	**1161189.77**	**2,538**	**457.52158**	Root MSE	=	**18.686**

pct_possible	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.2154688**	**.0087728**	**-24.56**	**0.000**	**-.2326715**	**-.1982662**
hs	**-9.265218**	**.9592117**	**-9.66**	**0.000**	**-11.14614**	**-7.384298**
year						
2010	**3.758426**	**1.189674**	**3.16**	**0.002**	**1.425592**	**6.091259**
2011	**7.001067**	**1.182426**	**5.92**	**0.000**	**4.682447**	**9.319687**
2012	**7.151639**	**1.177623**	**6.07**	**0.000**	**4.842436**	**9.460842**
2013	**7.626989**	**1.178786**	**6.47**	**0.000**	**5.315505**	**9.938472**

_cons	**62.66933**	**.9672445**	**64.79**	**0.000**	**60.77266**	**64.566**

```
1333 . est store points1, title("% Black")

1334 . reg pct_possible pct_blackhisp hs i.year if gov==3
```

Source	SS	df	MS		
Model	**404489.074**	**6**	**67414.8456**	Prob > F	**0.0000**
Residual	**756700.697**	**2,532**	**298.854936**	R-squared	**0.3483**
				Adj R-squared	**0.3468**
Total	**1161189.77**	**2,538**	**457.52158**	Root MSE	**17.287**

Number of obs	=					**2,539**
F(6, 2532)	=					**225.58**

pct_possible	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	**-.5391991**	**.0160321**	**-33.63**	**0.000**	**-.5706365**	**-.5077617**
hs	**-8.321099**	**.8885766**	**-9.36**	**0.000**	**-10.06351**	**-6.578688**
year						
2010	**3.724981**	**1.100617**	**3.38**	**0.001**	**1.56678**	**5.883182**
2011	**7.041725**	**1.093836**	**6.44**	**0.000**	**4.89682**	**9.18663**
2012	**7.083555**	**1.089431**	**6.50**	**0.000**	**4.947289**	**9.219822**
2013	**7.544592**	**1.09048**	**6.92**	**0.000**	**5.406268**	**9.682916**
_cons	**98.41156**	**1.597032**	**61.62**	**0.000**	**95.27994**	**101.5432**

```
1335 . est store points2, title("% Black or Hispanic")

1336 . xml_tab points1 points2, save("Regression Models Points.xml") replace

note: results saved to E:\Current Work\C1a-Chicago Litigation\CPS/Regression Models Points.xml
 click here  to open with Excel

1337 .
1338 .
1339 . ****What are the underlying patterns of racial disparity for each underlying indicator?****
1340 .
1341 . reg attend pct_blackhisp if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   3.8211e+05)
```

Source	SS	df	MS		
Model	**614.534993**	**1**	**614.534993**	Prob > F	**0.0000**
Residual	**12929.4992**	**616**	**20.9894467**	R-squared	**0.0454**
				Adj R-squared	**0.0438**
Total	**13544.0341**	**617**	**21.951433**	Root MSE	**4.5814**

Number of obs	=					**618**
F(1, 616)	=					**29.28**

attend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	**-.0466602**	**.0086233**	**-5.41**	**0.000**	**-.0635949**	**-.0297256**
_cons	**96.91096**	**.7531749**	**128.67**	**0.000**	**95.43186**	**98.39006**

```
1342 . local r2: display %5.4f e(r2)

1343 . graph twoway scatter attend pct_blackhisp if year==2013 [wei= total], ms(oh) msize(small) || lfit atten
> nic & Attendance) subtitle(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1344 . graph save attend_blackhisp13.gph, replace
(file attend_blackhisp13.gph saved)

1345 .
1346 . reg attend pct_black if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   3.8211e+05)
```

Source	SS	df	MS	Number of obs =	**618**
				F(1, 616) =	**67.78**
Model	**1342.62682**	**1**	**1342.62682**	Prob > F =	**0.0000**
Residual	**12201.4073**	**616**	**19.8074794**	R-squared =	**0.0991**
				Adj R-squared =	**0.0977**
Total	**13544.0341**	**617**	**21.951433**	Root MSE =	**4.4506**

attend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0363668**	**.0044172**	**-8.23**	**0.000**	**-.0450414**	**-.0276923**
_cons	**94.3593**	**.2469001**	**382.18**	**0.000**	**93.87443**	**94.84417**

```
1347 . local r2: display %5.4f e(r2)

1348 . graph twoway scatter attend pct_black if year==2013 [wei= total], ms(oh) msize(small) || lfit attend pc
> btitle(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1349 . graph save attend_black13.gph, replace
(file attend_black13.gph saved)

1350 .
1351 . reg isat_meet_exceed pct_blackhisp if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.6944e+05)
```

Source	SS	df	MS	Number of obs =	**471**
				F(1, 469) =	**504.76**
Model	**59703.6495**	**1**	**59703.6495**	Prob > F =	**0.0000**
Residual	**55473.3649**	**469**	**118.280096**	R-squared =	**0.5184**
				Adj R-squared =	**0.5173**
Total	**115177.014**	**470**	**245.057477**	Root MSE =	**10.876**

isat_meet_e~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	**-.4943941**	**.0220054**	**-22.47**	**0.000**	**-.5376354**	**-.4511527**
_cons	**97.87187**	**1.918958**	**51.00**	**0.000**	**94.10105**	**101.6427**

```
1352 . local r2: display %5.4f e(r2)

1353 . graph twoway scatter isat_meet_exceed pct_blackhisp if year==2013 [wei= total], ms(oh) msize(small) ||
> tle(% Black or Hispanic & ISAT Proficiency) subtitle(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1354 . graph save profic_blackhisp13.gph, replace
(file profic_blackhisp13.gph saved)

1355 .
1356 . reg isat_meet_exceed pct_black if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.6944e+05)
```

Source	SS	df	MS	Number of obs	=	471
				F(1, 469)	=	173.93
Model	31158.2049	1	31158.2049	Prob > F	=	0.0000
Residual	84018.8095	469	179.144583	R-squared	=	0.2705
				Adj R-squared	=	0.2690
Total	115177.014	470	245.057477	Root MSE	=	13.384

isat_meet_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.197959	.0150104	-13.19	0.000	-.2274549	-.1684631
_cons	63.39636	.820726	77.24	0.000	61.7836	65.00911

```
1357 . local r2: display %5.4f e(r2)

1358 . graph twoway scatter isat_meet_exceed pct_black if year==2013 [wei= total], ms(oh) msize(small) || lfit
> ack & ISAT Proficiency) subtitle(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1359 . graph save profic_black13.gph, replace
(file profic_black13.gph saved)

1360 .
1361 . reg va_read pct_blackhisp if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.6747e+05)
```

Source	SS	df	MS	Number of obs	=	465
				F(1, 463)	=	10.93
Model	7.71567612	1	7.71567612	Prob > F	=	0.0010
Residual	326.743766	463	.705710077	R-squared	=	0.0231
				Adj R-squared	=	0.0210
Total	334.459442	464	.720817762	Root MSE	=	.84007

va_read	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	-.0056449	.0017072	-3.31	0.001	-.0089997	-.0022901
_cons	.564607	.1488158	3.79	0.000	.272169	.857045

```
1362 . local r2: display %5.4f e(r2)

1363 . graph twoway scatter va_read pct_blackhisp if year==2013 [wei= total], ms(oh) msize(small) || lfit va_r
> panic & VA Reading) subtitle(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1364 . graph save va_read_blackhisp13.gph, replace
(file va_read_blackhisp13.gph saved)

1365 .
1366 . reg va_read pct_black if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.6747e+05)
```

Source	SS	df	MS	Number of obs =	**465**
				F(1, 463) =	**1.49**
Model	**1.07209833**	**1**	**1.07209833**	Prob > F =	**0.2230**
Residual	**333.387343**	**463**	**.720059057**	R-squared =	**0.0032**
				Adj R-squared =	**0.0011**
Total	**334.459442**	**464**	**.720817762**	Root MSE =	**.84856**

va_read	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0011683**	**.0009574**	**-1.22**	**0.223**	**-.0030497**	**.0007132**
_cons	**.1318558**	**.0523643**	**2.52**	**0.012**	**.0289547**	**.234757**

```
1367 . local r2: display %5.4f e(r2)

1368 . graph twoway scatter va_read pct_black if year==2013 [wei= total], ms(oh) msize(small) || lfit va_read
> subtitle(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1369 . graph save va_read_black13.gph, replace
(file va_read_black13.gph saved)

1370 .
1371 . reg va_math pct_blackhisp if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.6747e+05)
```

Source	SS	df	MS	Number of obs =	**465**
				F(1, 463) =	**20.19**
Model	**15.8273985**	**1**	**15.8273985**	Prob > F =	**0.0000**
Residual	**363.014869**	**463**	**.784049393**	R-squared =	**0.0418**
				Adj R-squared =	**0.0397**
Total	**378.842268**	**464**	**.816470404**	Root MSE =	**.88547**

va_math	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	**-.0080849**	**.0017995**	**-4.49**	**0.000**	**-.011621**	**-.0045488**
_cons	**.7629322**	**.1568583**	**4.86**	**0.000**	**.4546898**	**1.071175**

```
1372 . local r2: display %5.4f e(r2)

1373 . graph twoway scatter va_math pct_blackhisp if year==2013 [wei= total], ms(oh) msize(small) || lfit va_m
> panic & VA math) subtitle(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1374 . graph save va_math_blackhisp13.gph, replace
(file va_math_blackhisp13.gph saved)

1375 .
1376 . reg va_math pct_black if year==2013 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.6747e+05)
```

Source	SS	df	MS	Number of obs =	465
				F(1, 463) =	12.48
Model	9.94056106	1	9.94056106	Prob > F =	0.0005
Residual	368.901707	463	.796763945	R-squared =	0.0262
				Adj R-squared =	0.0241
Total	378.842268	464	.816470404	Root MSE =	.89262

va_math	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.0035574	.0010071	-3.53	0.000	-.0055366	-.0015783
_cons	.2111112	.0550828	3.83	0.000	.102868	.3193545

```
1377 . local r2: display %5.4f e(r2)

1378 . graph twoway scatter va_math pct_black if year==2013 [wei= total], ms(oh) msize(small) || lfit va_math
> title(CPS 2013) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1379 . graph save va_math_black13.gph, replace
(file va_math_black13.gph saved)

1380 .
1381 . reg attend pct_blackhisp if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   3.9839e+05)
```

Source	SS	df	MS	Number of obs =	615
				F(1, 613) =	29.37
Model	1767.60303	1	1767.60303	Prob > F =	0.0000
Residual	36890.1521	613	60.1796934	R-squared =	0.0457
				Adj R-squared =	0.0442
Total	38657.7551	614	62.9605132	Root MSE =	7.7576

attend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	-.0839085	.0154824	-5.42	0.000	-.1143135	-.0535035
_cons	98.25103	1.387799	70.80	0.000	95.52561	100.9764

```
1382 . local r2: display %5.4f e(r2)

1383 . graph twoway scatter attend pct_blackhisp if year==2009 [wei= total], ms(oh) msize(small) || lfit atten
> nic & Attendance) subtitle(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1384 . graph save attend_blackhisp09.gph, replace
(file attend_blackhisp09.gph saved)

1385 .
1386 . reg attend pct_black if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   3.9839e+05)
```

Source	SS	df	MS	Number of obs =	**615**
				F(1, 613) =	**68.45**
Model	**3882.97979**	**1**	**3882.97979**	Prob > F =	**0.0000**
Residual	**34774.7753**	**613**	**56.7288341**	R-squared =	**0.1004**
				Adj R-squared =	**0.0990**
Total	**38657.7551**	**614**	**62.9605132**	Root MSE =	**7.5319**

attend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.060069**	**.0072605**	**-8.27**	**0.000**	**-.0743275**	**-.0458104**
_cons	**93.67355**	**.4502773**	**208.04**	**0.000**	**92.78928**	**94.55782**

```
1387 . local r2: display %5.4f e(r2)

1388 . graph twoway scatter attend pct_black if year==2009 [wei= total], ms(oh) msize(small) || lfit attend pc
> btitle(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1389 . graph save attend_black09.gph, replace
(file attend_black09.gph saved)

1390 .
1391 . reg isat_meet_exceed pct_blackhisp if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.8629e+05)
```

Source	SS	df	MS	Number of obs =	**495**
				F(1, 493) =	**323.16**
Model	**37244.755**	**1**	**37244.755**	Prob > F =	**0.0000**
Residual	**56819.2917**	**493**	**115.252113**	R-squared =	**0.3960**
				Adj R-squared =	**0.3947**
Total	**94064.0468**	**494**	**190.41305**	Root MSE =	**10.736**

isat_meet_e~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	**-.4112312**	**.0228759**	**-17.98**	**0.000**	**-.4561774**	**-.3662849**
_cons	**106.2527**	**2.055904**	**51.68**	**0.000**	**102.2133**	**110.2921**

```
1392 . local r2: display %5.4f e(r2)

1393 . graph twoway scatter isat_meet_exceed pct_blackhisp if year==2009 [wei= total], ms(oh) msize(small) ||
> tle(% Black or Hispanic & ISAT Proficiency) subtitle(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1394 . graph save profic_blackhisp09.gph, replace
(file profic_blackhisp09.gph saved)

1395 .
1396 . reg isat_meet_exceed pct_black if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.8629e+05)
```

Source	SS	df	MS	Number of obs	=	495
				F(1, 493)	=	336.79
Model	38178.0198	1	38178.0198	Prob > F	=	0.0000
Residual	55886.027	493	113.359081	R-squared	=	0.4059
				Adj R-squared	=	0.4047
Total	94064.0468	494	190.41305	Root MSE	=	10.647

isat_meet_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.2042294	.0111286	-18.35	0.000	-.2260946	-.1823641
_cons	79.27305	.683118	116.05	0.000	77.93087	80.61523

```
1397 . local r2: display %5.4f e(r2)

1398 . graph twoway scatter isat_meet_exceed pct_black if year==2009 [wei= total], ms(oh) msize(small) || lfit
> ack & ISAT Proficiency) subtitle(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1399 . graph save profic_black09.gph, replace
(file profic_black09.gph saved)

1400 .
1401 . reg va_read pct_blackhisp if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.8328e+05)
```

Source	SS	df	MS	Number of obs	=	486
				F(1, 484)	=	64.21
Model	222.938384	1	222.938384	Prob > F	=	0.0000
Residual	1680.33758	484	3.47177186	R-squared	=	0.1171
				Adj R-squared	=	0.1153
Total	1903.27597	485	3.92428034	Root MSE	=	1.8633

va_read	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	-.0319777	.0039905	-8.01	0.000	-.0398187	-.0241368
_cons	2.864485	.3583717	7.99	0.000	2.160329	3.568642

```
1402 . local r2: display %5.4f e(r2)

1403 . graph twoway scatter va_read pct_blackhisp if year==2009 [wei= total], ms(oh) msize(small) || lfit va_r
> panic & VA Reading) subtitle(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1404 . graph save va_read_blackhisp09.gph, replace
(file va_read_blackhisp09.gph saved)

1405 .
1406 . reg va_read pct_black if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.8328e+05)
```

Source	SS	df	MS	Number of obs =	**486**
				F(1, 484) =	**160.41**
Model	**473.770732**	**1**	**473.770732**	Prob > F =	**0.0000**
Residual	**1429.50523**	**484**	**2.95352321**	R-squared =	**0.2489**
				Adj R-squared =	**0.2474**
Total	**1903.27597**	**485**	**3.92428034**	Root MSE =	**1.7186**

va_read	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0229482**	**.0018119**	**-12.67**	**0.000**	**-.0265083**	**-.019388**
_cons	**1.076566**	**.1111163**	**9.69**	**0.000**	**.8582358**	**1.294895**

```
1407 . local r2: display %5.4f e(r2)

1408 . graph twoway scatter va_read pct_black if year==2009 [wei= total], ms(oh) msize(small) || lfit va_read
> subtitle(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1409 . graph save va_read_black09.gph, replace
(file va_read_black09.gph saved)

1410 .
1411 . reg va_math pct_blackhisp if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.8328e+05)
```

Source	SS	df	MS	Number of obs =	**486**
				F(1, 484) =	**47.64**
Model	**274.540066**	**1**	**274.540066**	Prob > F =	**0.0000**
Residual	**2789.19228**	**484**	**5.76279397**	R-squared =	**0.0896**
				Adj R-squared =	**0.0877**
Total	**3063.73235**	**485**	**6.31697392**	Root MSE =	**2.4006**

va_math	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_blackhisp	**-.0354861**	**.0051413**	**-6.90**	**0.000**	**-.0455881**	**-.0253841**
_cons	**3.16067**	**.4617157**	**6.85**	**0.000**	**2.253456**	**4.067885**

```
1412 . local r2: display %5.4f e(r2)

1413 . graph twoway scatter va_math pct_blackhisp if year==2009 [wei= total], ms(oh) msize(small) || lfit va_m
> panic & VA math) subtitle(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1414 . graph save va_math_blackhisp09.gph, replace
(file va_math_blackhisp09.gph saved)

1415 .
1416 . reg va_math pct_black if year==2009 [wei= total]
(analytic weights assumed)
(sum of wgt is   2.8328e+05)
```

Source	SS	df	MS	Number of obs =	**486**
				F(1, 484) =	**25.18**
Model	**151.490953**	**1**	**151.490953**	Prob > F =	**0.0000**
Residual	**2912.2414**	**484**	**6.01702768**	R-squared =	**0.0494**
				Adj R-squared =	**0.0475**
Total	**3063.73235**	**485**	**6.31697392**	Root MSE =	**2.453**

va_math	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0129765**	**.0025862**	**-5.02**	**0.000**	**-.018058**	**-.007895**
_cons	**.6308017**	**.1585983**	**3.98**	**0.000**	**.3191755**	**.9424278**

```
1417 . local r2: display %5.4f e(r2)

1418 . graph twoway scatter va_math pct_black if year==2009 [wei= total], ms(oh) msize(small) || lfit va_math
> title(CPS 2009) note(rsq=`r2')
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)
(analytic weights assumed)

1419 . graph save va_math_black09.gph, replace
(file va_math_black09.gph saved)

1420 .
1421 . **************
1422 .
1423 . pcorr isat_math i.year pct_black if hs==0
(obs=2505)

Partial and semipartial correlations of isat_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0581**	**0.0411**	**0.0034**	**0.0017**	**0.0036**
2011.year	**0.1240**	**0.0882**	**0.0154**	**0.0078**	**0.0000**
2012.year	**0.1423**	**0.1015**	**0.0203**	**0.0103**	**0.0000**
2013.year	**-0.4789**	**-0.3850**	**0.2294**	**0.1483**	**0.0000**
pct_black	**-0.5362**	**-0.4483**	**0.2875**	**0.2010**	**0.0000**

```
1424 . pcorr isat_math i.year pct_blackhisp if hs==0
(obs=2505)
```

Partial and semipartial correlations of isat_math with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0582**	**0.0404**	**0.0034**	**0.0016**	**0.0036**
2011.year	**0.1269**	**0.0887**	**0.0161**	**0.0079**	**0.0000**
2012.year	**0.1445**	**0.1012**	**0.0209**	**0.0102**	**0.0000**
2013.year	**-0.4820**	**-0.3814**	**0.2324**	**0.1454**	**0.0000**
pct_black~p	**-0.5592**	**-0.4676**	**0.3127**	**0.2186**	**0.0000**

```
1425 . pcorr isat_math i.year pct_frl if hs==0
(obs=2010)
```

Partial and semipartial correlations of isat_math with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0673**	**0.0455**	**0.0045**	**0.0021**	**0.0025**
2012.year	**0.0941**	**0.0637**	**0.0089**	**0.0041**	**0.0000**
2013.year	**-0.5671**	**-0.4641**	**0.3216**	**0.2154**	**0.0000**
pct_frl	**-0.5512**	**-0.4453**	**0.3038**	**0.1983**	**0.0000**

```
1426 . pcorr isat_math i.year pct_ell if hs==0
(obs=1702)
```

Partial and semipartial correlations of isat_math with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0402**	**0.0305**	**0.0016**	**0.0009**	**0.0975**
2012.year	**0.0335**	**0.0254**	**0.0011**	**0.0006**	**0.1671**
2013.year	**-0.5254**	**-0.4676**	**0.2761**	**0.2186**	**0.0000**
pct_ell	**0.2138**	**0.1657**	**0.0457**	**0.0275**	**0.0000**

```
1427 . pcorr isat_math i.year pct_sped if hs==0
(obs=2010)
```

Partial and semipartial correlations of isat_math with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0768**	**0.0587**	**0.0059**	**0.0034**	**0.0006**
2012.year	**0.1010**	**0.0773**	**0.0102**	**0.0060**	**0.0000**
2013.year	**-0.5007**	**-0.4405**	**0.2507**	**0.1941**	**0.0000**
pct_sped	**-0.3339**	**-0.2697**	**0.1115**	**0.0728**	**0.0000**

```
1428 . reg isat_math pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS	Number of obs =	1,702
				F(8, 1693) =	584.76
Model	462364.635	8	57795.5793	Prob > F =	0.0000
Residual	167330.547	1,693	98.8367084	R-squared =	0.7343
				Adj R-squared =	0.7330
Total	629695.182	1,701	370.191171	Root MSE =	9.9417

isat_math	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.2160025	.0201138	-10.74	0.000	-.255453	-.176552
pct_hisp	-.0756097	.0201713	-3.75	0.000	-.115173	-.0360465
pct_frl	-24.28891	2.160712	-11.24	0.000	-28.52686	-20.05096
pct_ell	-2.577432	2.973941	-0.87	0.386	-8.41042	3.255556
pct_sped	-54.58066	2.845486	-19.18	0.000	-60.1617	-48.99962
year						
2011	1.559203	.745779	2.09	0.037	.0964576	3.021949
2012	3.661038	.6950387	5.27	0.000	2.297813	5.024264
2013	-24.94459	.7093967	-35.16	0.000	-26.33598	-23.55321
_cons	117.0101	1.18942	98.38	0.000	114.6772	119.3429

```
1429 . pcorr isat_math i.year va_math if hs==0
(obs=2952)
```

Partial and semipartial correlations of isat_math with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	0.0449	0.0359	0.0020	0.0013	0.0148
2010.year	0.0889	0.0712	0.0079	0.0051	0.0000
2011.year	0.1463	0.1180	0.0214	0.0139	0.0000
2012.year	0.1728	0.1400	0.0299	0.0196	0.0000
2013.year	-0.3612	-0.3090	0.1304	0.0955	0.0000
va_math	0.3651	0.3130	0.1333	0.0979	0.0000

```
1430 .
1431 . pcorr isat_math_trend i.year pct_black if hs==0
(obs=2424)
```

Partial and semipartial correlations of isat_math_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0003	0.0003	0.0000	0.0000	0.9894
2011.year	0.0481	0.0469	0.0023	0.0022	0.0180
2012.year	-0.0512	-0.0500	0.0026	0.0025	0.0118
2013.year	0.0106	0.0104	0.0001	0.0001	0.6016
pct_black	0.1996	0.1986	0.0398	0.0395	0.0000

```
1432 . pcorr isat_math_trend i.year pct_blackhisp if hs==0
(obs=2424)
```

Partial and semipartial correlations of isat_math_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0002**	**0.0002**	**0.0000**	**0.0000**	**0.9915**
2011.year	**0.0472**	**0.0464**	**0.0022**	**0.0022**	**0.0203**
2012.year	**-0.0510**	**-0.0502**	**0.0026**	**0.0025**	**0.0121**
2013.year	**0.0074**	**0.0073**	**0.0001**	**0.0001**	**0.7168**
pct_black~p	**0.1530**	**0.1522**	**0.0234**	**0.0232**	**0.0000**

```
1433 . pcorr isat_math_trend i.year pct_frl if hs==0
(obs=1944)
```

Partial and semipartial correlations of isat_math_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0548**	**0.0538**	**0.0030**	**0.0029**	**0.0157**
2012.year	**-0.0546**	**-0.0536**	**0.0030**	**0.0029**	**0.0161**
2013.year	**0.0133**	**0.0130**	**0.0002**	**0.0002**	**0.5587**
pct_frl	**0.1704**	**0.1694**	**0.0290**	**0.0287**	**0.0000**

```
1434 . pcorr isat_math_trend i.year pct_ell if hs==0
(obs=1647)
```

Partial and semipartial correlations of isat_math_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0206**	**0.0205**	**0.0004**	**0.0004**	**0.4032**
2012.year	**-0.0215**	**-0.0214**	**0.0005**	**0.0005**	**0.3829**
2013.year	**0.0436**	**0.0434**	**0.0019**	**0.0019**	**0.0771**
pct_ell	**-0.0717**	**-0.0715**	**0.0051**	**0.0051**	**0.0036**

```
1435 . pcorr isat_math_trend i.year pct_sped if hs==0
(obs=1944)
```

Partial and semipartial correlations of isat_math_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0504**	**0.0501**	**0.0025**	**0.0025**	**0.0263**
2012.year	**-0.0573**	**-0.0570**	**0.0033**	**0.0032**	**0.0116**
2013.year	**0.0013**	**0.0013**	**0.0000**	**0.0000**	**0.9527**
pct_sped	**-0.0532**	**-0.0529**	**0.0028**	**0.0028**	**0.0191**

```
1436 . reg isat_math_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS	Number of obs =	1,647
				F(8, 1638) =	8.88
Model	2588.40341	8	323.550427	Prob > F =	0.0000
Residual	59712.5013	1,638	36.4545185	R-squared =	0.0415
				Adj R-squared =	0.0369
Total	62300.9047	1,646	37.8498813	Root MSE =	6.0378

isat_math_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	.0017498	.0123933	0.14	0.888	-.0225586	.0260581
pct_hisp	-.0151648	.0124679	-1.22	0.224	-.0396196	.0092899
pct_frl	4.79702	1.335841	3.59	0.000	2.176883	7.417156
pct_ell	-.9114203	1.835635	-0.50	0.620	-4.51186	2.689019
pct_sped	-4.03806	1.778308	-2.27	0.023	-7.526058	-.5500629
year						
2011	.5185232	.4622184	1.12	0.262	-.388078	1.425124
2012	-.5823651	.4294344	-1.36	0.175	-1.424664	.2599333
2013	.6788008	.4373736	1.55	0.121	-.1790696	1.536671
_cons	1.069812	.7372882	1.45	0.147	-.3763151	2.515939

```
1437 . pcorr isat_math_trend i.year va_math if hs==0
(obs=2877)
```

Partial and semipartial correlations of isat_math_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	-0.2395	-0.2189	0.0573	0.0479	0.0000
2010.year	-0.2442	-0.2235	0.0596	0.0499	0.0000
2011.year	-0.2083	-0.1891	0.0434	0.0357	0.0000
2012.year	-0.2895	-0.2685	0.0838	0.0721	0.0000
2013.year	-0.2468	-0.2260	0.0609	0.0511	0.0000
va_math	0.3723	0.3561	0.1386	0.1268	0.0000

```
1438 .
1439 . pcorr isat_read i.year pct_black if hs==0
(obs=2505)
```

Partial and semipartial correlations of isat_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	-0.0004	-0.0003	0.0000	0.0000	0.9846
2011.year	0.0914	0.0699	0.0084	0.0049	0.0000
2012.year	0.1002	0.0766	0.0100	0.0059	0.0000
2013.year	-0.3912	-0.3235	0.1530	0.1047	0.0000
pct_black	-0.5270	-0.4720	0.2778	0.2228	0.0000

```
1440 . pcorr isat_read i.year pct_blackhisp if hs==0
(obs=2505)
```

Partial and semipartial correlations of isat_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**-0.0018**	**-0.0013**	**0.0000**	**0.0000**	**0.9273**
2011.year	**0.0993**	**0.0695**	**0.0099**	**0.0048**	**0.0000**
2012.year	**0.1072**	**0.0751**	**0.0115**	**0.0056**	**0.0000**
2013.year	**-0.4197**	**-0.3223**	**0.1762**	**0.1039**	**0.0000**
pct_black~p	**-0.6281**	**-0.5626**	**0.3946**	**0.3165**	**0.0000**

```
1441 . pcorr isat_read i.year pct_frl if hs==0
(obs=2010)
```

Partial and semipartial correlations of isat_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1016**	**0.0684**	**0.0103**	**0.0047**	**0.0000**
2012.year	**0.1188**	**0.0802**	**0.0141**	**0.0064**	**0.0000**
2013.year	**-0.4749**	**-0.3615**	**0.2255**	**0.1306**	**0.0000**
pct_frl	**-0.6462**	**-0.5672**	**0.4176**	**0.3218**	**0.0000**

```
1442 . pcorr isat_read i.year pct_ell if hs==0
(obs=1702)
```

Partial and semipartial correlations of isat_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0827**	**0.0694**	**0.0068**	**0.0048**	**0.0006**
2012.year	**0.0478**	**0.0400**	**0.0023**	**0.0016**	**0.0488**
2013.year	**-0.4041**	**-0.3693**	**0.1633**	**0.1364**	**0.0000**
pct_ell	**0.1578**	**0.1336**	**0.0249**	**0.0178**	**0.0000**

```
1443 . pcorr isat_read i.year pct_sped if hs==0
(obs=2010)
```

Partial and semipartial correlations of isat_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1001**	**0.0844**	**0.0100**	**0.0071**	**0.0000**
2012.year	**0.1137**	**0.0961**	**0.0129**	**0.0092**	**0.0000**
2013.year	**-0.3661**	**-0.3303**	**0.1340**	**0.1091**	**0.0000**
pct_sped	**-0.2916**	**-0.2560**	**0.0850**	**0.0655**	**0.0000**

```
1444 . reg isat_read pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS	Number of obs =	1,702
				F(8, 1693) =	572.80
Model	394143.981	8	49267.9977	Prob > F =	0.0000
Residual	145619.39	1,693	86.0126345	R-squared =	0.7302
				Adj R-squared =	0.7289
Total	539763.372	1,701	317.321206	Root MSE =	9.2743

isat_read	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.2213106	.0187636	-11.79	0.000	-.2581129	-.1845083
pct_hisp	-.0895118	.0188172	-4.76	0.000	-.1264192	-.0526043
pct_frl	-30.6772	2.015667	-15.22	0.000	-34.63066	-26.72374
pct_ell	-3.827421	2.774306	-1.38	0.168	-9.268851	1.614009
pct_sped	-49.20531	2.654473	-18.54	0.000	-54.41171	-43.99892
year						
2011	3.356948	.6957163	4.83	0.000	1.992394	4.721502
2012	4.335375	.6483821	6.69	0.000	3.06366	5.607089
2013	-18.07012	.6617762	-27.31	0.000	-19.3681	-16.77213
_cons	114.5526	1.109577	103.24	0.000	112.3763	116.7289

```
1445 . pcorr isat_read i.year va_read if hs==0
(obs=2952)
```

Partial and semipartial correlations of isat_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	0.0314	0.0256	0.0010	0.0007	0.0883
2010.year	0.0131	0.0106	0.0002	0.0001	0.4780
2011.year	0.1012	0.0827	0.0102	0.0068	0.0000
2012.year	0.1163	0.0952	0.0135	0.0091	0.0000
2013.year	-0.3245	-0.2791	0.1053	0.0779	0.0000
va_read	0.4410	0.3998	0.1945	0.1598	0.0000

```
1446 .
1447 . pcorr isat_read_trend i.year pct_black if hs==0
(obs=2424)
```

Partial and semipartial correlations of isat_read_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	-0.1155	-0.1150	0.0133	0.0132	0.0000
2011.year	-0.0053	-0.0053	0.0000	0.0000	0.7930
2012.year	-0.0840	-0.0833	0.0070	0.0069	0.0000
2013.year	-0.0453	-0.0448	0.0020	0.0020	0.0260
pct_black	0.0417	0.0413	0.0017	0.0017	0.0402

```
1448 . pcorr isat_read_trend i.year pct_blackhisp if hs==0
(obs=2424)
```

Partial and semipartial correlations of isat_read_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**-0.1158**	**-0.1150**	**0.0134**	**0.0132**	**0.0000**
2011.year	**-0.0050**	**-0.0049**	**0.0000**	**0.0000**	**0.8053**
2012.year	**-0.0835**	**-0.0827**	**0.0070**	**0.0068**	**0.0000**
2013.year	**-0.0443**	**-0.0437**	**0.0020**	**0.0019**	**0.0294**
pct_black~p	**0.0792**	**0.0784**	**0.0063**	**0.0061**	**0.0001**

```
1449 . pcorr isat_read_trend i.year pct_frl if hs==0
(obs=1944)
```

Partial and semipartial correlations of isat_read_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1246**	**0.1238**	**0.0155**	**0.0153**	**0.0000**
2012.year	**0.0382**	**0.0377**	**0.0015**	**0.0014**	**0.0929**
2013.year	**0.0812**	**0.0804**	**0.0066**	**0.0065**	**0.0003**
pct_frl	**0.1036**	**0.1027**	**0.0107**	**0.0106**	**0.0000**

```
1450 . pcorr isat_read_trend i.year pct_ell if hs==0
(obs=1647)
```

Partial and semipartial correlations of isat_read_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1192**	**0.1189**	**0.0142**	**0.0141**	**0.0000**
2012.year	**0.0608**	**0.0604**	**0.0037**	**0.0036**	**0.0136**
2013.year	**0.0994**	**0.0989**	**0.0099**	**0.0098**	**0.0001**
pct_ell	**0.0481**	**0.0476**	**0.0023**	**0.0023**	**0.0514**

```
1451 . pcorr isat_read_trend i.year pct_sped if hs==0
(obs=1944)
```

Partial and semipartial correlations of isat_read_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1219**	**0.1217**	**0.0149**	**0.0148**	**0.0000**
2012.year	**0.0360**	**0.0357**	**0.0013**	**0.0013**	**0.1130**
2013.year	**0.0739**	**0.0734**	**0.0055**	**0.0054**	**0.0011**
pct_sped	**-0.0367**	**-0.0364**	**0.0013**	**0.0013**	**0.1058**

```
1452 . reg isat_read_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS	Number of obs =	1,647
				F(8, 1638) =	6.36
Model	1425.2958	8	178.161974	Prob > F =	0.0000
Residual	45883.1975	1,638	28.0117201	R-squared =	0.0301
				Adj R-squared =	0.0254
Total	47308.4933	1,646	28.7414905	Root MSE =	5.2926

isat_read_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.0087848	.0108638	-0.81	0.419	-.0300931	.0125235
pct_hisp	-.0136089	.0109292	-1.25	0.213	-.0350456	.0078277
pct_frl	3.20843	1.170979	2.74	0.006	.9116569	5.505204
pct_ell	1.453346	1.609091	0.90	0.367	-1.702747	4.609438
pct_sped	-2.826086	1.558839	-1.81	0.070	-5.883613	.2314418
year						
2011	2.060922	.4051738	5.09	0.000	1.266209	2.855635
2012	.864118	.3764359	2.30	0.022	.1257715	1.602464
2013	1.537048	.3833953	4.01	0.000	.7850512	2.289044
_cons	.5118274	.6462961	0.79	0.429	-.7558264	1.779481

```
1453 . pcorr isat_read_trend i.year va_read if hs==0
(obs=2877)
```

Partial and semipartial correlations of isat_read_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	-0.2806	-0.2516	0.0787	0.0633	0.0000
2010.year	-0.3893	-0.3636	0.1515	0.1322	0.0000
2011.year	-0.2971	-0.2677	0.0882	0.0717	0.0000
2012.year	-0.3595	-0.3315	0.1292	0.1099	0.0000
2013.year	-0.3354	-0.3063	0.1125	0.0938	0.0000
va_read	0.3270	0.2978	0.1070	0.0887	0.0000

```
1454 .
1455 . pcorr isat_science i.year pct_black if hs==0
(obs=2455)
```

Partial and semipartial correlations of isat_science with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0586	0.0468	0.0034	0.0022	0.0037
2011.year	0.1512	0.1220	0.0229	0.0149	0.0000
2012.year	0.1683	0.1362	0.0283	0.0186	0.0000
2013.year	0.2373	0.1949	0.0563	0.0380	0.0000
pct_black	-0.5681	-0.5508	0.3228	0.3033	0.0000

```
1456 . pcorr isat_science i.year pct_blackhisp if hs==0
(obs=2455)
```

Partial and semipartial correlations of isat_science with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0590**	**0.0469**	**0.0035**	**0.0022**	**0.0035**
2011.year	**0.1536**	**0.1233**	**0.0236**	**0.0152**	**0.0000**
2012.year	**0.1699**	**0.1367**	**0.0289**	**0.0187**	**0.0000**
2013.year	**0.2447**	**0.2002**	**0.0599**	**0.0401**	**0.0000**
pct_black~p	**-0.5751**	**-0.5575**	**0.3307**	**0.3108**	**0.0000**

```
1457 . pcorr isat_science i.year pct_frl if hs==0
(obs=1968)
```

Partial and semipartial correlations of isat_science with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1000**	**0.0817**	**0.0100**	**0.0067**	**0.0000**
2012.year	**0.1247**	**0.1021**	**0.0156**	**0.0104**	**0.0000**
2013.year	**0.2043**	**0.1696**	**0.0417**	**0.0288**	**0.0000**
pct_frl	**-0.5575**	**-0.5457**	**0.3108**	**0.2978**	**0.0000**

```
1458 . pcorr isat_science i.year pct_ell if hs==0
(obs=1667)
```

Partial and semipartial correlations of isat_science with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0630**	**0.0607**	**0.0040**	**0.0037**	**0.0102**
2012.year	**0.0407**	**0.0392**	**0.0017**	**0.0015**	**0.0967**
2013.year	**0.1310**	**0.1272**	**0.0172**	**0.0162**	**0.0000**
pct_ell	**0.2356**	**0.2334**	**0.0555**	**0.0545**	**0.0000**

```
1459 . pcorr isat_science i.year pct_sped if hs==0
(obs=1968)
```

Partial and semipartial correlations of isat_science with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1027**	**0.0986**	**0.0106**	**0.0097**	**0.0000**
2012.year	**0.1246**	**0.1199**	**0.0155**	**0.0144**	**0.0000**
2013.year	**0.2093**	**0.2043**	**0.0438**	**0.0417**	**0.0000**
pct_sped	**-0.2208**	**-0.2161**	**0.0488**	**0.0467**	**0.0000**

```
1460 . reg isat_science pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS	Number of obs =	1,667
				F(8, 1658) =	245.65
Model	227910.953	8	28488.8691	Prob > F =	0.0000
Residual	192285.416	1,658	115.974316	R-squared =	0.5424
				Adj R-squared =	0.5402
Total	420196.368	1,666	252.218708	Root MSE =	10.769

isat_science	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.2303934	.0221291	-10.41	0.000	-.2737973	-.1869895
pct_hisp	-.072491	.0219659	-3.30	0.001	-.1155749	-.0294071
pct_frl	-26.53089	2.379155	-11.15	0.000	-31.19736	-21.86443
pct_ell	-1.62884	3.335237	-0.49	0.625	-8.17056	4.91288
pct_sped	-44.64456	3.526151	-12.66	0.000	-51.56074	-37.72839
year						
2011	2.733602	.8183752	3.34	0.001	1.128444	4.338759
2012	4.323221	.7630679	5.67	0.000	2.826543	5.819899
2013	7.20173	.7774584	9.26	0.000	5.676826	8.726634
_cons	109.5573	1.311934	83.51	0.000	106.984	112.1305

```
1461 .
1462 . pcorr isat_science_trend i.year pct_black if hs==0
(obs=2376)
```

Partial and semipartial correlations of isat_science_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.1046	0.1020	0.0109	0.0104	0.0000
2011.year	0.2021	0.2001	0.0408	0.0401	0.0000
2012.year	0.1177	0.1150	0.0139	0.0132	0.0000
2013.year	0.1256	0.1228	0.0158	0.0151	0.0000
pct_black	0.1420	0.1391	0.0202	0.0194	0.0000

```
1463 . pcorr isat_science_trend i.year pct_blackhisp if hs==0
(obs=2376)
```

Partial and semipartial correlations of isat_science_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.1043	0.1020	0.0109	0.0104	0.0000
2011.year	0.2011	0.1997	0.0405	0.0399	0.0000
2012.year	0.1171	0.1147	0.0137	0.0131	0.0000
2013.year	0.1234	0.1210	0.0152	0.0146	0.0000
pct_black~p	0.1209	0.1185	0.0146	0.0140	0.0000

```
1464 . pcorr isat_science_trend i.year pct_frl if hs==0
(obs=1904)

Partial and semipartial correlations of isat_science_trend with

   Variable | Partial Corr. | Semipartial Corr. | Partial Corr.^2 | Semipartial Corr.^2 | Significance Value
------------+---------------+-------------------+-----------------+---------------------+-------------------
 2010b.year | (dropped)
  2011.year |        0.1160 |            0.1142 |          0.0135 |              0.0130 |             0.0000
  2012.year |        0.0167 |            0.0163 |          0.0003 |              0.0003 |             0.4666
  2013.year |        0.0303 |            0.0297 |          0.0009 |              0.0009 |             0.1866
    pct_frl |        0.1691 |            0.1679 |          0.0286 |              0.0282 |             0.0000

1465 . pcorr isat_science_trend i.year pct_ell if hs==0
(obs=1612)

Partial and semipartial correlations of isat_science_trend with

   Variable | Partial Corr. | Semipartial Corr. | Partial Corr.^2 | Semipartial Corr.^2 | Significance Value
------------+---------------+-------------------+-----------------+---------------------+-------------------
 2010b.year | (dropped)
  2011.year |        0.0738 |            0.0737 |          0.0055 |              0.0054 |             0.0030
  2012.year |        0.0363 |            0.0361 |          0.0013 |              0.0013 |             0.1458
  2013.year |        0.0453 |            0.0451 |          0.0021 |              0.0020 |             0.0692
    pct_ell |       -0.0714 |           -0.0712 |          0.0051 |              0.0051 |             0.0042

1466 . pcorr isat_science_trend i.year pct_sped if hs==0
(obs=1904)

Partial and semipartial correlations of isat_science_trend with

   Variable | Partial Corr. | Semipartial Corr. | Partial Corr.^2 | Semipartial Corr.^2 | Significance Value
------------+---------------+-------------------+-----------------+---------------------+-------------------
 2010b.year | (dropped)
  2011.year |        0.1107 |            0.1105 |          0.0123 |              0.0122 |             0.0000
  2012.year |        0.0128 |            0.0127 |          0.0002 |              0.0002 |             0.5785
  2013.year |        0.0189 |            0.0187 |          0.0004 |              0.0004 |             0.4110
   pct_sped |       -0.0248 |           -0.0246 |          0.0006 |              0.0006 |             0.2799

1467 . reg isat_science_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0

      Source |       SS           df       MS      Number of obs   =         1,612
-------------+----------------------------------   F(8, 1603)      =          9.31
       Model |  5003.72005         8  625.465006   Prob > F        =        0.0000
    Residual |  107748.131     1,603  67.2165509   R-squared       =        0.0444
-------------+----------------------------------   Adj R-squared   =        0.0396
       Total |  112751.851     1,611  69.9887344   Root MSE        =        8.1986

------------------------------------------------------------------------------
isat_scien~d |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   pct_black |   .0066805   .0170946     0.39   0.696    -.0268496    .0402105
    pct_hisp |  -.0025324    .017027    -0.15   0.882    -.0359299    .0308651
     pct_frl |   6.772699   1.843828     3.67   0.000     3.156132    10.38927
     pct_ell |  -3.899462   2.575628    -1.51   0.130    -8.951415     1.15249
    pct_sped |   -6.01448   2.820796    -2.13   0.033    -11.54732   -.4816433
             |
        year |
        2011 |   2.109039   .6327873     3.33   0.001     .8678613    3.350216
        2012 |    .681772   .5894553     1.16   0.248    -.4744121    1.837956
        2013 |   1.074378   .6006848     1.79   0.074    -.1038326    2.252588
             |
       _cons |  -.9386262   1.021791    -0.92   0.358    -2.942814    1.065562
------------------------------------------------------------------------------
```

```
1468 .
1469 . pcorr isat_exceeds i.year pct_black if hs==0
(obs=2508)

Partial and semipartial correlations of isat_exceeds with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     0.0215        0.0196       0.0005        0.0004         0.2819
  2011.year     0.0755        0.0690       0.0057        0.0048         0.0002
  2012.year     0.0882        0.0807       0.0078        0.0065         0.0000
  2013.year    -0.0859       -0.0786       0.0074        0.0062         0.0000
  pct_black    -0.3810       -0.3756       0.1452        0.1411         0.0000

1470 . pcorr isat_exceeds i.year pct_blackhisp if hs==0
(obs=2508)

Partial and semipartial correlations of isat_exceeds with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     0.0260        0.0180       0.0007        0.0003         0.1927
  2011.year     0.0939        0.0653       0.0088        0.0043         0.0000
  2012.year     0.1071        0.0745       0.0115        0.0056         0.0000
  2013.year    -0.1254       -0.0875       0.0157        0.0077         0.0000
pct_black~p    -0.7120       -0.7018       0.5069        0.4925         0.0000

1471 . pcorr isat_exceeds i.year pct_frl if hs==0
(obs=2013)

Partial and semipartial correlations of isat_exceeds with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     0.0682        0.0400       0.0046        0.0016         0.0022
  2012.year     0.0981        0.0576       0.0096        0.0033         0.0000
  2013.year    -0.2277       -0.1368       0.0518        0.0187         0.0000
    pct_frl    -0.8039       -0.7907       0.6463        0.6252         0.0000

1472 . pcorr isat_exceeds i.year pct_ell if hs==0
(obs=1705)

Partial and semipartial correlations of isat_exceeds with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     0.0686        0.0671       0.0047        0.0045         0.0046
  2012.year     0.0383        0.0374       0.0015        0.0014         0.1140
  2013.year    -0.1271       -0.1250       0.0161        0.0156         0.0000
    pct_ell    -0.0313       -0.0305       0.0010        0.0009         0.1974
```

```
1473 . pcorr isat_exceeds i.year pct_sped if hs==0
(obs=2013)
```

Partial and semipartial correlations of isat_exceeds with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0641**	**0.0622**	**0.0041**	**0.0039**	**0.0041**
2012.year	**0.0808**	**0.0785**	**0.0065**	**0.0062**	**0.0003**
2013.year	**-0.0921**	**-0.0896**	**0.0085**	**0.0080**	**0.0000**
pct_sped	**-0.1749**	**-0.1720**	**0.0306**	**0.0296**	**0.0000**

```
1474 . reg isat_exceeds pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS	Number of obs =	**1,705**
				F(8, 1696) =	**555.66**
Model	**244672.299**	**8**	**30584.0374**	Prob > F =	**0.0000**
Residual	**93348.667**	**1,696**	**55.0404876**	R-squared =	**0.7238**
				Adj R-squared =	**0.7225**
Total	**338020.966**	**1,704**	**198.369112**	Root MSE =	**7.4189**

isat_exceeds	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.1523291**	**.0149996**	**-10.16**	**0.000**	**-.1817488**	**-.1229095**
pct_hisp	**-.1210471**	**.0150423**	**-8.05**	**0.000**	**-.1505506**	**-.0915436**
pct_frl	**-41.37022**	**1.611595**	**-25.67**	**0.000**	**-44.53114**	**-38.2093**
pct_ell	**2.111711**	**2.213453**	**0.95**	**0.340**	**-2.229675**	**6.453097**
pct_sped	**-25.03098**	**2.006456**	**-12.48**	**0.000**	**-28.96637**	**-21.09559**
year						
2011	**1.951568**	**.5562979**	**3.51**	**0.000**	**.8604651**	**3.04267**
2012	**2.868092**	**.5184201**	**5.53**	**0.000**	**1.851281**	**3.884902**
2013	**-5.128318**	**.528974**	**-9.69**	**0.000**	**-6.165828**	**-4.090807**
_cons	**65.35111**	**.8866359**	**73.71**	**0.000**	**63.61209**	**67.09012**

```
1475 . pcorr isat_exceeds i.year va_read if hs==0
(obs=2952)
```

Partial and semipartial correlations of isat_exceeds with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	**0.0354**	**0.0321**	**0.0013**	**0.0010**	**0.0546**
2010.year	**0.0406**	**0.0368**	**0.0016**	**0.0014**	**0.0276**
2011.year	**0.0953**	**0.0868**	**0.0091**	**0.0075**	**0.0000**
2012.year	**0.1139**	**0.1040**	**0.0130**	**0.0108**	**0.0000**
2013.year	**-0.0426**	**-0.0387**	**0.0018**	**0.0015**	**0.0208**
va_read	**0.3935**	**0.3881**	**0.1548**	**0.1507**	**0.0000**

```
1476 . pcorr isat_exceeds i.year va_math if hs==0
(obs=2952)
```

Partial and semipartial correlations of isat_exceeds with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	**0.0123**	**0.0116**	**0.0002**	**0.0001**	**0.5060**
2010.year	**0.0312**	**0.0295**	**0.0010**	**0.0009**	**0.0907**
2011.year	**0.0797**	**0.0756**	**0.0063**	**0.0057**	**0.0000**
2012.year	**0.0993**	**0.0944**	**0.0099**	**0.0089**	**0.0000**
2013.year	**-0.0463**	**-0.0439**	**0.0021**	**0.0019**	**0.0119**
va_math	**0.2835**	**0.2797**	**0.0804**	**0.0782**	**0.0000**

```
1477 .
1478 . pcorr isat_exceeds_trend i.year pct_black if hs==0
(obs=2428)
```

Partial and semipartial correlations of isat_exceeds_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**-0.0285**	**-0.0282**	**0.0008**	**0.0008**	**0.1601**
2011.year	**0.0747**	**0.0739**	**0.0056**	**0.0055**	**0.0002**
2012.year	**-0.0037**	**-0.0036**	**0.0000**	**0.0000**	**0.8565**
2013.year	**-0.0016**	**-0.0015**	**0.0000**	**0.0000**	**0.9387**
pct_black	**-0.1230**	**-0.1222**	**0.0151**	**0.0149**	**0.0000**

```
1479 . pcorr isat_exceeds_trend i.year pct_blackhisp if hs==0
(obs=2428)
```

Partial and semipartial correlations of isat_exceeds_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**-0.0292**	**-0.0283**	**0.0009**	**0.0008**	**0.1506**
2011.year	**0.0750**	**0.0729**	**0.0056**	**0.0053**	**0.0002**
2012.year	**-0.0057**	**-0.0055**	**0.0000**	**0.0000**	**0.7793**
2013.year	**-0.0045**	**-0.0044**	**0.0000**	**0.0000**	**0.8243**
pct_black~p	**-0.2181**	**-0.2168**	**0.0476**	**0.0470**	**0.0000**

```
1480 . pcorr isat_exceeds_trend i.year pct_frl if hs==0
(obs=1948)
```

Partial and semipartial correlations of isat_exceeds_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1104**	**0.1080**	**0.0122**	**0.0117**	**0.0000**
2012.year	**0.0241**	**0.0235**	**0.0006**	**0.0006**	**0.2875**
2013.year	**0.0216**	**0.0210**	**0.0005**	**0.0004**	**0.3419**
pct_frl	**-0.2033**	**-0.2019**	**0.0413**	**0.0408**	**0.0000**

```
1481 . pcorr isat_exceeds_trend i.year pct_ell if hs==0
(obs=1651)

Partial and semipartial correlations of isat_exceeds_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1082**	**0.1081**	**0.0117**	**0.0117**	**0.0000**
2012.year	**0.0371**	**0.0368**	**0.0014**	**0.0014**	**0.1327**
2013.year	**0.0418**	**0.0415**	**0.0017**	**0.0017**	**0.0898**
pct_ell	**0.0357**	**0.0355**	**0.0013**	**0.0013**	**0.1470**

```
1482 . pcorr isat_exceeds_trend i.year pct_sped if hs==0
(obs=1948)

Partial and semipartial correlations of isat_exceeds_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1167**	**0.1154**	**0.0136**	**0.0133**	**0.0000**
2012.year	**0.0323**	**0.0317**	**0.0010**	**0.0010**	**0.1541**
2013.year	**0.0349**	**0.0343**	**0.0012**	**0.0012**	**0.1240**
pct_sped	**-0.1503**	**-0.1492**	**0.0226**	**0.0223**	**0.0000**

```
1483 . reg isat_exceeds_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS		
Model	**1959.2109**	**8**	**244.901362**	Number of obs	= **1,651**
Residual	**20622.4541**	**1,642**	**12.5593508**	F(8, 1642)	= **19.50**
Total	**22581.665**	**1,650**	**13.6858576**	Prob > F	= **0.0000**
				R-squared	= **0.0868**
				Adj R-squared	= **0.0823**
				Root MSE	= **3.5439**

isat_excee~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0249232**	**.0072676**	**-3.43**	**0.001**	**-.039178**	**-.0106685**
pct_hisp	**-.0181388**	**.0073124**	**-2.48**	**0.013**	**-.0324815**	**-.0037962**
pct_frl	**-1.45568**	**.7836348**	**-1.86**	**0.063**	**-2.992709**	**.0813488**
pct_ell	**-.3270181**	**1.074294**	**-0.30**	**0.761**	**-2.434149**	**1.780112**
pct_sped	**-6.310408**	**.9673552**	**-6.52**	**0.000**	**-8.207788**	**-4.413028**
year						
2011	**1.231073**	**.2709426**	**4.54**	**0.000**	**.6996439**	**1.762503**
2012	**.5404909**	**.2517701**	**2.15**	**0.032**	**.0466666**	**1.034315**
2013	**.4870639**	**.2563822**	**1.90**	**0.058**	**-.0158067**	**.9899345**
_cons	**5.753482**	**.4322761**	**13.31**	**0.000**	**4.905612**	**6.601353**

```
1484 . pcorr isat_exceeds_trend i.year va_read if hs==0
(obs=2877)

Partial and semipartial correlations of isat_exceeds_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	**-0.0820**	**-0.0737**	**0.0067**	**0.0054**	**0.0000**
2010.year	**-0.1200**	**-0.1083**	**0.0144**	**0.0117**	**0.0000**
2011.year	**-0.0027**	**-0.0024**	**0.0000**	**0.0000**	**0.8836**
2012.year	**-0.0890**	**-0.0801**	**0.0079**	**0.0064**	**0.0000**
2013.year	**-0.0899**	**-0.0809**	**0.0081**	**0.0065**	**0.0000**
va_read	**0.4240**	**0.4194**	**0.1797**	**0.1759**	**0.0000**

```
1485 . pcorr isat_exceeds_trend i.year va_math if hs==0
(obs=2877)
```

Partial and semipartial correlations of isat_exceeds_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	**-0.1067**	**-0.0971**	**0.0114**	**0.0094**	**0.0000**
2010.year	**-0.1284**	**-0.1171**	**0.0165**	**0.0137**	**0.0000**
2011.year	**-0.0195**	**-0.0176**	**0.0004**	**0.0003**	**0.2965**
2012.year	**-0.0996**	**-0.0905**	**0.0099**	**0.0082**	**0.0000**
2013.year	**-0.0971**	**-0.0883**	**0.0094**	**0.0078**	**0.0000**
va_math	**0.4048**	**0.4004**	**0.1639**	**0.1604**	**0.0000**

```
1486 .
1487 . pcorr isat_higrade i.year pct_black if hs==0
(obs=2506)
```

Partial and semipartial correlations of isat_higrade with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0622**	**0.0576**	**0.0039**	**0.0033**	**0.0018**
2011.year	**0.0747**	**0.0692**	**0.0056**	**0.0048**	**0.0002**
2012.year	**0.0843**	**0.0781**	**0.0071**	**0.0061**	**0.0000**
2013.year	**-0.0349**	**-0.0323**	**0.0012**	**0.0010**	**0.0809**
pct_black	**-0.3637**	**-0.3608**	**0.1323**	**0.1302**	**0.0000**

```
1488 . pcorr isat_higrade i.year pct_blackhisp if hs==0
(obs=2506)
```

Partial and semipartial correlations of isat_higrade with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0732**	**0.0562**	**0.0054**	**0.0032**	**0.0002**
2011.year	**0.0867**	**0.0666**	**0.0075**	**0.0044**	**0.0000**
2012.year	**0.0949**	**0.0730**	**0.0090**	**0.0053**	**0.0000**
2013.year	**-0.0511**	**-0.0392**	**0.0026**	**0.0015**	**0.0106**
pct_black~p	**-0.6355**	**-0.6304**	**0.4039**	**0.3974**	**0.0000**

```
1489 . pcorr isat_higrade i.year pct_frl if hs==0
(obs=2011)
```

Partial and semipartial correlations of isat_higrade with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0002**	**0.0002**	**0.0000**	**0.0000**	**0.9918**
2012.year	**0.0200**	**0.0141**	**0.0004**	**0.0002**	**0.3708**
2013.year	**-0.1697**	**-0.1217**	**0.0288**	**0.0148**	**0.0000**
pct_frl	**-0.7027**	**-0.6976**	**0.4937**	**0.4867**	**0.0000**

```
1490 . pcorr isat_higrade i.year pct_ell if hs==0
(obs=1703)
```

Partial and semipartial correlations of isat_higrade with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0196**	**0.0194**	**0.0004**	**0.0004**	**0.4186**
2012.year	**-0.0100**	**-0.0099**	**0.0001**	**0.0001**	**0.6805**
2013.year	**-0.1192**	**-0.1185**	**0.0142**	**0.0140**	**0.0000**
pct_ell	**-0.0039**	**-0.0039**	**0.0000**	**0.0000**	**0.8723**

```
1491 . pcorr isat_higrade i.year pct_sped if hs==0
(obs=2011)
```

Partial and semipartial correlations of isat_higrade with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0188**	**0.0185**	**0.0004**	**0.0003**	**0.3988**
2012.year	**0.0323**	**0.0317**	**0.0010**	**0.0010**	**0.1483**
2013.year	**-0.0813**	**-0.0800**	**0.0066**	**0.0064**	**0.0003**
pct_sped	**-0.1531**	**-0.1520**	**0.0234**	**0.0231**	**0.0000**

```
1492 . reg isat_higrade pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS		
Model	**168220.617**	**8**	**21027.5771**	Prob > F	**265.44** **0.0000**
Residual	**134197.065**	**1,694**	**79.2190469**	R-squared	**0.5563**
				Adj R-squared	**0.5542**
Total	**302417.682**	**1,702**	**177.683715**	Root MSE	**8.9005**

Number of obs = **1,703**

F(8, 1694) = **265.44**

isat_higrade	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.1486143**	**.0179978**	**-8.26**	**0.000**	**-.1839145**	**-.1133141**
pct_hisp	**-.1086062**	**.0180539**	**-6.02**	**0.000**	**-.1440164**	**-.073196**
pct_frl	**-32.69789**	**1.934223**	**-16.90**	**0.000**	**-36.49161**	**-28.90418**
pct_ell	**.5597416**	**2.662032**	**0.21**	**0.833**	**-4.661476**	**5.78096**
pct_sped	**-21.01728**	**2.518831**	**-8.34**	**0.000**	**-25.95763**	**-16.07693**
year						
2011	**.0311668**	**.6676649**	**0.05**	**0.963**	**-1.278368**	**1.340702**
2012	**.8936239**	**.6221636**	**1.44**	**0.151**	**-.3266661**	**2.113914**
2013	**-4.420965**	**.6346274**	**-6.97**	**0.000**	**-5.665701**	**-3.176229**
_cons	**56.15242**	**1.066806**	**52.64**	**0.000**	**54.06003**	**58.24482**

```
1493 . pcorr isat_higrade i.year va_read if hs==0
(obs=2951)
```

Partial and semipartial correlations of isat_higrade with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	**0.0261**	**0.0240**	**0.0007**	**0.0006**	**0.1560**
2010.year	**0.0712**	**0.0654**	**0.0051**	**0.0043**	**0.0001**
2011.year	**0.0840**	**0.0773**	**0.0071**	**0.0060**	**0.0000**
2012.year	**0.1013**	**0.0933**	**0.0103**	**0.0087**	**0.0000**
2013.year	**-0.0025**	**-0.0023**	**0.0000**	**0.0000**	**0.8926**
va_read	**0.3813**	**0.3780**	**0.1454**	**0.1429**	**0.0000**

```
1494 . pcorr isat_higrade i.year va_math if hs==0
(obs=2951)
```

Partial and semipartial correlations of isat_higrade with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2008b.year	(dropped)				
2009.year	**0.0032**	**0.0031**	**0.0000**	**0.0000**	**0.8602**
2010.year	**0.0605**	**0.0570**	**0.0037**	**0.0032**	**0.0010**
2011.year	**0.0688**	**0.0649**	**0.0047**	**0.0042**	**0.0002**
2012.year	**0.0876**	**0.0828**	**0.0077**	**0.0069**	**0.0000**
2013.year	**-0.0091**	**-0.0086**	**0.0001**	**0.0001**	**0.6203**
va_math	**0.3145**	**0.3118**	**0.0989**	**0.0972**	**0.0000**

```
1495 .
1496 . pcorr isat_higrade_trend i.year pct_black if hs==0
(obs=2326)
```

Partial and semipartial correlations of isat_higrade_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.1043**	**0.1040**	**0.0109**	**0.0108**	**0.0000**
2011.year	**0.0791**	**0.0786**	**0.0063**	**0.0062**	**0.0001**
2012.year	**0.0465**	**0.0461**	**0.0022**	**0.0021**	**0.0251**
2013.year	**0.0809**	**0.0805**	**0.0066**	**0.0065**	**0.0001**
pct_black	**-0.0639**	**-0.0635**	**0.0041**	**0.0040**	**0.0021**

```
1497 . pcorr isat_higrade_trend i.year pct_blackhisp if hs==0
(obs=2326)
```

Partial and semipartial correlations of isat_higrade_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.1043**	**0.1037**	**0.0109**	**0.0108**	**0.0000**
2011.year	**0.0789**	**0.0783**	**0.0062**	**0.0061**	**0.0001**
2012.year	**0.0462**	**0.0457**	**0.0021**	**0.0021**	**0.0261**
2013.year	**0.0806**	**0.0800**	**0.0065**	**0.0064**	**0.0001**
pct_black~p	**-0.0901**	**-0.0895**	**0.0081**	**0.0080**	**0.0000**

```
1498 . pcorr isat_higrade_trend i.year pct_frl if hs==0
(obs=1860)
```

Partial and semipartial correlations of isat_higrade_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0296**	**-0.0294**	**0.0009**	**0.0009**	**0.2027**
2012.year	**-0.0645**	**-0.0642**	**0.0042**	**0.0041**	**0.0054**
2013.year	**-0.0265**	**-0.0263**	**0.0007**	**0.0007**	**0.2541**
pct_frl	**-0.1004**	**-0.1002**	**0.0101**	**0.0100**	**0.0000**

```
1499 . pcorr isat_higrade_trend i.year pct_ell if hs==0
(obs=1578)
```

Partial and semipartial correlations of isat_higrade_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0440**	**-0.0439**	**0.0019**	**0.0019**	**0.0811**
2012.year	**-0.0705**	**-0.0705**	**0.0050**	**0.0050**	**0.0051**
2013.year	**-0.0302**	**-0.0301**	**0.0009**	**0.0009**	**0.2311**
pct_ell	**0.0220**	**0.0219**	**0.0005**	**0.0005**	**0.3833**

```
1500 . pcorr isat_higrade_trend i.year pct_sped if hs==0
(obs=1860)
```

Partial and semipartial correlations of isat_higrade_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0266**	**-0.0264**	**0.0007**	**0.0007**	**0.2527**
2012.year	**-0.0616**	**-0.0615**	**0.0038**	**0.0038**	**0.0079**
2013.year	**-0.0209**	**-0.0208**	**0.0004**	**0.0004**	**0.3678**
pct_sped	**-0.0774**	**-0.0772**	**0.0060**	**0.0060**	**0.0008**

```
1501 . reg isat_higrade_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS		
Model	**1368.21047**	**8**	**171.026309**	Prob > F	**0.0000**
Residual	**56053.7321**	**1,569**	**35.7257693**	R-squared	**0.0238**
				Adj R-squared	**0.0189**
Total	**57421.9426**	**1,577**	**36.4121386**	Root MSE	**5.9771**

Number of obs = **1,578**
F(8, 1569) = **4.79**

isat_higra~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0142936**	**.0123914**	**-1.15**	**0.249**	**-.038599**	**.0100119**
pct_hisp	**-.0116604**	**.0125118**	**-0.93**	**0.352**	**-.036202**	**.0128812**
pct_frl	**-1.872802**	**1.344193**	**-1.39**	**0.164**	**-4.509406**	**.7638014**
pct_ell	**.5830732**	**1.854141**	**0.31**	**0.753**	**-3.053782**	**4.219928**
pct_sped	**-5.067642**	**1.721445**	**-2.94**	**0.003**	**-8.444216**	**-1.691067**
year						
2011	**-.8388068**	**.465386**	**-1.80**	**0.072**	**-1.751651**	**.0740371**
2012	**-1.112171**	**.4338348**	**-2.56**	**0.010**	**-1.963128**	**-.2612141**
2013	**-.5205833**	**.4426312**	**-1.18**	**0.240**	**-1.388794**	**.3476276**
_cons	**6.119223**	**.7427151**	**8.24**	**0.000**	**4.662404**	**7.576042**

```
1502 . pcorr isat_higrade_trend i.year va_read if hs==0
(obs=2751)

Partial and semipartial correlations of isat_higrade_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2008b.year   (dropped)
  2009.year     -0.0481       -0.0467       0.0023        0.0022         0.0117
  2010.year      0.0522        0.0506       0.0027        0.0026         0.0062
  2011.year      0.0272        0.0264       0.0007        0.0007         0.1539
  2012.year     -0.0031       -0.0030       0.0000        0.0000         0.8694
  2013.year      0.0287        0.0278       0.0008        0.0008         0.1332
    va_read      0.2224        0.2209       0.0495        0.0488         0.0000

1503 . pcorr isat_higrade_trend i.year va_math if hs==0
(obs=2751)

Partial and semipartial correlations of isat_higrade_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2008b.year   (dropped)
  2009.year     -0.0625       -0.0601       0.0039        0.0036         0.0010
  2010.year      0.0474        0.0455       0.0022        0.0021         0.0130
  2011.year      0.0176        0.0169       0.0003        0.0003         0.3558
  2012.year     -0.0088       -0.0084       0.0001        0.0001         0.6459
  2013.year      0.0236        0.0226       0.0006        0.0005         0.2162
    va_math      0.2627        0.2609       0.0690        0.0681         0.0000

1504 .
1505 .
1506 . pcorr attend i.year pct_black if hs==0
(obs=2511)

Partial and semipartial correlations of attend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year      0.0516        0.0440       0.0027        0.0019         0.0097
  2011.year      0.0067        0.0057       0.0000        0.0000         0.7381
  2012.year      0.0840        0.0718       0.0071        0.0052         0.0000
  2013.year      0.0023        0.0020       0.0000        0.0000         0.9072
  pct_black     -0.5189       -0.5168       0.2692        0.2671         0.0000

1507 . pcorr attend i.year pct_blackhisp if hs==0
(obs=2511)

Partial and semipartial correlations of attend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year      0.0467        0.0437       0.0022        0.0019         0.0193
  2011.year      0.0094        0.0088       0.0001        0.0001         0.6377
  2012.year      0.0801        0.0751       0.0064        0.0056         0.0001
  2013.year      0.0146        0.0137       0.0002        0.0002         0.4642
pct_black~p     -0.3456       -0.3442       0.1194        0.1185         0.0000
```

```
1508 . pcorr attend i.year pct_frl if hs==0
(obs=2016)

Partial and semipartial correlations of attend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0453       -0.0430       0.0021        0.0018         0.0419
  2012.year      0.0357        0.0338       0.0013        0.0011         0.1092
  2013.year     -0.0396       -0.0375       0.0016        0.0014         0.0755
    pct_frl     -0.3145       -0.3135       0.0989        0.0983         0.0000

1509 . pcorr attend i.year pct_ell if hs==0
(obs=1707)

Partial and semipartial correlations of attend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0540       -0.0509       0.0029        0.0026         0.0258
  2012.year     -0.0198       -0.0187       0.0004        0.0003         0.4133
  2013.year     -0.0909       -0.0859       0.0083        0.0074         0.0002
    pct_ell      0.3262        0.3248       0.1064        0.1055         0.0000

1510 . pcorr attend i.year pct_sped if hs==0
(obs=2016)

Partial and semipartial correlations of attend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0329       -0.0285       0.0011        0.0008         0.1401
  2012.year      0.0584        0.0507       0.0034        0.0026         0.0087
  2013.year     -0.0251       -0.0218       0.0006        0.0005         0.2604
   pct_sped     -0.4943       -0.4927       0.2443        0.2428         0.0000

1511 . reg attend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0

      Source |       SS           df       MS      Number of obs   =         1,707
-------------+----------------------------------   F(8, 1698)      =        256.45
       Model |  4214.48861         8  526.811077   Prob > F        =        0.0000
    Residual |  3488.06242     1,698  2.05421815   R-squared       =        0.5472
-------------+----------------------------------   Adj R-squared   =        0.5450
       Total |  7702.55104     1,706  4.51497716   Root MSE        =        1.4333

------------------------------------------------------------------------------
      attend |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   pct_black |  -.0151124   .0028925    -5.22   0.000    -.0207856   -.0094392
    pct_hisp |   .0029215   .0029057     1.01   0.315    -.0027777    .0086207
     pct_frl |  -2.247611   .3107305    -7.23   0.000    -2.857066   -1.638156
     pct_ell |   1.082454   .4249711     2.55   0.011      .248932    1.915976
    pct_sped |  -11.66932   .3646116   -32.00   0.000    -12.38446   -10.95419
             |
        year |
        2011 |  -.2881815   .1073942    -2.68   0.007    -.4988204   -.0775425
        2012 |   .1349358   .1000134     1.35   0.177    -.0612266    .3310983
        2013 |  -.4432881   .1020896    -4.34   0.000    -.6435228   -.2430535
             |
       _cons |   98.63358   .1707319   577.71   0.000     98.29872    98.96845
------------------------------------------------------------------------------
```

```
1512 .
1513 . pcorr attend_trend i.year pct_black if hs==0
(obs=2444)

Partial and semipartial correlations of attend_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.1395**	**0.1303**	**0.0194**	**0.0170**	**0.0000**
2011.year	**-0.0411**	**-0.0381**	**0.0017**	**0.0015**	**0.0423**
2012.year	**0.1065**	**0.0992**	**0.0114**	**0.0098**	**0.0000**
2013.year	**-0.2084**	**-0.1972**	**0.0434**	**0.0389**	**0.0000**
pct_black	**0.0912**	**0.0847**	**0.0083**	**0.0072**	**0.0000**

```
1514 . pcorr attend_trend i.year pct_blackhisp if hs==0
(obs=2444)

Partial and semipartial correlations of attend_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.1392**	**0.1304**	**0.0194**	**0.0170**	**0.0000**
2011.year	**-0.0413**	**-0.0383**	**0.0017**	**0.0015**	**0.0413**
2012.year	**0.1060**	**0.0989**	**0.0112**	**0.0098**	**0.0000**
2013.year	**-0.2096**	**-0.1989**	**0.0439**	**0.0395**	**0.0000**
pct_black~p	**0.0605**	**0.0562**	**0.0037**	**0.0032**	**0.0028**

```
1515 . pcorr attend_trend i.year pct_frl if hs==0
(obs=1962)

Partial and semipartial correlations of attend_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.1968**	**-0.1835**	**0.0387**	**0.0337**	**0.0000**
2012.year	**-0.0374**	**-0.0342**	**0.0014**	**0.0012**	**0.0977**
2013.year	**-0.3614**	**-0.3542**	**0.1306**	**0.1254**	**0.0000**
pct_frl	**0.0724**	**0.0663**	**0.0052**	**0.0044**	**0.0014**

```
1516 . pcorr attend_trend i.year pct_ell if hs==0
(obs=1662)

Partial and semipartial correlations of attend_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.1817**	**-0.1664**	**0.0330**	**0.0277**	**0.0000**
2012.year	**-0.0123**	**-0.0111**	**0.0002**	**0.0001**	**0.6165**
2013.year	**-0.3641**	**-0.3520**	**0.1326**	**0.1239**	**0.0000**
pct_ell	**-0.0751**	**-0.0678**	**0.0056**	**0.0046**	**0.0022**

```
1517 . pcorr attend_trend i.year pct_sped if hs==0
(obs=1962)

Partial and semipartial correlations of attend_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.1980**	**-0.1849**	**0.0392**	**0.0342**	**0.0000**
2012.year	**-0.0386**	**-0.0353**	**0.0015**	**0.0012**	**0.0878**
2013.year	**-0.3657**	**-0.3596**	**0.1337**	**0.1293**	**0.0000**
pct_sped	**-0.0440**	**-0.0403**	**0.0019**	**0.0016**	**0.0514**

```
1518 . reg attend_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS		
Model	**291.376275**	**8**	**36.4220344**	Number of obs	= **1,662**
Residual	**1189.72341**	**1,653**	**.719735881**	F(8, 1653)	= **50.60**
Total	**1481.09969**	**1,661**	**.891691564**	Prob > F	= **0.0000**
				R-squared	= **0.1967**
				Adj R-squared	= **0.1928**
				Root MSE	= **.84837**

attend_trend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**.0018293**	**.001733**	**1.06**	**0.291**	**-.0015698**	**.0052285**
pct_hisp	**.0001277**	**.0017479**	**0.07**	**0.942**	**-.0033007**	**.0035561**
pct_frl	**.1511615**	**.1865195**	**0.81**	**0.418**	**-.2146779**	**.5170009**
pct_ell	**-.1174849**	**.2553342**	**-0.46**	**0.645**	**-.6182975**	**.3833276**
pct_sped	**-.3999336**	**.2174229**	**-1.84**	**0.066**	**-.8263868**	**.0265197**
year						
2011	**-.4796318**	**.0645841**	**-7.43**	**0.000**	**-.6063071**	**-.3529565**
2012	**-.0515717**	**.0600343**	**-0.86**	**0.390**	**-.1693229**	**.0661795**
2013	**-.9761952**	**.0612469**	**-15.94**	**0.000**	**-1.096325**	**-.8560655**
_cons	**.3632621**	**.1026447**	**3.54**	**0.000**	**.1619348**	**.5645894**

```
1519 .
1520 .
1521 . pcorr va_read i.year pct_black if hs==0
(obs=2458)

Partial and semipartial correlations of va_read with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0503**	**0.0488**	**0.0025**	**0.0024**	**0.0127**
2011.year	**0.0402**	**0.0390**	**0.0016**	**0.0015**	**0.0466**
2012.year	**0.0359**	**0.0348**	**0.0013**	**0.0012**	**0.0758**
2013.year	**0.0443**	**0.0430**	**0.0020**	**0.0018**	**0.0283**
pct_black	**-0.2354**	**-0.2349**	**0.0554**	**0.0552**	**0.0000**

```
1522 . pcorr va_read i.year pct_blackhisp if hs==0
(obs=2458)
```

Partial and semipartial correlations of va_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0505**	**0.0490**	**0.0025**	**0.0024**	**0.0124**
2011.year	**0.0409**	**0.0397**	**0.0017**	**0.0016**	**0.0430**
2012.year	**0.0362**	**0.0351**	**0.0013**	**0.0012**	**0.0729**
2013.year	**0.0468**	**0.0454**	**0.0022**	**0.0021**	**0.0205**
pct_black~p	**-0.2366**	**-0.2362**	**0.0560**	**0.0558**	**0.0000**

```
1523 . pcorr va_read i.year pct_frl if hs==0
(obs=1972)
```

Partial and semipartial correlations of va_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0164**	**-0.0160**	**0.0003**	**0.0003**	**0.4678**
2012.year	**-0.0204**	**-0.0199**	**0.0004**	**0.0004**	**0.3649**
2013.year	**-0.0055**	**-0.0054**	**0.0000**	**0.0000**	**0.8069**
pct_frl	**-0.2192**	**-0.2191**	**0.0481**	**0.0480**	**0.0000**

```
1524 . pcorr va_read i.year pct_ell if hs==0
(obs=1671)
```

Partial and semipartial correlations of va_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0089**	**-0.0089**	**0.0001**	**0.0001**	**0.7170**
2012.year	**-0.0188**	**-0.0187**	**0.0004**	**0.0003**	**0.4440**
2013.year	**0.0029**	**0.0029**	**0.0000**	**0.0000**	**0.9061**
pct_ell	**0.0707**	**0.0707**	**0.0050**	**0.0050**	**0.0039**

```
1525 . pcorr va_read i.year pct_sped if hs==0
(obs=1972)
```

Partial and semipartial correlations of va_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0098**	**-0.0098**	**0.0001**	**0.0001**	**0.6640**
2012.year	**-0.0138**	**-0.0138**	**0.0002**	**0.0002**	**0.5409**
2013.year	**0.0079**	**0.0079**	**0.0001**	**0.0001**	**0.7259**
pct_sped	**-0.0527**	**-0.0527**	**0.0028**	**0.0028**	**0.0193**

```
1526 . reg va_read pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS	Number of obs =	1,671
				F(8, 1662) =	14.58
Model	105.054671	8	13.1318339	Prob > F =	0.0000
Residual	1496.79486	1,662	.900598589	R-squared =	0.0656
				Adj R-squared =	0.0611
Total	1601.84953	1,670	.959191334	Root MSE =	.949

va_read	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	.0000632	.0019496	0.03	0.974	-.0037608	.0038872
pct_hisp	-.0015597	.0019354	-0.81	0.420	-.0053557	.0022363
pct_frl	-1.148225	.2096088	-5.48	0.000	-1.55935	-.7371004
pct_ell	1.027772	.2938691	3.50	0.000	.451379	1.604164
pct_sped	-.4872132	.278584	-1.75	0.080	-1.033626	.0591992
year						
2011	-.054399	.0720111	-0.76	0.450	-.195641	.086843
2012	-.0511761	.067161	-0.76	0.446	-.1829052	.080553
2013	-.0222989	.0684388	-0.33	0.745	-.1565342	.1119364
_cons	1.006529	.1146166	8.78	0.000	.7817212	1.231338

```
1527 .
1528 .
1529 . pcorr va_math i.year pct_black if hs==0
(obs=2458)

Partial and semipartial correlations of va_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0107	0.0106	0.0001	0.0001	0.5973
2011.year	0.0173	0.0173	0.0003	0.0003	0.3912
2012.year	0.0045	0.0045	0.0000	0.0000	0.8223
2013.year	0.0059	0.0059	0.0000	0.0000	0.7704
pct_black	-0.0874	-0.0873	0.0076	0.0076	0.0000

```
1530 . pcorr va_math i.year pct_blackhisp if hs==0
(obs=2458)

Partial and semipartial correlations of va_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0108	0.0106	0.0001	0.0001	0.5943
2011.year	0.0170	0.0167	0.0003	0.0003	0.4010
2012.year	0.0034	0.0034	0.0000	0.0000	0.8659
2013.year	0.0041	0.0040	0.0000	0.0000	0.8398
pct_black~p	-0.1618	-0.1618	0.0262	0.0262	0.0000

```
1531 . pcorr va_math i.year pct_frl if hs==0
(obs=1972)

Partial and semipartial correlations of va_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0095**	**0.0094**	**0.0001**	**0.0001**	**0.6750**
2012.year	**-0.0105**	**-0.0104**	**0.0001**	**0.0001**	**0.6417**
2013.year	**-0.0083**	**-0.0082**	**0.0001**	**0.0001**	**0.7134**
pct_frl	**-0.1179**	**-0.1179**	**0.0139**	**0.0139**	**0.0000**

```
1532 . pcorr va_math i.year pct_ell if hs==0
(obs=1671)

Partial and semipartial correlations of va_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0108**	**0.0108**	**0.0001**	**0.0001**	**0.6582**
2012.year	**0.0150**	**0.0150**	**0.0002**	**0.0002**	**0.5392**
2013.year	**0.0213**	**0.0213**	**0.0005**	**0.0005**	**0.3848**
pct_ell	**0.0048**	**0.0048**	**0.0000**	**0.0000**	**0.8443**

```
1533 . pcorr va_math i.year pct_sped if hs==0
(obs=1972)

Partial and semipartial correlations of va_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0136**	**0.0135**	**0.0002**	**0.0002**	**0.5471**
2012.year	**-0.0062**	**-0.0062**	**0.0000**	**0.0000**	**0.7840**
2013.year	**-0.0014**	**-0.0013**	**0.0000**	**0.0000**	**0.9521**
pct_sped	**-0.0816**	**-0.0815**	**0.0067**	**0.0067**	**0.0003**

```
1534 . reg va_math pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==0
```

Source	SS	df	MS		
Model	**41.3461716**	**8**	**5.16827145**	Number of obs	**1,671**
Residual	**1555.17779**	**1,662**	**.935726709**	F(8, 1662)	**5.52**
Total	**1596.52396**	**1,670**	**.956002372**	Prob > F	**0.0000**
				R-squared	**0.0259**
				Adj R-squared	**0.0212**
				Root MSE	**.96733**

va_math	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**.0002745**	**.0019873**	**0.14**	**0.890**	**-.0036234**	**.0041724**
pct_hisp	**-.000949**	**.0019727**	**-0.48**	**0.631**	**-.0048183**	**.0029203**
pct_frl	**-.7084318**	**.2136576**	**-3.32**	**0.001**	**-1.127498**	**-.2893654**
pct_ell	**.4295093**	**.2995455**	**1.43**	**0.152**	**-.158017**	**1.017036**
pct_sped	**-.7158756**	**.2839651**	**-2.52**	**0.012**	**-1.272843**	**-.1589086**
year						
2011	**.0186669**	**.0734021**	**0.25**	**0.799**	**-.1253033**	**.1626371**
2012	**.0395178**	**.0684583**	**0.58**	**0.564**	**-.0947557**	**.1737914**
2013	**.0370562**	**.0697608**	**0.53**	**0.595**	**-.099772**	**.1738845**
_cons	**.6380797**	**.1168306**	**5.46**	**0.000**	**.4089291**	**.8672302**

```
1535 .
1536 .
1537 . pcorr dropout i.year pct_black if hs==1
(obs=698)

Partial and semipartial correlations of dropout with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     -0.0567       -0.0541       0.0032        0.0029         0.1359
  2011.year     -0.0208       -0.0199       0.0004        0.0004         0.5840
  2012.year      0.0043        0.0041       0.0000        0.0000         0.9100
  2013.year     -0.1148       -0.1101       0.0132        0.0121         0.0025
  pct_black      0.2666        0.2637       0.0711        0.0695         0.0000

1538 . pcorr dropout i.year pct_blackhisp if hs==1
(obs=698)

Partial and semipartial correlations of dropout with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     -0.0563       -0.0545       0.0032        0.0030         0.1383
  2011.year     -0.0239       -0.0231       0.0006        0.0005         0.5304
  2012.year      0.0012        0.0012       0.0000        0.0000         0.9738
  2013.year     -0.1183       -0.1151       0.0140        0.0132         0.0018
pct_black~p      0.2147        0.2124       0.0461        0.0451         0.0000

1539 . pcorr dropout i.year pct_frl if hs==1
(obs=578)

Partial and semipartial correlations of dropout with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year      0.0550        0.0535       0.0030        0.0029         0.1875
  2012.year      0.0492        0.0478       0.0024        0.0023         0.2389
  2013.year     -0.0759       -0.0739       0.0058        0.0055         0.0688
    pct_frl      0.1955        0.1935       0.0382        0.0375         0.0000

1540 . pcorr dropout i.year pct_ell if hs==1
(obs=523)

Partial and semipartial correlations of dropout with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year      0.0345        0.0339       0.0012        0.0011         0.4321
  2012.year      0.0711        0.0699       0.0051        0.0049         0.1054
  2013.year     -0.0534       -0.0525       0.0029        0.0028         0.2242
    pct_ell     -0.1360       -0.1347       0.0185        0.0181         0.0019
```

```
1541 . pcorr dropout i.year pct_sped if hs==1
(obs=578)

Partial and semipartial correlations of dropout with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0350**	**0.0346**	**0.0012**	**0.0012**	**0.4024**
2012.year	**0.0589**	**0.0583**	**0.0035**	**0.0034**	**0.1584**
2013.year	**-0.0714**	**-0.0708**	**0.0051**	**0.0050**	**0.0870**
pct_sped	**0.0484**	**0.0479**	**0.0023**	**0.0023**	**0.2466**

```
1542 . reg dropout pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**3529.9163**	**8**	**441.239537**	Number of obs	= **523**
Residual	**28134.7492**	**514**	**54.7368662**	F(8, 514)	= **8.06**
				Prob > F	= **0.0000**
Total	**31664.6655**	**522**	**60.6602787**	R-squared	= **0.1115**
				Adj R-squared	= **0.0976**
				Root MSE	= **7.3984**

dropout	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**.0393003**	**.0400601**	**0.98**	**0.327**	**-.0394014**	**.118002**
pct_hisp	**-.0117985**	**.0432077**	**-0.27**	**0.785**	**-.0966839**	**.0730869**
pct_frl	**9.313258**	**4.319192**	**2.16**	**0.032**	**.8278165**	**17.7987**
pct_ell	**-1.79384**	**8.751494**	**-0.20**	**0.838**	**-18.98694**	**15.39926**
pct_sped	**.2816713**	**2.907111**	**0.10**	**0.923**	**-5.42961**	**5.992953**
year						
2011	**.9714026**	**1.00389**	**0.97**	**0.334**	**-1.000831**	**2.943636**
2012	**.8896531**	**.9497661**	**0.94**	**0.349**	**-.9762479**	**2.755554**
2013	**-1.708987**	**.9537999**	**-1.79**	**0.074**	**-3.582812**	**.1648392**
_cons	**-3.104185**	**2.432898**	**-1.28**	**0.203**	**-7.883833**	**1.675463**

```
1543 .
1544 . pcorr dropout_trend i.year pct_black if hs==1
(obs=617)

Partial and semipartial correlations of dropout_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**-0.1348**	**-0.1316**	**0.0182**	**0.0173**	**0.0008**
2011.year	**-0.1874**	**-0.1845**	**0.0351**	**0.0340**	**0.0000**
2012.year	**-0.1595**	**-0.1563**	**0.0254**	**0.0244**	**0.0001**
2013.year	**-0.2214**	**-0.2196**	**0.0490**	**0.0482**	**0.0000**
pct_black	**0.1033**	**0.1005**	**0.0107**	**0.0101**	**0.0105**

```
1545 . pcorr dropout_trend i.year pct_blackhisp if hs==1
(obs=617)
```

Partial and semipartial correlations of dropout_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**-0.1340**	**-0.1314**	**0.0180**	**0.0173**	**0.0009**
2011.year	**-0.1862**	**-0.1842**	**0.0347**	**0.0339**	**0.0000**
2012.year	**-0.1593**	**-0.1567**	**0.0254**	**0.0246**	**0.0001**
2013.year	**-0.2223**	**-0.2215**	**0.0494**	**0.0491**	**0.0000**
pct_black~p	**0.0439**	**0.0427**	**0.0019**	**0.0018**	**0.2782**

```
1546 . pcorr dropout_trend i.year pct_frl if hs==1
(obs=520)
```

Partial and semipartial correlations of dropout_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0560**	**-0.0557**	**0.0031**	**0.0031**	**0.2041**
2012.year	**-0.0202**	**-0.0201**	**0.0004**	**0.0004**	**0.6460**
2013.year	**-0.0952**	**-0.0951**	**0.0091**	**0.0090**	**0.0304**
pct_frl	**-0.0408**	**-0.0406**	**0.0017**	**0.0016**	**0.3544**

```
1547 . pcorr dropout_trend i.year pct_ell if hs==1
(obs=475)
```

Partial and semipartial correlations of dropout_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0291**	**-0.0289**	**0.0008**	**0.0008**	**0.5284**
2012.year	**0.0206**	**0.0204**	**0.0004**	**0.0004**	**0.6558**
2013.year	**-0.0531**	**-0.0529**	**0.0028**	**0.0028**	**0.2493**
pct_ell	**-0.0735**	**-0.0732**	**0.0054**	**0.0054**	**0.1106**

```
1548 . pcorr dropout_trend i.year pct_sped if hs==1
(obs=520)
```

Partial and semipartial correlations of dropout_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0556**	**-0.0553**	**0.0031**	**0.0031**	**0.2071**
2012.year	**-0.0252**	**-0.0251**	**0.0006**	**0.0006**	**0.5670**
2013.year	**-0.0994**	**-0.0993**	**0.0099**	**0.0099**	**0.0238**
pct_sped	**0.0518**	**0.0515**	**0.0027**	**0.0027**	**0.2398**

```
1549 . reg dropout_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS	Number of obs =	475
				F(8, 466) =	1.70
Model	238.766755	8	29.8458444	Prob > F =	0.0956
Residual	8172.50482	466	17.537564	R-squared =	0.0284
				Adj R-squared =	0.0117
Total	8411.27158	474	17.7452987	Root MSE =	4.1878

dropout_tr~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	.0136904	.023738	0.58	0.564	-.0329562	.0603371
pct_hisp	.0239087	.0254803	0.94	0.349	-.0261619	.0739792
pct_frl	-2.8358	2.611168	-1.09	0.278	-7.966921	2.295322
pct_ell	-10.56478	5.17418	-2.04	0.042	-20.73239	-.3971647
pct_sped	4.094926	1.673889	2.45	0.015	.8056215	7.384231
year						
2011	-.5751156	.6081428	-0.95	0.345	-1.770157	.6199263
2012	.2406479	.5697013	0.42	0.673	-.8788537	1.36015
2013	-.710337	.5710098	-1.24	0.214	-1.83241	.4117358
_cons	-.5064244	1.423057	-0.36	0.722	-3.302828	2.28998

```
1550 .
1551 . pcorr freshman i.year pct_black if hs==1
(obs=535)

Partial and semipartial correlations of freshman with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.1291	0.1205	0.0167	0.0145	0.0029
2011.year	0.0911	0.0847	0.0083	0.0072	0.0358
2012.year	0.1389	0.1297	0.0193	0.0168	0.0013
2013.year	0.2489	0.2378	0.0620	0.0565	0.0000
pct_black	-0.2862	-0.2763	0.0819	0.0764	0.0000

```
1552 . pcorr freshman i.year pct_blackhisp if hs==1
(obs=535)

Partial and semipartial correlations of freshman with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.1377	0.1283	0.0190	0.0165	0.0015
2011.year	0.1004	0.0931	0.0101	0.0087	0.0207
2012.year	0.1505	0.1405	0.0227	0.0197	0.0005
2013.year	0.2563	0.2446	0.0657	0.0598	0.0000
pct_black~p	-0.2948	-0.2846	0.0869	0.0810	0.0000

```
1553 . pcorr freshman i.year pct_frl if hs==1
(obs=447)

Partial and semipartial correlations of freshman with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0833**	**-0.0769**	**0.0069**	**0.0059**	**0.0796**
2012.year	**0.0344**	**0.0317**	**0.0012**	**0.0010**	**0.4694**
2013.year	**0.1668**	**0.1556**	**0.0278**	**0.0242**	**0.0004**
pct_frl	**-0.3401**	**-0.3326**	**0.1157**	**0.1107**	**0.0000**

```
1554 . pcorr freshman i.year pct_ell if hs==1
(obs=409)

Partial and semipartial correlations of freshman with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0011**	**0.0011**	**0.0000**	**0.0000**	**0.9819**
2012.year	**-0.0143**	**-0.0140**	**0.0002**	**0.0002**	**0.7744**
2013.year	**0.1347**	**0.1337**	**0.0181**	**0.0179**	**0.0066**
pct_ell	**-0.0480**	**-0.0473**	**0.0023**	**0.0022**	**0.3345**

```
1555 . pcorr freshman i.year pct_sped if hs==1
(obs=447)

Partial and semipartial correlations of freshman with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0589**	**-0.0538**	**0.0035**	**0.0029**	**0.2153**
2012.year	**0.0070**	**0.0064**	**0.0000**	**0.0000**	**0.8836**
2013.year	**0.1721**	**0.1592**	**0.0296**	**0.0254**	**0.0003**
pct_sped	**-0.3630**	**-0.3551**	**0.1318**	**0.1261**	**0.0000**

```
1556 . reg freshman pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**22700.071**	**8**	**2837.50888**	Prob > F	**0.0000**
Residual	**67445.6984**	**400**	**168.614246**	R-squared	**0.2518**
				Adj R-squared	**0.2369**
Total	**90145.7694**	**408**	**220.945513**	Root MSE	**12.985**

	Number of obs = **409**
	F(8, 400) = **16.83**

freshman	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**.0035485**	**.0766071**	**0.05**	**0.963**	**-.1470543**	**.1541513**
pct_hisp	**.1477369**	**.0825376**	**1.79**	**0.074**	**-.0145248**	**.3099987**
pct_frl	**-26.63679**	**8.764886**	**-3.04**	**0.003**	**-43.86779**	**-9.405791**
pct_ell	**-54.78249**	**17.68014**	**-3.10**	**0.002**	**-89.54008**	**-20.02489**
pct_sped	**-53.34237**	**12.91852**	**-4.13**	**0.000**	**-78.73906**	**-27.94569**
year						
2011	**-.7954447**	**1.903315**	**-0.42**	**0.676**	**-4.537195**	**2.946305**
2012	**1.067314**	**1.813496**	**0.59**	**0.557**	**-2.49786**	**4.632489**
2013	**7.596551**	**1.89631**	**4.01**	**0.000**	**3.868571**	**11.32453**
_cons	**100.9474**	**4.512138**	**22.37**	**0.000**	**92.07694**	**109.8179**

```
1557 .
1558 . pcorr freshman_trend i.year pct_black if hs==1
(obs=484)

Partial and semipartial correlations of freshman_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     0.0605        0.0602       0.0037        0.0036         0.1855
  2011.year     0.0186        0.0185       0.0003        0.0003         0.6841
  2012.year    -0.0471       -0.0468       0.0022        0.0022         0.3026
  2013.year     0.0130        0.0129       0.0002        0.0002         0.7770
  pct_black     0.0415        0.0412       0.0017        0.0017         0.3647

1559 . pcorr freshman_trend i.year pct_blackhisp if hs==1
(obs=484)

Partial and semipartial correlations of freshman_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     0.0588        0.0583       0.0035        0.0034         0.1981
  2011.year     0.0156        0.0154       0.0002        0.0002         0.7337
  2012.year    -0.0491       -0.0486       0.0024        0.0024         0.2832
  2013.year     0.0129        0.0127       0.0002        0.0002         0.7784
pct_black~p     0.0938        0.0932       0.0088        0.0087         0.0399

1560 . pcorr freshman_trend i.year pct_frl if hs==1
(obs=403)

Partial and semipartial correlations of freshman_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year    -0.0362       -0.0356       0.0013        0.0013         0.4708
  2012.year    -0.1241       -0.1231       0.0154        0.0152         0.0130
  2013.year    -0.0529       -0.0521       0.0028        0.0027         0.2917
    pct_frl     0.1254        0.1245       0.0157        0.0155         0.0121

1561 . pcorr freshman_trend i.year pct_ell if hs==1
(obs=375)

Partial and semipartial correlations of freshman_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year    -0.0353       -0.0349       0.0012        0.0012         0.4975
  2012.year    -0.1104       -0.1099       0.0122        0.0121         0.0333
  2013.year    -0.0467       -0.0463       0.0022        0.0021         0.3690
    pct_ell     0.0874        0.0868       0.0076        0.0075         0.0924
```

```
1562 . pcorr freshman_trend i.year pct_sped if hs==1
(obs=403)

Partial and semipartial correlations of freshman_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0457**	**-0.0451**	**0.0021**	**0.0020**	**0.3625**
2012.year	**-0.1181**	**-0.1174**	**0.0139**	**0.0138**	**0.0182**
2013.year	**-0.0556**	**-0.0550**	**0.0031**	**0.0030**	**0.2675**
pct_sped	**0.1033**	**0.1025**	**0.0107**	**0.0105**	**0.0390**

```
1563 . reg freshman_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**1801.49085**	**8**	**225.186356**	Number of obs	= **375**
Residual	**46817.9095**	**366**	**127.917786**	F(8, 366)	= **1.76**
Total	**48619.4004**	**374**	**129.998397**	Prob > F	= **0.0836**
				R-squared	= **0.0371**
				Adj R-squared	= **0.0160**
				Root MSE	= **11.31**

freshman_t~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0266177**	**.0692892**	**-0.38**	**0.701**	**-.1628725**	**.1096372**
pct_hisp	**-.0344947**	**.0741225**	**-0.47**	**0.642**	**-.1802541**	**.1112646**
pct_frl	**10.62528**	**8.156572**	**1.30**	**0.194**	**-5.41435**	**26.6649**
pct_ell	**13.30304**	**15.68707**	**0.85**	**0.397**	**-17.54506**	**44.15115**
pct_sped	**9.270196**	**11.83051**	**0.78**	**0.434**	**-13.99412**	**32.53451**
year						
2011	**-.773651**	**1.763812**	**-0.44**	**0.661**	**-4.242129**	**2.694827**
2012	**-3.854952**	**1.664258**	**-2.32**	**0.021**	**-7.12766**	**-.5822437**
2013	**-1.766428**	**1.713338**	**-1.03**	**0.303**	**-5.135649**	**1.602794**
_cons	**-1.247082**	**4.083452**	**-0.31**	**0.760**	**-9.277053**	**6.78289**

```
1564 .
1565 .
1566 . pcorr act i.year pct_black if hs==1
(obs=611)

Partial and semipartial correlations of act with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0153**	**0.0138**	**0.0002**	**0.0002**	**0.7069**
2011.year	**0.0017**	**0.0015**	**0.0000**	**0.0000**	**0.9669**
2012.year	**0.0414**	**0.0372**	**0.0017**	**0.0014**	**0.3091**
2013.year	**0.0374**	**0.0337**	**0.0014**	**0.0011**	**0.3581**
pct_black	**-0.4318**	**-0.4309**	**0.1865**	**0.1856**	**0.0000**

```
1567 . pcorr act i.year pct_blackhisp if hs==1
(obs=611)
```

Partial and semipartial correlations of act with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0308**	**0.0224**	**0.0009**	**0.0005**	**0.4486**
2011.year	**0.0254**	**0.0185**	**0.0006**	**0.0003**	**0.5317**
2012.year	**0.0629**	**0.0457**	**0.0040**	**0.0021**	**0.1218**
2013.year	**0.0649**	**0.0472**	**0.0042**	**0.0022**	**0.1100**
pct_black~p	**-0.6868**	**-0.6852**	**0.4717**	**0.4696**	**0.0000**

```
1568 . pcorr act i.year pct_frl if hs==1
(obs=508)
```

Partial and semipartial correlations of act with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.1356**	**-0.0917**	**0.0184**	**0.0084**	**0.0023**
2012.year	**0.0886**	**0.0596**	**0.0079**	**0.0036**	**0.0465**
2013.year	**0.0702**	**0.0471**	**0.0049**	**0.0022**	**0.1152**
pct_frl	**-0.7412**	**-0.7397**	**0.5493**	**0.5472**	**0.0000**

```
1569 . pcorr act i.year pct_ell if hs==1
(obs=466)
```

Partial and semipartial correlations of act with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0122**	**-0.0122**	**0.0001**	**0.0001**	**0.7931**
2012.year	**-0.0106**	**-0.0106**	**0.0001**	**0.0001**	**0.8194**
2013.year	**-0.0038**	**-0.0038**	**0.0000**	**0.0000**	**0.9345**
pct_ell	**-0.0748**	**-0.0748**	**0.0056**	**0.0056**	**0.1082**

```
1570 . pcorr act i.year pct_sped if hs==1
(obs=508)
```

Partial and semipartial correlations of act with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0028**	**-0.0022**	**0.0000**	**0.0000**	**0.9492**
2012.year	**0.0392**	**0.0309**	**0.0015**	**0.0010**	**0.3791**
2013.year	**0.0669**	**0.0527**	**0.0045**	**0.0028**	**0.1335**
pct_sped	**-0.6156**	**-0.6144**	**0.3790**	**0.3775**	**0.0000**

```
1571 . reg act pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS	Number of obs =	466
				F(8, 457) =	153.24
Model	2966.41197	8	370.801496	Prob > F =	0.0000
Residual	1105.79801	457	2.4196893	R-squared =	0.7285
				Adj R-squared =	0.7237
Total	4072.20998	465	8.75744081	Root MSE =	1.5555

act	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.0507637	.0087588	-5.80	0.000	-.0679763	-.0335511
pct_hisp	-.0265878	.0094187	-2.82	0.005	-.0450971	-.0080786
pct_frl	-9.304525	1.008066	-9.23	0.000	-11.28555	-7.323505
pct_ell	-10.05555	2.036272	-4.94	0.000	-14.05717	-6.053933
pct_sped	-16.53358	1.520809	-10.87	0.000	-19.52222	-13.54493
year						
2011	-.3534024	.2274752	-1.55	0.121	-.8004296	.0936248
2012	.3871273	.2110715	1.83	0.067	-.0276637	.8019183
2013	.3975916	.2101189	1.89	0.059	-.0153274	.8105107
_cons	31.61649	.5289652	59.77	0.000	30.57699	32.656

```
1572 .
1573 . pcorr act_trend i.year pct_black if hs==1
(obs=510)
```

Partial and semipartial correlations of act_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0337	0.0323	0.0011	0.0010	0.4488
2011.year	0.0543	0.0521	0.0029	0.0027	0.2229
2012.year	0.1587	0.1539	0.0252	0.0237	0.0003
2013.year	0.0667	0.0640	0.0044	0.0041	0.1343
pct_black	-0.2340	-0.2305	0.0547	0.0531	0.0000

```
1574 . pcorr act_trend i.year pct_blackhisp if hs==1
(obs=510)
```

Partial and semipartial correlations of act_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0410	0.0394	0.0017	0.0016	0.3574
2011.year	0.0648	0.0624	0.0042	0.0039	0.1454
2012.year	0.1677	0.1633	0.0281	0.0267	0.0002
2013.year	0.0768	0.0739	0.0059	0.0055	0.0845
pct_black~p	-0.2228	-0.2195	0.0497	0.0482	0.0000

```
1575 . pcorr act_trend i.year pct_frl if hs==1
(obs=428)
```

Partial and semipartial correlations of act_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0031**	**-0.0030**	**0.0000**	**0.0000**	**0.9486**
2012.year	**0.1534**	**0.1500**	**0.0235**	**0.0225**	**0.0015**
2013.year	**0.0438**	**0.0424**	**0.0019**	**0.0018**	**0.3672**
pct_frl	**-0.2032**	**-0.2007**	**0.0413**	**0.0403**	**0.0000**

```
1576 . pcorr act_trend i.year pct_ell if hs==1
(obs=398)
```

Partial and semipartial correlations of act_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0345**	**0.0342**	**0.0012**	**0.0012**	**0.4936**
2012.year	**0.1233**	**0.1230**	**0.0152**	**0.0151**	**0.0142**
2013.year	**0.0203**	**0.0201**	**0.0004**	**0.0004**	**0.6881**
pct_ell	**0.0019**	**0.0019**	**0.0000**	**0.0000**	**0.9703**

```
1577 . pcorr act_trend i.year pct_sped if hs==1
(obs=428)
```

Partial and semipartial correlations of act_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0320**	**0.0302**	**0.0010**	**0.0009**	**0.5104**
2012.year	**0.1455**	**0.1389**	**0.0212**	**0.0193**	**0.0026**
2013.year	**0.0467**	**0.0441**	**0.0022**	**0.0019**	**0.3373**
pct_sped	**-0.2922**	**-0.2885**	**0.0854**	**0.0832**	**0.0000**

```
1578 . reg act_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**18.5229264**	**8**	**2.31536581**	Number of obs	= **398**
Residual	**119.016069**	**389**	**.305953904**	F(8, 389)	= **7.57**
Total	**137.538995**	**397**	**.346445831**	Prob > F	= **0.0000**
				R-squared	= **0.1347**
				Adj R-squared	= **0.1169**
				Root MSE	= **.55313**

act_trend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0026741**	**.0033704**	**-0.79**	**0.428**	**-.0093006**	**.0039524**
pct_hisp	**.0012138**	**.0036201**	**0.34**	**0.738**	**-.0059036**	**.0083312**
pct_frl	**-.2531559**	**.4077241**	**-0.62**	**0.535**	**-1.054774**	**.5484627**
pct_ell	**-1.426052**	**.7609403**	**-1.87**	**0.062**	**-2.922122**	**.0700181**
pct_sped	**-2.080091**	**.6097938**	**-3.41**	**0.001**	**-3.278995**	**-.8811868**
year						
2011	**.064291**	**.0876584**	**0.73**	**0.464**	**-.1080524**	**.2366345**
2012	**.2413841**	**.0813893**	**2.97**	**0.003**	**.0813662**	**.401402**
2013	**.0762081**	**.0803396**	**0.95**	**0.343**	**-.0817461**	**.2341622**
_cons	**.7537767**	**.1986664**	**3.79**	**0.000**	**.3631825**	**1.144371**

```
1579 .
1580 . pcorr psae_read i.year pct_black if hs==1
(obs=611)

Partial and semipartial correlations of psae_read with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     -0.0366       -0.0336       0.0013        0.0011         0.3680
  2011.year     -0.0591       -0.0544       0.0035        0.0030         0.1460
  2012.year     -0.0537       -0.0494       0.0029        0.0024         0.1865
  2013.year      0.0023        0.0021       0.0000        0.0000         0.9544
  pct_black     -0.3872       -0.3857       0.1499        0.1488         0.0000

1581 . pcorr psae_read i.year pct_blackhisp if hs==1
(obs=611)

Partial and semipartial correlations of psae_read with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2009b.year   (dropped)
  2010.year     -0.0342       -0.0253       0.0012        0.0006         0.4009
  2011.year     -0.0511       -0.0379       0.0026        0.0014         0.2088
  2012.year     -0.0561       -0.0417       0.0031        0.0017         0.1675
  2013.year      0.0191        0.0142       0.0004        0.0002         0.6384
pct_black~p     -0.6678       -0.6652       0.4459        0.4424         0.0000

1582 . pcorr psae_read i.year pct_frl if hs==1
(obs=508)

Partial and semipartial correlations of psae_read with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.1486       -0.1002       0.0221        0.0100         0.0008
  2012.year      0.0251        0.0167       0.0006        0.0003         0.5739
  2013.year      0.0985        0.0660       0.0097        0.0044         0.0268
    pct_frl     -0.7427       -0.7397       0.5516        0.5472         0.0000

1583 . pcorr psae_read i.year pct_ell if hs==1
(obs=466)

Partial and semipartial correlations of psae_read with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0250       -0.0247       0.0006        0.0006         0.5918
  2012.year     -0.0579       -0.0574       0.0034        0.0033         0.2138
  2013.year      0.0104        0.0103       0.0001        0.0001         0.8231
    pct_ell     -0.1239       -0.1235       0.0153        0.0153         0.0076
```

```
1584 . pcorr psae_read i.year pct_sped if hs==1
(obs=508)

Partial and semipartial correlations of psae_read with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0136**	**-0.0104**	**0.0002**	**0.0001**	**0.7609**
2012.year	**-0.0157**	**-0.0121**	**0.0002**	**0.0001**	**0.7243**
2013.year	**0.0934**	**0.0721**	**0.0087**	**0.0052**	**0.0359**
pct_sped	**-0.6361**	**-0.6336**	**0.4047**	**0.4014**	**0.0000**

```
1585 . reg psae_read pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**164248.415**	**8**	**20531.0518**	Number of obs	= **466**
Residual	**59124.5067**	**457**	**129.375288**	F(8, 457)	= **158.69**
				Prob > F	= **0.0000**
Total	**223372.921**	**465**	**480.371874**	R-squared	= **0.7353**
				Adj R-squared	= **0.7307**
				Root MSE	= **11.374**

psae_read	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.3569195**	**.0640461**	**-5.57**	**0.000**	**-.4827809**	**-.2310582**
pct_hisp	**-.222993**	**.0688707**	**-3.24**	**0.001**	**-.3583356**	**-.0876505**
pct_frl	**-66.28741**	**7.371145**	**-8.99**	**0.000**	**-80.77295**	**-51.80187**
pct_ell	**-73.90728**	**14.88955**	**-4.96**	**0.000**	**-103.1678**	**-44.6468**
pct_sped	**-141.616**	**11.1204**	**-12.73**	**0.000**	**-163.4694**	**-119.7625**
year						
2011	**-3.383204**	**1.663336**	**-2.03**	**0.043**	**-6.651939**	**-.1144683**
2012	**-.2972275**	**1.543389**	**-0.19**	**0.847**	**-3.330247**	**2.735792**
2013	**3.793459**	**1.536424**	**2.47**	**0.014**	**.7741277**	**6.812791**
_cons	**138.8386**	**3.86788**	**35.90**	**0.000**	**131.2375**	**146.4396**

```
1586 .
1587 . pcorr psae_read_trend i.year pct_black if hs==1
(obs=426)

Partial and semipartial correlations of psae_read_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0366**	**-0.0352**	**0.0013**	**0.0012**	**0.4533**
2012.year	**-0.0643**	**-0.0619**	**0.0041**	**0.0038**	**0.1870**
2013.year	**0.1749**	**0.1708**	**0.0306**	**0.0292**	**0.0003**
pct_black	**-0.0439**	**-0.0422**	**0.0019**	**0.0018**	**0.3682**

```
1588 . pcorr psae_read_trend i.year pct_blackhisp if hs==1
(obs=426)

Partial and semipartial correlations of psae_read_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0354       -0.0341       0.0013        0.0012         0.4672
  2012.year     -0.0634       -0.0611       0.0040        0.0037         0.1930
  2013.year      0.1759        0.1718       0.0310        0.0295         0.0003
pct_black~p     -0.0543       -0.0523       0.0030        0.0027         0.2649

1589 . pcorr psae_read_trend i.year pct_frl if hs==1
(obs=426)

Partial and semipartial correlations of psae_read_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0385       -0.0371       0.0015        0.0014         0.4295
  2012.year     -0.0628       -0.0606       0.0039        0.0037         0.1973
  2013.year      0.1756        0.1718       0.0309        0.0295         0.0003
    pct_frl     -0.0171       -0.0165       0.0003        0.0003         0.7258

1590 . pcorr psae_read_trend i.year pct_ell if hs==1
(obs=396)

Partial and semipartial correlations of psae_read_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0344       -0.0331       0.0012        0.0011         0.4963
  2012.year     -0.0565       -0.0544       0.0032        0.0030         0.2637
  2013.year      0.1795        0.1752       0.0322        0.0307         0.0003
    pct_ell      0.0034        0.0032       0.0000        0.0000         0.9467

1591 . pcorr psae_read_trend i.year pct_sped if hs==1
(obs=426)

Partial and semipartial correlations of psae_read_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0344       -0.0330       0.0012        0.0011         0.4805
  2012.year     -0.0651       -0.0625       0.0042        0.0039         0.1817
  2013.year      0.1775        0.1730       0.0315        0.0299         0.0002
   pct_sped     -0.0853       -0.0821       0.0073        0.0067         0.0797
```

```
1592 . reg psae_read_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS	Number of obs =	396
				F(8, 387) =	4.85
Model	1415.84415	8	176.980519	Prob > F =	0.0000
Residual	14114.9474	387	36.4727324	R-squared =	0.0912
				Adj R-squared =	0.0724
Total	15530.7916	395	39.3184597	Root MSE =	6.0393

psae_read_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.0487125	.0372473	-1.31	0.192	-.1219449	.0245199
pct_hisp	-.0441717	.0399341	-1.11	0.269	-.1226866	.0343431
pct_frl	5.259853	4.517277	1.16	0.245	-3.621623	14.14133
pct_ell	-4.743808	8.41177	-0.56	0.573	-21.2823	11.79468
pct_sped	-11.09331	6.682354	-1.66	0.098	-24.23157	2.044953
year						
2011	-.3050651	.9596443	-0.32	0.751	-2.191834	1.581704
2012	-1.024712	.8919186	-1.15	0.251	-2.778325	.7289004
2013	3.248455	.8800677	3.69	0.000	1.518143	4.978767
_cons	1.173284	2.17031	0.54	0.589	-3.093791	5.440358

```
1593 .
1594 .
1595 . pcorr psae_math i.year pct_black if hs==1
(obs=611)
```

Partial and semipartial correlations of psae_math with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0027	0.0024	0.0000	0.0000	0.9463
2011.year	0.0235	0.0205	0.0006	0.0004	0.5635
2012.year	0.0476	0.0417	0.0023	0.0017	0.2415
2013.year	0.0488	0.0427	0.0024	0.0018	0.2296
pct_black	-0.4805	-0.4791	0.2309	0.2296	0.0000

```
1596 . pcorr psae_math i.year pct_blackhisp if hs==1
(obs=611)
```

Partial and semipartial correlations of psae_math with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0131	0.0103	0.0002	0.0001	0.7466
2011.year	0.0459	0.0359	0.0021	0.0013	0.2592
2012.year	0.0646	0.0506	0.0042	0.0026	0.1118
2013.year	0.0740	0.0580	0.0055	0.0034	0.0684
pct_black~p	-0.6209	-0.6191	0.3855	0.3833	0.0000

```
1597 . pcorr psae_math i.year pct_frl if hs==1
(obs=508)

Partial and semipartial correlations of psae_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0648**	**-0.0488**	**0.0042**	**0.0024**	**0.1459**
2012.year	**0.1000**	**0.0755**	**0.0100**	**0.0057**	**0.0247**
2013.year	**0.0945**	**0.0713**	**0.0089**	**0.0051**	**0.0337**
pct_frl	**-0.6580**	**-0.6564**	**0.4330**	**0.4309**	**0.0000**

```
1598 . pcorr psae_math i.year pct_ell if hs==1
(obs=466)

Partial and semipartial correlations of psae_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0169**	**0.0169**	**0.0003**	**0.0003**	**0.7171**
2012.year	**0.0045**	**0.0045**	**0.0000**	**0.0000**	**0.9236**
2013.year	**0.0159**	**0.0159**	**0.0003**	**0.0003**	**0.7322**
pct_ell	**-0.0151**	**-0.0151**	**0.0002**	**0.0002**	**0.7455**

```
1599 . pcorr psae_math i.year pct_sped if hs==1
(obs=508)

Partial and semipartial correlations of psae_math with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0397**	**0.0318**	**0.0016**	**0.0010**	**0.3736**
2012.year	**0.0622**	**0.0499**	**0.0039**	**0.0025**	**0.1629**
2013.year	**0.0964**	**0.0775**	**0.0093**	**0.0060**	**0.0304**
pct_sped	**-0.5968**	**-0.5953**	**0.3562**	**0.3544**	**0.0000**

```
1600 . reg psae_math pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**179040.045**	**8**	**22380.0057**	Prob > F	**0.0000**
Residual	**97925.2438**	**457**	**214.278433**	R-squared	**0.6464**
Total	**276965.289**	**465**	**595.624278**	Adj R-squared	**0.6402**
				Root MSE	**14.638**

Number of obs = **466**
F(8, 457) = **104.44**

psae_math	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.3279472**	**.0824245**	**-3.98**	**0.000**	**-.4899252**	**-.1659693**
pct_hisp	**-.0579557**	**.0886336**	**-0.65**	**0.514**	**-.2321356**	**.1162241**
pct_frl	**-70.58248**	**9.486336**	**-7.44**	**0.000**	**-89.22473**	**-51.94023**
pct_ell	**-89.60624**	**19.16219**	**-4.68**	**0.000**	**-127.2632**	**-51.9493**
pct_sped	**-132.2654**	**14.31146**	**-9.24**	**0.000**	**-160.3898**	**-104.1409**
year						
2011	**-.4750719**	**2.14064**	**-0.22**	**0.824**	**-4.681789**	**3.731646**
2012	**4.233437**	**1.986273**	**2.13**	**0.034**	**.3300757**	**8.136798**
2013	**4.683451**	**1.977309**	**2.37**	**0.018**	**.7977054**	**8.569197**
_cons	**129.5718**	**4.977789**	**26.03**	**0.000**	**119.7896**	**139.354**

```
1601 .
1602 . pcorr psae_math_trend i.year pct_black if hs==1
(obs=426)

Partial and semipartial correlations of psae_math_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     0.1353        0.1336       0.0183        0.0179         0.0053
  2012.year     0.1331        0.1314       0.0177        0.0173         0.0061
  2013.year     0.0897        0.0881       0.0080        0.0078         0.0654
  pct_black    -0.1438       -0.1422       0.0207        0.0202         0.0030

1603 . pcorr psae_math_trend i.year pct_blackhisp if hs==1
(obs=426)

Partial and semipartial correlations of psae_math_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     0.1344        0.1338       0.0181        0.0179         0.0056
  2012.year     0.1340        0.1334       0.0179        0.0178         0.0058
  2013.year     0.0910        0.0902       0.0083        0.0081         0.0615
pct_black~p    -0.0567       -0.0561       0.0032        0.0031         0.2443

1604 . pcorr psae_math_trend i.year pct_frl if hs==1
(obs=426)

Partial and semipartial correlations of psae_math_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     0.1278        0.1273       0.0163        0.0162         0.0085
  2012.year     0.1353        0.1348       0.0183        0.0182         0.0053
  2013.year     0.0917        0.0909       0.0084        0.0083         0.0595
    pct_frl    -0.0412       -0.0407       0.0017        0.0017         0.3981

1605 . pcorr psae_math_trend i.year pct_ell if hs==1
(obs=396)

Partial and semipartial correlations of psae_math_trend with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     0.1246        0.1244       0.0155        0.0155         0.0134
  2012.year     0.1068        0.1064       0.0114        0.0113         0.0343
  2013.year     0.0628        0.0623       0.0039        0.0039         0.2142
    pct_ell     0.0032        0.0031       0.0000        0.0000         0.9502
```

```
1606 . pcorr psae_math_trend i.year pct_sped if hs==1
(obs=426)

Partial and semipartial correlations of psae_math_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.1371**	**0.1359**	**0.0188**	**0.0185**	**0.0047**
2012.year	**0.1327**	**0.1315**	**0.0176**	**0.0173**	**0.0063**
2013.year	**0.0933**	**0.0920**	**0.0087**	**0.0085**	**0.0551**
pct_sped	**-0.1172**	**-0.1158**	**0.0137**	**0.0134**	**0.0159**

```
1607 . reg psae_math_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**744.856507**	**8**	**93.1070634**	Prob > F	**0.0064**
Residual	**13282.9837**	**387**	**34.3229553**	R-squared	**0.0531**
				Adj R-squared	**0.0335**
Total	**14027.8402**	**395**	**35.5135195**	Root MSE	**5.8586**

Number of obs = **396**
F(8, 387) = **2.71**

psae_math_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0040884**	**.0361329**	**-0.11**	**0.910**	**-.0751298**	**.0669529**
pct_hisp	**.0300069**	**.0387393**	**0.77**	**0.439**	**-.0461589**	**.1061727**
pct_frl	**.6632329**	**4.382127**	**0.15**	**0.880**	**-7.952523**	**9.278988**
pct_ell	**-13.90754**	**8.160102**	**-1.70**	**0.089**	**-29.95122**	**2.136145**
pct_sped	**-10.53466**	**6.482427**	**-1.63**	**0.105**	**-23.27985**	**2.21052**
year						
2011	**2.322544**	**.9309331**	**2.49**	**0.013**	**.4922249**	**4.152864**
2012	**1.944708**	**.8652337**	**2.25**	**0.025**	**.2435606**	**3.645855**
2013	**1.245813**	**.8537373**	**1.46**	**0.145**	**-.4327304**	**2.924357**
_cons	**1.224444**	**2.105378**	**0.58**	**0.561**	**-2.914965**	**5.363854**

```
1608 .
1609 . pcorr psae_sci i.year pct_black if hs==1
(obs=611)

Partial and semipartial correlations of psae_sci with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0215**	**0.0191**	**0.0005**	**0.0004**	**0.5972**
2011.year	**0.0049**	**0.0043**	**0.0000**	**0.0000**	**0.9047**
2012.year	**0.0663**	**0.0589**	**0.0044**	**0.0035**	**0.1027**
2013.year	**0.0127**	**0.0113**	**0.0002**	**0.0001**	**0.7546**
pct_black	**-0.4566**	**-0.4552**	**0.2085**	**0.2072**	**0.0000**

```
1610 . pcorr psae_sci i.year pct_blackhisp if hs==1
(obs=611)
```

Partial and semipartial correlations of psae_sci with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0393**	**0.0279**	**0.0015**	**0.0008**	**0.3340**
2011.year	**0.0305**	**0.0216**	**0.0009**	**0.0005**	**0.4531**
2012.year	**0.0952**	**0.0678**	**0.0091**	**0.0046**	**0.0190**
2013.year	**0.0361**	**0.0256**	**0.0013**	**0.0007**	**0.3748**
pct_black~p	**-0.7030**	**-0.7010**	**0.4942**	**0.4914**	**0.0000**

```
1611 . pcorr psae_sci i.year pct_frl if hs==1
(obs=508)
```

Partial and semipartial correlations of psae_sci with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.1448**	**-0.0960**	**0.0210**	**0.0092**	**0.0011**
2012.year	**0.1196**	**0.0790**	**0.0143**	**0.0062**	**0.0071**
2013.year	**0.0257**	**0.0168**	**0.0007**	**0.0003**	**0.5651**
pct_frl	**-0.7532**	**-0.7511**	**0.5672**	**0.5641**	**0.0000**

```
1612 . pcorr psae_sci i.year pct_ell if hs==1
(obs=466)
```

Partial and semipartial correlations of psae_sci with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0225**	**-0.0225**	**0.0005**	**0.0005**	**0.6287**
2012.year	**-0.0011**	**-0.0011**	**0.0000**	**0.0000**	**0.9810**
2013.year	**-0.0423**	**-0.0422**	**0.0018**	**0.0018**	**0.3634**
pct_ell	**-0.0692**	**-0.0691**	**0.0048**	**0.0048**	**0.1369**

```
1613 . pcorr psae_sci i.year pct_sped if hs==1
(obs=508)
```

Partial and semipartial correlations of psae_sci with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0072**	**-0.0058**	**0.0001**	**0.0000**	**0.8719**
2012.year	**0.0621**	**0.0499**	**0.0039**	**0.0025**	**0.1637**
2013.year	**0.0271**	**0.0217**	**0.0007**	**0.0005**	**0.5441**
pct_sped	**-0.5940**	**-0.5924**	**0.3529**	**0.3509**	**0.0000**

```
1614 . reg psae_sci pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS	Number of obs =	466
				F(8, 457) =	165.09
Model	165493.754	8	20686.7192	Prob > F =	0.0000
Residual	57263.6988	457	125.303499	R-squared =	0.7429
				Adj R-squared =	0.7384
Total	222757.453	465	479.048286	Root MSE =	11.194

psae_sci	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.387056	.0630302	-6.14	0.000	-.5109209	-.2631911
pct_hisp	-.1865103	.0677783	-2.75	0.006	-.3197061	-.0533146
pct_frl	-72.134	7.254223	-9.94	0.000	-86.38977	-57.87823
pct_ell	-80.61909	14.65337	-5.50	0.000	-109.4154	-51.82275
pct_sped	-108.5265	10.94401	-9.92	0.000	-130.0333	-87.01969
year						
2011	-3.439505	1.636952	-2.10	0.036	-6.656391	-.2226188
2012	3.592535	1.518908	2.37	0.018	.6076259	6.577444
2013	.5179818	1.512053	0.34	0.732	-2.453457	3.48942
_cons	132.7123	3.806527	34.86	0.000	125.2319	140.1928

```
1615 .
1616 . pcorr psae_sci_trend i.year pct_black if hs==1
(obs=426)

Partial and semipartial correlations of psae_sci_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	-0.0137	-0.0130	0.0002	0.0002	0.7781
2012.year	0.1436	0.1371	0.0206	0.0188	0.0031
2013.year	-0.1649	-0.1579	0.0272	0.0249	0.0007
pct_black	-0.1106	-0.1051	0.0122	0.0110	0.0230

```
1617 . pcorr psae_sci_trend i.year pct_blackhisp if hs==1
(obs=426)

Partial and semipartial correlations of psae_sci_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	-0.0124	-0.0118	0.0002	0.0001	0.7989
2012.year	0.1450	0.1389	0.0210	0.0193	0.0028
2013.year	-0.1625	-0.1560	0.0264	0.0243	0.0008
pct_black~p	-0.0810	-0.0770	0.0066	0.0059	0.0962

```
1618 . pcorr psae_sci_trend i.year pct_frl if hs==1
(obs=426)
```

Partial and semipartial correlations of psae_sci_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0213**	**-0.0202**	**0.0005**	**0.0004**	**0.6626**
2012.year	**0.1471**	**0.1411**	**0.0216**	**0.0199**	**0.0024**
2013.year	**-0.1609**	**-0.1546**	**0.0259**	**0.0239**	**0.0009**
pct_frl	**-0.0633**	**-0.0602**	**0.0040**	**0.0036**	**0.1937**

```
1619 . pcorr psae_sci_trend i.year pct_ell if hs==1
(obs=396)
```

Partial and semipartial correlations of psae_sci_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0110**	**-0.0105**	**0.0001**	**0.0001**	**0.8274**
2012.year	**0.1321**	**0.1265**	**0.0174**	**0.0160**	**0.0087**
2013.year	**-0.1651**	**-0.1589**	**0.0273**	**0.0253**	**0.0010**
pct_ell	**0.0063**	**0.0060**	**0.0000**	**0.0000**	**0.9009**

```
1620 . pcorr psae_sci_trend i.year pct_sped if hs==1
(obs=426)
```

Partial and semipartial correlations of psae_sci_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0104**	**-0.0098**	**0.0001**	**0.0001**	**0.8316**
2012.year	**0.1436**	**0.1365**	**0.0206**	**0.0186**	**0.0031**
2013.year	**-0.1614**	**-0.1539**	**0.0261**	**0.0237**	**0.0009**
pct_sped	**-0.1416**	**-0.1346**	**0.0200**	**0.0181**	**0.0035**

```
1621 . reg psae_sci_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**1555.75152**	**8**	**194.46894**	Number of obs	**396**
Residual	**11152.956**	**387**	**28.8190076**	F(8, 387)	**6.75**
				Prob > F	**0.0000**
Total	**12708.7075**	**395**	**32.173943**	R-squared	**0.1224**
				Adj R-squared	**0.1043**
				Root MSE	**5.3683**

psae_sci_t~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0279672**	**.0331093**	**-0.84**	**0.399**	**-.0930638**	**.0371295**
pct_hisp	**-.0104793**	**.0354976**	**-0.30**	**0.768**	**-.0802715**	**.059313**
pct_frl	**2.192877**	**4.015431**	**0.55**	**0.585**	**-5.701912**	**10.08767**
pct_ell	**-7.922491**	**7.477265**	**-1.06**	**0.290**	**-22.62364**	**6.778655**
pct_sped	**-10.97519**	**5.939978**	**-1.85**	**0.065**	**-22.65386**	**.703475**
year						
2011	**-.01854**	**.8530327**	**-0.02**	**0.983**	**-1.695698**	**1.658618**
2012	**2.148597**	**.792831**	**2.71**	**0.007**	**.5898024**	**3.707393**
2013	**-2.463797**	**.7822966**	**-3.15**	**0.002**	**-4.00188**	**-.9257134**
_cons	**3.220098**	**1.9292**	**1.67**	**0.096**	**-.5729256**	**7.013122**

```
1622 .
1623 . pcorr attend i.year pct_black if hs==1
(obs=707)

Partial and semipartial correlations of attend with

   Variable |    Partial   Semipartial      Partial   Semipartial   Significance
            |       Corr.         Corr.     Corr.^2       Corr.^2          Value
------------+------------------------------------------------------------------
 2009b.year |  (dropped)
  2010.year |     0.0478       0.0447       0.0023       0.0020         0.2060
  2011.year |     0.0071       0.0066       0.0000       0.0000         0.8519
  2012.year |     0.0534       0.0501       0.0029       0.0025         0.1571
  2013.year |     0.1184       0.1116       0.0140       0.0125         0.0017
  pct_black |    -0.3258      -0.3226       0.1062       0.1040         0.0000

1624 . pcorr attend i.year pct_blackhisp if hs==1
(obs=707)

Partial and semipartial correlations of attend with

   Variable |    Partial   Semipartial      Partial   Semipartial   Significance
            |       Corr.         Corr.     Corr.^2       Corr.^2          Value
------------+------------------------------------------------------------------
 2009b.year |  (dropped)
  2010.year |     0.0476       0.0453       0.0023       0.0020         0.2077
  2011.year |     0.0092       0.0087       0.0001       0.0001         0.8080
  2012.year |     0.0545       0.0519       0.0030       0.0027         0.1487
  2013.year |     0.1222       0.1169       0.0149       0.0137         0.0012
pct_black~p |    -0.2809      -0.2781       0.0789       0.0773         0.0000

1625 . pcorr attend i.year pct_frl if hs==1
(obs=587)

Partial and semipartial correlations of attend with

   Variable |    Partial   Semipartial      Partial   Semipartial   Significance
            |       Corr.         Corr.     Corr.^2       Corr.^2          Value
------------+------------------------------------------------------------------
 2010b.year |  (dropped)
  2011.year |    -0.0819      -0.0771       0.0067       0.0059         0.0478
  2012.year |     0.0269       0.0252       0.0007       0.0006         0.5168
  2013.year |     0.0979       0.0923       0.0096       0.0085         0.0180
    pct_frl |    -0.3223      -0.3194       0.1039       0.1020         0.0000

1626 . pcorr attend i.year pct_ell if hs==1
(obs=532)

Partial and semipartial correlations of attend with

   Variable |    Partial   Semipartial      Partial   Semipartial   Significance
            |       Corr.         Corr.     Corr.^2       Corr.^2          Value
------------+------------------------------------------------------------------
 2010b.year |  (dropped)
  2011.year |    -0.0316      -0.0312       0.0010       0.0010         0.4683
  2012.year |     0.0006       0.0006       0.0000       0.0000         0.9882
  2013.year |     0.0782       0.0774       0.0061       0.0060         0.0723
    pct_ell |     0.1159       0.1150       0.0134       0.0132         0.0076
```

```
1627 . pcorr attend i.year pct_sped if hs==1
(obs=587)

Partial and semipartial correlations of attend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0379**	**-0.0373**	**0.0014**	**0.0014**	**0.3603**
2012.year	**0.0124**	**0.0122**	**0.0002**	**0.0001**	**0.7657**
2013.year	**0.0929**	**0.0918**	**0.0086**	**0.0084**	**0.0247**
pct_sped	**-0.1192**	**-0.1181**	**0.0142**	**0.0139**	**0.0039**

```
1628 . reg attend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**11289.8127**	**8**	**1411.22659**	Prob > F	**17.93** / **0.0000**
Residual	**41171.0815**	**523**	**78.7209971**	R-squared	**0.2152**
Total	**52460.8942**	**531**	**98.7964109**	Adj R-squared / Root MSE	**0.2032** / **8.8725**

Number of obs = **532**; F(8, 523) = **17.93**

attend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**.0204288**	**.0446837**	**0.46**	**0.648**	**-.0673529**	**.1082104**
pct_hisp	**.1147184**	**.0484612**	**2.37**	**0.018**	**.0195158**	**.209921**
pct_frl	**-27.90253**	**4.609362**	**-6.05**	**0.000**	**-36.95767**	**-18.84739**
pct_ell	**.0278994**	**10.53644**	**0.00**	**0.998**	**-20.67105**	**20.72685**
pct_sped	**-2.907435**	**3.460333**	**-0.84**	**0.401**	**-9.705293**	**3.890424**
year						
2011	**-1.876397**	**1.202573**	**-1.56**	**0.119**	**-4.238865**	**.48607**
2012	**1.596264**	**1.130537**	**1.41**	**0.159**	**-.6246874**	**3.817216**
2013	**3.384378**	**1.140408**	**2.97**	**0.003**	**1.144035**	**5.624721**
_cons	**104.6738**	**2.892335**	**36.19**	**0.000**	**98.99178**	**110.3558**

```
1629 .
1630 . pcorr attend_trend i.year pct_black if hs==1
(obs=523)

Partial and semipartial correlations of attend_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0218**	**-0.0217**	**0.0005**	**0.0005**	**0.6202**
2012.year	**-0.0153**	**-0.0152**	**0.0002**	**0.0002**	**0.7281**
2013.year	**0.0361**	**0.0360**	**0.0013**	**0.0013**	**0.4120**
pct_black	**0.0220**	**0.0220**	**0.0005**	**0.0005**	**0.6165**

```
1631 . pcorr attend_trend i.year pct_blackhisp if hs==1
(obs=523)
```

Partial and semipartial correlations of attend_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0222**	**-0.0221**	**0.0005**	**0.0005**	**0.6140**
2012.year	**-0.0152**	**-0.0152**	**0.0002**	**0.0002**	**0.7294**
2013.year	**0.0361**	**0.0360**	**0.0013**	**0.0013**	**0.4113**
pct_black~p	**0.0370**	**0.0369**	**0.0014**	**0.0014**	**0.4002**

```
1632 . pcorr attend_trend i.year pct_frl if hs==1
(obs=523)
```

Partial and semipartial correlations of attend_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0163**	**-0.0162**	**0.0003**	**0.0003**	**0.7111**
2012.year	**-0.0169**	**-0.0169**	**0.0003**	**0.0003**	**0.6999**
2013.year	**0.0351**	**0.0350**	**0.0012**	**0.0012**	**0.4247**
pct_frl	**0.0442**	**0.0441**	**0.0020**	**0.0019**	**0.3140**

```
1633 . pcorr attend_trend i.year pct_ell if hs==1
(obs=478)
```

Partial and semipartial correlations of attend_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0066**	**-0.0066**	**0.0000**	**0.0000**	**0.8865**
2012.year	**-0.0066**	**-0.0066**	**0.0000**	**0.0000**	**0.8857**
2013.year	**0.0447**	**0.0446**	**0.0020**	**0.0020**	**0.3310**
pct_ell	**-0.0173**	**-0.0172**	**0.0003**	**0.0003**	**0.7076**

```
1634 . pcorr attend_trend i.year pct_sped if hs==1
(obs=523)
```

Partial and semipartial correlations of attend_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0198**	**-0.0198**	**0.0004**	**0.0004**	**0.6524**
2012.year	**-0.0139**	**-0.0139**	**0.0002**	**0.0002**	**0.7516**
2013.year	**0.0371**	**0.0370**	**0.0014**	**0.0014**	**0.3985**
pct_sped	**-0.0232**	**-0.0231**	**0.0005**	**0.0005**	**0.5978**

```
1635 . reg attend_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS	Number of obs =	478
				F(8, 469) =	0.45
Model	83.5402672	8	10.4425334	Prob > F =	0.8881
Residual	10792.7333	469	23.0122245	R-squared =	0.0077
				Adj R-squared =	-0.0092
Total	10876.2736	477	22.8014121	Root MSE =	4.7971

attend_trend	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	.0081748	.0250748	0.33	0.745	-.0410981	.0574478
pct_hisp	.0064351	.027104	0.24	0.812	-.0468252	.0596955
pct_frl	.7857353	2.631652	0.30	0.765	-4.385553	5.957023
pct_ell	.4661259	5.954652	0.08	0.938	-11.23497	12.16722
pct_sped	-1.500576	1.909956	-0.79	0.432	-5.253706	2.252553
year						
2011	-.0293254	.6955609	-0.04	0.966	-1.396127	1.337476
2012	-.0851663	.6511857	-0.13	0.896	-1.364769	1.194437
2013	.6555192	.6541115	1.00	0.317	-.6298328	1.940871
_cons	.0653926	1.610373	0.04	0.968	-3.099047	3.229832

```
1636 .
1637 . pcorr ap_enroll_trend i.year pct_black if hs==1
(obs=500)
```

Partial and semipartial correlations of ap_enroll_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	-0.0298	-0.0297	0.0009	0.0009	0.5073
2011.year	-0.0187	-0.0186	0.0003	0.0003	0.6782
2012.year	-0.0278	-0.0277	0.0008	0.0008	0.5368
2013.year	-0.0722	-0.0721	0.0052	0.0052	0.1081
pct_black	-0.0489	-0.0487	0.0024	0.0024	0.2775

```
1638 . pcorr ap_enroll_trend i.year pct_blackhisp if hs==1
(obs=500)
```

Partial and semipartial correlations of ap_enroll_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	-0.0296	-0.0296	0.0009	0.0009	0.5101
2011.year	-0.0189	-0.0188	0.0004	0.0004	0.6753
2012.year	-0.0270	-0.0269	0.0007	0.0007	0.5486
2013.year	-0.0709	-0.0708	0.0050	0.0050	0.1149
pct_black~p	-0.0213	-0.0213	0.0005	0.0005	0.6356

```
1639 . pcorr ap_enroll_trend i.year pct_frl if hs==1
(obs=417)
```

Partial and semipartial correlations of ap_enroll_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0037**	**0.0037**	**0.0000**	**0.0000**	**0.9399**
2012.year	**0.0065**	**0.0065**	**0.0000**	**0.0000**	**0.8949**
2013.year	**-0.0445**	**-0.0443**	**0.0020**	**0.0020**	**0.3664**
pct_frl	**-0.0756**	**-0.0754**	**0.0057**	**0.0057**	**0.1248**

```
1640 . pcorr ap_enroll_trend i.year pct_ell if hs==1
(obs=385)
```

Partial and semipartial correlations of ap_enroll_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0181**	**0.0180**	**0.0003**	**0.0003**	**0.7237**
2012.year	**0.0051**	**0.0050**	**0.0000**	**0.0000**	**0.9213**
2013.year	**-0.0395**	**-0.0393**	**0.0016**	**0.0015**	**0.4414**
pct_ell	**-0.0815**	**-0.0813**	**0.0066**	**0.0066**	**0.1119**

```
1641 . pcorr ap_enroll_trend i.year pct_sped if hs==1
(obs=417)
```

Partial and semipartial correlations of ap_enroll_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0207**	**0.0206**	**0.0004**	**0.0004**	**0.6738**
2012.year	**0.0123**	**0.0122**	**0.0002**	**0.0001**	**0.8025**
2013.year	**-0.0340**	**-0.0338**	**0.0012**	**0.0011**	**0.4900**
pct_sped	**-0.1073**	**-0.1071**	**0.0115**	**0.0115**	**0.0291**

```
1642 . reg ap_enroll_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**736.836641**	**8**	**92.1045802**	Number of obs	**385**
Residual	**22903.54**	**376**	**60.9136702**	F(8, 376)	**1.51**
				Prob > F	**0.1512**
Total	**23640.3766**	**384**	**61.5634808**	R-squared	**0.0312**
				Adj R-squared	**0.0106**
				Root MSE	**7.8047**

ap_enroll_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0013833**	**.0431281**	**-0.03**	**0.974**	**-.0861859**	**.0834192**
pct_hisp	**.0323906**	**.0465805**	**0.70**	**0.487**	**-.0592003**	**.1239815**
pct_frl	**-3.2535**	**4.605086**	**-0.71**	**0.480**	**-12.30845**	**5.801449**
pct_ell	**-17.0377**	**10.33568**	**-1.65**	**0.100**	**-37.36067**	**3.285272**
pct_sped	**-1.602757**	**3.222546**	**-0.50**	**0.619**	**-7.939227**	**4.733714**
year						
2011	**.4621053**	**1.20879**	**0.38**	**0.702**	**-1.914729**	**2.83894**
2012	**.4203682**	**1.144356**	**0.37**	**0.714**	**-1.829771**	**2.670507**
2013	**-.6136003**	**1.181868**	**-0.52**	**0.604**	**-2.9375**	**1.710299**
_cons	**5.999701**	**2.745917**	**2.18**	**0.030**	**.6004233**	**11.39898**

```
1643 .
1644 . pcorr ap_success_trend i.year pct_black if hs==1
(obs=400)

Partial and semipartial correlations of ap_success_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0017**	**0.0016**	**0.0000**	**0.0000**	**0.9738**
2011.year	**0.0358**	**0.0349**	**0.0013**	**0.0012**	**0.4778**
2012.year	**0.1093**	**0.1071**	**0.0119**	**0.0115**	**0.0297**
2013.year	**0.1439**	**0.1417**	**0.0207**	**0.0201**	**0.0041**
pct_black	**-0.1205**	**-0.1182**	**0.0145**	**0.0140**	**0.0165**

```
1645 . pcorr ap_success_trend i.year pct_blackhisp if hs==1
(obs=400)

Partial and semipartial correlations of ap_success_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0048**	**0.0047**	**0.0000**	**0.0000**	**0.9237**
2011.year	**0.0401**	**0.0392**	**0.0016**	**0.0015**	**0.4265**
2012.year	**0.1157**	**0.1139**	**0.0134**	**0.0130**	**0.0212**
2013.year	**0.1490**	**0.1473**	**0.0222**	**0.0217**	**0.0030**
pct_black~p	**-0.0849**	**-0.0833**	**0.0072**	**0.0069**	**0.0918**

```
1646 . pcorr ap_success_trend i.year pct_frl if hs==1
(obs=329)

Partial and semipartial correlations of ap_success_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0343**	**0.0337**	**0.0012**	**0.0011**	**0.5375**
2012.year	**0.1231**	**0.1219**	**0.0151**	**0.0149**	**0.0263**
2013.year	**0.1596**	**0.1590**	**0.0255**	**0.0253**	**0.0039**
pct_frl	**-0.0374**	**-0.0368**	**0.0014**	**0.0014**	**0.5009**

```
1647 . pcorr ap_success_trend i.year pct_ell if hs==1
(obs=310)

Partial and semipartial correlations of ap_success_trend with
```

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0344**	**0.0339**	**0.0012**	**0.0012**	**0.5480**
2012.year	**0.1126**	**0.1116**	**0.0127**	**0.0125**	**0.0487**
2013.year	**0.1481**	**0.1476**	**0.0219**	**0.0218**	**0.0093**
pct_ell	**0.0442**	**0.0436**	**0.0020**	**0.0019**	**0.4407**

```
1648 . pcorr ap_success_trend i.year pct_sped if hs==1
(obs=329)
```

Partial and semipartial correlations of ap_success_trend with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**0.0407**	**0.0400**	**0.0017**	**0.0016**	**0.4638**
2012.year	**0.1211**	**0.1196**	**0.0147**	**0.0143**	**0.0289**
2013.year	**0.1591**	**0.1581**	**0.0253**	**0.0250**	**0.0040**
pct_sped	**-0.0781**	**-0.0769**	**0.0061**	**0.0059**	**0.1593**

```
1649 . reg ap_success_trend pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS		
Model	**1314.34751**	**8**	**164.293438**	Number of obs	= **310**
Residual	**23992.2874**	**301**	**79.7085959**	F(8, 301)	= **2.06**
				Prob > F	= **0.0394**
Total	**25306.6349**	**309**	**81.8984947**	R-squared	= **0.0519**
				Adj R-squared	= **0.0267**
				Root MSE	= **8.928**

ap_success~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	**-.0495278**	**.0588793**	**-0.84**	**0.401**	**-.1653949**	**.0663393**
pct_hisp	**-.0009841**	**.0629863**	**-0.02**	**0.988**	**-.1249334**	**.1229651**
pct_frl	**2.968822**	**7.22375**	**0.41**	**0.681**	**-11.24663**	**17.18427**
pct_ell	**-14.82819**	**13.41007**	**-1.11**	**0.270**	**-41.21755**	**11.56117**
pct_sped	**-2.683142**	**11.04661**	**-0.24**	**0.808**	**-24.42151**	**19.05522**
year						
2011	**1.046591**	**1.521735**	**0.69**	**0.492**	**-1.947995**	**4.041177**
2012	**2.845555**	**1.424341**	**2.00**	**0.047**	**.0426271**	**5.648482**
2013	**3.942786**	**1.452237**	**2.71**	**0.007**	**1.084964**	**6.800608**
_cons	**2.354746**	**3.340099**	**0.70**	**0.481**	**-4.218156**	**8.927649**

```
1650 .
1651 .
1652 . pcorr epas_gain_read i.year pct_black if hs==1
(obs=617)
```

Partial and semipartial correlations of epas_gain_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**-0.0034**	**-0.0032**	**0.0000**	**0.0000**	**0.9335**
2011.year	**-0.0615**	**-0.0576**	**0.0038**	**0.0033**	**0.1282**
2012.year	**-0.0306**	**-0.0286**	**0.0009**	**0.0008**	**0.4492**
2013.year	**-0.0162**	**-0.0151**	**0.0003**	**0.0002**	**0.6895**
pct_black	**-0.3506**	**-0.3497**	**0.1229**	**0.1223**	**0.0000**

```
1653 . pcorr epas_gain_read i.year pct_blackhisp if hs==1
(obs=617)
```

Partial and semipartial correlations of epas_gain_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	**0.0052**	**0.0046**	**0.0000**	**0.0000**	**0.8971**
2011.year	**-0.0579**	**-0.0507**	**0.0034**	**0.0026**	**0.1521**
2012.year	**-0.0261**	**-0.0229**	**0.0007**	**0.0005**	**0.5185**
2013.year	**-0.0115**	**-0.0101**	**0.0001**	**0.0001**	**0.7761**
pct_black~p	**-0.4807**	**-0.4794**	**0.2311**	**0.2298**	**0.0000**

```
1654 . pcorr epas_gain_read i.year pct_frl if hs==1
(obs=515)
```

Partial and semipartial correlations of epas_gain_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.1435**	**-0.1210**	**0.0206**	**0.0146**	**0.0011**
2012.year	**-0.0066**	**-0.0055**	**0.0000**	**0.0000**	**0.8815**
2013.year	**0.0002**	**0.0001**	**0.0000**	**0.0000**	**0.9972**
pct_frl	**-0.5475**	**-0.5460**	**0.2998**	**0.2981**	**0.0000**

```
1655 . pcorr epas_gain_read i.year pct_ell if hs==1
(obs=467)
```

Partial and semipartial correlations of epas_gain_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0442**	**-0.0442**	**0.0020**	**0.0020**	**0.3417**
2012.year	**-0.0452**	**-0.0451**	**0.0020**	**0.0020**	**0.3318**
2013.year	**-0.0231**	**-0.0231**	**0.0005**	**0.0005**	**0.6190**
pct_ell	**-0.0383**	**-0.0382**	**0.0015**	**0.0015**	**0.4109**

```
1656 . pcorr epas_gain_read i.year pct_sped if hs==1
(obs=515)
```

Partial and semipartial correlations of epas_gain_read with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2010b.year	(dropped)				
2011.year	**-0.0690**	**-0.0603**	**0.0048**	**0.0036**	**0.1191**
2012.year	**-0.0233**	**-0.0203**	**0.0005**	**0.0004**	**0.5990**
2013.year	**0.0197**	**0.0172**	**0.0004**	**0.0003**	**0.6565**
pct_sped	**-0.4839**	**-0.4826**	**0.2342**	**0.2329**	**0.0000**

```
1657 . reg epas_gain_read pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1
```

Source	SS	df	MS	Number of obs =	467
				F(8, 458) =	50.61
Model	166816.43	8	20852.0538	Prob > F =	0.0000
Residual	188713.467	458	412.038137	R-squared =	0.4692
				Adj R-squared =	0.4599
Total	355529.897	466	762.939694	Root MSE =	20.299

epas_gain_~d	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
pct_black	-.2188302	.1157834	-1.89	0.059	-.4463628	.0087024
pct_hisp	.0496714	.1245746	0.40	0.690	-.1951373	.29448
pct_frl	-73.43999	13.108	-5.60	0.000	-99.19927	-47.68071
pct_ell	-98.59992	26.10029	-3.78	0.000	-149.8911	-47.30875
pct_sped	-138.6636	19.75717	-7.02	0.000	-177.4895	-99.83763
year						
2011	-6.882177	2.901558	-2.37	0.018	-12.58419	-1.180159
2012	-.2637516	2.735009	-0.10	0.923	-5.638474	5.110971
2013	1.252963	2.756653	0.45	0.650	-4.164294	6.67022
_cons	154.2356	6.91395	22.31	0.000	140.6486	167.8226

```
1658 .
1659 . pcorr epas_math_gain i.year pct_black if hs==1
(obs=617)
```

Partial and semipartial correlations of epas_math_gain with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	-0.0005	-0.0005	0.0000	0.0000	0.9898
2011.year	-0.0554	-0.0514	0.0031	0.0026	0.1710
2012.year	-0.0230	-0.0213	0.0005	0.0005	0.5695
2013.year	-0.0107	-0.0099	0.0001	0.0001	0.7924
pct_black	-0.3702	-0.3693	0.1370	0.1364	0.0000

```
1660 . pcorr epas_math_gain i.year pct_blackhisp if hs==1
(obs=617)
```

Partial and semipartial correlations of epas_math_gain with

Variable	Partial Corr.	Semipartial Corr.	Partial Corr.^2	Semipartial Corr.^2	Significance Value
2009b.year	(dropped)				
2010.year	0.0055	0.0052	0.0000	0.0000	0.8919
2011.year	-0.0494	-0.0468	0.0024	0.0022	0.2217
2012.year	-0.0156	-0.0148	0.0002	0.0002	0.6997
2013.year	-0.0018	-0.0017	0.0000	0.0000	0.9643
pct_black~p	-0.3195	-0.3187	0.1021	0.1016	0.0000

```
1661 . pcorr epas_math_gain i.year pct_frl if hs==1
(obs=515)

Partial and semipartial correlations of epas_math_gain with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.1075       -0.0996       0.0116        0.0099         0.0149
  2012.year     -0.0054       -0.0050       0.0000        0.0000         0.9032
  2013.year      0.0035        0.0032       0.0000        0.0000         0.9368
    pct_frl     -0.3849       -0.3839       0.1481        0.1474         0.0000

1662 . pcorr epas_math_gain i.year pct_ell if hs==1
(obs=467)

Partial and semipartial correlations of epas_math_gain with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0415       -0.0413       0.0017        0.0017         0.3723
  2012.year     -0.0327       -0.0325       0.0011        0.0011         0.4817
  2013.year     -0.0151       -0.0150       0.0002        0.0002         0.7455
    pct_ell      0.1058        0.1057       0.0112        0.0112         0.0227

1663 . pcorr epas_math_gain i.year pct_sped if hs==1
(obs=515)

Partial and semipartial correlations of epas_math_gain with

                Partial   Semipartial      Partial   Semipartial   Significance
   Variable        Corr.         Corr.      Corr.^2       Corr.^2          Value
-------------------------------------------------------------------------------
 2010b.year   (dropped)
  2011.year     -0.0628       -0.0565       0.0039        0.0032         0.1561
  2012.year     -0.0167       -0.0150       0.0003        0.0002         0.7062
  2013.year      0.0209        0.0188       0.0004        0.0004         0.6372
   pct_sped     -0.4337       -0.4326       0.1881        0.1872         0.0000

1664 . reg epas_math_gain pct_black pct_hisp pct_frl pct_ell pct_sped i.year if hs==1

      Source |       SS           df       MS      Number of obs   =       467
-------------+----------------------------------   F(8, 458)       =     28.55
       Model |  115469.531         8  14433.6914   Prob > F        =    0.0000
    Residual |  231546.978       458  505.561088   R-squared       =    0.3327
-------------+----------------------------------   Adj R-squared   =    0.3211
       Total |  347016.51        466  744.670622   Root MSE        =    22.485

------------------------------------------------------------------------------
epas_math_~n |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   pct_black |   .0968419   .1282521     0.76   0.451    -.1551936    .3488775
    pct_hisp |   .3877426     .13799     2.81   0.005     .1165706    .6589146
     pct_frl |  -72.03536    14.5196    -4.96   0.000    -100.5686   -43.50207
     pct_ell |  -37.10932   28.91103    -1.28   0.200    -93.92403    19.70539
    pct_sped |  -123.3243   21.88481    -5.64   0.000    -166.3314   -80.31722
             |
        year |
        2011 |  -6.524469   3.214026    -2.03   0.043    -12.84054   -.2084027
        2012 |   .4965553   3.029541     0.16   0.870    -5.456969    6.45008
        2013 |   1.744134   3.053516     0.57   0.568    -4.256505    7.744774
             |
       _cons |   117.8668   7.658511    15.39   0.000     102.8167    132.917
------------------------------------------------------------------------------
```

```
1665 .
1666 . ************************************************
1667 .
1668 . use chi_merged_panel.dta, clear

1669 . merge m:1 schoolid using turnaround.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                         3,675
        from master                     3,672  (_merge==1)
        from using                          3  (_merge==2)

    matched                               184  (_merge==3)
    -----------------------------------------

1670 . drop _merge

1671 . gen turnaround=0

1672 . recode turnaround 0=1 if yearofturnaround !=.
(turnaround: 187 changes made)

1673 .
1674 . logit turnaround pct_black va_read va_math i.year if hs==0 & gov==3 & level3==1, or

Iteration 0:   log likelihood =  -210.05558
Iteration 1:   log likelihood =  -198.39045
Iteration 2:   log likelihood =  -196.83969
Iteration 3:   log likelihood =  -196.81982
Iteration 4:   log likelihood =  -196.81979
Iteration 5:   log likelihood =  -196.81979

Logistic regression                             Number of obs     =        682
                                                LR chi2(   7)     =      26.47
                                                Prob > chi2       =     0.0004
Log likelihood =  -196.81979                    Pseudo R2         =     0.0630

------------------------------------------------------------------------------
  turnaround | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
   pct_black |   1.017373   .0058375     3.00   0.003     1.005996    1.028879
     va_read |   .7176363   .0911897    -2.61   0.009      .559426    .9205898
     va_math |   1.207892   .1258641     1.81   0.070     .9847633    1.481579
             |
        year |
        2010 |    1.43524   .5829607     0.89   0.374     .6474209    3.181725
        2011 |   1.162908   .5069946     0.35   0.729     .4948181    2.733033
        2012 |   .7929161   .3935981    -0.47   0.640     .2997068     2.09777
        2013 |   1.230696   .5564543     0.46   0.646     .5073218    2.985508
             |
       _cons |   .0181117   .0110636    -6.57   0.000     .0054702    .0599676
------------------------------------------------------------------------------
```

```
1675 . est store level3b, title("% Black & Value Added")

1676 . logit turnaround pct_blackhisp va_read va_math hs i.year if hs==0 & gov==3 & level3==1, or

note: hs omitted because of collinearity
Iteration 0:   log likelihood =  -210.05558
Iteration 1:   log likelihood =  -200.40648
Iteration 2:   log likelihood =  -196.63689
Iteration 3:   log likelihood =  -195.77337
Iteration 4:   log likelihood =  -195.74631
Iteration 5:   log likelihood =  -195.74626
Iteration 6:   log likelihood =  -195.74626

Logistic regression                             Number of obs     =            682
                                                LR chi2(   7)     =          28.62
                                                Prob > chi2       =         0.0002
Log likelihood =  -195.74626                    Pseudo R2         =         0.0681

------------------------------------------------------------------------------
  turnaround | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
pct_blackhisp |   1.417126   .1896489     2.61   0.009     1.090173    1.842137
      va_read |    .711533     .08922    -2.71   0.007     .5564958    .9097629
      va_math |   1.214736    .126911     1.86   0.063     .9898097    1.490775
           hs |          1  (omitted)
              |
         year |
        2010  |   1.419715   .5720655     0.87   0.384     .6444881     3.12743
        2011  |   1.397096   .6102888     0.77   0.444       .59347    3.288924
        2012  |    1.00975   .5037421     0.02   0.984     .3798118    2.684477
        2013  |   1.550365   .7071551     0.96   0.336     .6341363    3.790404
              |
        _cons |   7.27e-17   9.67e-16    -2.79   0.005     3.43e-28    .0000154
------------------------------------------------------------------------------
Note: 1 failure and 0 successes completely determined.

1677 . est store level3c, title("% Black or Hispanic & Value Added")

1678 . xml_tab level3b(, or) level3c(, or), save("Logit Models Turnaround.xml") replace


note: results saved to E:\Current Work\C1a-Chicago Litigation\CPS/Logit Models Turnaround.xml
 click here  to open with Excel

1679 .
1680 . logit turnaround pct_black i.year if hs==1 & gov==3 & level3==1, or

Iteration 0:   log likelihood =  -94.251293
Iteration 1:   log likelihood =  -81.959442
Iteration 2:   log likelihood =    -79.2661
Iteration 3:   log likelihood =  -79.061686
Iteration 4:   log likelihood =  -79.058942
Iteration 5:   log likelihood =   -79.05894

Logistic regression                             Number of obs     =            208
                                                LR chi2(   5)     =          30.38
                                                Prob > chi2       =         0.0000
Log likelihood =   -79.05894                    Pseudo R2         =         0.1612
```

turnaround	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf. Interval]	
pct_black	**1.049528**	**.015688**	**3.23**	**0.001**	**1.019226**	**1.080731**
year						
2010	**1.014631**	**.6055903**	**0.02**	**0.981**	**.3149646**	**3.268544**
2011	**.7144859**	**.4486531**	**-0.54**	**0.592**	**.2086852**	**2.446221**
2012	**.8403341**	**.4937857**	**-0.30**	**0.767**	**.2656321**	**2.658419**
2013	**.6255253**	**.4101619**	**-0.72**	**0.474**	**.1730236**	**2.261437**
_cons	**.0037984**	**.0055747**	**-3.80**	**0.000**	**.000214**	**.0674317**

```
1681 . est store level3b, title("% Black & Value Added")

1682 . logit turnaround pct_blackhisp i.year if hs==1 & gov==3 & level3==1, or

Iteration 0:   log likelihood =   -94.251293
Iteration 1:   log likelihood =   -90.126829
Iteration 2:   log likelihood =   -89.436225
Iteration 3:   log likelihood =   -89.425923
Iteration 4:   log likelihood =     -89.4259
Iteration 5:   log likelihood =     -89.4259

Logistic regression                             Number of obs     =            208
                                                LR chi2(   5)       =         9.65
                                                Prob > chi2       =         0.0858
Log likelihood =    -89.4259                      Pseudo R2         =         0.0512
```

turnaround	Odds Ratio	Std. Err.	z	P>|z|	[95% Conf. Interval]	
pct_blackhisp	**1.170329**	**.0870219**	**2.12**	**0.034**	**1.011615**	**1.353944**
year						
2010	**1.082175**	**.6075145**	**0.14**	**0.888**	**.3601204**	**3.251977**
2011	**.880259**	**.5271831**	**-0.21**	**0.831**	**.2721634**	**2.847025**
2012	**1.117307**	**.6267251**	**0.20**	**0.843**	**.3721456**	**3.354536**
2013	**.8465775**	**.5341083**	**-0.26**	**0.792**	**.2458335**	**2.915361**
_cons	**4.30e-08**	**3.16e-07**	**-2.31**	**0.021**	**2.41e-14**	**.0766299**

```
1683 . est store level3c, title("% Black or Hispanic & Value Added")

1684 . xml_tab level3b(, or) level3c(, or), save("Logit Models Turnaround HS.xml") replace

note: results saved to E:\Current Work\C1a-Chicago Litigation\CPS/Logit Models Turnaround HS.xml
 click here  to open with Excel

1685 .
1686 . gen time_turn=year-yearofturnaround
(3,675 missing values generated)
```

1687 . tab time_turn if yearofturnaround==2012, sum(pct_black)

time_turn	Summary of % Black Mean	Std. Dev.	Freq.
-3	**89.09375**	**18.914314**	**16**
-2	**88.9**	**19.404158**	**16**
-1	**88.03125**	**19.64728**	**16**
0	**84.183333**	**21.344569**	**12**
1	**83.066667**	**21.652308**	**12**
Total	**86.991667**	**19.644243**	**72**

1688 . tab time_turn if yearofturnaround==2012, sum(pct_blackhisp)

time_turn	Summary of % Black or Hispanic Mean	Std. Dev.	Freq.
-3	**99.3125**	**1.7469496**	**16**
-2	**99.36875**	**1.7730263**	**16**
-1	**98.806251**	**2.0361638**	**16**
0	**98.166666**	**2.3026983**	**12**
1	**97.491667**	**2.355828**	**12**
Total	**98.718056**	**2.0853159**	**72**

1689 . tab time_turn if yearofturnaround==2010, sum(pct_black)

time_turn	Summary of % Black Mean	Std. Dev.	Freq.
-1	**98.92**	**.89554453**	**5**
0	**98.98**	**.69785385**	**5**
1	**98.12**	**1.4149205**	**5**
2	**97.86**	**1.0549882**	**5**
3	**97.5**	**.9617692**	**5**
Total	**98.276**	**1.1155268**	**25**

1690 . tab time_turn if yearofturnaround==2010, sum(pct_blackhisp)

time_turn	Summary of % Black or Hispanic Mean	Std. Dev.	Freq.
-1	**99.559999**	**.51283673**	**5**
0	**99.58**	**.47116772**	**5**
1	**99.1**	**1.0606595**	**5**
2	**98.98**	**.55407458**	**5**
3	**99.1**	**.43011547**	**5**
Total	**99.264**	**.64606454**	**25**

1691 . tab time_turn if yearofturnaround==2009, sum(pct_black)

time_turn	Summary of % Black Mean	Std. Dev.	Freq.
0	**99.475**	**.22173558**	**4**
1	**99.8**	**.28284271**	**4**
2	**98.6**	**1.3490738**	**4**
3	**99.28**	**.50695167**	**5**
4	**98.3**	**.43588989**	**3**
Total	**99.14**	**.82167992**	**20**

```
1692 . tab time_turn  if yearofturnaround==2009, sum(pct_blackhisp)
```

time_turn	Summary of % Black or Hispanic Mean	Std. Dev.	Freq.
0	**99.85**	**.19148582**	**4**
1	**99.875**	**.15000068**	**4**
2	**99.225**	**1.1615367**	**4**
3	**99.839999**	**.23021775**	**5**
4	**99.266668**	**.32145447**	**3**
Total	**99.64**	**.57801837**	**20**

```
1693 .
1694 . log close
       name:  <unnamed>
        log:  E:\Current Work\C1a-Chicago Litigation\CPS\bbaker_cps_schoolacctblty_2.10.17.smcl
  log type:  smcl
 closed on:   9 Feb 2017, 09:42:04
```

ATTACHMENT C

(14,396 missing values generated)
      name: **<unnamed>**
       log: **E:\Current Work\C1a-Chicago Litigation\ILLINOIS\bbaker_stu_teacher_link_2.10.17.smcl**
  log type: **smcl**
 opened on: **9 Feb 2017, 09:32:15**

```
 1 .
 2 . use "Chicago Teachers.dta", clear

 3 . egen rcdts_concat=concat(rcdt sch_num)

 4 . replace rcdts=rcdts_concat if rcdts==""
   (107,517 real changes made)

 5 .
 6 . replace raceethnicity= race_ethnicity_desc if raceethnicity==""
   (107,436 real changes made)

 7 . replace hispanic=hisp if hispanic==.
   (52,165 real changes made)

 8 . replace housedpk12= enrollmentpkpghab if housedpk12==.
   (27,522 real changes made)

 9 . drop sch_pct_black sch_pct_blackhisp

10 . gen sch_pct_black=black/k12*100
   (14,396 missing values generated)

11 . gen sch_pct_blackhisp=(black+hispanic)/k12*100
   (14,396 missing values generated)

12 . keep schoolyear idnumber raceethnicity employerrcdt district fulltimeequivalent rcdts sch_num year k12
   > aces sch_pct_black sch_pct_blackhisp

13 . drop if k12==.
   (11,821 observations deleted)

14 . drop if raceeth==""
   (81 observations deleted)

15 . gen race=""
   (183,370 missing values generated)

16 . replace race="Asian-PacIsl" if raceeth=="Asian"
   variable race was str1 now str12
   (4,374 real changes made)

17 . replace race="Asian-PacIsl" if raceeth=="Asian or Pacific Islander"
   (1,786 real changes made)

18 . replace race="Native" if raceeth=="American Indian or Alaska Native"
   (437 real changes made)

19 . replace race="Native" if raceeth=="American Indian or Alaskan Native"
   (402 real changes made)
```

```
20 . replace race="Black" if raceeth=="Black or African American"
   (33,588 real changes made)

21 . replace race="Black" if raceeth=="Black, Non-Hispanic"
   (16,454 real changes made)

22 . replace race="Hispanic" if raceeth=="Hispanic"
   (7,876 real changes made)

23 . replace race="Hispanic" if raceeth=="Hispanic or Latino"
   (20,816 real changes made)

24 . replace race="Multi/Other" if raceeth=="Two or More Races"
   (2,344 real changes made)

25 . replace race="White" if raceeth=="White"
   (63,625 real changes made)

26 . replace race="White" if raceeth=="White, Non-Hispanic"
   (25,360 real changes made)

27 . replace race="NA" if raceeth=="NULL"
   (278 real changes made)

28 . replace race="NA" if raceeth=="Unknow"
   (3,504 real changes made)

29 . replace race="NA" if raceeth=="Unknown"
   (2,404 real changes made)

30 . gen tch_black=0

31 . recode tch_black 0=1 if race=="Black"
   (tch_black: 50042 changes made)

32 . gen tch_blackhisp=0

33 . recode tch_blackhisp 0=1 if race=="Black" || race=="Hispanic"
   (tch_blackhisp: 78734 changes made)

34 . save chitch_0915.dta, replace
   file chitch_0915.dta saved

35 .
36 . logit tch_black sch_pct_black if year==2009, or

   Iteration 0:   log likelihood =   -15712.425
   Iteration 1:   log likelihood =   -12284.913
   Iteration 2:   log likelihood =   -12137.266
   Iteration 3:   log likelihood =   -12136.318
   Iteration 4:   log likelihood =   -12136.318

   Logistic regression                             Number of obs     =         25,184
                                                   LR chi2(   1)     =       7152.22
                                                   Prob > chi2       =        0.0000
   Log likelihood =  -12136.318                    Pseudo R2         =        0.2276

------------------------------------------------------------------------------
   tch_black | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
sch_pct_black |   1.029711   .0004088    73.75   0.000      1.02891    1.030513
       _cons |   .0767014    .002478   -79.48   0.000     .0719952    .0817152
------------------------------------------------------------------------------
```

```
37 . est store black09, title("2009")

38 . logit tch_black sch_pct_black if year==2010, or

Iteration 0:   log likelihood =  -15148.097
Iteration 1:   log likelihood =  -11745.728
Iteration 2:   log likelihood =  -11580.088
Iteration 3:   log likelihood =  -11578.906
Iteration 4:   log likelihood =  -11578.905

Logistic regression                               Number of obs     =         24,609
                                                  LR chi2(   1)     =       7138.38
                                                  Prob > chi2       =        0.0000
Log likelihood =  -11578.905                      Pseudo R2         =        0.2356

------------------------------------------------------------------------------
   tch_black | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
sch_pct_black |   1.030367   .0004197    73.43   0.000     1.029545    1.03119
       _cons |   .0718185   .0023725   -79.72   0.000     .0673159    .0766223
------------------------------------------------------------------------------

39 . est store black10, title("2010")

40 . logit tch_black sch_pct_black if year==2011, or

Iteration 0:   log likelihood =   -14234.43
Iteration 1:   log likelihood =  -10973.438
Iteration 2:   log likelihood =  -10759.882
Iteration 3:   log likelihood =  -10758.305
Iteration 4:   log likelihood =  -10758.305

Logistic regression                               Number of obs     =         24,260
                                                  LR chi2(   1)     =       6952.25
                                                  Prob > chi2       =        0.0000
Log likelihood =  -10758.305                      Pseudo R2         =        0.2442

------------------------------------------------------------------------------
   tch_black | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
sch_pct_black |   1.031472   .0004466    71.56   0.000     1.030597    1.032348
       _cons |   .0576116   .0020545   -80.03   0.000     .0537223    .0617825
------------------------------------------------------------------------------

41 . est store black11, title("2011")

42 . logit tch_black sch_pct_black if year==2012, or

Iteration 0:   log likelihood =  -14242.864
Iteration 1:   log likelihood =  -10987.947
Iteration 2:   log likelihood =  -10766.354
Iteration 3:   log likelihood =  -10764.686
Iteration 4:   log likelihood =  -10764.686

Logistic regression                               Number of obs     =         24,748
                                                  LR chi2(   1)     =       6956.36
                                                  Prob > chi2       =        0.0000
Log likelihood =  -10764.686                      Pseudo R2         =        0.2442

------------------------------------------------------------------------------
   tch_black | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
sch_pct_black |   1.031445   .0004469    71.45   0.000     1.030569    1.032321
       _cons |   .0554544   .0019707   -81.39   0.000     .0517233    .0594545
------------------------------------------------------------------------------
```

```
43 . est store black12, title("2012")

44 . *logit tch_black sch_pct_black if year==2013, or
45 . *est store black13, title("2013")
46 . logit tch_black sch_pct_black if year==2014, or

Iteration 0:   log likelihood =   -15683.385
Iteration 1:   log likelihood =   -11985.003
Iteration 2:   log likelihood =   -11698.999
Iteration 3:   log likelihood =   -11696.224
Iteration 4:   log likelihood =   -11696.223

Logistic regression                               Number of obs     =         27,949
                                                  LR chi2(   1)     =       7974.32
                                                  Prob > chi2       =        0.0000
Log likelihood =  -11696.223                      Pseudo R2         =        0.2542

------------------------------------------------------------------------------
    tch_black | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
sch_pct_black |   1.032771   .0004351    76.54   0.000     1.031919    1.033624
        _cons |   .0499845   .0017054   -87.81   0.000     .0467514    .0534413
------------------------------------------------------------------------------

47 . est store black14, title("2014")

48 . logit tch_black sch_pct_black if year==2015, or

Iteration 0:   log likelihood =   -15808.904
Iteration 1:   log likelihood =   -11990.688
Iteration 2:   log likelihood =   -11693.252
Iteration 3:   log likelihood =   -11690.213
Iteration 4:   log likelihood =   -11690.212

Logistic regression                               Number of obs     =         28,133
                                                  LR chi2(   1)     =       8237.38
                                                  Prob > chi2       =        0.0000
Log likelihood =  -11690.212                      Pseudo R2         =        0.2605

------------------------------------------------------------------------------
    tch_black | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
sch_pct_black |   1.033384   .0004377    77.53   0.000     1.032527    1.034243
        _cons |   .0491488   .0016763   -88.34   0.000     .0459707    .0525466
------------------------------------------------------------------------------

49 . est store black15, title("2015")

50 . xml_tab black09(, or) black10(, or) black11(, or) black12(, or) black14(, or) black15(, or), save("Blac


note: results saved to E:\Current Work\C1a-Chicago Litigation\ILLINOIS/Black Teachers & Students.xml
 click here  to open with Excel

51 .
```

```
52 . *logit tch_blackhisp sch_pct_blackhisp if year==2009, or
53 . logit tch_blackhisp sch_pct_blackhisp if year==2010, or

Iteration 0:   log likelihood =  -16981.978
Iteration 1:   log likelihood =  -16203.698
Iteration 2:   log likelihood =  -16202.382
Iteration 3:   log likelihood =  -16202.382

Logistic regression                             Number of obs     =         24,609
                                                LR chi2(   1)     =       1559.19
                                                Prob > chi2       =        0.0000
Log likelihood =  -16202.382                    Pseudo R2         =        0.0459

------------------------------------------------------------------------------
 tch_blackhisp | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------+--------------------------------------------------------------
sch_pct_blackhisp |   1.024821   .0007096    35.41   0.000     1.023431    1.026212
         _cons |   .0851497   .0057342   -36.58   0.000      .074621     .097164
------------------------------------------------------------------------------

54 . est store blackhisp2010, title("2010")

55 . logit tch_blackhisp sch_pct_blackhisp if year==2011, or

Iteration 0:   log likelihood =  -16544.657
Iteration 1:   log likelihood =  -15579.746
Iteration 2:   log likelihood =  -15567.582
Iteration 3:   log likelihood =  -15567.555
Iteration 4:   log likelihood =  -15567.555

Logistic regression                             Number of obs     =         24,260
                                                LR chi2(   1)     =       1954.20
                                                Prob > chi2       =        0.0000
Log likelihood =  -15567.555                    Pseudo R2         =        0.0591

------------------------------------------------------------------------------
 tch_blackhisp | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------+--------------------------------------------------------------
sch_pct_blackhisp |   1.030581   .0007993    38.84   0.000     1.029016    1.032149
         _cons |   .0435196   .0032972   -41.37   0.000     .0375141    .0504864
------------------------------------------------------------------------------

56 . est store blackhisp2011, title("2011")

57 . logit tch_blackhisp sch_pct_blackhisp if year==2012, or

Iteration 0:   log likelihood =  -16788.995
Iteration 1:   log likelihood =  -16104.019
Iteration 2:   log likelihood =  -16092.103
Iteration 3:   log likelihood =  -16092.092
Iteration 4:   log likelihood =  -16092.092

Logistic regression                             Number of obs     =         24,748
                                                LR chi2(   1)     =       1393.81
                                                Prob > chi2       =        0.0000
Log likelihood =  -16092.092                    Pseudo R2         =        0.0415

------------------------------------------------------------------------------
 tch_blackhisp | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
---------------+--------------------------------------------------------------
sch_pct_blackhisp |   1.022982   .0006989    33.26   0.000     1.021613    1.024353
         _cons |   .0846858    .005603   -37.31   0.000     .0743863    .0964113
------------------------------------------------------------------------------
```

```
58 . est store blackhisp2012, title("2012")

59 . logit tch_blackhisp sch_pct_blackhisp if year==2013, or

Iteration 0:   log likelihood =  -17557.142
Iteration 1:   log likelihood =  -17416.736
Iteration 2:   log likelihood =  -17411.811
Iteration 3:   log likelihood =  -17411.811

Logistic regression                             Number of obs     =         25,912
                                                LR chi2(   1)     =         290.66
                                                Prob > chi2       =         0.0000
Log likelihood =  -17411.811                    Pseudo R2         =         0.0083

------------------------------------------------------------------------------
tch_blackhisp | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
sch_pct_blackhisp    1.008097    .000574    14.16   0.000     1.006973    1.009223
            _cons    .3331146   .0179823   -20.36   0.000     .2996704    .3702912
------------------------------------------------------------------------------

60 . est store blackhisp2013, title("2013")

61 . logit tch_blackhisp sch_pct_blackhisp if year==2014, or

Iteration 0:   log likelihood =   -18943.31
Iteration 1:   log likelihood =  -17763.598
Iteration 2:   log likelihood =  -17746.681
Iteration 3:   log likelihood =  -17746.637
Iteration 4:   log likelihood =  -17746.637

Logistic regression                             Number of obs     =         27,949
                                                LR chi2(   1)     =        2393.35
                                                Prob > chi2       =         0.0000
Log likelihood =  -17746.637                    Pseudo R2         =         0.0632

------------------------------------------------------------------------------
tch_blackhisp | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
sch_pct_blackhisp    1.030265   .0007174    42.82   0.000      1.02886    1.031672
            _cons    .0434225    .002943   -46.28   0.000     .0380209    .0495913
------------------------------------------------------------------------------

62 . est store blackhisp2014, title("2014")

63 . logit tch_blackhisp sch_pct_blackhisp if year==2015, or

Iteration 0:   log likelihood =  -19053.802
Iteration 1:   log likelihood =  -17836.774
Iteration 2:   log likelihood =  -17815.971
Iteration 3:   log likelihood =  -17815.896
Iteration 4:   log likelihood =  -17815.896

Logistic regression                             Number of obs     =         28,133
                                                LR chi2(   1)     =        2475.81
                                                Prob > chi2       =         0.0000
Log likelihood =  -17815.896                    Pseudo R2         =         0.0650

------------------------------------------------------------------------------
tch_blackhisp | Odds Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
sch_pct_blackhisp    1.031425     .00074    43.12   0.000     1.029975    1.032876
            _cons    .0387317   .0027073   -46.51   0.000      .033773    .0444186
------------------------------------------------------------------------------
```

```
64 . est store blackhisp2015, title("2015")

65 . xml_tab  blackhisp2010(, or) blackhisp2011(, or) blackhisp2012(, or) blackhisp2013(, or) blackhisp2014(
> s.xml") replace


note: results saved to E:\Current Work\C1a-Chicago Litigation\ILLINOIS/Black & Hispanic Teachers & Studen
 click here  to open with Excel

66 .
67 . use chitch_0915.dta, clear

68 . collapse (mean) sch_pct_black, by(tch_black year)

69 . export excel using "Teacher_Student_Match.xlsx", sheet("Black") sheetreplace firstrow(var)
file Teacher_Student_Match.xlsx saved

70 .
71 . use chitch_0915.dta, clear

72 . collapse (mean) sch_pct_blackhisp, by(tch_blackhisp year)

73 . export excel using "Teacher_Student_Match.xlsx", sheet("BlackHisp") sheetreplace firstrow(var)
file Teacher_Student_Match.xlsx saved

74 .
75 . ****************************************
76 .
77 . use turnaround.dta, clear

78 . drop schoolid turnaroundschool

79 . duplicates drop

Duplicates in terms of all variables

(5 observations deleted)

80 . save turnaround_drop.dta, replace
file turnaround_drop.dta saved

81 .
82 . use chitch_0915.dta, clear

83 . merge m:m rcdts using turnaround_drop.dta

    Result                           # of obs.
    -----------------------------------------
    not matched                       175,403
        from master                   175,401  (_merge==1)
        from using                          2  (_merge==2)

    matched                             7,969  (_merge==3)
    -----------------------------------------
```

```
84 . drop _merge

85 . gen time_turn=year-yearofturnaround
   (175,403 missing values generated)

86 . tab time_turn
```

time_turn	Freq.	Percent	Cum.
-3	608	7.63	7.63
-2	533	6.69	14.32
-1	699	8.77	23.09
0	783	9.83	32.92
1	1,091	13.69	46.61
2	1,134	14.23	60.84
3	1,093	13.72	74.55
4	650	8.16	82.71
5	638	8.01	90.71
6	401	5.03	95.75
7	264	3.31	99.06
8	55	0.69	99.75
9	20	0.25	100.00
Total	7,969	100.00	

```
87 . tab time_turn tch_black if yearofturnaround==2010, row
```

Key
frequency *row percentage*

time_turn	tch_black 0	1	Total
-1	74 31.49	161 68.51	235 100.00
0	67 31.02	149 68.98	216 100.00
1	114 51.12	109 48.88	223 100.00
2	128 55.41	103 44.59	231 100.00
3	134 55.14	109 44.86	243 100.00
4	126 50.20	125 49.80	251 100.00
5	112 49.78	113 50.22	225 100.00
Total	755 46.49	869 53.51	1,624 100.00

88 . tab time_turn tch_blackhisp if yearofturnaround==2010, row

Key
frequency *row percentage*

time_turn	tch_blackhisp 0	1	Total
-1	**69** **29.36**	**166** **70.64**	**235** **100.00**
0	**63** **29.17**	**153** **70.83**	**216** **100.00**
1	**106** **47.53**	**117** **52.47**	**223** **100.00**
2	**119** **51.52**	**112** **48.48**	**231** **100.00**
3	**126** **51.85**	**117** **48.15**	**243** **100.00**
4	**119** **47.41**	**132** **52.59**	**251** **100.00**
5	**105** **46.67**	**120** **53.33**	**225** **100.00**
Total	**707** **43.53**	**917** **56.47**	**1,624** **100.00**

89 . tab time_turn tch_black if yearofturnaround==2009, row

Key
frequency *row percentage*

time_turn	tch_black 0	1	Total
0	**43** **31.85**	**92** **68.15**	**135** **100.00**
1	**68** **52.31**	**62** **47.69**	**130** **100.00**
2	**74** **58.73**	**52** **41.27**	**126** **100.00**
3	**66** **59.46**	**45** **40.54**	**111** **100.00**
4	**66** **55.93**	**52** **44.07**	**118** **100.00**
5	**62** **48.06**	**67** **51.94**	**129** **100.00**

6	**49**	**57**	**106**
	46.23	**53.77**	**100.00**
Total	**428**	**427**	**855**
	50.06	**49.94**	**100.00**

```
90 . tab time_turn tch_blackhisp if yearofturnaround==2009, row
```

Key
frequency *row percentage*

time_turn	tch_blackhisp 0	1	Total
0	**39**	**96**	**135**
	28.89	**71.11**	**100.00**
1	**66**	**64**	**130**
	50.77	**49.23**	**100.00**
2	**67**	**59**	**126**
	53.17	**46.83**	**100.00**
3	**59**	**52**	**111**
	53.15	**46.85**	**100.00**
4	**58**	**60**	**118**
	49.15	**50.85**	**100.00**
5	**57**	**72**	**129**
	44.19	**55.81**	**100.00**
6	**45**	**61**	**106**
	42.45	**57.55**	**100.00**
Total	**391**	**464**	**855**
	45.73	**54.27**	**100.00**

```
91 .
92 .
93 .
94 . tab time_turn tch_black if yearofturnaround==2012, row
```

Key
frequency *row percentage*

time_turn	tch_black 0	1	Total
-3	**273** **44.90**	**335** **55.10**	**608** **100.00**
-2	**230** **43.15**	**303** **56.85**	**533** **100.00**
-1	**225** **48.49**	**239** **51.51**	**464** **100.00**
0	**193** **44.68**	**239** **55.32**	**432** **100.00**
1	**249** **54.73**	**206** **45.27**	**455** **100.00**
2	**270** **56.49**	**208** **43.51**	**478** **100.00**
3	**234** **54.17**	**198** **45.83**	**432** **100.00**
Total	**1,674** **49.21**	**1,728** **50.79**	**3,402** **100.00**

95 . tab time_turn tch_blackhisp if yearofturnaround==2012, row

Key
frequency *row percentage*

time_turn	tch_blackhisp 0	1	Total
-3	**229** **37.66**	**379** **62.34**	**608** **100.00**
-2	**181** **33.96**	**352** **66.04**	**533** **100.00**
-1	**183** **39.44**	**281** **60.56**	**464** **100.00**
0	**156** **36.11**	**276** **63.89**	**432** **100.00**
1	**196** **43.08**	**259** **56.92**	**455** **100.00**
2	**216** **45.19**	**262** **54.81**	**478** **100.00**
3	**184** **42.59**	**248** **57.41**	**432** **100.00**
Total	**1,345** **39.54**	**2,057** **60.46**	**3,402** **100.00**

```
96 .
97 . log close
       name:  <unnamed>
        log:  E:\Current Work\C1a-Chicago Litigation\ILLINOIS\bbaker_stu_teacher_link_2.10.17.smcl
  log type:  smcl
 closed on:   9 Feb 2017, 09:34:46
```

ATTACHMENT D

Exhibit D

Data Relied on in the Report:

CPS Data:

- 2013_PerformancePolicy_Results_03262014.xls, http://schoolreports.cps.edu/cpsedu/schooldata/2013_PerformancePolicy_Results_03262014.xls.
- Adopt A School Performance, Remediation and Probation Policy for the 2011-2012 School Year (July 28, 2010), https://www.cpsboe.org/content/actions/2010_07/10-0728-PO4.pdf.
- CPS Performance Policy, Overview of 2011-2012 Policy, http://cps.edu/SiteCollectionDocuments/PerformancePolicy_Tutorial.ppt
- SY14-15 School Quality Rating Policy (Aug. 28, 2013) http://www.cpsboe.org/content/documents/sy14-15_school_quality_rating_policy.pdf.
- Overview of Measures used in CPT Accountability (June 12, 2014) http://cps.edu/Performance/Documents/OverviewAccountabilityMetrics_June2014.ppt.
- School Quality Rating Policy (SQRP) Handbook: Guide to the Policy, Indicators, and Ratings (Sept. 15, 2016) http://cps.edu/Performance/Documents/SQRPHandbook.pdf.
- CBOE0026469.xls
- CBOE0026470.xlsx
- CBOE0026471.xls
- CBOE0026472.xls
- CBOE0026473.XLS
- CPS_Schools_2013-2014_Academic_Year.csv
- enrollment_20th_day_2013.xls
- enrollment_20th_day_2014-15.xls
- enrollment_20th_day_2014.xls
- enrollment_20th_day_2016_GV_20151023.xls
- FY08_Racial_Ethnic_Survey.xls
- FY09_Racial_Ethnic_Survey.xls
- FY10_Racial_Ethnic_Survey.xls
- FY11_Racial_Ethnic_Survey.xls
- FY12_Racial_Ethnic_Survey.xls
- FY13_Racial_Ethnic_Survey.xls
- FY14_Racial_Ethnic_Survey.xls
- FY15_Racial_Ethnic_Survey.xls
- FY16_Student_Racial_Ethnic_Report_20151023.xls
- lep_iep_frl_report_2010_revised_20130506.xls
- lep_iep_frl_report_2011.xls
- lep_iep_frl_report_2012.xls
- lep_iep_frl_report_2013.xls
- lep_iep_frl_report_2014.xls
- lep_sped_frl_report_2016_20151023.xls

- membership_20th_day_2009.xls
- membership_20th_day_2010.xls
- membership_20th_day_2011.xls
- membership_20th_day_2012.xls
- parent_survey_results_2011_CEdONews_112511.xlsx
- parent_survey_results_2014_FINAL.xlsx
- parent_survey_results_2015_FINAL_LOCKED.xlsx
- parent_survey_results_2016.xlsx
- ParentSurveyResults_2012.xlsm
- ParentSurveyResults_2013.xlsx
- PerformancePolicy_Results.xls
- SY14_SQRP_Report_CPSEDU_FINAL_20151026.xlsx
- SY15_SQRP_Report_CPSEDU_FINAL_20151023_full.xlsx
- SY2015_lep_sped_frl_report_20151022.xlsx

Illinois Data:

- ISBE data:
  - Educator Employment Information, archived at http://206.166.105.35/research/htmls/educator-employment.htm.
  - Fall enrollment counts, archived at http://206.166.105.35/research/htmls/fall_housing.htm.
- district_sum16.xls
- school_sum04.xls
- school_sum05.xls
- school_sum06.xls
- school_sum07.xls
- school_sum08.xls
- school_sum09.xls
- school_sum10.xls
- school_sum11.xls
- school_sum12.xls
- school_sum13.xls
- school_sum14.xls
- school_sum15.xls
- school_sum16.xls
- Teacher_Student_Match.xlsx (created by Bruce Baker, merging above files, see code and log files provided).

Other Data:

- Jonathan Walker, Expert Report, Aug. 12, 2016.
- David Blanchflower, Expert Report, Sept. 15, 2016.

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