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**The AERA Grants Program  
Key Findings of Selected Studies,  
Volume 3**

**A Report to the  
AERA Grants Program  
Governing Board**

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## Table of Contents

I.	Introduction and Overview	1
II.	Impact of the AERA Grants Program	4
III.	Key Findings	9
	A. Schools and Resources	9
	B. Student Achievement	12
	C. Teachers and Teaching	14
	D. Race, Ethnicity, and Gender	14
	E. Parents and Families	17
	F. Postsecondary Education	19
	G. Methodology	22
IV.	Article Abstracts	25
V.	Bibliography of Included Articles	74

## I. Introduction and Overview

In this time of social, political, and economic uncertainty, education is regarded as a potential solution to many of the challenges facing society. However, at the same time education is often considered to be part of the problem itself. Critics charge that schools are failing to educate students for the 21<sup>st</sup> century and that the public schools should be reformed and restructured. The No Child Left Behind (NCLB) Act has increased accountability for schools and created much controversy on its implementation policies and results. The U.S. Department of Education’s Institute of Education Sciences is promoting higher standards for research in education through increased scientific rigor and reliability. At a time when governmental and public interest in education is surging, many important education issues, such as standards and assessment, teacher quality and training, school accountability, resources, and student achievement are fiercely debated. The ongoing need for solid education research is of critical importance as policy makers and educators attempt to evaluate existing education policies and practices and create new ones.

Since 1990, the American Educational Research Association (AERA) has operated the AERA Grants Program with joint funding from the National Science Foundation (NSF) and the National Center for Education Statistics (NCES) of the Institute of Education Sciences<sup>1</sup>. This program seeks to provide scientific, accurate, and replicable research on timely education policy issues that is of use to policy makers, educators, and federal, state, and local agencies, and to build the research infrastructure necessary to conduct such studies. Through competitive small grants, fellowships, and training components, the Program has supported and encouraged researchers from a variety of disciplines (e.g., education, psychology, sociology, economics) to conduct education policy- and practice-related research using quantitative methods with data from the rich, often longitudinal, data sets sponsored by NSF and NCES. All research projects are field initiated and the variety of topics reflect the current issues of interest to the education community. To date the program has supported 440 Small Grants (\$10,000-\$35,000 each) and Fellowships. Over 360 publications, many in well-respected, refereed journals (e.g., *Educational Evaluation and Policy Analysis*, *Sociology of Education*, *Economics of Education Review*, *American Educational Research Journal*, *Research in Higher Education*) have resulted directly from AERA Grants Program support across all components (see Table 1).

Table 1: AERA Grants Program Awards and author-reported publications by component, 1990 to September 2008.

Component	Total # of awards	Completed awards to date	# of publications	Avg # of publications per awardee *
Senior Fellows	13	12	27	2.25
Research Fellows	24	24	18	.75
Postdoctoral Fellows	3	3	2	.67
Research Grants	192	165	213	1.29
Dissertation Grants	208	190	107	.56
Totals	440	394	367	1.10

\*Calculated on completed awards.

Since the information on publications is based on awardees keeping the Program informed beyond the grant period and the lag time to publication is often several years, it is estimated that the number of publications resulting from AERA Grants Program is higher than indicated.

<sup>1</sup> NSF grants that have supported the AERA Grants Program include SPA 8955347, RED 9255347, RED 8452861, REC 9980573, REC 0310268, and DRL 0634035.

One strength of the program is the multidisciplinary nature of the research, as shown by the variety of journals and disciplines represented in the articles highlighted in this volume. The findings of research supported by the AERA Grants Program have been widely published to a broad audience in diverse disciplines.

This volume is the third such report produced under the auspices of the AERA Grants Program's Governing Board. The first report, *The AERA Research Grants Program: Key Findings of Selected Studies*, includes selected publications generated from AERA Grants Program support for the years 1995-2001. The report describes the work of the program as follows:

Although relatively limited in scope, the AERA Grants Program has in fact generated a wealth of findings that have tremendous significance for educational policy. The importance of this research can be traced to the type of work that is funded. All grants rely on large-scale data sets that are drawn from multistage probability samples, which makes it possible to make predictions about the future, or evaluate programs and then describe the likelihood of what might happen if certain organizational, institutional, or instructional reforms were implemented on a larger scale. Secondary data analysis of federal data sets, particularly data sets that obtain information on individuals and institutions over time, continues to provide perhaps the richest scientific source for educational policy research we have to date.<sup>2</sup>

*Key Findings, Volume 2* builds on the previous report and showcases exemplary research supported by the AERA Grants Program from 2002 to 2005.

As *Key Findings, Volume 3* illustrates, the AERA Grants Program continues to be an important resource for education researchers and provides a wealth of timely findings on key issues of U.S. education policy. For *Key Findings, Volume 3*, awardees who had reported publications as a result of AERA Grants Program support were asked to submit structured abstracts of their publications. The 49 articles that are included in this report have been published (or are accepted for publication) in peer-reviewed journals. Such journals rely on unbiased peer review and serve as the standard for what is considered by the field as high-quality research capable of withstanding rigorous review by scientists and policy makers.

*Key Findings, Volume 3* is divided into seven sections: Schools and Resources; Student Achievement; Teachers and Teaching; Race, Ethnicity, and Gender; Parents and Families; Postsecondary Education; and Methodology. Some articles logically fit in more than one category, however each is only listed once. It is important to note that all of the research showcased in this report was conducted with small grants ranging between \$15,000 and \$35,000. The report includes selected brief "key findings" followed by abstracts written by the authors of the publications, and a bibliography of the journal articles included in this report. A complete bibliography of all publications resulting from AERA Grants Program support and further information on the program may be found at <http://www.aera.net/grantsprogram>.

The findings and conclusions presented herein reflect the opinions of the individual authors and do not necessarily reflect the views of AERA, the AERA Grants Program Governing Board, or the funding agencies.

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<sup>2</sup> p. i, Whiteley, et al.

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Murdock, J. (Ed.) (2006). *The AERA Grants Program: Key Findings of Selected Studies, Volume 2*. ([http://www.aera.net/grantsprogram/pubs\\_reports/pubs\\_reports.html](http://www.aera.net/grantsprogram/pubs_reports/pubs_reports.html))

Whiteley, B.J., Seelig, S.E., Weinschenker, M., and Schneider, B. (2002). *The AERA Research Grants Program: Key Findings of Selected Studies*. ([http://www.aera.net/grantsprogram/pubs\\_reports/pubs\\_reports.html](http://www.aera.net/grantsprogram/pubs_reports/pubs_reports.html))

## II. Impact of the AERA Grants Program

The AERA Grants Program supports a broad range of timely and innovative research of interest to U. S. policy makers and educators at all levels, including federal, state, and local entities. From the 49 peer-reviewed journal articles included in this report and resulting from support of the AERA Grants Program, many new findings and policy recommendations have emerged. The scope of most studies is either at the national or international level, creating the potential for broad impact on education policy and practice. This research represents the range of issues that are of current interest to the education community, and the findings point to ways to improve education policies and practices in the U.S. for all students, pre-K through postsecondary and beyond. These studies also reflect the latest methods used in scientifically sound, replicable research in the field of education.

The findings related to schools and resources include several studies on school violence and student victimization. Larger schools and those with a greater percentage of students receiving special education services reported more school crime and disruption. Security/enforcement, or strategies used to secure the environment and enforce rules (such as security guards and suspension), was associated with more incidents of school crime and disruption, suggesting that advocates of “get tough” approaches should critically examine the effects of these practices. School-based interventions may only affect violence in a limited way, underscoring the need for school-community partnerships to tackle this complex and multifaceted issue. Schools, particularly those in rural areas and those serving students from economically disadvantaged backgrounds, should be encouraged to use more evidence-based and proactive procedures to reduce violence, such as, better mental health professional-to-student ratios, the use of violence prevention programs, student involvement in resolving conflict, and parent training. For 8<sup>th</sup> grade students the fear of school violence and victimization is greater for males than for females. In the U.S. 8th graders reported greater fear in the schools with higher levels of classroom and school disorders and in the schools where teachers practice student-centered instruction less frequently.

The way schools are organized and financed affects students and teachers. Accountability policies are more effective at increasing student achievement when local authorities have more control over resource allocation. As education finance continues to be centralized at the state level, citizens and districts lose control over revenue raising and allocation, potentially impeding the positive effects of state-implemented accountability policies. While addressing differences in school characteristics may moderate differential school effects, the low social class school context represents a form of educational inequality that may require more drastic interventions to correct, such as redistributing students to achieve more equal student compositions across schools. Black student enrollment in charter schools is a function of district segregation and state policy. Policies that encourage more racially balanced school districts would help encourage integrated charter schools. Poor and minority children are much more concentrated in high-poverty public schools than they would be if all children attended their local schools. Unregulated school choice programs may increase concentrations of poor and minority students in those schools already serving the most economically distressed areas. For students in the early grades, the overall access to computers and technology use is increasing and differences in technology access between higher and lower poverty schools have decreased. Although equality of computer access and use has improved for all schools, a digital divide still exists in access to home computers, mainly due to family income.

The findings related to student achievement show that full day kindergarten is important for disadvantaged students. School readiness for mathematics learning in the early grades is crucial to subsequent learning trajectories. If inequality in mathematics achievement is to be reduced, greater efforts need to be made to improve the beginning knowledge and academic engagement of the lowest achieving group. For students who were retained in kindergarten or first grade, the negative effects persist for several years. Most children initially at risk of repeating kindergarten or first grade would have been capable of learning reading and mathematics content at a higher grade level if promoted. However, for

children who were at risk of early grade retention and were promoted instead, the benefit of promotion did not hold up in the subsequent years.

Student achievement was also investigated in relation to classroom and school contexts. For children in poverty, student and family characteristics were associated more frequently with children's reading skills at kindergarten entry than with their reading development through third grade. Low socioeconomic status (SES) kindergarten and first grade students would benefit from early intervention programs in reading. Because low-SES students tend to have lower initial reading skills, preschool and family literacy programs for these students are essential. In addition, programs intended to lessen the gap in reading achievement should focus on non-instructional periods, primarily during summer vacations and prior to kindergarten entry. Multiple contexts combine and are associated with young children's reading achievement and growth and help account for the relation of SES to reading outcomes. The association of neighborhood and school characteristics with children's reading performance reinforces the need to focus on characteristics and qualities of family life in preschool children and to widen the emphasis to include schools and neighborhoods as children enter school. Characteristics of classrooms and schools, such as full-day kindergarten and comprehensive literacy instruction, are associated with reading performance above and beyond instruction. For third grade students without disabilities, being educated in an inclusive classroom does not negatively impact their reading achievement and in some cases, improves reading scores.

Teachers and teaching were the focus of several articles. Findings show that strong teacher influence over and participation in school policy making can mitigate the propensity of first-year teachers to leave the teaching profession. Work conditions play a more important role in determining where new teachers choose to teach than teacher wages. However, wages play a more important role than work conditions at the occupational entry decision, when male and female new college graduates are deciding to go into the teaching profession. In studying teacher effects on reading and mathematics achievement gains in first grade, background qualifications have a less robust association with achievement gains than do instructional practices. This finding suggests that the No Child Left Behind (NCLB) Act's "highly qualified teacher" provision, which screens teachers on the basis of their background qualifications, is insufficient for ensuring that classrooms are led by teachers who are effective in raising student achievement. Assignment to a same-gender teacher significantly improves the achievement of both girls and boys as well as teacher perceptions of student performance and student engagement with the teacher's subject. Instructional practices in mathematics teaching in kindergarten, such as time spent on traditional mathematics and group/interactive activities, were associated with increased student achievement, especially for African American students.

Studies on race, ethnicity, and gender issues found that the black-white gap in confidence in education is largest at lower levels of education, and disappears among college graduates. The black-white gap is not due solely to individual factors, but also to the larger political context and to the groups' different relationships to educational institutions. Another study found that Latino children are losing Spanish proficiency over generations and as their families gain social mobility. However, Spanish-speaking proficiency is also significantly structured by gender and race.

The issue of racial segregation was investigated in several articles. Racial segregation experienced by students in high schools and colleges has a lasting influence and reinforces segregation in their neighborhoods at age 26. These findings suggest that school desegregation programs can assist in the desegregation of neighborhoods. Another study found that racial segregation decreased when school districts implemented desegregation plans. These plans were also associated with significant white enrollment losses. Desegregation policies that encompass larger geographic areas are more effective at achieving long-term desegregation goals. Public schools would be less racially segregated if all children living in a school district attended their neighborhood schools. Private, magnet, and charter schools

contribute to overall racial segregation within many school districts. School district desegregation policies ameliorate the effects of private school enrollment on racial segregation in public schools.

Several studies looked at occupational attainment for minority students. For poor youth of color, the occupational attainment in adulthood is lower than that of their more affluent white counterparts. Sociopolitical development influences occupational expectations in 12<sup>th</sup> grade and has a longitudinal impact on the adult occupational attainment of poor youth of color. Sociopolitical development may be an overlooked mechanism to facilitate career development and occupational attainment among poor youth of color. For students age 14-26, blacks reported the highest educational expectations and occupational expectations compared to other racial/ethnic groups, and SES positively predicted expectations. For the same age groups, males and females had similar developmental trajectories of educational expectations with the average expecting to attend college. Adolescent educational and occupational expectations predicted corresponding attainment in adulthood, although the relationship varied by gender.

Research on parents and families covers a broad range of topics. Two studies quantitatively test Annette Lareau's theory<sup>3</sup> of "concerted cultivation", which describes the strategy of middle-class families to provide enriching experiences for their children through intensive verbal interactions, activities such as music lessons and sports, and parental involvement with institutions and schools as advocates for their children. For white students in first grade, parental socioeconomic status is positively and very strongly associated with the parental practice of concerted cultivation. Concerted cultivation is also positively associated with both academic test scores and the teacher's judgment of student language and literacy skills, and explains a portion of the effect of parental SES on these achievement measures. In another study, the concerted cultivation measure was strongly related to children's mathematics and reading skills and kindergarten entry, and less strongly over the kindergarten year, summer time, and first grade school year. These results are consistent with prior studies indicating the important role of family experiences in early childhood learning. The strongest and most consistent family influences were found at kindergarten entry, which is consistent with calls to strengthen early childhood education efforts. Notably, concerted cultivation played a more significant role in explaining race/ethnic achievement gaps than expected from Lareau's discussion, which suggested that after controlling for socioeconomic background, the concerted cultivation educational investment pattern should not be implicated in race/ethnic learning disparities.

Parental practices and resources can benefit or hinder children's educational and life chances, especially during the first few years of schooling. Biracial families provide comparable or greater economic and cultural resources to their children than do their monoracial counterparts but offer fewer advantages in interactional/social resources. Compared to other family types, the adoptive family has an advantage, due in part to the socioeconomic differences between adoptive and other families. These findings challenge the claim that biological parenthood should be privileged over other forms of parenthood. Although teenage parents are at an educational and financial disadvantage compared to their childless peers, this need not be the case. If teenage parents are provided with enough material resources, they may be able to succeed in school and college, despite their initial socioeconomic and educational disadvantage.

Research on postsecondary financial aid and student loans found that students with higher student loan debt in their first year of college are less likely than those with lower debt levels to obtain a degree within five years. The effect of first-year debt is greater for low-income and African American students than for other students. Students' increased reliance on loans for financial aid may widen the income and racial/ethnic gaps in degree completion, despite the fact that a primary goal of financial aid is to narrow those gaps. The dropout risks in college are consistently higher for low-income students compared to their upper-income counterparts. The receipt of a Pell grant is related to narrowing the dropout gap between

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<sup>3</sup> Lareau, A. (2003). *Unequal Childhoods: Class, Race and Family Life*. Berkeley, CA: University of California Press.

students from low- and middle-income groups. Loans and work-study aid both have similar effects on student dropout across all income groups.

Studies related to community colleges show that Hispanics are more likely to enroll in community colleges than four-year institutions, and this difference persists even when other factors are held constant, and when comparing Hispanics to both whites and African Americans. Hispanics are often concentrated in states where community colleges are an integral part of the higher education system; however even when controlling for state differences, Hispanic students are still more likely than their white and African American counterparts to choose a community college over a four-year institution. However, while community colleges have the potential to be an alternative path towards a B.A., until transfer rates increase, Hispanics may be better off beginning their college education at a four-year institution. The relatively lower attainment rate of Hispanic transfer students is the result of individual characteristics and lack of academic preparation, rather than institutional characteristics.

The paths that college students take toward degree attainment was the focus of several studies. Findings indicate that students from lower socioeconomic backgrounds are more likely than are economically advantaged students to follow pathways that are characterized by interrupted movement. Such pathways appear to be less effective routes to the timely completion of degrees. First-generation college students show higher risks of leaving the higher education system than students of college-educated parents each year up to the fourth year. First-generation students and students whose parents have some college education face the highest risk period of departure during the second year of college. First-generation students are less likely to complete four-year degree programs in a timely manner. Students who attend selective institutions, as opposed to non-selective ones, are more likely to complete a bachelor's degree. This result holds for African American and Hispanic students. The positive effect of selective institutions on attainment suggests that they have the potential to increase the graduation rates of minorities while narrowing the persistent college completion gap. Gender plays a role in patterns of nontraditional college enrollment. For male nontraditional college students, joblessness is a primary factor in late entry to college, while divorce promotes women's nontraditional college entry. Having young children adversely affects women's college attendance at both 2- and 4-year institutions, but males are only adversely affected at 4-year institutions.

Research on postsecondary affirmative action and the admissions process shows that in Texas, the knowledge of a percent plan that guarantees college admission for high school students based on placement in their high school class plays an important role in raising the sights of students who might not otherwise consider college. This effect is particularly pronounced for minority students, although peer, family and high school context play pivotal roles, particularly for Hispanic seniors. These findings demonstrate that percent plans increase minority students' college aspirations, expectations, and applications to college.

Research comparing the curriculum of tribal colleges, historically black colleges and universities, and comparable "mainstream" colleges shows that tribal colleges offer nearly 10 times as many ethnocentric courses as mainstream colleges. The number of ethnocentric courses at private black colleges is slightly higher than at public black colleges, but much lower than at tribal colleges. For black colleges, curricular distinctiveness may offer a strategy for preserving their continued existence.

All studies highlighted in this report use sophisticated quantitative methods that underscore the value of analyzing large-scale datasets to provide accurate and reliable measures of educational outcomes. Because the emphasis of the program is on education policy, few strictly methodological studies are funded by the AERA Grants Program. The articles in the methodology section not only illustrate important findings with education policy implications, but also describe new methods and approaches for analyzing large data sets. One study suggests that school engagement should be measured as a

multidimensional concept rather than as a single measure. An improved model is described. Another study investigates the relationship between kindergarten retention and children's social-emotional outcomes using propensity score stratification to contend with selection bias, and embedding measurement models in hierarchical models to account for measurement error and to model dependence among observations. Another evaluated the impact of different ways of modeling cross-classified data, providing more accurate and appropriate techniques to assess school progress over time.

To estimate the Catholic school effect on mathematics achievement in high school students, a simple nine-step routine was developed to determine whether or not the implicit weighting of regression estimators generated a misleading estimate of the average causal effect. The challenges associated with using small subsample sizes were described, and simulation analysis was demonstrated to show the utility of power analysis in determining appropriate subsample sizes. Various replication sampling variance estimation techniques were shown to be useful in Structural Equation Modeling. Lastly, a method to reallocate data from census geography (such as block groups) to educational geography (such as school attendance boundaries) when the two geographic zonal systems overlap randomly, was demonstrated. This work allows educational researchers to produce highly accurate estimates of student populations living in school catchment areas. These and other studies presented here provide a wealth of innovative statistical methods, models, and techniques that can be used in further research in a variety of disciplines.

### **III. Key Findings Organized by Substantive Area**

Identified by author, date of publication, and data source used. Complete citations are available in the Article Abstracts and Bibliography of Included Articles sections.

#### **A. Schools and Resources**

##### ***Main Issues***

Schools and resources are vital elements in the education enterprise, and much of the research supported by the AERA Grants Program focuses on related topics. Research in this area includes studies related to school violence, the effects of school practices and resources on student learning, charter schools, accountability and local control.

##### ***Key Findings***

Akiba, (2008) TIMSS 1999

- Eighth graders who witnessed their friends' violence victimization and who experienced theft victimization were most likely to fear becoming the victims of school violence in all 33 countries of TIMSS.
- Male students reported greater fear than female students in a majority of countries including the U.S.
- There was no consistent finding regarding socioeconomic status and academic achievement of students, and in more than a half of the countries, these factors were not significantly associated with students' fear.
- While individual predictors of student fear were relatively consistent, school predictors varied across the countries.
- U.S. 8th graders reported greater fear in the schools with higher levels of classroom and school disorders and in the schools where teachers practice student-centered instruction less frequently.

Judge, Puckett, and Bell (2006) ECLS-K

- Higher poverty schools had significantly more instructional computers and a smaller ratio of children to computers during third grade compared to lower poverty schools. However, children attending lower poverty schools had significantly more access to home computers over the first four years of school.
- Access to and use of a home computer, computer area in classrooms, frequent use of Internet, proficiency in computer use, and lower poverty school status were positively correlated with academic achievement.
- Frequent use of software for reading was negatively correlated with reading achievement.
- Overall access to computers and technology use is increasing and differences in technology access between higher and lower poverty schools have decreased.
- Even though the ratio of children to computers has decreased from kindergarten to third grade, only 60% of third-grade classrooms in higher poverty schools and 53% of classrooms in lower poverty schools had enough classroom computers to provide a ratio of at least one computer for every five students enrolled.
- Although equality of computer access and use has improved for all schools, a digital divide still exists in access to home computers. Much of the disparity in home computer ownership is related to family income.

### Nickerson and Martens (2008) SSOCS

- Demographic variables account for substantial variance in school disruption and crime. Larger schools and those with a greater percentage of students receiving special education services reported more school crime and disruption.
- Location in urban areas was associated with school crime but not disruption, and neighborhood crime was related to school disruption but not crime.
- SES did not contribute to school crime and disruption.
- Strategies used to secure the environment and enforce rules (e.g., security guards, suspension), was associated with more incidents of school crime and disruption. This finding suggests that advocates of “get tough” approaches should critically examine the effects of these practices.
- Both Control and Educational/Therapeutic approaches were not significantly associated with the incidence of school crime and disruption.
- School-based interventions may only affect violence in a limited way, underscoring the need for school-community partnerships to tackle this complex and multifaceted issue.

### Nickerson and Spears (2007) SSOCS

- To prevent school violence, large, urban schools use both authoritarian and therapeutic approaches, such as security, violence prevention programs, and parent training.
- Rural schools use authoritarian practices, such as corporal punishment and suspension without services, more often than schools in other locations.
- Schools serving low SES students were more likely to use security, random metal detector checks, and corporal punishment, regardless of neighborhood crime levels.
- Several practices that are not recommended, such as corporal punishment and suspension without services, continue to be used by schools. In addition, students from low SES backgrounds appear to be subject to more punitive discipline practices.
- Schools, particularly those in rural areas and those serving students from economically disadvantaged backgrounds, should be encouraged to use more evidence-based and proactive procedures to reduce violence, such as, better mental health professional-to-student ratios, the use of violence prevention programs, student involvement in resolving conflict, and parent training.

### Palardy (2008) NELS:88

- The effects of school inputs and school practices on student learning differ across low, middle, and high social class composition public high schools.
- Student learning in low social class schools is far more sensitive to school factors than in middle and high social class schools. After controlling for an extensive set of student background characteristics and school inputs, students attending low social class schools continued to learn at significantly slower rates.
- The findings accentuate the importance of school effectiveness research that goes beyond generic “one-size-fits-all” models to examine differential effects.
- Widespread differences in the characteristics of schools across the subpopulations, which consistently challenge the educational milieu in low social class schools, likely contribute to differential school effects, as well as to the disparity in learning rates. While addressing differences in school characteristics may moderate differential school effects, the low social class school context represents a form of educational inequality that may require more drastic interventions to correct, such as redistributing students to achieve more equal student compositions across schools.

Renzulli (2006) SASS, CCD

- Segregated school districts, those districts where whites and blacks are more unevenly distributed among schools, have a larger percentage of blacks enrolled in local charter schools than districts where schools are integrated.
- Charter schools in states that do not have a racial clause have a smaller percent of blacks in their charter schools.
- Black enrollment in charter schools is a function of district segregation and state policy. Therefore, policies that encourage better racial balance would help encourage integrated charter schools.

Saporito and Sohoni (2007) CCD, Census

- Percentages of poor children in neighborhood schools is greater than in their corresponding catchment areas and this difference is greater when the majority of children living in a neighborhood are racial minorities. These patterns reflect the withdrawal of wealthier children from public schools and into private, charter and magnet schools.
- The result is that poor and minority children are much more concentrated in high-poverty public schools than they would be if all children attended their local schools.
- Unregulated school choice programs that publicly subsidize the ability of any parent to enroll their children in non-neighborhood public schools may increase concentrations of poor students in those schools already serving the most economically distressed areas. These potential effects are most acute for minority populations.

Strunk and Loeb (2007) SASS, NAEP, CCD, et al.

- Strong accountability states have less control over revenue-raising, a higher proportion of funds tied up in categorical grants, and somewhat less local control over revenue raising and resource allocation, on average.
- Accountability reforms appear to have changed principal autonomy: principals in stronger accountability states gained significantly more perceived control over spending and hiring than did principals in lower-accountability states, and they gained more influence over hiring relative to the states, though they lost control over curriculum, evaluation of teachers, and average authority relative to the state.
- Districts with stronger accountability states lost perceived authority over all categories (besides evaluation of teachers) relative to the state.
- Accountability policies are more effective at increasing student achievement when local authorities have more control over resource allocation.
- As education finance continues to be centralized at the state level, citizens and districts lose control over revenue raising and allocation, potentially impeding the positive effects of state-implemented accountability policies.

## **B. Student Achievement**

### ***Main Issues***

Student achievement is a “hot button” topic for educators and policy makers. Student achievement not only provides a measure of the individual student’s educational progress but also of the success (or failure) of the schools and larger education systems. The studies in this section provide information on several topics related to improved student achievement, such as, instructional practices, student characteristics, early grade retention policies, reading achievement, and inclusion.

### ***Key Findings***

#### **Aikens and Barbarin (2008) ECLS-K**

- Socioeconomic status (SES)-related differences in reading achievement were present at children’s entry to school, and the SES gap grew wider through third grade.
- Family characteristics made the largest contribution to the prediction of initial kindergarten reading disparities.
- School and neighborhood conditions contributed more than family characteristics to SES differences in children’s acquisition rate in reading, particularly during the period of most rapid reading growth.
- The association between school characteristics and reading outcomes suggests that the makeup of the student population, as indexed by poverty concentration and number of children with reading deficits in the school, is related to reading outcomes.
- Neighborhood characteristics such as community support for the school and poor physical conditions surrounding the school were also associated with children’s reading.

#### **Bodovsky and Farkas (2007b) ECLS-K**

- Students who began school with the lowest mathematics achievement also showed the least achievement growth from kindergarten through third grade.
- Students in the two highest skills groups had similar achievement growth, and the highest levels of growth.
- Students in the lowest group received the most time on instruction but had the lowest engagement with instruction.
- Time on instruction increased achievement for all students equally, but the effect of engagement was strongest among the lowest performing group. The lower engagement of the lowest-performing group explained more than half of their lower achievement growth in grades K-3.
- If inequality in mathematics achievement is to be reduced, teachers must make greater efforts to improve the beginning knowledge and academic engagement of the lowest achieving group.

#### **Gandhi (2007) ECLS-K**

- Controlling for selected background characteristics of the student and classroom, as well as experience of the classroom teacher, non-disabled students in third grade who are educated in inclusive classrooms essentially perform as well in reading as non-disabled students who are educated in non-inclusive classrooms.
- When looking at the interactions between being educated in an inclusive classroom and other contextual classroom variables, the presence or absence of a paid aide does not appear to make much of a difference to reading achievement, with two exceptions—for students in inclusive classes in which the majority of students with disabilities have autism and students in inclusive classes in which the majority of students with disabilities have emotional disturbance. In these

two cases, non-disabled students who are in classes in which there is a paid aide have much higher reading scores than their peers in classes without a paid aide.

- Being educated in an inclusive classroom does not negatively impact the reading achievement of non-disabled third grade students.

#### Hong and Yu (2007) ECLS-K

- On average, kindergarten retention showed immediate negative effects in both reading and mathematics at the end of the treatment year. In each subject, the negative retention effect diminished by about two-thirds of the initial amount two years later and almost disappeared four years after the treatment.
- Although the data provided no information about the immediate effect of first-grade retention at the end of the treatment year, the results showed negative retention effects on the first-grade retainees' reading and mathematics achievement one year and three years after the treatment.
- Throughout the elementary years, the kindergarten retainees and the first-grade retainees never achieved more on average than they would have if they had been promoted instead.
- Most children initially at risk of repeating kindergarten or first grade would have been capable of learning reading and math content at a higher grade level if promoted. However, for children who were at risk of early grade retention and were promoted instead, the benefit of promotion did not hold up in the subsequent years.

#### Kainz and Vernon-Feagans (2007) ECLS-K

- Characteristics of children and their families were associated more frequently with children's reading skills at kindergarten entry than with their reading development through third grade.
- Characteristics of classrooms and schools are associated with reading performance above and beyond instruction.
- Full day kindergarten was associated with enhanced reading performance at the end of kindergarten.
- Comprehensive literacy instruction (as opposed to primarily phonics or whole language) was associated with enhanced reading performance in kindergarten and first grade.
- Increases in the number of students reading below grade level in a kindergarten class were associated with constrained reading performance at the end of kindergarten, and increases in the number of students reading below grade level in first grade were associated with constrained performance in first and third grades.
- Minority segregation (minority composition 75% or greater) was associated with constrained reading performance at kindergarten, first, and third grades, but there was no evidence that poverty segregation was significantly associated with performance above and beyond other variables in the model.

#### McCoach, O'Connell, Reiss, and Levitt (2006) ECLS-K

- On average, students make much greater reading gains in 1<sup>st</sup> grade than they do in kindergarten.
- Student-level variables (including socioeconomic status, ethnicity, kindergarten entry age, and gender) were better able to explain between-schools variability in students' initial reading scores and students' reading growth than school-level variables (percentage of minority students, percentage of free-lunch students, and sector).
- Although socioeconomic status had a minimal impact on reading growth while school was in session, it had a larger impact on summer reading growth.
- The findings suggests that low socioeconomic status students would benefit from early intervention programs in reading.

## C. Teachers and Teaching

### *Main Issues*

Teachers are an essential element in the education process. With the ongoing push to increase student achievement and improve learning, the characteristics, qualifications, and instructional practices of teachers have come under increasing scrutiny. The studies highlighted here address issues of teacher qualifications and retention, factors affecting the selection of where to teach, the affects of a teacher's gender on student achievement, and instructional practices.

### *Key Findings*

#### Bacalod (2007) Baccalaureate and Beyond, Census, Common Core of Data

- Work conditions play a relatively more important role in determining where new teachers choose to teach, rather than differences in relative teacher wages.
- Schools with more poor students attract significantly fewer new teachers, and this is especially true among female teachers. On the other hand, relative teacher wages play a more important role than work conditions at the occupational entry decision, when male and female new college graduates are deciding to teach.
- Conditional on choosing to teach, those with higher scholastic aptitude (in terms of SAT scores and college GPA) are significantly less likely to teach in central city schools compared to suburban schools.

#### Bodovsky and Farkas (2007a) ECLS-K

- Where instructional effectiveness is concerned, time spent on traditional mathematics and group/interactive activities was significantly and positively associated with achievement gains.
- Time spent on advanced counting, practical mathematics, and single-digit operations was associated with increased achievement.
- Time spent on basic numbers/shapes significantly decreased achievement.
- Classes with a high percentage of African-American students were particularly likely to receive full-day kindergarten, which increased total instructional time, and this may have modestly decreased the achievement growth gap for these classes.
- Overall, kindergarten instructional practices were found to modestly reduce the mathematics achievement growth gap of African-American students, but have no significant effects on the achievement growth gaps of lower social class or Hispanic students.

#### Dee (2007) NELS:88

- Assignment to a same-gender teacher significantly improves the achievement of both girls and boys as well as teacher perceptions of student performance and student engagement with the teacher's subject. For example, assignment to a female science teacher increases the likelihood that a girl views science as useful for her future.
- Because the middle-school teachers in most academic subjects are female, these results also suggest that the gender dynamics between teachers and students at this level amplify boys' large underperformance in reading while attenuating the more modest underperformance of girls in mathematics and science.
- The classroom dynamics between students and teachers contribute to the gender differences in student outcomes. However, these findings do not indicate the exact nature of these dynamics.

Liu (2007) SASS, TFS

- First-year teachers stand a higher risk of leaving the teaching profession than experienced teachers.
- Strong teacher influence over school policy can mitigate first-year teachers' propensity to leave the teaching profession.
- Increased teacher participation in school decision-making may be one way to keep early career teachers in the teaching profession.

Palardy and Rumberger (2008) ECLS-K

- In studying teacher effects on reading and mathematics achievement gains in first grade, compared with instructional practices, background qualifications have less robust associations with achievement gains.
- The results suggest that the No Child Left Behind Act's "highly qualified teacher" provision, which screens teachers on the basis of their background qualifications, is insufficient for ensuring that classrooms are led by teachers who are effective in raising student achievement.
- To meet the objectives of the NCLB, educational policy should be directed toward improving aspects of teaching, such as instructional practices and teacher attitudes.

## **D. Race, Ethnicity, and Gender**

### ***Main Issues***

Race, ethnicity, and gender are often considered important factors that influence student learning. These socially constructed terms are used to compare differences in learning opportunities and outcomes among students depending on their membership in one particular group. The research reported here focuses on segregation and the racial composition of schools and neighborhoods, racial and gender differences in academic and occupational aspirations, the sociopolitical influences on students, and Spanish language maintenance.

### ***Key Findings***

Diemer (2009) NELS:88

- Sociopolitical development influences occupational expectations in 12<sup>th</sup> grade and has a longitudinal impact upon the adult occupational attainment of Poor Youth of Color (PYOC).
- A consciousness of and motivation to transform sociopolitical inequity has a positive impact upon the career development and occupational attainment of PYOC; a critical consciousness of sociopolitical barriers may assist youth in overcoming the barriers that constrain their career development and occupational attainment.
- Teachers and school personnel who discuss sociopolitical inequity with students may positively affect their students' career development and occupational attainment, rather than discourage marginalized youth from engaging with an inequitable opportunity structure.
- Sociopolitical development may be an overlooked mechanism to facilitate career development and occupational attainment among PYOC.

Goldsmith (In press) NELS:88, IPEDS, Census

- Racial segregation in high schools and colleges reinforces segregation in neighborhoods. Holding constant the percent white in neighborhoods, students' socioeconomic backgrounds, and other characteristics of individuals, the proportion white that students experience in high school and

college has a lasting influence, affecting the percent white in their young adult neighborhoods at age 26.

- While the study does not look precisely at desegregation programs, the findings show that net of the kinds of neighborhoods that students lived in, those that attended integrated educational institutions—high schools or colleges—also tended to live in integrated neighborhoods as young adults after they left home.
- School desegregation programs can assist in the desegregation of neighborhoods in the long run.

#### Klugman and Xu (2008) General Social Surveys (1974-2002)

- Whites have less confidence in education, partly because whites tend to have higher levels of education, income, and conservatism, and are more likely to be affiliated with the Republican Party and evangelical denominations.
- The black-white gap in confidence in education is largest at lower levels of education, and disappears among college graduates.
- The gap shrinks during Republican control of the presidency in the United States, and widens during Democratic control.
- The black-white gap in confidence in education is not due solely to individual factors, but also to the larger political context and to the groups' different relationships to educational institutions.

#### Lutz (2006) NELS:88

- Effects of generation, residence in concentration with coethnics, and income on speaking Spanish well appear to follow the theoretical trajectory of the assimilation perspective whereby language accommodation is part of a larger process of shedding of ethnic distinction and integrating with the larger society.
- The effects of generation suggest that parents' nativity is more important than the child's in predicting high levels of Spanish-speaking proficiency.
- Family, school, and community contexts are also important in terms of reinforcing Spanish use and creating opportunities to speak Spanish.
- As income rises, the likelihood of speaking Spanish well decreases. However, income may operate differently across ethnic lines, such that high income increases Spanish proficiency for Cuban youth.
- Girls are more likely to speak Spanish well than boys. Language skills may reflect greater interaction at home between parents and girls.
- Racial identity also plays a role in Spanish maintenance. Males who identify racially as black are significantly less likely to speak Spanish than males who identify as white.

#### Mello (2008) NELS:88/2000

- Males and females have similar developmental trajectories of educational expectations from adolescence to adulthood with the sample average expecting to attend college.
- Probabilities of expecting a professional occupation were lower for males than females.
- Adolescent educational and occupational expectations predicted corresponding attainment in adulthood, although the relationship varied by gender.
- Males who reported high occupational expectations in adolescence had higher occupational attainment in adulthood compared to males with low occupational expectations, whereas females' adult occupational attainment did not vary by their adolescent occupational expectations.

#### Mello (In press) NELS:88/2000

- African Americans reported the highest educational expectations, followed by Hispanic and Asian American/Pacific Islanders, European Americans, and American Indian/Alaskan Natives.

- African Americans and Asian American/Pacific Islanders reported the highest occupational expectations, followed by Hispanic, American Indian/Alaskan Natives, and European Americans.
- Racial/ethnic group patterns persisted from adolescence to adulthood.
- SES positively predicted expectations.
- This study highlights the importance of considering SES when examining variation in educational/occupational expectations across racial/ethnic groups.

#### Reber (2005) CCD, Census

- Racial segregation fell when school districts implemented desegregation plans; plans were also associated with significant white enrollment losses that offset about one-third of the within-district reductions in segregation.
- White flight was particularly severe in districts with more public school districts in the same metropolitan area.
- Desegregation policies that encompass larger geographic areas (metropolitan remedies) are more effective at achieving long-term increases in exposure of non-white students to white students.

#### Saporito and Sohoni (2006) CCD, Census

- Public schools would be less racially segregated if all children living in a school district attended their neighborhood schools.
- Private, magnet, and charter schools contribute to overall racial segregation within many school districts. The effects are particularly striking for segregation between white and Hispanic children.
- A few school districts with desegregation policies have succeeded in reducing racial segregation.
- The analyses contribute to debates regarding recent proposals to eliminate desegregation programs while simultaneously expanding “free-market” educational reforms that promote students’ mobility across public, private, and charter schools.
- Unregulated school choice programs that publicly subsidize the ability of any parent to enroll their children in non-neighborhood public schools may increase racial segregation in urban school districts. School district desegregation policies ameliorate the effects of private school enrollment on racial segregation in public schools.

## **D. Parents and Families**

### ***Main Issues***

Parents and families provide the underlying support system for most students throughout their school years. Much research has been conducted on the role that parents and families play in the development, aspirations, attainment, and success of students. The studies in this section look at the impact of parental and family factors on student achievement, compare adoptive family structure to biological family structure related to parental investment, and investigate teenage parents’ education disadvantages.

### ***Key Findings***

#### Bodovski and Farkas (2008) ECLS-K

- Parental and family related factors are important to early school achievement.
- Parental SES is positively and very strongly associated with parental concerted cultivation, which is a mediator of the positive effect of parental SES on children’s school achievement.

- Concerted cultivation is positively associated with both test scores and the teacher's judgment of student language and literacy skills, and explains a portion of the effect of parental SES on these achievement measures.

#### Cheadle (2008) ECLS-K

- Concerted cultivation is strongly related to children's mathematics and reading skills and kindergarten entry, and less strongly over the kindergarten year (mathematics), summer time (mathematics), and first grade school year (reading), but not over the second-third grade period.
- Educational investments are an important mediator of socioeconomic and race/ethnic disparities, completely explaining the black-white reading gap at kindergarten entry and consistently explaining 20-60% and 30-50% of the black-white and Hispanic-white disparities in the growth parameters, respectively, and approximately 20% of the socioeconomic gradients.
- Concerted cultivation played a more significant role in explaining race/ethnic achievement gaps than expected from Lareau's (2003) discussion, which suggested that after controlling for socioeconomic background, the concerted cultivation educational investment pattern should not be implicated in race/ethnic learning disparities.

#### Cheng and Powell (2007) ECLS-K

- Parental practices and resources can benefit or hinder children's educational and life chances, especially during the first few years of schooling. Understanding which groups of parents invest more (or less) in their children may be useful in determining strategies to improve educational performance of youths.
- The authors demonstrate the utility of distinguishing not only between white-biracial and nonwhite biracial families, but also between even more refined measures of biracial families (e.g., white father, Asian mother).
- In most cases, biracial families provide comparable or greater economic and cultural resources to their children than do their monoracial counterparts but offer fewer advantages in interactional/social resources. This overall pattern remains even after sociodemographic factors are taken into consideration.

#### Hamilton, Cheng, and Powell (2007) ECLS-K

- Comparing parental investments in two-adoptive-parent families to those in other family forms reveals an adoptive advantage over all family types. This advantage is due in part to the socioeconomic differences between adoptive and other families.
- Once other factors also are taken into account, adoptive families invest at similar levels as two-biological-parent families but still at significantly higher levels in most resources than other types of families.
- Recent court cases regarding family have privileged biological parenthood over other forms of parenthood and have used this privilege in their justification of the prohibition of certain marital/family forms. This research offers a challenge to these claims.

#### Mollborn (2007) NELS:88

- Teenage parents have an additional disadvantage over most childless adolescents because of their much greater need for material resources that far outstrips the available reserves of most teenagers.
- The lack of material resources explains why there is an educational penalty for becoming a teenage parent, especially for males.
- If provided with enough material resources, contemporary teenage parents may be able to go quite far in school, despite their initial socioeconomic and educational disadvantage.

- Traditional ideas suggest that teenage parents should get married, the mothers should become primary caretakers of their children, and the fathers should work to support their children financially. Evidence from this study suggests that these actions may actually decrease adolescents' long-term educational attainment.
- Financial aid packages similar to those offered for higher education may be a way to provide financial resources, reduce the need for paid work among teenage parents, and allow them to stay in school.

## **E. Postsecondary Education**

### ***Main Issues***

Research in postsecondary education provides valuable and timely information to policy makers who must make decisions on funding higher education, student financial aid programs, access to college and affirmative action, and the determination of what programs are necessary for training the future workforce, both locally and globally. The research presented in this section provides important new information related to a wide range of postsecondary education issues, such as, student dropout, college curricula, the varied pathways to degree attainment, community college enrollment and transfer, student debt burdens, and postsecondary admissions.

### ***Key Findings***

#### **Chen and DesJardins (2008) BPS**

- There are consistently higher dropout risks for low-income students compared to their upper-income counterparts.
- The receipt of a Pell grant is related to narrowing the dropout gap between students from low- and middle-income groups, although overall the interaction between Pell grant and income is not significant.
- Loans and work-study aid both have similar effects on student dropout across all income groups.
- Programs and practices that aim at reducing dropout risks should be designed differently at the different time points according to the time-varying nature of dropout risks.
- Methodologically, the results demonstrate the need to model dropout behavior temporally and to avoid main-effect bias by incorporating interaction effects.

#### **Cole (2006) IPEDS**

- Tribal colleges offer nearly 10 times as many ethnocentric courses as mainstream colleges, net of other institutional characteristics (total enrollment, minority enrollment, public or private control, two- or four-year college, accreditation status).
- Compared with mainstream institutions, privately controlled black colleges offer approximately 15 percent more, and publicly controlled black colleges offer 73 percent fewer, Afrocentric courses.
- The number of ethnocentric courses at private black colleges is slightly higher than at public black colleges, but much lower than at tribal colleges.
- For tribal colleges, curricular distinctiveness is supported by the sovereign authority of Indian tribes to charter their own postsecondary institutions.
- For black colleges, curricular distinctiveness may offer a strategy for preserving their continued existence. Offering additional Afrocentric courses would distinguish black colleges from

mainstream institutions and thereby insulate them from legal accusations of programmatic duplication.

#### Goldrick-Rab (2006) NELS:88

- Students from lower socioeconomic backgrounds are more likely than are economically advantaged students (net of prior academic preparation) to follow postsecondary pathways that are characterized by interrupted movement.
- Such pathways appear to be less effective routes to the timely completion of degrees.
- Differences in the social-class variation in the attendance patterns of college students represent inequality in higher education.

#### Ishitani (2006) NELS:88/2000 and PETS: 2000

- First-generation students showed higher risks of leaving the higher education system than students of college-educated parents each year up to the fourth year.
- First-generation students and students whose parents had some college education faced the highest risk period of departure during the second year of college.
- Students attending a private institution were less likely to depart than those attending a public institution at any period. This propensity was particularly prominent in the third year.
- First-generation college student persistence could alter depending on other pre-college characteristics of the student, such as high school academic attributes. Moreover, such pre-college characteristics of first-generation students have longitudinal effects on their college persistence that vary over time.
- First-generation students were less likely to complete four-year degree programs in a timely manner. First-generation students with parents of some college education were slightly more likely to graduate in a timely manner than first-generation students whose parents never attended college. The impact of high school academic attributes was also pivotal in projecting the odds of timely college graduation among first-generation students.

#### Kim (2007) BPS

- Students with higher student loan debt in their first year of college are less likely than those with lower debt levels to obtain a degree within five years.
- The effect of first-year debt is greater for low-income and African American students than for other students.
- Controlling for a range of individual and institutional characteristics, an increase in first-year loan amounts is associated with a decrease in a low-income student's probability of degree completion, and with a decrease in the probability of African American students' degree completion.
- Students' increased reliance on loans for financial aid may widen the income and racial/ethnic gaps in degree completion, despite the fact that a primary goal of financial aid is to narrow those gaps.

#### Kurlaender (2006) NELS:88/2000

- Latinos are more likely to enroll in community colleges than four-year institutions, and this difference persists even when other factors are held constant, and when comparing Latinos to both whites and African Americans.
- Latino college students are more likely than their white peers to be financially disadvantaged, however, Latino students are more likely to attend a community college rather than a four-year institution than are African American or white college students from similar socioeconomic backgrounds.

- When compared to white and African American students with similar degree objective and levels of academic achievement, Latinos' probability of enrolling in a community college rather than a four-year institution is consistently higher.
- Latinos are often concentrated in states where community colleges are an integral part of the higher education system; however even when controlling for state differences, Latino students are still more likely than their white and African American counterparts to choose a community college over a four-year institution.

Lloyd, Leicht, and Sullivan (2008) CCD, Texas Higher Education Opportunity Project (Wave 1)

- The knowledge of a percent plan that guarantees college admission for high school students based on placement in their high school class plays an important role in raising the sights of students who might not otherwise consider college.
- This effect is particularly pronounced for minority students, although peer, family and high school context play pivotal roles, particularly for Hispanic seniors.
- This analysis provides some of the first systematic evidence of how percent plans influence students' decisions to pursue higher education. By strongly reducing the uncertainty about applying to college, at least for the top decile of the senior high school class, the Top 10% Law in Texas may improve diversity in colleges simply because a broader range of students becomes motivated to apply.
- Percent plans have been proposed as an alternative to race-sensitive admission criteria. This study demonstrates that percent plans increase minority students' college aspirations, expectations, and applications to college.

Melguizo (2009) HSB and NELS:88/2000

- The relatively lower attainment rate of Hispanic transfer students is the result of individual characteristics and lack of academic preparation, rather than institutional characteristics.
- While community colleges have the potential to be an alternative path towards a B.A., until transfer rates increase, Hispanics may be better off beginning their college education at a four-year institution.
- In states such as California and Florida with substantial numbers of Hispanics, there should be funds allocated to orientation programs and additional counseling for transfer students, especially for Hispanic transfer students.
- Hispanic students also would benefit from applying for federal and state financial aid that could enable them to attend full time, increasing their probability of success.

Melguizo (2008) HSB and NELS:88/2000

- Students who attend selective institutions, as opposed to non-selective ones, are more likely to complete a bachelor's degree. This result holds for African American and Hispanic students.
- The positive effect of selective institutions on attainment suggests that they have the potential to increase the graduation rates of minorities while narrowing the persistent college completion gap.
- A student's failure to complete a college degree has negative repercussions at the individual, institutional and societal levels.

Taniguchi (2007) NLSY79

- Focusing both on employment- and family-related factors illuminates gender differences and similarities in the correlates of nontraditional college enrollment.
- Joblessness more directly facilitates men's late college entry than women's, while divorce promotes only women's nontraditional enrollment.

- The presence of preschoolers adversely affects women’s attendance at two- and four-year institutions and men’s attendance at four-year institutions.
- Mothers of older children, unlike fathers, are more likely to enroll in both two- and four-year institutions.
- University administrators and policy makers concerned with higher education reform need to understand the diversity of nontraditional students. Gender differences in the pattern of nontraditional enrollment are one instance of this diversity.

## **F. Methodology**

### ***Main Issues***

Large data sets by the very nature of their construction invite methodological analyses, whether it is to improve the quality of the data sets themselves or to experiment with new approaches for analyzing various outcomes. The studies in this section focus on developing new models and methods for analyzing large data sets and for making causal claims, while also investigating current issues with education policy relevance.

### ***Key Findings***

#### **Glanville and Wildhagen (2007) NELS:88**

- School engagement should be measured as a multidimensional concept, rather than as a single measure as has been done in some previous research.
- The measurement of school engagement operates similarly for white, African American, Latino, and Asian students; each measure of school engagement has the same relationship with the latent school engagement variables across each racial and ethnic group.
- Engagement is often measured in disparate ways across different studies and a lack of understanding of the best way to measure engagement precludes strong inferences about the impact of different facets of school engagement on educational outcomes that could be used in formulating policy. This study suggests that combining the different subtypes of engagement in one measure makes it difficult to discern which aspects of engagement are the most important for improving different school outcomes.
- This research shows that items measuring engagement operate similarly across race and ethnicity. Accordingly, future research can accurately gauge whether engagement is more or less important in predicting school achievement for some racial groups.

#### **Hong and Yu (2008) ECLS-K**

- Previous studies of child development have generated mixed results partly due to some major methodological challenges including selection bias, measurement error, and divergent perceptions of multiple respondents in different domains of child development.
- The authors address these challenges by employing propensity score stratification to contend with selection bias, and by embedding measurement models in hierarchical models to account for measurement error and to model dependence among observations. Their analyses of a series of multivariate models enable the comparison of the retention effects across different respondents over different time points.
- The results of the analyses show no evidence suggesting that kindergarten retention does harm to children’s social-emotional development. Rather, the findings suggest that, had the retainees been promoted to the first grade instead, they would possibly have developed a lower level of self-confidence and interest in reading and all school subjects two years later, and would have

displayed a higher level of internalizing problem behaviors at the end of the treatment year and two years later.

#### Meyers and Beretvas (2006) NELS:88

- This investigation included two studies aimed at evaluating the impact of different ways of modeling cross-classified data. Cross-classified random effects modeling (CCREM) methods exist for this type of data, but they currently are rarely used.
- The first study used the NELS: 88 data set to compare parameter estimates resulting from a CCREM analysis (correct modeling) and two hierarchical linear modeling (HLM; incorrect modeling) analyses. A simulation study designed to investigate the impact of correctly modeling versus neglecting to model cross-classified data under a variety of conditions was conducted as a follow-up.
- Using HLM resulted in underestimated standard errors for the variables modeled incorrectly. Estimates of the variance between students and associated standard error estimates were also affected by using HLM instead of CCREM. The more variance attributable to the ignored cross-classified factor, the more positive bias was introduced to the student level variance estimate. In addition, the standard error estimates became negatively biased.
- Model mis-specification also resulted in an over-estimation of the variance between the remaining modeled, cross-classified factor.
- With the passage of NCLB, the need for appropriate techniques to model cross-classified structures has increased. Use of CCREM provides a flexible modeling technique that is well matched to these cross-classified data structures.

#### Morgan and Todd (2008) ELS:2002 and 2004 follow-up waves

- A simple nine-step routine was developed to determine whether or not the implicit weighting of regression estimators has generated a misleading estimate of the average causal effect.
- In addition to methodological elaboration, the Catholic school effect on mathematics achievement in the 10<sup>th</sup> and 12<sup>th</sup> grade (and on growth between the 10<sup>th</sup> and 12<sup>th</sup> grade) was elaborated in three different ways: (1) standard regression modeling, (2) propensity-score based weighting estimators of the Catholic school effect for those students who have characteristics similar to those who attend Catholic schools, and (3) propensity-score based weighting estimators of the Catholic school effect for those students who have characteristics similar to those who attend public schools.
- The Catholic school effect appears to remain largest in 2002 and 2004 for those Catholic school students from the most disadvantaged social origins (relatively low-SES, non-white students).
- Solutions to the small sample size problem can yield more robust and more empirically rigorous answers to questions about non-traditional families. These answers may well be useful in determining the best strategies to improve the education of a wide range of youths.

#### Powell and Cheng (2005) ECLS-K

- The authors show the difficulties in using small subsample sizes but also demonstrate that there are plausible solutions that enable scholars to more fully examine non-traditional families—and especially the educational benefits or disadvantages of living in these families.
- Solutions to the small sample size problem can yield more robust and more empirically rigorous answers to questions about non-traditional families.
- These answers may well be useful in determining the best strategies to improve the education of a wide range of youths.

#### Stapleton (2008) ECLS-K and Monte Carlo simulation data

- The author discusses replication sampling variance estimation techniques that are often applied in analyses using data from complex sampling designs: Jackknife Repeated Replication (JRR), Balanced Repeated Replication (BRR), and bootstrapping. These techniques are used with traditional analyses such as regression, but are currently not used with structural equation modeling (SEM) analyses. An extension of these methods to SEM analyses is provided, including a proposed adjustment to the likelihood ratio test.
- The study includes a simulation design to compare the robustness of standard error estimates from JRR, BRR, and bootstrap analyses along with linearized estimates of standard errors. For the bootstrap analyses, a determination of the number of bootstrap samples to achieve stable estimates of standard errors is made. Additionally, a demonstration of the application of these methods using data from the Early Childhood Longitudinal Study is included.
- All variance estimation approaches worked well in the SEM framework (there was little standard error bias and chi-square test rejection rates were appropriate).
- For the bootstrapped standard errors, estimates were very stable within 200 replications and fairly stable within 100 replications.
- The demonstration indicated that very few differences in interpretation would have been made under any of the variance estimation approaches.
- Researchers can use these estimation tools with their favorite SEM software in order to appropriately analyze data from complex sampling designs. Given that many publicly-available NCES datasets already contain Jackknife or Balanced Repeated replicate weights, this manuscript instructs researchers on how to include those weights in a structural equation modeling analysis to appropriately analyze data for proper statistical inference.

#### Saporito, Chavers, Nixon, and McQuiddy (2007) Census

- The authors describe four ways of reassigning data across incompatible zonal systems and test the accuracy of each approach with two case studies. The first example reassigns racial data from block groups to school attendance boundaries for selected school systems and the second reassigns racial data from school districts to Public Use Micro Areas for the entire U.S..
- Census data summarizing populations living in census geography can be reallocated to other socially meaningful areas, such as school attendance boundaries, accurately. Of the four methods explored in this study, population weighting and areal weighting were determined to be highly accurate reallocation methods.
- This work allows educational researchers to produce highly accurate estimates of student populations living in school catchment areas. These estimates allow policy makers, school district administrators and other researchers to use GIS techniques for addressing challenges such as estimating school enrollment projections or producing estimates of students in a school who are eligible for a free or reduced-priced lunch by determining student populations living in school catchment areas.

#### **IV. Article Abstracts, in alphabetical order.**

AERA Grants Program awardees listed in **bold**.

**Aikens, Nikki L.**, and Barbarin, O.A. (2008). Socioeconomic differences in reading trajectories: The contribution of family, neighborhood, and school contexts. *Journal of Educational Psychology*, 100(2), 235 – 251.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

#### **Purpose of the Study**

The purposes of the study were to (1) explore the relation between SES and children’s reading development from the fall of kindergarten to the spring of third grade; (2) examine the extent that family, neighborhood, and school contexts explain socioeconomic differences in early reading outcomes and growth; and (3) assess how these relations vary over the first 4 years of school.

#### **Study Design and Methods**

Growth curve models were estimated to depict children’s reading trajectories from kindergarten to third grade and to allow investigation of covariates or predictors underlying initial reading achievement, growth over time, and reading achievement at specific time points. The models had a three-level nested structure: time at Level 1; child, family, and neighborhood characteristics at Level 2; and school characteristics at Level 3.

#### **Findings**

SES-related differences in reading were present at children’s entry to school, and the SES gap grew wider through third grade. Family characteristics made the largest contribution to the prediction of initial kindergarten reading disparities. This included home literacy environment, number of books owned, parental role strain, and receipt of center-based care prior to kindergarten. School and neighborhood conditions contributed more than family characteristics to SES differences in children’s acquisition rate in reading, particularly during the period of most rapid reading growth. The association between school characteristics and reading outcomes suggests that the makeup of the student population, as indexed by poverty concentration and number of children with reading deficits in the school, is related to reading outcomes. Neighborhood characteristics such as community support for the school and poor physical conditions surrounding the school were also associated with children’s reading.

#### **Policy Implication**

The findings imply that multiple contexts combine and are associated with young children’s reading achievement and growth and help account for the relation of SES to reading outcomes. The association of neighborhood and school characteristics with children’s reading performance reinforces the need to focus on characteristics and qualities of family life in preschool children and to widen the emphasis to include schools and neighborhoods as children enter school.

The findings also speak to the importance of grouping and segregation that occurs within schools. Educational policy designed to eliminate reading disparities must be aware of the relation of the presence and concentration of peers with limited skills or fewer economic resources to students’ skills and achievement.

**Akiba, Motoko.** (2008). Predictors of student fear of school violence: A comparative study of eighth graders in 33 countries. *School Effectiveness and School Improvement*, 19(1), 51-72.

**Data Source:** The 1999 Trends in International Mathematics and Science Study (TIMSS)

### **Purpose of the Study**

The following research questions were addressed in this study:

- (1) How does the level of eighth-graders' fear of becoming victims of school violence differ across 33 countries?
- (2) How do the individual characteristics of eighth graders who fear becoming victims of school violence differ across the 33 countries?
- (3) What school and teacher characteristics are associated with the level of eighth-graders' fear in the U.S., Chile, Hungary, Israel, The Netherlands, and Taiwan?

### **Study Design and Methods**

This study is based on a secondary analysis of survey data collected from 8<sup>th</sup>-graders, their mathematics teachers, and school principals in the 1999 Trends in International Mathematics and Science Study (TIMSS). To examine the relationship between student characteristics and students' fear of becoming victims of school violence, a multiple regression analysis was conducted separately for each of the 33 countries with five independent variables: gender, SES, academic achievement, theft victimization, and friends' violence victimization. For the examination of school predictors, Hierarchical Linear Modeling (HLM) was conducted separately for the U.S., Chile, Hungary, Israel, The Netherlands, and Taiwan to examine what school- and teacher-related factors are associated with student fear of becoming victims of school violence.

### **Findings**

The study found that 8th graders who witnessed their friends' violence victimization and who experienced theft victimization were most likely to fear becoming the victims of school violence in all 33 countries. Male students also reported greater fear than female students in a majority of countries including the U.S. However, there was no consistent finding regarding socioeconomic status and academic achievement of students, and in more than a half of the countries, these factors were not significantly associated with students' fear. In addition, U.S. 8th graders reported greater fear in the schools with higher levels of classroom and school disorders and in the schools where teachers practice student-centered instruction less frequently. While individual predictors of student fear were relatively consistent, school predictors varied across the countries.

### **Policy Implications**

It is important that policymakers and educators in each country work toward promoting school environments associated with a lower level of student fear and reforming environments that lead to greater fear among students. In the U.S. educators need to promote student-centered instruction and keep close communication with students to understand their daily experiences.

**Bacolod, Marigee** (2007). Who teaches and where they choose to teach: Male vs. female college graduates of the 1990s. *Educational Evaluation and Policy Analysis*, 29(3), 155-168.

**Data Sources:** Baccalaureate and Beyond (B&B) Longitudinal Study augmented with wage and non-wage attributes of teaching jobs from two additional sources: local wages calculated from the 1990 and 2000 1% U.S. Census samples, and local schools' working conditions derived from the 1997 Common Core of Data (CCD).

### **Purpose of the Study**

Concern is often voiced over the low academic achievement of U.S. K-12 students, especially gaps in achievement among income and racial or ethnic groups. Despite policies aimed at equalizing per-pupil spending across schools, however, considerable differences in school resources and in teacher qualifications persist. Given this disparity, it is essential to understand the underlying mechanisms that drive who teaches and where they choose to teach.

This study investigates the key determinants of entry into the teaching profession, and the subsequent sorting of new teachers across urban, suburban, and rural schools. Of particular interest is the relative importance of teacher salaries, alternative labor market opportunities, and non-pecuniary job attributes or working conditions on this decision process.

### **Study Design and Methods**

A nested logit framework is used to investigate the importance of teacher salaries, alternative wage opportunities, and working conditions on the decision of recent college graduates to teach, and the subsequent sorting of new teachers across urban, suburban, and rural schools. Since teaching has traditionally been a female-dominated occupation, analyses are also conducted separately for men and women to see if the relative importance of these factors varies by gender.

### **Findings**

Findings suggest that work conditions play a relatively more important role in determining where new teachers end up choosing to teach, rather than differences in relative teacher wages. Schools with more poor students attract significantly fewer teachers, and this is especially true among female teachers. On the other hand, relative teacher wages play a more important role than work conditions at the occupational entry decision, when male and female new college graduates are deciding to teach. Furthermore, conditional on choosing to teach, those with higher scholastic aptitude (in terms of SAT scores and college GPA) are significantly less likely to teach in central city schools compared to suburban schools. Accounting for individual teacher quality using these measures is found to be important in understanding overall teacher supply.

**Bodovski, Katerina** and Farkas, George. (2008) ‘Concerted Cultivation’ and unequal achievement in elementary school. *Social Science Research*, 37(3): 903-919.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of the Study**

To quantitatively test Lareau’s [Lareau, Annette. 2003. *Unequal Childhoods: class, race, and family life*. Berkeley: University of California Press] theory of the role played by parental concerted cultivation as a mediator of the positive effect of parental SES on children’s school achievement.

### **Study Design and Methods**

The first grade wave of the ECLS-K data for white students was utilized for the study. The concept of concerted cultivation was measured using a scale of 29 items, each of which was a parental response to one of the following: perceptions of parental responsibilities towards their child, leisure-time activities scheduled for the child, parental relationships with the child’s school, and the number of children’s books at home. The study also included measures of parental educational expectations, the teacher’s judgment of the student’s school-related effort and organization, and socio-demographic control variables. Two distinct measures of achievement – reading test scores, and the teacher’s judgment of the student’s language and literacy skills- were used.

### **Findings**

In support of Lareau’s theory, the study found that parental SES is positively and very strongly associated with concerted cultivation. It was also found that concerted cultivation is positively associated with both test scores and the teacher’s judgment of student language and literacy skills, and explains a portion of the effect of parental SES on these achievement measures. However, the portion attributable to concerted cultivation is modest in size.

### **Policy Implications**

The importance of family related factors to early school achievement; parental practices and school achievement.

**Bodovski, Katerina** and Farkas, George. (2007a). Do instructional practices contribute to inequality in achievement? The Case of mathematics instruction in kindergarten. *The Journal of Early Childhood Research*. Vol. 5 (3): 301-322.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

**Purpose of the Study**

To describe the process and content of kindergarten mathematics instruction, as well as the associations of such instruction with achievement gaps by social class and race/ethnicity.

**Study Design and Methods**

Two waves of the ECLS-K data (fall and spring of the Kindergarten year) were used in this study. Three-level hierarchical linear models were employed (students nested within classrooms nested within schools).

**Findings**

Where instructional effectiveness is concerned, time spent on two of the process characteristics -- traditional math and group/interactive activities -- was significantly and positively associated with achievement gains. Time spent on three of the content variables -- advanced counting, practical math, and single-digit operations -- was associated with increased achievement. Time spent on basic numbers/shapes significantly decreased achievement. Classes with a high percentage of African-American students were particularly likely to receive full-day kindergarten, which increased total instructional time, and this may have modestly decreased the achievement growth gap for these classes. Overall, kindergarten instructional practices were found to modestly reduce the mathematics achievement growth gap of African-American students, but have no significant effects on the achievement growth gaps of lower social class or Hispanic students.

**Policy Implications**

Importance of the full-day kindergarten for disadvantaged students; Understanding of the early achievement gap.

**Bodovski, Katerina & Farkas, George. (2007b).** Mathematics growth in early elementary school: The roles of beginning knowledge, student engagement and instruction. *The Elementary School Journal*. Vol. 108(2): 115-130.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

**Purpose of the Study**

To examine how important mathematics readiness levels are to subsequent achievement growth and the efficacy of instruction and engagement in producing such growth.

**Study Design and Methods**

The study employed kindergarten, first and third grade waves of the ECLS-K data. The standardized mathematics assessments that were administered to the students by ECLS-K staff were used to divide students to the different achievement categories. Separately for students who began kindergarten with low, medium-low, medium-high, and high mathematics skill, the achievement growth through third grade was examined, as well as the effects of teacher time on mathematics instruction and student engagement (as perceived by the teacher) on such growth.

**Findings**

Students who began with the lowest achievement also showed the least growth over this period. Students in the two highest skills groups had similar growth, and the highest levels of growth. Students in the lowest group received the most time on instruction but had the lowest engagement with instruction. Time on instruction increased achievement for all students equally, but the effect of engagement was strongest among the lowest performing group. The lower engagement of the lowest-performing group explained more than half of their lower achievement growth in grades K-3.

**Policy Implications**

Crucial importance of mathematics school readiness on the subsequent learning trajectories. If inequality in mathematics achievement is to be reduced, teachers must make greater efforts to improve the beginning knowledge and academic engagement of the lowest achieving group.

**Cheadle, Jacob E. (2008).** Educational investment, family context, and children's math and reading growth from kindergarten through third grade. *Sociology of Education*, 81(1), 1-31.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999

### **Purpose of the Study**

The purpose of this study was to extend models of growth and change in children's academic competencies by elaborating the between-child components of the model with indicators of the family context to better understand the transition to school period and to address the role of the family in children's learning after entering school and over the summertime. Particular attention was given to operationalizing and employing a broad measure of parent investments, entitled 'concerted cultivation', in children's education based upon Annette Lareau's well-received contemporary ethnography of family life. Lareau's (2003) research suggested that a composite measure of parenting based upon three dimensions of educational investment should (a) be related to children's skill levels at kindergarten entry, (b) children's educational development after they enter school, (c) play a significant role in explaining social class or socioeconomic gaps in children's learning, and (d) should not be significantly associated with race/ethnic differences in children's learning after adjusting for socioeconomic or social class background.

### **Study Design and Methods**

This study used a mixture of traditional confirmatory factor analysis and item response theory modeling to operationalize a measure of parental educational investments based upon Lareau's (2002, 2003) notion of 'concerted cultivation.' The three-dimensional measure was based upon scales of child participation in adult orchestrated leisure activities, parent investment in educational materials, and parent involvement with the school. The measure was then included, along with other characteristics of family background, in multilevel piecewise growth models predicting children's math and reading achievement from kindergarten entry through the third grade. All within-school, between-child variables were centered at their group means to account for omitted school-level factors.

### **Findings**

The concerted cultivation measure was strongly related to children's math and reading skills and kindergarten entry, and less strongly over the kindergarten year (math), summer time (math), and first grade school year (reading), but not over the second-third grade period. Additional results indicated that educational investments were an important mediator of socioeconomic and race/ethnic disparities, completely explaining the black-white reading gap at kindergarten entry and consistently explaining 20-60% and 30-50% of the black-white and Hispanic-white disparities in the growth parameters, respectively, and approximately 20% of the socioeconomic gradients. Notably, concerted cultivation played a more significant role in explaining race/ethnic achievement gaps than expected from Lareau's (2003) discussion, which suggested that after controlling for socioeconomic background, the concerted cultivation educational investment pattern should not be implicated in race/ethnic learning disparities.

### **Policy Implications**

The results presented in this paper were consistent with prior studies indicating the important role of family experiences in early childhood learning. The strongest and most consistent family influences were found at kindergarten entry. Thus, this research is consistent with calls to strengthen early childhood education efforts. The results also suggest that investment patterns like concerted cultivation are defined largely by socioeconomic and race/ethnic status. As such, in order to be useful for policies that involve the family, not only must the underlying cultural logic of child rearing be made more independent of socioeconomic and race/ethnicity *per se* than it currently is, the means of realizing this logic must also become more accessible. It is in this sense that high quality after school programs, or programs to provide books could prove helpful. The estimates presented in the paper are correlational, however, and rather than implying specific policy recommendations, they should be taken to imply avenues for future randomized intervention studies in early childhood and those involving reading materials, extracurricular activities, and strengthening parental ties to the educational system, at the second step. The first step should be to more clearly elaborate race/ethnic, socioeconomic, and geographic variation in the cultural logics of childrearing so that these intervention studies can be tailored to the needs of specific communities

**Chen, Rong** and DesJardins, Stephen L. (2008). Exploring the effects of financial aid on the gap in student dropout risks by income level. *Research in Higher Education*, 49(1), 1-18.

**Data Source:** Beginning Postsecondary Students (BPS:96/01)

### **Purpose of the Study**

Although there have been some important studies of the effects of financial aid on student dropout behavior, research focusing on understanding the differences in dropout risks among income groups, and the role that different types of aid play in reducing these gaps, is often ignored. The authors developed a longitudinal model to examine how the sources of aid are differently related to the dropout risks of students from different income groups.

### **Study Design and Methods**

Given the longitudinal nature of the student departure process, the authors applied event history method to take into account the effects of time and time-varying types of financial aid. They also used tests of the interaction effects to understand whether student aid mediates the relationship between parental income and student dropout behavior.

### **Findings**

The descriptive analysis confirms that there is a gap in dropout rates for low income students compared with their upper income peers. In addition, the event history analysis reveals that the receipt of a Pell grant is related to narrowing the dropout gap between students from low- and middle-income groups, although overall the interaction between Pell grant and income is not significant. Loans and work-study aid both have similar effects on student dropout across all income groups. Methodologically, the results demonstrate the need to model dropout behavior temporally and to avoid main-effect bias by incorporating interaction effects.

### **Policy Implications**

The study provides a comprehensive longitudinal picture of dropout risk differences by income groups. It is found that there were consistently higher dropout risks for low-income students compared to their upper-income counterparts over the 1996 to 2001 period.

Results suggest that programs and practices that aim at reducing dropout risks should be designed differently at the different time points according to the time-varying nature of dropout risks.

Based on the results of the interaction effect tests, the authors suggest that Pell grants should still be the center of student aid policy to reduce the socioeconomic gap in educational opportunity in American higher education.

**Cheng, Simon and Powell, Brian** (2007). Under and beyond constraints: Resource allocation to young children from biracial families. *American Journal of Sociology*, 112(4), 1044-1094.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

**Purpose of the Study**

The authors examine the extent to which biracial families differ from monoracial families in their transmission of resource to young children.

**Study Design and Methods**

Using the Early Childhood Longitudinal Study, the authors examine twelve items/scales that measure three types of familial resource allocation: economic (e.g., children's possession of educational goods), cultural (e.g., reading and book-related cultural activities), and interactional/social (e.g., parental involvement in school). Ten different types of biracial families (e.g., white father, black mother) are compared to their monoracial counterparts. A range of multivariate analytical techniques are used, including OLS regression, binary logistic regression, and controls for selectivity are taken into account.

**Findings**

The authors demonstrate the utility of distinguishing not only between white-biracial and nonwhite biracial families, but also between even more refine measures of biracial families (e.g., white father, Asian mother). They also find that, in most cases, biracial families provide comparable or greater economic and cultural resources to their children than do their monoracial counterparts but offer fewer advantages in interactional/social resources. This overall pattern remains even after sociodemographic factors are taken into consideration. Exceptions to this pattern also are identified and explored.

**Policy Implications**

Scholars generally agree that parental practices and resources can benefit or hinder children's educational and life chances. These resources are especially important during the first few years of schooling, a period consider by some to be a crucial threshold for children. Thus, understanding which groups of parent invest more (or less) in their children may be useful in determining strategies to improve educational performance of youths.

**Cole, Wade M.** (2006). Accrediting culture: An analysis of tribal and historically black college curricula. *Sociology of Education* 79: 355-388.

**Data Sources:** Variables from the Integrated Postsecondary Educational Data System (IPEDS) were matched with original curricular data coded by the author from course catalogs and bulletins.

### **Purpose of the Study**

This study examines the formal curriculum at minority-serving colleges and universities in the United States. It analyzes whether “ethnocentric” content—defined as undergraduate-level courses making explicit and exclusive reference to American Indian or African American issues, perspectives, or worldviews—is more prevalent at tribal colleges than at historically black colleges and universities. The core hypothesis is that the exceptional quasi-sovereign legal and political status of Indian tribes empowers them not only to establish their own postsecondary institutions in the post-*Brown* era, but also to infuse curricula with culturally distinctive content. African Americans, who lack claims to sovereignty, reference principles such as non-discrimination and equality that support curricular multiculturalism rather than ethnocentrism.

### **Study Design and Methods**

The study sample consists of 28 tribal colleges, 33 historically black colleges, and 30 “mainstream” colleges at two time points (1992 and 2002). The study includes all tribal colleges for which data were available; the historically black and mainstream college samples were selected purposively to maximize similarities with tribal colleges. The dependent variable, total number of ethnocentric courses, is analyzed using pooled cross-sectional time-series negative binomial regression models.

### **Findings**

Tribal colleges offer nearly 10 times as many ethnocentric courses as mainstream colleges, net of other institutional characteristics (total enrollment, minority enrollment, public or private control, two- or four-year college, accreditation status). Compared with mainstream institutions, privately controlled black colleges offer approximately 15 percent more, and publicly controlled black colleges offer 73 percent fewer, Afrocentric courses. The primary conclusion is that the number of ethnocentric courses at private black colleges is slightly higher than at public black colleges, but much lower than at tribal colleges.

### **Policy Implications**

For tribal colleges, curricular distinctiveness is supported by the sovereign authority of Indian tribes to charter their own postsecondary institutions. For black colleges, curricular distinctiveness may offer a strategy for preserving their continued existence. In 1992, the Supreme Court challenged the legitimacy of publicly controlled black colleges, in part because “the widespread duplication of programs at the historically black and historically white...universities...represents a continuation of the ‘separate but equal’ treatment required by the prior dual system” (*United States v. Fordice*). In response to this judgment, black colleges could incorporate culturally distinctive perspectives more extensively into the curriculum. Afrocentric courses would distinguish black colleges from mainstream institutions and thereby insulate them from legal accusations of programmatic duplication.

**Dee, Thomas S.** (2007). Teachers and the gender gaps in student achievement. *Journal of Human Resources*, 42(3), 528-554. Non-technical version of same article: **Dee, T.S.** (2006). The why chromosome: How a teacher's gender affects boys and girls. *Education Next*, 6(4), 68-75.

**Data Source:** National Education Longitudinal Study of 1988 (NELS:88)

### **Purpose of the Study**

To examine the effects of assignment to a same-gender teacher on cognitive and non-cognitive student outcomes.

### **Study Design and Methods**

This study's identification strategy exploits a unique "matched pairs" feature of NELS:88. Specifically, in its base year, NELS:88 provides a variety of student outcome data in two academic subjects. The availability of two contemporaneous observations for each student (and multiple reports on students from specific teachers) makes it possible to condition on both student and teacher fixed effects.

### **Findings**

Within-student comparisons based on these data indicate that assignment to a same-gender teacher significantly improves the achievement of both girls and boys as well as teacher perceptions of student performance and student engagement with the teacher's subject. For example, assignment to a female science teacher increases the likelihood that a girl views science as useful for her future. However, because the middle-school teachers in most academic subjects are female, these results also suggest that the gender dynamics between teachers and students at this level amplify boys' large underperformance in reading while attenuating the more modest underperformance of girls in math and science.

### **Policy Implications**

These findings indicate that the classroom dynamics between students and teachers contribute to the gender differences in student outcomes. However, these findings do not indicate the exact nature of these dynamics. Further study should address these issues so that appropriately targeted interventions can be designed. For example, if these results reflected unintended teacher biases in classroom management and curricula, professional-development activities could target that issue. However, if these results were due to the phenomenon known as "stereotype threat" a different type of professional development might be appropriate.

**Diemer, Matthew A.** (2009). Pathways to occupational attainment among poor youth of color: The role of sociopolitical development. *The Counseling Psychologist*, 37(1), 6-35.

**Data Source:** National Educational Longitudinal Study of 1988 (NELS:88)

### **Purpose of the Study**

The occupational attainment of poor Youth of Color (PYOC) in adulthood is lower than that of their more affluent White counterparts. This may be explained by sociopolitical barriers (e.g. structural racism, asymmetry in educational and economic resources) that PYOC face. Given these sociopolitical barriers to occupational attainment, sociopolitical development—defined as the consciousness of and motivation to change sociopolitical inequity—may help PYOC overcome these barriers to career development and occupational attainment. This proposition has been supported by recent research, which has suggested a relationship between sociopolitical development and career development among PYOC. The present study extends this line of inquiry by longitudinally examining sociopolitical development in adolescence and its relationship to occupational attainment in adulthood among PYOC.

### **Study Design and Methods**

Participants were selected from the National Educational Longitudinal Survey of 1988 (NELS), a large-scale survey that followed a nationally representative group of young people across a 12-year span, including high school and their postsecondary transitions into college and/or work. The study longitudinally examines sociopolitical development's role in predicting career development in adolescence and occupational attainment in adulthood among PYOC, while controlling for academic performance. Participants' self-reported racial/ethnic group membership was used to select Youth of Color from the population of NELS participants, and participants from the lowest one-third of the socioeconomic status distribution were selected to examine youth who reside in poverty. This longitudinal study contains three waves (F1, F2, F4) that were examined using structural equation modeling (SEM).

### **Findings**

The obtained structural model suggests that sociopolitical development influences occupational expectations in 12<sup>th</sup> grade and has a longitudinal impact upon the adult occupational attainment of a nationally representative sample of PYOC. The study suggests that a consciousness of and motivation to transform sociopolitical inequity has a positive impact upon the career development and occupational attainment of PYOC; a critical consciousness of sociopolitical barriers may assist youth in overcoming the barriers that constrain their career development and occupational attainment.

### **Policy Implications**

The study suggests that discussing issues such as racism, sexism, and economic/social inequality may empower PYOC to overcome sociopolitical barriers in the opportunity structure. Similarly, career interventions with oppressed or marginalized individuals could also foster participants' consciousness of and motivation to transform sociopolitical inequity (e.g., by incorporating critical analyses of racism and sexism). Teachers and school personnel who discuss sociopolitical inequity with students may positively affect their students' career development and occupational attainment, rather than discourage marginalized youth from engaging with an inequitable opportunity structure. In sum, sociopolitical development may be an overlooked mechanism to facilitate career development and occupational attainment among PYOC.

**Gandhi, Allison G.** (formerly Gruner, A.) (2007). Context matters: Exploring relations between inclusion and reading achievement of students without disabilities. *International Journal of Disability, Development, and Education. Special Issue: Illuminating the Black Box of School Reform to Improve Outcomes for All Students*, 54(1), 91-112.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

**Purpose of the Study:**

The purpose of the study is to examine the relationship between being educated in an inclusive classroom and reading achievement of students without disabilities.

**Study Design and Methods:**

This study design was a correlational analysis of data drawn from a nationally representative sample of third-grade public school students without disabilities in the United States. The analyses were regression models that describe a non-disabled student's reading achievement as a function of whether or not the student is educated in an inclusive classroom. The outcome variable, RDSCORE, represents a continuous score in reading that is based on results of a cognitive assessment given to each student during the second half of the third grade. The primary predictor variable is INCLUS, a dichotomous variable that indicates whether or not a non-disabled student's classroom enrolls any students who are classified under federal law as requiring special education services. The analyses also included a series of secondary predictors, including measures of the total number of students with disabilities in the class, the types of disabilities represented within the classroom, total class size, years experience of the teacher, number of special education courses taken by the teacher, whether or not a paid aide worked in the classroom, and the frequency with which the classroom teacher consulted with special education teaches about the needs of students in his or her class. The analyses tested for the main effect of each predictor on reading achievement, as well as any possible interaction effects among these variables. Finally, the models all contained a standard set of control variables measuring background characteristics of the students and their classrooms. In these analyses, the STATA survey estimation ("svy") commands were used to account for the natural grouping of students within classrooms and to account for the complex design of the ECLS-K survey sample. This set of commands allows the programmer to adjust all subsequent analyses based on sampling weights used in the survey, any clustering of observations (i.e., students clustered within classrooms), and any stratification that was used in the sampling design. All analyses, therefore, were conducted based on design specifications regarding the multi-stage, clustered sampling design of the ECLS-K, and the multi-leveled nature of the data.

**Findings**

Controlling for selected background characteristics of the student and classroom, as well as experience of the classroom teacher, non-disabled students who are educated in inclusive classrooms essentially perform as well in reading as non-disabled students who are educated in non-inclusive classrooms. Being educated in an inclusive classroom, as opposed to a non-inclusive general education classroom, does not contribute to lower or higher reading achievement for non-disabled students. However, when looking at the interactions between being educated in an inclusive classroom and other contextual classroom variables, some effects are apparent. For example, the presence or absence of a paid aide does not appear to make much of a difference to reading achievement, with two exceptions—for students in inclusive classes in which the majority of students with disabilities have autism and students in inclusive classes in which the majority of students with disabilities have emotional disturbance. In these two cases, non-disabled students who are in classes in which there is a paid aide have much higher reading scores than their peers in classes without a paid aide. The average difference in score is +12.7 points for students in the "Autism" class, and +12.1 points for students in the "ED" class. In these cases, the impact of an aide is so large that students in the "Autism" and "ED" inclusive classrooms who have an aide in their classroom also outperform their peers in non-inclusive classrooms.

**Policy Implications**

The finding that being educated in an inclusive classroom does not negatively impact the reading achievement of non-disabled students is critical, because it could help to alleviate fears among parents and educators that inclusion can be harmful to students without disabilities.

**Glanville, Jennifer L. and Wildhagen, Tina. (2007). The measurement of school engagement: Assessing dimensionality and measurement invariance across race and ethnicity.” *Educational and Psychological Measurement* 67: 1019-1041.**

**Data Source:** National Educational Longitudinal Study of 1988 (NELS:88)

### **Purpose of the Study**

The concept of school engagement, or the extent to which students are committed to and participate in the curriculum and other school activities, plays a prominent role in theories of educational achievement and attainment. The purposes of this study were threefold: (1) to assess the measurement of school engagement in prior research that used *NELS:88*; (2) to systematically develop an improved measurement model for school engagement; and (3) to examine whether the measures of engagement operate similarly across racial and ethnic groups.

### **Study Design and Methods**

School engagement is an abstract, multifaceted concept. Available measures can only indirectly measure engagement and accordingly, it should be measured with a technique that allows it to be measured as a “latent” or unobserved variable, thereby accounting for measurement error. Confirmatory factor analyses tested whether school engagement is best measured as a single-dimensional concept or whether there are multiple components of engagement. Multiple group confirmatory factor analysis tested whether the measurement of school engagement is invariant across racial and ethnic groups.

### **Findings**

Results indicated that school engagement should be measured as a multidimensional concept, rather than as a single measure as has been done in some previous research. Results from a series of multiple group analyses indicated that the measurement of school engagement operates similarly for white, African American, Latino, and Asian students. In other words, each measure of school engagement has the same relationship with the latent school engagement variables across each racial and ethnic group.

### **Policy Implications**

Given its association with better school outcomes in previous research, research on school engagement could help both policy makers and scholars gain a more complete understanding of the process of academic achievement. However, engagement is measured in disparate ways across different studies and a lack of understanding of the best way to measure engagement precludes strong inferences about the impact of different facets of school engagement on educational outcomes that could be used in formulating policy. This study suggests that combining the different subtypes of engagement in one measure makes it difficult to discern which aspects of engagement are the most important for improving different school outcomes.

It is also important to consider whether engagement can be measured similarly for all groups of students. While some scholars and policy makers have suggested that increasing engagement among disadvantaged minority students is a promising way to decrease educational disparities, if the measures of engagement behave differently across racial groups and these differences are not taken into account in the measurement strategy, comparisons of levels of engagement or its effects across groups are invalid. This research has established that items measuring engagement operate similarly across race and ethnicity. Accordingly, future research can accurately gauge whether engagement is more or less important in predicting school achievement for some racial groups.

**Goldrick-Rab, Sara.** (2006). Following their every move: How social class shapes postsecondary pathways. *Sociology of Education*, 79, 61-79.

**Data Source:** National Education Longitudinal Study (NELS:88) College transcript file (NOT)

**Purpose of the Study**

To investigate whether there is social-class variation in the attendance patterns of college students, with socioeconomically advantaged and disadvantaged students responding to new postsecondary choices by engaging in different pathways.

**Study Design and Methods**

National longitudinal data from postsecondary transcripts were used to track students across schools and to examine the importance of family background and high school preparation in predicting forms of college attendance. In particular I estimate multinomial logistic regressions predicting whether and how students change colleges.

**Findings**

The results demonstrate that students from lower socioeconomic backgrounds are more likely than are economically advantaged students (net of prior academic preparation) to follow pathways that are characterized by interrupted movement. Such pathways appear to be less effective routes to the timely completion of degrees.

**Policy Implication**

Differences in how students attend college represent inequality in higher education which deserves more consideration.

**Goldsmith, Pat Rubio.** (In press). Learning apart, living apart: The lasting impact of perpetual segregation.” *Teachers College Record*.

**Data Sources:** Restricted version of the National Education Longitudinal Study 1988-2000 (NELS), the Integrated Postsecondary Education Data System (IPEDS), and Summary File 3B of the 1990 and the 2000 Censuses of Population and Housing.

### **Purpose of the Study**

The purpose of the study is to examine the role of school segregation in reinforcing residential segregation, and its findings are considered in light of human capital theory, place stratification theory, and perpetuation theory. The study examines the extent to which neighborhoods’ racial context is inherited from one generation to the next and the extent to which the racial composition of students’ schools and colleges reinforces this relationship. Put differently, the study is asking whether or not attending an integrated school makes individuals to live in more integrated neighborhood as an adult.

### **Study Design and Methods**

The study appends data on the percent white in teenage Zip Code Areas (ZCAs), high schools, colleges, and young adult ZCTAs to individual records of NELS respondents. Multiple imputations correct for missing data. Multiple regression with weighted coefficients and standard errors that are adjusted for survey design is used to predict the percent white in each institution, using percent white in prior institutions and control as independent variables.

### **Findings**

The data show a very strong, intergenerational inheritance of ZCAs’ percent white. Much of the relationship, an estimated 31 percent of it, is explained by the racial composition of schools and colleges. Holding constant the percent white in neighborhoods, students’ socioeconomic backgrounds, and other characteristics of individuals, the proportion white that students experience in high school and college has a lasting influence, affecting the percent white in their young adult neighborhoods at age 26. The analyses therefore suggest that racial segregation in high schools and colleges reinforces segregation in neighborhoods.

### **Policy Implications**

While the study does not look precisely at desegregation programs, the findings show that net of the kinds of neighborhoods that students lived in, those that attended integrated educational institutions—high schools or colleges—also tended to live in integrated neighborhoods as young adults after they left home. The findings suggest therefore suggest that school desegregation programs can assist in the desegregation of neighborhoods in the long run.

Hamilton, Laura, **Cheng, Simon**, and **Powell, Brian** (2007). Adoptive parents, adoptive parents: Evaluating the importance of biological ties for parental investment. *American Sociological Review*, 72(1), 95-116.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of the Study**

To compare parental investments in two-adoptive-parent families to those in other family forms (e.g., biological families, step-parent families).

### **Study Design and Methods**

The authors use multivariate analytical techniques (binary logit regression, OLS regression, Poisson regression, ordinal logistic regression) to explore adoptive families' (vs. other families') investments in economics resources (e.g., enrollment in a private school), cultural resources (e.g., reading to one's child), interactional resources (e.g., meals with child), social capital resources (e.g., participation in PTOs), and religious involvement. These resources were selected because they have been shown to be influential in children's academic progress. The models also took into account potentially confounding factors, such as parental age, familial income, race, and parental education.

### **Findings**

Basic group comparisons reveal an adoptive advantage over all family types. This advantage is due in part to the socioeconomic differences between adoptive and other families. Once other factors also are taken into account, adoptive families invest at similar levels as two-biological-parent families but still at significantly higher levels in most resources than other types of families.

### **Policy Implications**

The implications of these conclusions go beyond scholarly debate (on the merits of evolutionary theory, for example) and into the policy arena. Recent court cases regarding family have privileged biological parenthood over other forms of parenthood and have used this privilege in their justification of the prohibition of certain marital/family forms. This research offers a challenge to these claims. They also may have implications for attempts to change rules regarding adoption.

**Hong, Guanglei, & Yu, B. (2008).** Effects of kindergarten retention on children's social-emotional development: An application of propensity score method to multivariate multi-level data. Special Section on New Methods in *Developmental Psychology*, 44(2), 407-421.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of the Study**

The present study aims to investigate the relationships between kindergarten retention and children's social-emotional outcomes. The authors examine multiple domains including children's self-perceived competence and interest in reading, math, and all school subjects, their self-reported competence and interest in peer relationship, and internalizing problem behaviors as perceived by teachers, parents, and children themselves. They ask: If a child at risk of repeating kindergarten is actually retained, how would the child develop in the above social-emotional domains at the end of the treatment year, two years later, and four years later in comparison with the expected outcomes of being promoted to the first grade?

### **Study Design and Methods**

Previous studies have generated mixed results partly due to some major methodological challenges including selection bias, measurement error, and divergent perceptions of multiple respondents in different domains of child development. The authors address these challenges by employing propensity score stratification to contend with selection bias, and by embedding measurement models in hierarchical models to account for measurement error and to model dependence among observations. Their analyses of a series of multivariate models enable us to compare the retention effects across different respondents over different time points.

### **Findings**

In general, the results show no evidence suggesting that kindergarten retention does harm to children's social-emotional development. Rather, the findings suggest that, had the retainees been promoted to the first grade instead, they would possibly have developed a lower level of self-confidence and interest in reading and all school subjects two years later, and would have displayed a higher level of internalizing problem behaviors at the end of the treatment year and two years later.

### **Policy Implications**

The early intervention theory and the social comparison theory provide complementary interpretations of the findings. As hypothesized by the early intervention theory, a second chance of learning the kindergarten curriculum accompanied by the growing maturity in cognition, emotions, and social behaviors may have provided the retainees with a better preparation for learning the academic content in the later years, and therefore may have improved their academic standings among a group of younger peers. These successful experiences may have in turn increased the retainees' self-confidence and fostered their academic interest, as suggested by the social comparison theory. The results from the current study contradict with the predictions of the labeling theory. Being retained in kindergarten did not seem to have alienated the retainees from their new peer groups. Nor did the retainees develop more negative feelings about themselves on average than they would have if promoted.

**Hong, Guanglei, & Yu, B. (2007).** Early grade retention and children's reading and math learning in elementary years. *Educational Evaluation and Policy Analysis*, 29(4), 239-261.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of the Study**

Previous analyses of the US Early Childhood Longitudinal Study-Kindergarten cohort data have found evidence suggesting that children who are retained in kindergarten learn less during the repeated year than they would have were they promoted to the first grade instead. The first research question in the current study is whether the negative effect of kindergarten retention on children's cognitive learning will fade or even disappear in the mid- and late elementary years. The second research question asks about the effect of first-grade retention on children's reading and math learning in the rest of the elementary years.

### **Study Design and Methods**

The authors use propensity score stratification to remove selection bias associated with a large number of pretreatment covariates. They model the retention effects on repeated outcomes of students nested within schools, accounting for both sample attrition and measurement errors in the outcomes.

### **Findings**

On average, kindergarten retention showed immediate negative effects in both reading and mathematics at the end of the treatment year. In each subject, the negative retention effect diminished by about two-thirds of the initial amount two years later and almost disappeared four years after the treatment. Although the data provided no information about the immediate effect of first-grade retention at the end of the treatment year, the results showed negative retention effects on the first-grade retainees' reading and math achievement one year and three years after the treatment. Throughout the elementary years, the kindergarten retainees and the first-grade retainees never achieved more on average than they would have if they had been promoted instead.

### **Policy Implications**

Evidence from the current study indicates that most children initially at risk of repeating kindergarten or first grade would have been capable of learning reading and math content at a higher grade level if promoted. These are important findings for educators to take into consideration in making retention decisions. However, for children who were at risk of early grade retention and were promoted instead, the benefit of promotion did not hold up in the subsequent years. This will require further investigation of the sequences of instructional treatments that the students receive during the elementary years.

**Ishitani, Terry T. (2006).** Studying attrition and degree completion behavior among first-generation college students in the United States. *Journal of Higher Education*, 77(5), 861-885.

**Data Sources:** National Education Longitudinal Study (NELS: 88/00) and Postsecondary Education Transcript Study (PETS: 2000)

### **Purpose of the Study**

This study was to investigate longitudinal college attrition and degree completion behaviors of first-generation students in the United States.

### **Study Design and Methods**

Event history modeling was employed for assessing longitudinal attrition behavior, while logistic regression was used for estimating degree-completion behavior.

### **Findings**

- First-generation students showed higher risks of leaving the higher education system than students of college-educated parents each year up to the fourth year. First-generation students faced the highest risk period of departure during the second year of college. They were 8.5 times more likely to drop out than students whose parents graduated from college.
- Students whose parents had some college education also presented their highest risk of departure during the second year. They were 4.4 times more likely to leave than their counterparts.
- Period specific effects of quintile high school class rank and academic intensity were found. For instance, students from 3<sup>rd</sup> quintile class rank were more likely to depart in their third year than students from the top quintile, while students from the 4<sup>th</sup> were more likely to do so in their second year, after controlling for high school academic intensity. On the other hand, 3<sup>rd</sup> quintile students in high school academic intensity showed their prominent departure risk behavior in their second year compared to students from the 1<sup>st</sup> quintile after controlling for high school class rank. Students from the lowest academic intensity quintile had the highest departure risk during their third year.
- Students attending a private institution were less likely to depart than those attending a public institution at any period. This propensity was particularly prominent in the third year.
- First-generation students were 51% and 32% less likely to graduate in the fourth and fifth years than students whose parents graduated from college. First-generation students whose parents had some college education were 44% and 29% less likely to do so in the years four and five.

### **Policy Implications**

The findings of this study attest that first-generation students were exposed to higher risks of departure through college years than students of parents who were both college-educated. Although the effect of being a first-generation itself had a negative effect on college persistence, his/her persistence could alter depending on other pre-college characteristics of the student, such as high school academic attributes. Moreover, such pre-college characteristics of first-generation students have longitudinal effects on their college persistence that vary over time. Therefore, institutional intervention to improve first-generation students' college persistence needs to target students who are at risk of departure at a certain period. For instance, the intervention can be intensified for first-generation students from the 4<sup>th</sup> quintile in class rank during the second year, while first-generation students from the 2<sup>nd</sup> quintile in class rank need to be approached more carefully during their third year.

Additionally, first-generation students were less likely to complete four-year degree programs in a timely manner. First-generation students with parents of some college education were slightly more likely to graduate in a timely manner than first-generation students whose parents never attended college. However, as observed in the findings from the attrition analysis in this study, the impact of high school academic attributes was also pivotal in projecting the odds of timely college graduation among first-generation students. Thus, it becomes important for us to be aware of diverse pre-college characteristics that exist within the group of first-generation students, and prolonging effects of these pre-college characteristics on their time-to-degree behavior.

**Judge, Sharon, Puckett, K. and Bell, S.M. (2006).** Closing the digital divide: An update from the Early Childhood Longitudinal Study. *The Journal of Education Research*, 100(1), 52-60.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of the Study**

The purpose of this study was to examine the progress towards equitable technology access and use over children's first four years of school, from the start of kindergarten to the end of third grade.

### **Study Design and Methods**

The sample consisted of 8,283 children in their fourth year of school. The criteria used to define higher poverty and lower poverty schools are the following: (a) higher poverty schools have 50% or more of the total school enrollment eligible for free and reduced lunch and (b) lower poverty schools have less than 50% of the total school enrollment eligible for free and reduced lunch. Of this sample, 63.1% attended lower poverty schools ( $n = 5,230$ ) and 36.9% attended higher poverty schools ( $n = 3,053$ ). Data are collected from adaptive, individually-administered child assessments, parent interviews, and teacher and school administrator questionnaires.

### **Findings**

Higher poverty schools had significantly more instructional computers and a smaller ratio of children to computers during third grade compared to lower poverty schools. However, children attending lower poverty schools had significantly more access to home computers over the first four years of school. Children's use of computers during third grade differed by school poverty status. Results indicate that access to and use of a home computer, computer area in classrooms, frequent use of Internet, proficiency in computer use, and lower poverty school status were positively correlated with academic achievement. In contrast, frequent use of software for reading was negatively correlated with reading achievement.

### **Policy Implications**

Data from the current sample indicate that overall access to computers and technology use is increasing and differences in technology access between higher and lower poverty schools have decreased. Even though the ratio of children to computers has decreased from kindergarten to third grade, only 60% of third-grade classrooms in higher poverty schools and 53% of classrooms in lower poverty schools had enough classroom computers to provide a ratio of at least one computer for every five students enrolled. Thus, for computers to become an integral tool for learning, further improvements are needed in both the quantity and quality of computers available in classrooms. Although equality of computer access and use has improved for all schools, a digital divide still exists in access to home computers. Much of the disparity in home computer ownership is related to family income. To truly bridge the digital divide and receive the benefits that we desire for children, attention to the human element must accompany computer access progress. Teachers need improved technology skills, an ability to integrate technology into effective instruction, and a belief system that supports high expectations for all students.

**Kainz, Kirsten, and Vernon-Feagans, Lynne (2007).** The ecology of reading development for children in poverty. *The Elementary School Journal*, 107(5), 407-428.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of study**

The major purpose of this study was to investigate the aspects of classrooms and schools that are associated with children's reading performance above and beyond family characteristics and children's initial reading skills at kindergarten entry.

### **Study design and methods**

**Analytic Sample.** The analytic sample included 1,913 children from the ECLS-K: from families with incomes below 200% of the poverty threshold as their children entered kindergarten; who enrolled in kindergarten for the first time in 1998; who progressed through third grade in the same school; who performed their assessments in English; and who did not have an IEP on record at kindergarten.

**Instrumentation.** Data for this project were taken from the direct child assessment and parent, teacher, and school administrator responses to interviews and questionnaires. Children's reading skills were measured at the beginning and end of kindergarten, the end of first grade, and the end of third grade.

**Analytic Method.** Latent growth models provided a descriptive framework to examine children's reading development from kindergarten to third grade. Two contrasting growth models estimated 1) the child and family characteristics associated with children's reading skills as they transitioned to kindergarten and their rates of reading development through third grade, and 2) additional variation in child reading outcomes associated with aspects of classrooms and schools.

### **Findings**

Characteristics of children and their families were associated more frequently with children's reading skills at kindergarten entry than with their reading development through third grade. One notable exception was that girls made more growth in reading between kindergarten and first grade than boys did. Characteristics of classrooms and schools were associated with enhanced and constrained reading performance at specific time points along the trajectory. Full day kindergarten was associated with enhanced reading performance at the end of kindergarten. Comprehensive literacy instruction (as opposed to primarily phonics or whole language) was associated with enhanced reading performance in kindergarten and first grade. Increases in the number of students reading below grade level in a kindergarten class were associated with constrained reading performance at the end of kindergarten, and increases in the number of students reading below grade level in first grade were associated with constrained performance in first and third grades. Minority segregation (minority composition 75% or greater) was associated with constrained reading performance at kindergarten, first, and third grades, but there was no evidence that poverty segregation was significantly associated with performance above and beyond other variables in the model.

### **Policy implications**

Current reading policy emphasizes the amount and nature of instruction children receive in the early grades. These findings indicate that school and classroom composition features are associated with reading performance above and beyond instruction.

**Kim, Dongbin.** (2007). Multilevel analysis of the effect of loans on students' degree attainment: Differences by student and institutional characteristics. *Harvard Educational Review*, 177(1), 64-100.

**Data Sources:** Beginning Postsecondary Student (BPS) survey data in 1995-1996 and 2000-2001

### **Purpose of the Study**

This study examined whether the relationship between undergraduate debt and degree attainment is different for students with different parental income levels or racial/ethnic backgrounds, and for students attending different types of higher education institutions.

### **Study Design and Methods**

Given the nested structures of the data -- students are nested within the institutions, this study used multilevel statistical framework, namely, hierarchical generalized linear model.

### **Findings**

This study found that students with higher student loan debt in their first year of college are less likely than those with lower debt levels to obtain a degree within five years. This study also found that the effect of first-year debt is greater for low-income and African American students than for other students. Controlling for a range of individual and institutional characteristics, the research findings indicate that an increase in first-year loan amounts is associated with a decrease in a low-income student's probability of degree completion, and with a decrease in the probability of African American students' degree completion.

### **Policy Implications**

The findings suggest that students' increased reliance on loans for financial aid may widen the income and racial/ethnic gaps in degree completion, despite the fact that a primary goal of financial aid is to narrow those gaps. Therefore, financial aid policymakers should consider that the current emphasis in financial aid policy -- increasing reliance on loans -- may have been widening the gap in degree-completion rates by income or race.

**Klugman, Joshua, and Jun Xu. (2008). Racial differences in public confidence in education: 1974-2002. *Social Science Quarterly* 89(1): 155-176.**

**Data Sources:** General Social Surveys (1974-2002)

**Purpose of the Study**

Examines the black-white gap in confidence in education in the United States and how the gap has changed over time.

**Study Design and Methods**

We used ordinal logit regression on cross-sectional panels of the GSS (a nationwide representative sample of noninstitutionalized American adults) to analyze how much trust people place in the institution of education.

**Findings**

Whites have less confidence in education, partly because whites tend to have higher levels of education, income, and conservatism, and are more likely to be affiliated with the Republican Party and evangelical denominations. The black-white gap is largest at lower levels of education, and disappears among college graduates. The gap shrinks during Republican control of the presidency in the United States, and widens during Democratic control. In other words: The black-white gap in confidence in education is not due solely to individual factors, but also to the larger political context and to the groups' different relationships to educational institutions.

**Policy Implications**

Political scientists (e.g. Jeffrey Henig, Marion Orr, and Clarence Stone) believe that civic involvement is necessary to successfully reform schools in urban areas serving students from low-income families. To the extent that blacks trust educational leaders to undertake this reform—and our results suggest they do—their involvement could be suppressed, depriving schools of the civic involvement they need to succeed.

**Kurlaender, Michal.** (2006). Choosing community college: Factors affecting Latino college choice. *New Directions for Community Colleges*, 133, 7-16.

**Data Sources:** National Educational Longitudinal Study of 1998 (NELS:88), base-year through the fourth follow-up in 2000.

### **Purpose of the Study**

The study explores four potential explanations for the differential rates of community college entry by race: (1) socioeconomic factors; (2) degree intention; (3) prior academic achievement and preparation; and (4) differences among state postsecondary structures.

### **Study Design and Methods**

The study employs a multivariate analysis utilizing the NELS:88 fourth follow-up data to explore students' postsecondary entry as a function of a variety of observable characteristics. Logistic regression analysis is used to investigate the relationship between type of postsecondary destination (community college versus four-year) and race, controlling for a variety of individual characteristics. Although analyses adjust for differences among people who choose to attend community colleges versus four-year institutions, a host of unobservable characteristics may lead some students to choose one type of institution over another. Therefore results must be interpreted as providing descriptive, rather than causal, evidence of the extent to which the choice to attend a community college rather than a four-year institution varies by race among individuals from similar socioeconomic and educational backgrounds.

### **Findings**

Latinos are more likely to enroll in community colleges than four-year institutions, and this difference persists even when other factors are held constant, and when comparing Latinos to both whites and African Americans. Specifically, Latino college students are more likely than their white peers to be financially disadvantaged, however, Latino students are more likely to attend a community college rather than a four-year institution than are African American or white college students from similar socioeconomic backgrounds. When compared to white and African American students with similar degree objective and levels of academic achievement, Latinos' probability of enrolling in a community college rather than a four-year institution is consistently higher. Finally, Latinos are often concentrated in states where community colleges are an integral part of the higher education system; however results indicate that even when controlling for state differences, Latino students are still more likely than their white and African American counterparts to choose a community college over a four-year institution.

### **Policy Implications**

Today's college students often face a complex set of postsecondary schooling choices. This study provides insight into several possible explanations for the differential rates of community college entry by race. Results suggest that policymakers must look beyond traditional explanations, such as degree intent, weak academic preparation, or limited financial resources to identify the factors that lead Latino youth, in particular, to choose community colleges over four-year postsecondary institutions.

**Liu, Xiaofeng.** (2007). The effect of teacher influence at school on first-year teacher attrition: A multilevel analysis of the Schools and Staffing Survey for 1999-2000. *Educational Research and Evaluation*, 13, 1-16.

**Data Source:** Schools and Staffing Survey (SASS) for 1999-2000

**Purpose of the Study**

This paper studied the effect of perceived teacher influence over school policy on first-year teacher attrition.

**Study Design and Methods**

Data came from the National Center for Education Statistics' Schools and Staffing Survey 1999 – 2000 and Teacher Follow-up Survey 2000 – 2001. First-year teacher status and teacher influence over school policy were related to teachers' odds of leaving the teaching profession in a weighted hierarchical generalized linear model.

**Findings**

First-year teachers stand a higher risk of leaving the teaching profession than experienced teachers, and strong teacher influence over school policy can mitigate first-year teachers' propensity to leave the teaching profession.

**Policy Implications**

Teacher influence over school policy at school can mitigate first-year teachers' propensity to leave the teaching profession. The findings support the idea of more teacher participation in school decision-making.

**Lloyd, Kim M.,** Leicht, Kevin T., and Sullivan, Teresa A. (2008). Minority educational aspirations, expectations, and application under the Texas Top Ten Percent Law. *Social Forces* 86:1105-1137.

**Data Sources:** Texas Higher Education Opportunity Project (Wave 1), National Center for Education Statistics, Texas Education Agency.

### **Purpose of the Study**

The Supreme Court in the recent *Grutter* and *Gratz* decisions require that in order to practice affirmative action universities must demonstrate that they have given serious consideration to race-neutral means of admission, of which the most common are the percent plans. After the 5th Circuit Court's *Hopwood* (1996) ruling banned the use of race or ethnicity in college admissions decisions, the Texas legislature passed the Top Ten 10% Law guaranteeing automatic admission to any Texas public college or university for seniors who graduate in the top decile of their high school class. The purpose of this study is to ascertain whether and how the Texas Top 10% Law affects the educational aspirations and expectations of graduating seniors, as well as their application to college.

### **Study Design and Methods**

Hierarchical generalized linear models are used to analyze data on a representative sample of seniors (N = 12,029) enrolled in 96 Texas public high schools in the spring of 2002. The authors focus on (a) students' knowledge of the Top 10% Law net of (b) the effects of students' perceptions of parental and peer support – on college aspirations, expectations, and actual college application.

### **Findings**

Knowledge of a percent plan plays an important role in raising the sights of students who might not otherwise consider college. This effect is particularly pronounced for minority students, although peer, family and high school context play pivotal roles, particularly for Hispanic seniors. This analysis provides some of the first systematic evidence of how percent plans influence students' decisions to pursue higher education. By strongly reducing the uncertainty about applying to college, at least for the top decile of the senior high school class, the Top 10% Law may improve diversity in colleges simply because a broader range of students becomes motivated to apply.

### **Policy Implications**

The policy implications of this analysis resides in the high stakes legal challenges to the constitutionality of affirmative action as interpreted by the Supreme Court's *Bakke* decision. Percent plans have been proposed as an alternative to race-sensitive admission criteria yet prior to this study there has been no empirical evidence that such plans actually influence college aspirations, expectations, or application to college. This study demonstrates that percent plans increase minority students' college aspirations, expectations, and applications to college.

**Lutz, Amy (2006).** Spanish maintenance among English-speaking Latino youth: A look at the role of individual, social and demographic characteristics. *Social Forces*. 84(3), 1417-1433.

**Data Source:** The National Education Longitudinal Study (NELS:88).

### **Purpose of the Study**

This paper investigates the effects of individual, family, social, and demographic characteristics on the maintenance of Spanish among English-speaking Latino youth.

### **Study Design and Methods**

A sample of English-speaking Latino children was selected from the eighth-grade NELS data to investigate the maintenance and loss of Spanish oral proficiency among those who speak English well. The analysis focuses on the production of bilingualism by examining the individual, social, and demographic characteristics associated with the maintenance of high-level oral proficiency in Spanish among English-speaking Latino youth. Ordered logit models were estimated as the dependent variable is based on ordinal-level data (Spanish oral proficiency was coded as well, not very well, and not at all). The ordered models were estimated in STATA using the *svy* ologit procedure. In this case the models estimate the log odds of being in the higher level Spanish-speaking proficiency categories relative to the lowest category (not at all).

### **Findings**

This research finds effects of generation, gender, race, parent's English proficiency, single-parent status, parental income, and neighborhood concentration of co-ethnics as well as combined effects of race and gender on Spanish oral proficiency. The effects of generation suggest that parents' nativity is more important than the child's in predicting high levels of Spanish-speaking proficiency. Family, school, and community contexts are also important in terms of reinforcing Spanish use and creating opportunities to speak Spanish. Single parents may have a more difficult time resisting the linguistic Anglicization of their children, and maintaining Spanish at home than two-parent families. As income rises, the likelihood of speaking Spanish well decreases, perhaps reflecting increased entrée into American educational, social, and economic spaces, and decreased participation in ethnic institutions. However, income may operate differently across ethnic lines, such that high income increases Spanish proficiency for Cuban youth, who tend to be concentrated in an ethnic enclave that offers incentives to maintain Spanish in social, scholastic, and professional environments. In general, those who live in an environment with other coethnics are also more likely to have higher Spanish-speaking proficiency, as seen by the effects of percent Hispanic in the neighborhood. Girls are also more likely to speak Spanish well than boys. Language skills may reflect greater interaction at home between parents and girls. In this sense maintenance and loss of Spanish proficiency appears to be segmented by gender, potentially reflecting different gendered language environments, opportunities, and repertoires. Racial identity also plays a role in Spanish maintenance. Males who identify racially as black are significantly less likely to speak Spanish than males who identify as white, while females who identify as racially "other" as more likely to speak Spanish well. Racial identification may be linked to the students' feelings about integration into the U.S. society with its notion of a racial binary. The segmented assimilation framework would suggest that black Latino males are assimilating into African American cultural environments, including decreased use of (and therefore decreased proficiency in) Spanish. The gender-race experience theory suggests that the combined effect of racial identity and gender is an indication that the segmentation of linguistic assimilation across gender and race likely reflects language experiences, opportunities to speak Spanish, and access to the domains in which Spanish is spoken. In this way, race and gender may operate to structure the social context of linguistic relations.

### **Policy Implications**

These results appear to indicate that language proficiencies in Spanish reflect social and demographic contexts that allow for greater or lesser exposure to Spanish use within the United States; it appears that many of the social and demographic factors associated with Spanish maintenance are important in that they structure the opportunities for interaction in Spanish and the domains in which Spanish is used. Effects of generation, residence in concentration with coethnics, and income on speaking Spanish well appear to follow the theoretical trajectory of the assimilation perspective whereby language accommodation is part of a larger process of shedding of ethnic distinction and integrating with the larger society. Latino children are losing Spanish over generations and as their families gain social mobility. Yet, the picture is also a somewhat nuanced one as the results indicate that Spanish-speaking proficiency is also significantly structured by gender and race.

**McCoach, D. Betsy, O'Connell, A.A., Reiss, S.M., and Levitt, H. (2006).** Growing readers: A hierarchical linear model of children's reading growth over the first two years of school. *Journal of Educational Psychology, 98*, 14-28.

**Data Source:** The first four waves of data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K).

### **Purpose of the Study**

To determine if reading achievement at the end of first grade is primarily determined by reading abilities at the beginning of kindergarten or by individual- and school-level differences in growth rates over the first 2 years of school. Also examined whether these differences existed prior to students' entering school as well as whether the reading gap widens or narrows during the first two years of school.

### **Study Design and Methods**

A sample consisted of 8,089 students from 657 schools measured at a total of 26,255 time points over the course of four waves. Students were measured in the fall and spring of both kindergarten and first grade. Due to missing data, some students were eliminated from the analysis, which caused the remaining sample to not be representative of American kindergarteners. Various reading assessments were administered to each child individually using a two-step adaptive process. Parent, student, and school variables were assessed through surveys. The analysis utilized a piecewise three-level hierarchical linear model of student reading growth over the first 2 years of school.

### **Findings**

On average, students make much greater reading gains in 1<sup>st</sup> grade than they do in kindergarten. First-grade monthly reading growth averages 2.65 points per month, whereas kindergartens make approximately 1.67 points of reading growth per month. Student-level variables (including socioeconomic status, ethnicity, kindergarten entry age, and gender) were better able to explain between-schools variability in students' initial reading scores and students' reading growth than school-level variables (percentage of minority students, percentage of free-lunch students, and sector). Although socioeconomic status had a minimal impact on reading growth while school was in session, it had a larger impact on summer reading growth.

### **Policy Implications**

The study suggests that low socioeconomic status students would benefit from early intervention programs in reading. Because low-SES students tend to have lower initial reading skills, preschool and family literacy programs for these students are essential. Research has shown that programs of this type are beneficial, with longer-lasting programs demonstrating greater effectiveness. In addition, programs intended to lessen the gap in reading achievement should focus on noninstructional periods, primarily during summer vacations and prior to kindergarten entry.

**Melguizo, Tatiana** (2008). Quality matters: Assessing the impact of selective institutions on minority college completion rates. *Research in Higher Education*, 49(3), 214-236.

**Data Sources:** National Education Longitudinal Study (NELS:88/2000) high school senior class of 1992. Information on selectivity of institution attended was added from Barron's Profiles of American Colleges and Universities.

### **Purpose of the Study**

The main objective of the study is to identify whether the relatively higher graduation rates of students at selective institutions are the result of specific characteristics of these institutions, or whether they are mainly the result of enrolling students who would graduate regardless of their institution's characteristics. Of primary interest is the impact of selective institutions on graduation rates of minority students. The following two questions guide this inquiry: (1) Are students, and in particular, minority students, more likely to complete college if they attend selective versus non-selective postsecondary institutions? (2) Are students, and in particular, minorities, more likely to graduate from selective institutions versus non-selective institutions after correcting for sorting of better-prepared students into specific types of institutions?

### **Study Design and Methods**

This study uses statistical methods developed mostly by economists (Dale & Krueger<sup>4</sup>, Kane<sup>5</sup>) to address the sorting or non-random selection of students into colleges. In other words, a much higher percentage of better-prepared students attend more selective institutions. In addition, this study tests for differences in completion for students attending institutions of various degrees of selectivity (i.e., most and highly selective versus non-selective, very selective versus non-selective and selective versus non-selective).

### **Findings**

The results suggest that students who attend the most selective institutions and highly selective institutions, as opposed to non-selective ones, are more likely to complete a bachelor's degree. This result holds for African American and Hispanic students. After correcting for the problem of sorting of students into specific types of institutions, the results of the models suggest that the coefficient of selective institutions might have a small upward bias. The positive effect of selective institutions on attainment suggests that they have the potential to increase the graduation rates of minorities while narrowing the persistent college completion gap.

### **Policy Implications**

The findings of this study are relevant to students and their parents, researchers, administrators and policy makers. A student's failure to complete a college degree has negative repercussions at the individual, institutional and societal levels. At the individual level, only students who persist and complete their education receive the full economic payoff of a college education. Individuals who attained a bachelor's degree had a median annual income in 2003 of over \$50,000 (2004 constant dollars) compared to about \$38,000 (2004 constant dollars) for those who completed some years of college). At the institutional level, college completion affects institutional rankings. Retention and graduation rates account for 25 percent of an undergraduate institution's ranking in *U.S. News and World Report*. For public institutions, college completion rates can also influence state appropriations. At the societal level, the country benefits from higher graduation rates since college graduates have higher earnings, thus providing greater tax revenues.

<sup>4</sup> Dale, S.B., & Krueger, A.B. (1999). Estimating the payoff to attending a more selective college: An application of selection on observables and un-observables (NBER Working Paper, No. W7322).

<sup>5</sup> Kane, T. (1998). Racial and ethnic preferences in college admissions. In: C. Jencks & M. Phillips (Eds.), *The Black-White test score gap*. Washington, D.C: Brookings Institution Press.

**Melguizo, Tatiana (2009).** Are community colleges an alternative path for Hispanic students to attain a bachelor's degree? *Teachers College Record*, 111 (1).

**Data Sources:** High School and Beyond Sophomore sample (HS&B/So) high school senior class of 1982 and the National Education Longitudinal Study (NELS:88/2000) high school senior class of 1992

### **Purpose of the Study**

This study contributes to the long-standing debate over whether community colleges democratize education or whether they divert students from attaining a bachelor's degree. This study has four interrelated goals: 1) to describe and compare the characteristics of Hispanic transfer students in the 1980s and the 1990s; 2) to conceptualize and test a model of academic persistence in college for "traditional" Hispanic community college transfer students; 3) to assess the impact that attending a community college has on students' probability of attaining a bachelor's degree; and 4) to predict and identify whether individual or institutional factors contributed to the college completion rates of Hispanic students. The following research questions guide this inquiry. 1) Were Hispanic transfers as likely to attain a degree as Hispanic rising juniors in the early 1980s and 1990s? 2) What factors explain the differences in degree attainment between the two cohorts of Hispanic students?

### **Study Design and Methods**

Regression analysis is used to identify the effect of being a transfer student on B.A. attainment, after controlling for individual characteristics and institutional characteristics of the community college. Simulation analysis is used to identify the factors that affected B.A. attainment in the 1980s, which are used to predict B.A. rates a decade later.

### **Findings**

The results show that the negative impact of being a transfer student in the 1980s had disappeared within a decade. The results suggest that the relatively lower attainment rate of Hispanic transfer students is the result of individual characteristics and lack of academic preparation, rather than institutional characteristics.

### **Policy Implications**

While community colleges have the potential to be an alternative path towards a B.A., until transfer rates increase, Hispanics may be better off beginning their college education at a four-year institution. There are a number of policies at the state and institutional levels that can be implemented to facilitate transfers. At the state level, there is a need to create or strengthen articulation agreements. In addition, states can offer dual enrollment or automatic admission to state colleges for students on the transfer track. There is also some evidence that a higher number of students who take orientation courses and receive counseling successfully transfer. In states such as California and Florida with substantial numbers of Hispanics, there should be funds allocated to orientation programs and additional counseling. Hispanic students can benefit from applying for federal and state financial aid that could enable them to attend full time, increasing their probability of success. At the institutional level, there are also a number of programs that community colleges can create to facilitate transfer. There is evidence that if students are part of a cohort with similar educational aspirations or if they belong to a learning community, this might also help them persist.

**Mello, Zena R.** (2008). Gender variation in developmental trajectories of educational and occupational expectations and attainment from adolescence to adulthood. *Developmental Psychology*, 44, 1069-1080.

**Data Source:** National Education Longitudinal Study (NELS:88/2000 Public use data files).

### **Purpose of the Study**

This longitudinal study examined gender variation in developmental trajectories of educational and occupational expectations from adolescence to adulthood and in connection to corresponding adult attainment to illuminate how males and females vary in schooling and work outcomes.

### **Study Design and Methods**

Hierarchical Linear Modeling was used to generate developmental trajectories of educational and occupational expectations from age 14 to 26. A series of three-level growth curve models were produced. Level 1 included repeated observations of expectations, from age 14 to age 26. Repeated observations included 5 waves of data that corresponded to ages 14, 16, 18, 20, and 26, respectively. Level 2 included gender, racial/ethnic group, and academic achievement control variables. Level 3 included participants' schools to account for the sampling of participants within schools.

### **Findings**

Males and females had similar developmental trajectories of educational expectations from adolescence to adulthood with the sample average expecting to attend college. Probabilities of expecting a professional occupation were lower for males than females. Adolescent educational and occupational expectations predicted corresponding attainment in adulthood, although the relationship varied by gender. Males who reported high occupational expectations in adolescence had higher occupational attainment in adulthood compared to males with low occupational expectations, whereas females' adult occupational attainment did not vary by their adolescent occupational expectations.

### **Policy Implications**

This study supports attention toward the decline in educational attainment of males, although it is important to continue research on gender disparities in attainment, given that there are still large gender gaps in the *types* of occupations that are pursued and/or obtained between females and males.

**Mello, Zena R.** (In press). Racial/ethnic group and socioeconomic status variation in educational and occupational expectations from adolescence to adulthood. *Journal of Applied Developmental Psychology*.

**Data Source:** National Education Longitudinal Study (NELS:88/2000 Public use data files.)

### **Purpose of the Study**

The purpose of this study was to examine educational and occupational expectations from adolescence to adulthood across racial/ethnic and SES groups with longitudinal analyses of national data spanning 12 years from ages 14 to 26.

### **Study Design and Methods**

Hierarchical Linear Modeling was used for statistical analyses. For this study, three-level growth curve models were generated. Level 1 included repeated observations of educational and occupational expectations, estimated in separate models, from age 14 to age 26; Level 2 included racial/ethnic group, SES, and control variables; Level 3 included participants' schools to account for the sampling of individuals within schools. Linear multi-level modeling was used for analyses on educational expectations given that it was a continuous variable. In contrast, logistic multi-level modeling was used with occupational expectations because it was a dichotomous variable. Population-average estimates were reported. Logistic coefficients were log odds and were transformed to odds ratio and probabilities.

### **Findings**

Analyses yielded several findings: (a) African Americans reported the highest educational expectations, followed by Hispanic and Asian American/Pacific Islanders, European Americans, and American Indian/Alaskan Natives, (b) African Americans and Asian American/Pacific Islanders reported the highest occupational expectations, followed by Hispanic, American Indian/Alaskan Natives, and European Americans, (c) racial/ethnic group patterns persisted from adolescence to adulthood, and (d) SES positively predicted expectations.

### **Policy Implications**

This study highlights the importance of considering SES when examining variation in educational/occupational expectations across racial/ethnic groups. Future research is needed that addresses race/ethnicity and attainment. An important area involves the examination of factors that may *explain* racial/ethnic group variation in expectations. This area of research would also greatly benefit from studies that connect expectations with *actual* attainment in adulthood.

**Meyers, Jason L., and Beretvas, S.N. (2006).** The impact of the inappropriate modeling of cross-classified data structures. *Multivariate Behavioral Research, 41(4), 473-497*

**Data Source:** National Educational Longitudinal Study of 1988 (NELS:88)

### **Purpose of the Study**

This investigation was comprised of two studies aimed at evaluating the impact of different ways of modeling cross-classified data. Cross-classified data are similar to hierarchical data; however the structure is not as pure. For example, students in a given neighborhood typically attend several different schools, and students at a given school typically come from a variety of neighborhoods. In situations such as this, students are nested within schools and within neighborhoods, yet schools cannot be considered as nested within neighborhoods (nor vice-versa). Students are cross-classified by school and neighborhood. Cross-classified random effects modeling (CCREM) methods exist for this type of data, but they are rarely used.

The first study used the NELS: 88 data set to compare parameter estimates resulting from a CCREM analysis (correct modeling) and two hierarchical linear modeling (HLM; incorrect modeling) analyses. A simulation study designed to investigate the impact of correctly modeling versus neglecting to model cross-classified data under a variety of conditions was conducted as a follow-up.

### **Study Design and Methods**

For the real data analysis, a tenth grade test score was modeled as a function of the student's gender, the population of the student's middle school, and the percentage of the students in the free or reduced lunch program at the high school the student attended. Three models were fit and the results compared.

The simulation study was set up to mimic the real data. In this study, several conditions were manipulated: the correlation between the middle school and high school residuals, the number of middle schools feeding into each high school, the number of middle schools and high schools, the average number of students at each middle school, and the proportion of the total variance between the middle school and high schools. 1,000 replications were conducted. A CCREM and an HLM were fit to the data and the models were compared in terms of fixed and random effect estimates, standard error estimates, parameter estimate bias, and model fit.

### **Findings**

Study findings indicated that using HLM resulted in underestimated standard errors for the variables modeled incorrectly. These underestimated standard errors were impacted by the degree of relationship between the middle school and high schools, the variance attributable to middle schools (the incorrectly modeled factor) and the size of the middle school. Estimates of the variance between students and associated standard error estimates were also affected by using HLM instead of CCREM. The more variance attributable to the ignored cross-classified factor (the middle school), the more positive bias was introduced to the student level variance estimate. In addition, the standard error estimates became negatively biased. Model mis-specification also resulted in an over-estimation of the variance between the remaining modeled, cross-classified factor (high schools). The correct model (CCREM) was identified more frequently for the conditions with more variance between middle and high schools and with no relationship between middle schools and high schools.

### **Policy Implications**

With the recent passage of NCLB, the need for appropriate techniques to model cross-classified structures has increased. Schools that do not make adequate yearly progress towards state-wide goals become, over time, subject to improvement, corrective action and other measures aimed towards getting them back on course towards reaching state-defined standards. It is essential that appropriate modeling methods be used to assess this progress over time.

In addition, local education agencies are required to give students who attend underperforming schools the opportunity to attend a "better" school within the school district. As more and more students begin to transfer between schools, the evaluation of institutional effectiveness needs to be enhanced. A result of NCLB is that there are more students attending schools outside of their neighborhood and more students changing schools over time. Use of CCREM provides a flexible modeling technique that is well matched to these cross-classified data structures, so it is imperative that the performance of these methods be well understood and that they be adopted by researchers.

**Mollborn, Stefanie.** (2007). Making the best of a bad situation: Material resources and teenage parenthood. *Journal of Marriage and Family*, 69, 92-104.  
Summarized in *Perspectives on Sexual and Reproductive Health* 39(3), 184-5, 2007, as Teenage parents' educational attainment is affected more by available resources than by parenthood.

**Data Source:** National Education Longitudinal Study of 1988-2000 (NELS:88)

### **Purpose of the Study**

This study examines the influence of material resources available after the birth of a child on teenage mothers' and teenage fathers' educational attainment at age 26. A lack of resources such as housing, child care, and financial support is hypothesized to explain why teenage parenthood has a negative effect on educational attainment.

### **Study Design and Methods**

Regression analyses use nationally representative data from the 1988 - 2000 National Education Longitudinal Study ( $N = 8,432$ ,  $n = 356$  teenage parents). Separate analyses for women and men begin with estimating the total effect of being a teenage parent on years of educational attainment at age 26, then re-estimate this effect controlling for factors influencing selection into teenage parenthood, and finally add resource measures. Formal tests examine whether material resources mediate the effect of teenage parenthood on educational attainment for each gender.

### **Findings**

This study shows that teenage mothers' and fathers' educational disadvantage compared to their childless peers begins even before they have children because of worse socioeconomic and educational starting points in eighth grade. Teenage parents have an additional disadvantage over most childless adolescents because of their much greater need for material resources that far outstrips the available reserves of most teenagers. This study hypothesizes that material resources explain why there is an educational penalty for becoming a teenage parent. Results support the hypothesis among men and provide partial support among women. For the men in this sample, being a teenage parent has no significant effect on educational attainment once the resources available after becoming a parent are controlled. The effect of teenage parenthood controlling for resource availability is greatly reduced but still significant for women, and further analysis suggests that child care resources may explain even more of the educational penalty paid by teen mothers. Hypothetical cases illustrate that available material resources matter more than teenage parenthood for understanding teenage moms' and dads' educational attainment.

### **Policy Implications**

Assuming there is a causal link between becoming a teenage parent and educational attainment at least eight years later, this study's findings offer a message of hope for policymakers. Although most teenage parents do suffer a long-term educational penalty for having children, this need not be the case. If they are provided with enough material resources, contemporary teenage parents may be able to go quite far in school, despite their initial socioeconomic and educational disadvantage. Traditional ideas suggest that teenage parents should get married, the mothers should become primary caretakers of their children, and the fathers should work to support their children financially. Evidence from this study suggests that these actions may actually decrease adolescents' long-term educational attainment. Financial aid packages similar to those offered for higher education may be a way to provide financial resources and to reduce the need for paid work among teenage parents. Adolescents, especially teenage fathers, could be encouraged to continue to live with their parent or parents instead of moving out on their own or with a spouse. Teenage mothers could be encouraged to share the care of their child with others in order to increase their educational attainment. Generally, recommendations for policies related to teenage parenthood should consider the implications for educational attainment.

**Morgan, Stephen L.** and Jennifer J. Todd. (2008). A diagnostic routine for the detection of consequential heterogeneity of causal effects. *Sociological Methodology*, 38(1), 231-281.

**Data Sources:** Education Longitudinal Study (ELS): 2002 base-year and 2004 follow-up waves

### **Purpose of the Study**

The study has two goals:

1. **Methodological:** Develop a simple nine-step routine to determine whether or not the implicit weighting of regression estimators has generated a misleading estimate of the average causal effect.
2. **Substantive:** Provide a demonstration of the routine, using data from the 2002 and 2004 waves of the Education Longitudinal Study, for a contested but important causal effect in educational research: the effect of Catholic schooling, in comparison to public schooling, on the achievement of high school students in the United States.

### **Study Design and Methods**

In addition to methodological elaboration, the Catholic school effect on mathematics achievement in the 10<sup>th</sup> and 12<sup>th</sup> grade (and on growth between the 10<sup>th</sup> and 12<sup>th</sup> grade) is estimated in three different ways: (1) standard regression modeling, (2) propensity-score based weighting estimators of the Catholic school effect for those students who have characteristics similar to those who attend Catholic schools, and (3) propensity-score based weighting estimators of the Catholic school effect for those students who have characteristics similar to those who attend public schools.

### **Findings**

Consistent with past research from the 1980s and 1990s, the Catholic school effect appears to remain largest in 2002 and 2004 for those Catholic school students from the most disadvantaged social origins (relatively low-SES, non-white students). There are three possible explanations for this effect:

1. *The common school explanation:* Catholic schools distribute opportunities for learning, such as advanced course-taking, more equitably than do public schools.
2. *The better alternatives explanation:* Catholic schooling is relatively more beneficial for those students who have poor public schooling alternatives, in particular those students from families who are not able to afford to live in school districts with the best public schools.
3. *The binding constraint explanation:* Differential responsiveness exists to accurate perceptions of students' likely benefits from Catholic schooling. For low-income families for whom tuition at a Catholic school represents a genuine financial sacrifice, the only students who enroll in Catholic schools are those students who are especially likely to benefit from enrolling. In contrast, among high-income families for whom tuition is not a substantial financial sacrifice, even students who are not likely to benefit from attending Catholic schooling instead of public schooling may enroll in Catholic schools.

The authors are unable to distinguish between these three possible explanations in this article. The first two are the most common explanations in the literature. However, the third explanation must be true to some extent. Thus, the support for the first two explanations is not as strong as past researchers claim.

### **Policy Implications**

Catholic schooling remains an important piece of the US educational system, and it is not an institution that serves only high income Catholic families. Catholic schooling is an important alternative to public schooling for many students in the nation's most challenged public school districts. At worst, it is comparable to public schooling in these areas. At best, it serves as an opportunity that benefits ambitious youth whose families are willing to make additional sacrifices to send their children to Catholic schooling.

**Nickerson, Amanda B. and Martens, Matthew P. (2008).** School violence: Associations with control, security/enforcement, educational/therapeutic strategies, and demographic factors. *School Psychology Review*, 37, 228-243.

**Data Source:** School Survey of Crime and Safety (SSOCS)

### **Purpose of the Study**

The purpose of this study was to examine the extent that different approaches to school violence prevention and reduction (a) could be differentiated empirically and (b) are associated with school crime and disruption after accounting for demographic variables (e.g., SES, school size, neighborhood crime).

### **Study Design and Methods**

Secondary data analyses were conducted with four subsets of the sample of principals who completed the SSOCS. Exploratory and confirmatory factor analyses conducted with sample 1 ( $n = 426$ ) and sample 2 ( $n = 459$ ), respectively, identified four approaches to preventing and intervening with school violence labeled: Educational/Therapeutic, Control, Security/Enforcement, and Crisis Plans. Confirmatory factor analyses with sample 3 ( $n = 382$ ) validated the constructs of school crime and disruption. Hierarchical regression analyses were conducted with sample 4 ( $n = 440$ ) to assess the extent to which each of these approaches were associated with school crime or school disruption after accounting for demographic influences.

### **Findings**

Results indicated that demographic variables account for substantial variance in disruption and crime. Larger schools and those with a greater percentage of students receiving special education services reported more school crime and disruption. Location in urban areas was associated with school crime but not disruption and neighborhood crime was related to school disruption but not crime. SES did not contribute to school crime and disruption. Security/Enforcement, or strategies used to secure the environment and enforce rules (e.g., security guards, suspension), was associated with more incidents of school crime and disruption.

In contrast, both Control and Educational/Therapeutic approaches were not significantly associated with the incidence of school crime and disruption.

### **Policy Implications**

The finding that demographic characteristics accounted for much larger proportions of the variance in school crime and disruption than did any of the violence prevention or intervention approaches highlights the fact that school-based interventions may only affect violence in a limited way, underscoring the need for school-community partnerships to tackle this complex and multifaceted issue. Policy makers may consider identifying schools with characteristics associated with crime and disruption (e.g., larger schools, schools with large percentages of students with special education needs) to examine ways that the climate could be changed to reduce these incidents, such as creating “houses” within schools, increasing supervision, and ensuring that students with special needs are provided with individualized educational and mental health supports. Findings regarding the significant positive association between Security/Enforcement and school crime and disruption suggest that advocates of “get tough” approaches should critically examine the effects of these practices.

**Nickerson, Amanda B.** and Spears, W. H. (2007). Influences on authoritarian and educational/therapeutic approaches to school violence prevention. *Journal of School Violence*, 6, 3-31.

**Data Source:** School Survey of Crime and Safety (SSOCS)

### **Purpose of the Study**

The purpose of this study was to (a) document the extent to which schools use selected practices that can be conceptualized as representing an authoritarian or educational/therapeutic approach and (b) assess the extent to which school size, socioeconomic status (SES), neighborhood crime, location, level, and number of full-time equivalent (FTE) mental health professionals predicted schools' implementation of selected authoritarian and educational/therapeutic practices.

### **Study Design and Methods**

Five experts in school crisis prevention and intervention categorized 41 school policies/practices and 17 disciplinary actions surveyed on the SSOCS as authoritarian, educational/therapeutic, or neutral. All five experts agreed that 12 items were authoritarian, 10 were therapeutic, and 4 were neutral. Frequencies of these practices were calculated. Logistic regression analyses were conducted to examine the variables that predicted schools' use of selected violence practices that clearly reflected the authoritarian or educational/therapeutic approach (based on a literature review and unanimous expert agreement) and that had sufficient variability in their use. Four separate logistic regression analyses were conducted for the authoritarian practices of (a) security used during school hours, (b) random metal detector checks, (c) outside suspension (< 1 year) with no curriculum/services provided, and (d) corporal punishment. In addition, three separate logistic regression analyses were conducted for the educational/therapeutic practices of (a) violence prevention programs, (b) student involvement in resolving conflict, and (c) training parents to deal with students' problem behaviors.

### **Findings**

Large, urban schools used both authoritarian and therapeutic approaches, such as security, violence prevention programs, and parent training. Rural schools used authoritarian practices, such as corporal punishment and suspension without services, more often than schools in other locations. Schools serving low SES students were more likely to use security, random metal detector checks, and corporal punishment, regardless of neighborhood crime levels. A greater number of mental health professionals predicted the use of violence prevention programs, student involvement in resolving problems, and parent training.

### **Policy Implications**

Several practices that are not recommended, such as corporal punishment and suspension without services, continue to be used by schools. In addition, students from low SES backgrounds appear to be subject to more punitive discipline practices. Policy makers should address this and encourage schools, particularly those in rural areas and those serving students from economically disadvantaged backgrounds, to use more evidence-based and proactive procedures to reduce violence. Better mental health professional-to-student ratios predicted the use of violence prevention programs, student involvement in resolving conflict, and parent training; these data should be used to advocate for the increased presence of these professionals to provide a wide variety of mental health services in schools.

**Palardy, Gregory J. (2008).** Differential school effects among low, middle, and high social class composition schools: A multilevel, multiple group latent growth curve analysis. *School Effectiveness and School Improvement*, 19 (1), 21-49.

**Data Source:** National Educational Longitudinal Study of 1988 (NELS:88), base year through second follow-up.

### **Purpose of the Study**

To examine whether school-level predictors of student learning (i.e., school effects) differ in low, middle, and high social class composition public high schools. This research problem has important policy implications as well as methodological implications.

### **Study Design and Methods**

Multilevel, multiple group latent growth curve analysis was used. This is a new and innovative model that is highly suitable for educational research using longitudinal data to compare groups (e.g., types of schools) or estimate group-level interactions.

### **Findings**

The effects of school inputs and school practices on student learning differ across the 3 subpopulations. Moreover, student learning in low social class schools is far more sensitive to school factors than in middle and high social class schools. The findings accentuate the importance of school effectiveness research that goes beyond generic “one-size-fits-all” models to examine differential effects.

### **Policy Implications**

Widespread differences in the characteristics of schools across the subpopulations, which consistently challenge the educational milieu in low social class schools, likely contribute to differential school effects, as well as to the disparity in learning rates. Yet, even after controlling for an extensive set of student background characteristics and school inputs, students attending low social class schools continued to learn at significantly slower rates. This suggests that while addressing differences in school characteristics may moderate differential school effects, the low social class school context represents a form of educational inequality that may require more drastic interventions to correct, such as redistributing students to achieve more equal student compositions across schools.

**Palardy, Gregory J.** and Rumberger, Russell W. (2008). Teacher Effectiveness in first grade: The importance of background qualifications, attitudes, and instructional practices for student learning. *Educational Evaluation and Policy Analysis*, 30 (2), 111-140.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

**Purpose of the Study**

Investigate the importance of three general aspects of teacher effects—teacher background qualifications, attitudes, and instructional practices—to reading and math achievement gains in first grade.

**Study Design and Methods**

Three-level models (student, classroom, school) using achievement gains in reading and math as outcomes. The models are designed to isolate the variation in achievement gains due to teacher effects and model that variation using three types of teacher effects. Extensive controls for student background and classroom composition were employed.

**Findings**

Compared with instructional practices, background qualifications have less robust associations with achievement gains.

**Policy Implications**

The results suggest that the No Child Left Behind Act’s “highly qualified teacher” provision, which screens teachers on the basis of their background qualifications, is insufficient for ensuring that classrooms are led by teachers who are effective in raising student achievement. To meet that objective, educational policy needs to be directed toward improving aspects of teaching, such as instructional practices and teacher attitudes.

**Powell, Brian and Cheng, Simon** (2005). Small samples, big challenges: Studying atypical family forms. *Journal of Marriage and Family*, 67, 926-935.

**Data Source:** Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of the Study**

Social scientists have witnessed a transformation in the definition of “family.” This development has been accompanied by research using national representative data. Unfortunately, research efforts in this direction are often discount for their reliance on small sizes of atypical families in their samples. In this study, the authors discuss the challenges resulting from small-subsample sizes that family and education scholars often encounter when using existing survey data to study nontraditional or less common families. To illustrate the challenges, the authors use data from the Early Childhood Longitudinal Study to examine the school performance of children from monoracial White, monoracial Asian, and Asian/White interracial families.

### **Study Design and Methods**

Using the Early Childhood Longitudinal Study, the authors conduct simulation analysis to demonstrate the utility of power analysis in determining appropriate subsample sizes and assesses solutions that scholars from other fields have proposed to partially reconcile these problems.

### **Findings**

The authors show that the difficulties in using small subsample sizes but also demonstrate that there are plausible solutions that enable scholars to more fully examine non-traditional families—and especially the educational benefits or disadvantages of living in these families.

### **Policy Implications**

Solutions to the small sample size problem can yield more robust and more empirically rigorous answers to questions about non-traditional families. These answers may well be useful in determining the best strategies to improve the education of a wide range of youths.

**Reber, Sarah.** (2005). Court-ordered desegregation: Successes and failures in integration since Brown vs. Board of Education. *Journal of Human Resources*, 40(3), 559-590.

**Data Sources:** Common Core Public School Universe, Office of Civil Rights Survey, US Census

**Purpose of the Study:\**

To determine the causal effect of court-ordered school desegregation plans on segregation and white flight and to examine what characteristics are predictive of having more or less white flight in response to desegregation.

**Study Design and Methods**

This paper uses a new methodology to assess the effects of court-ordered desegregation plans on segregation and white enrollment. The author then assesses what characteristics of districts are predictive of having more or less white flight when desegregation plans are implemented. The wide variation in the timing of implementation of desegregation plans is exploited to identify their effects.

**Findings**

Strong evidence indicates that segregation fell when districts implemented desegregation plans; plans were also associated with significant white enrollment losses that offset about one-third of the within-district reductions in segregation. White flight was particularly severe in districts with more public school districts in the same metropolitan area.

**Policy Implications**

Desegregation policies that encompass larger geographic areas (metropolitan remedies) are more effective at achieving long-term increases in exposure of non-white students to white students.

**Renzulli, Linda A.** (2006). District segregation, race legislation, and black enrollment in charter schools. *Social Science Quarterly*, 82(3), 618-637.

**Data Sources:** Schools and Staffing Survey (SASS), 1999-2000, Common Core of Data, collected data on district test scores

**Purpose of the Study**

The purpose of the study is to examine how segregation at the school level within districts and charter school legislation predict Black enrollment in local charter schools.

**Study Design and Methods**

Quantitative analyses to estimate OLS regression models of Black enrollment in charter schools on district racial segregation and race provisions in charter school legislation.

**Findings**

Results suggest that segregated school districts, those districts where Whites and Blacks are more unevenly distributed among schools, have a larger percentage of Blacks enrolled in local charter schools than districts where schools are integrated. In addition, charter schools in states that do not have a racial clause have a smaller percent of Blacks in their charter schools.

**Policy Implications**

Findings suggest that Black enrollment in charter schools is a function of district segregation and state policy. Therefore, policies that encourage better racial balance would help encourage integrated charter schools.

**Saporito, Salvatore, Chavers, J., Nixon, L., and McQuiddy, M. (2007).** From here to there: Methods of allocating data between census geography and socially meaningful areas. *Social Science Research*. 36A: 897-920.

**Data Source:** 2000 U.S. Summary File 1 Census Data;

### **Purpose of the Study**

To demonstrate how to reallocate data from census geography (such as block groups) to educational geography (such as school attendance boundaries) when the two geographic zonal systems overlap randomly.

### **Study Design and Methods**

Sociologists often need to reassign data from one set of geographic areas (called source units) to another set of geographic areas (called target units) in cases where the two zonal systems are spatially incongruent. Although geographers have developed a variety of interpolation techniques to address the challenge of reallocating data across misaligned geography, there has been limited use of these methods in educational research. As a result of the scant use of interpolation methods by researchers, the accuracy of these methods has not been assessed adequately with empirical data typically encountered by scholars studying educational issues. To address this shortcoming, the authors describe four ways of reassigning data across incompatible zonal systems and test the accuracy of each approach with two case studies. The first example reassigns racial data from block groups to school attendance boundaries for selected school systems and the second reassigns racial data from school districts to Public Use Micro Areas for the entire U.S..

### **Findings**

Findings demonstrate that census data summarizing populations living in census geography can be reallocated to other socially meaningful areas such school attendance boundaries accurately. Of the four methods explored in this study, population weighting and areal weighting were determined to be highly accurate reallocation methods.

### **Policy Implications**

This work allows educational researchers to produce highly accurate estimates of student populations living in school catchment areas. These estimates allow policy makers, school district administrators and other researchers to use GIS techniques for addressing challenges such as estimating school enrollment projections or producing estimates of students in a school who are eligible for a free or reduced-priced lunch by determining student populations living in school catchment areas.

**Saporito, Salvatore and Sohoni, Deenesh.** (2007). Mapping educational inequality: Concentrations of poverty among poor and minority students in public schools. *Social Forces*. 85(3), 1227-1254.

**Data Sources:** Common Core of Data; Private School Survey, 2000 Summary File 1 Census Data; School Attendance Boundaries.

**Purpose of the Study**

To determine how much student enrollment in charter, magnet and private schools exacerbates rates of economic segregation in local, neighborhood public schools.

**Study Design and Methods**

The authors examine high concentrations of poverty in public schools by comparing economic segregation in schools and in their corresponding attendance boundaries. To do this, poverty rates from the 2000 census are assigned to maps of school attendance boundaries for 21 of the largest school districts and linked with data enumerating the number of poor children enrolled in each school.

**Findings**

Results show that percentages of poor children in neighborhood schools is greater than in their corresponding catchment areas and this difference is greater when the majority of children living in a neighborhood are racial minorities. These patterns reflect the withdrawal of wealthier children from public schools and into private, charter and magnet schools. The result is that poor and minority children are much more concentrated in high-poverty public schools than they would be if all children attended their local schools.

**Policy Implications**

Policy-makers need to be attentive to possibility that unregulated school choice programs that publicly subsidize the ability of any student to enroll their children in non-neighborhood public schools may increase concentrations of poor students in those schools already serving the most economically distressed areas. These potential effects are most acute for minority populations.

**Saporito, Salvatore and Sohoni, Deenesh.** (2006). Coloring outside the lines: Racial segregation in public schools and their attendance boundaries. *Sociology of Education*. 79, 81-105.

**Data Sources:** Common Core of Data; Private School Survey, 2000 Summary File 1 Census Data; School Attendance Boundaries.

### **Purpose of the Study**

Scholars have debated whether students' enrollment in private schools changes levels of racial segregation across urban school districts. The authors explore this issue by comparing the actual racial composition of schools with the racial composition of school-aged children living in the corresponding attendance areas.

### **Study Design and Methods**

The study links maps of school attendance boundaries with 2000 census data, the Common Core of Data, and the Private School Survey for the 22 largest U.S. school districts using a variety of geo-statistical techniques in GIS.

### **Findings**

The results show that public schools would be less racially segregated if all children living in a school district attended their neighborhood schools. In addition, private, magnet, and charter schools contribute to overall racial segregation within many school districts. The effects are particularly striking for segregation between white and Hispanic children. Finally, a few school districts with desegregation policies have succeeded in reducing racial segregation. The analyses contribute to debates regarding recent proposals to eliminate desegregation programs while simultaneously expanding "free-market" educational reforms that promote students' mobility across public, private, and charter schools.

### **Policy Implications**

Policy-makers need to be attentive to possibility that unregulated school choice programs that publicly subsidize the ability of any student to enroll their children in non-neighborhood public schools may increase racial segregation in urban school districts. Findings also show that school district desegregation policies ameliorate the effects of private school enrollment on racial segregation in public schools.

**Stapleton, Laura M.** (2008). Variance estimation using replication methods in structural equation modeling with complex sample data. *Structural Equation Modeling*, 15, 183-210.

**Data Sources:** Monte Carlo simulation data and Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)

### **Purpose of the Study**

This manuscript discusses replication sampling variance estimation techniques that are often applied in analyses using data from complex sampling designs: Jackknife Repeated Replication, Balanced Repeated Replication and bootstrapping. These techniques are used with traditional analyses such as regression, but are currently not used with structural equation modeling (SEM) analyses. The manuscript provides an extension of these methods to SEM analyses, including a proposed adjustment to the likelihood ratio test.

### **Study Design and Methods**

The study includes a simulation design to compare the robustness of standard error estimates from JRR, BRR, and bootstrap analyses along with linearized estimates of standard errors. For the bootstrap analyses, a determination of the number of bootstrap samples to achieve stable estimates of standard errors is made. Additionally, a demonstration of the application of these methods using data from the Early Childhood Longitudinal Study is included.

### **Findings**

All variance estimation approaches worked well in the SEM framework (there was little standard error bias and chi-square test rejection rates were appropriate). For the bootstrapped standard errors, estimates were very stable within 200 replications and fairly stable within 100 replications. The demonstration indicated that very few differences in interpretation would have been made under any of the variance estimation approaches.

### **Policy Implications**

Researchers can use these estimation tools with their favorite SEM software in order to appropriately analyze data from complex sampling designs. Given that many publicly-available NCES datasets already contain Jackknife or Balanced Repeated replicate weights, this manuscript instructs researchers on how to include those weights in a structural equation modeling analysis to appropriately analyze data for proper statistical inference.

**Strunk, Katharine** and Loeb, Susanna (2007). Accountability and local control: Response to incentives with and without authority over resource generation and allocation. *Education Finance and Policy*, 2(1), 10-39.

**Data Sources:** The Schools & Staffing Survey (SASS) from 1993-4 and 1999-2000; The National Assessment of Educational Progress (NAEP); Carnoy & Loeb Accountability Index; the Common Core of Data (CCD); data from NCES *Public School Finance Programs of the U.S. and Canada: 1998-1999*; local taxing authority data from Randall Reback; David Figio's 1997 categorization of states that have imposed "tax revolt-era limits on school district;" and Murray Evans, and Schwab's (1998) classification of states' supreme court rulings on the constitutionality of school finance systems.

### **Purpose of the Study**

This study has two parts. The first explores the relationship between accountability and measures of local control, asking whether stronger accountability reforms were more likely to be implemented in states that had stronger or weaker local control and whether accountability increased or decreased this control. The second assesses the effect of accountability and control on student outcomes and asks whether accountability is more or less effective in states with greater or lesser local control. The authors define greater local control as discretion over spending, decentralization of school finance systems, and greater principal autonomy over school-level decisions, specifically regarding hiring and spending.

### **Study Design and Methods**

First, the relationship between accountability and control is analyzed. The authors first test whether states that implemented stronger accountability systems had more or less control, and then ask whether accountability changed local control, using a regression framework in which local control in 1999 is modeled as a function of local control in the early 1990s and accountability strength.

In the second part of the study, student achievement gains at the state level are estimated as a function of accountability, control and other measures found to affect student outcomes and accountability. Because of the small state-level sample, power is lost by including all of the local control variables at once. Instead, separate regression analyses are run for the effect of accountability and different local measures on student outcomes. The analyses are run separately for white and black students and for fourth and eighth-grade math performance, and for a "stacked" sample of all groups, using clustered standard errors.

### **Findings**

On average, strong accountability states had less local control pre-accountability policy implementation. Specifically, strong accountability states had less control over revenue-raising, a higher proportion of funds tied up in categorical grants, and somewhat less local control over revenue raising and resource allocation, on average. Accountability reforms also appear to have changed principal autonomy: principals in stronger accountability states gained significantly more perceived control over spending and hiring than did principals in lower-accountability states, and they gained more influence over hiring relative to the states, though they lost control over curriculum, evaluation of teachers, and average authority relative to the state. Districts with stronger accountability states lost perceived authority over all categories (besides evaluation of teachers) relative to the state.

Findings also indicate that accountability policies are more effective at increasing student outcomes when there is greater local control. Specifically, the lack of local control over revenue negatively interacts with accountability strength to affect student performance. Although students perform better in states with high accountability strength on average, this positive effect is less strong when districts have less discretion over resource allocation and in states that do not allow local voting over education measures. The positive effect of accountability on student performance on the NAEP is also less strong in states in which principals have greater control over spending.

### **Policy Implications**

These analyses provide evidence that accountability policies are more effective at increasing student achievement when local authorities have more control over resource allocation. However, the states that are least able to respond to accountability programs are exactly those in which accountability policies are being instituted most strongly. As education finance continues to be centralized at the state level, citizens and districts lose control over revenue raising and allocation, potentially impeding the positive effects of state-implemented accountability policies.

**Taniguchi, Hiromi** and Kaufman, G. (2007). Belated entry: Gender differences and similarities in the pattern of nontraditional college enrollment. *Social Science Research*, 36(2), 550-568.

**Data Source:** National Longitudinal Survey of Youth (NLSY79)

**Purpose of the Study**

Building on research showing that the incidence of late or nontraditional entry into higher education is influenced by both individuals' needs and resources, this study examines possible gender differences in its pattern.

**Study Design and Methods**

Using data from the National Longitudinal Survey of Youth, the study estimates discrete-time hazard models (Allison 1995) to examine the key determinants of nontraditional college entry.

**Findings**

Focusing both on employment- and family-related factors illuminates gender differences and similarities in the correlates of nontraditional college enrollment. Specifically, joblessness more directly facilitates men's late college entry than women's, while divorce promotes only women's nontraditional enrollment. The presence of preschoolers adversely affects women's attendance at two- and four-year institutions and men's attendance at four-year institutions. However, mothers of older children, unlike fathers, are more likely to enroll in both two- and four-year institutions.

**Policy Implications**

Nontraditional college enrollment will likely remain an important issue given today's skyrocketing college costs that would force more and more teenagers to postpone college and to enter the labor force and/or start a family before returning to school. University administrators and policy makers concerned with higher education reform need to understand the diversity of nontraditional students. Gender differences in the pattern of nontraditional enrollment are one instance of this diversity.

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