

Does NCLB Alter the Allocation of Resources? And, If It Does, So What?

Session 1.1

Jane Hannaway
Session Chair/Reactor
Urban Institute

Responses to NCLB Among Tennessee Public Schools

As a result of the No Child Left Behind Act, public schools face sanctions if subgroups of students defined on the basis of SES and demographics fail to make adequate academic progress. To achieve these goals, schools may find it necessary to divert resources from some groups to raise the achievement of others. But it is also possible that no diversion will be required, if these targets can be met simply by improving efficiency. Much of the political rhetoric in support of NCLB and the sanctions it imposes on failing schools suggests that in the view of many of the act's proponents, gains by some subgroups need not come at the expense of others. In this research, we seek to establish which, if either, of these two views is correct. We employ two distinct methodologies. Our first approach contrasts achievement gains among subgroups before and after NCLB (a difference-in-differences approach). Changes in these parameters indicate the act has had an effect, though in a way that confounds policy decisions (e.g., to target more resources to certain groups) with gains in efficiency. In our second approach we estimate a multiple-output frontier production function in which the delineation between efficiency gains (movement toward the frontier) and policy decisions (movement along the frontier) falls out naturally from the model. We apply these two approaches to Tennessee public schools between 1999–2000 and 2003–2004.

1.1.1

Dale Ballou
Peabody College of
Vanderbilt University

Keke Liu
Peabody College of
Vanderbilt University

Anthony Rolle
Peabody College of
Vanderbilt University

David Figlio
Discussant
University of Florida

Will Accountability Lead to Barbarianism? The Effect of Accountability on Arts Education

With the recent implementation of No Child Left Behind (NCLB), school accountability systems based on student testing have become ubiquitous in United States public schools. Using national and state level data, this paper explores the effects of school accountability on arts and music education. The hypothesis is that the focus of NCLB on reading, math and science, will draw resources away from untested subjects such as music, visual and performing arts. The paper begins with a conversation about school accountability and the quality of arts education in America. It then goes on to describe the data, at both the national and state level. Econometric techniques appropriate for analyzing panel data are then used to quantify the effects of NCLB on arts education in America.

1.1.2

Joshua Hyman
Tufts University

Lawrence Getzler
Discussant
Virginia Department of
Planning and Budget

The national data comes from two sources. The first is a survey done by the Council of Basic Education, and the second is a set of two surveys done by the National Center for Education Statistics. These data will be used to provide national context on trends in arts education. The state level data comes from both Kentucky and Wyoming. The data from Wyoming include the yearly number of arts and music teachers. Kentucky tests in the arts and reports those scores. By analyzing these data, we can determine if there have been relative increases or decreases in staffing and student performance in the arts, pre- and post- NCLB. Both states have data ranging back about six years on things such as district level attendance rates, graduation rates, dropout rates, finances and demographics. These data supplement the data on arts provision, making it possible to ensure that the changes in test scores and staffing are not being caused by something other than school accountability.

Measuring Returns to Social Investments in Education of Disadvantaged Populations

NCLB and other recent reform efforts put a great deal of emphasis on improving educational outcomes for those students who are most disadvantaged educationally. An important economic question is to ask what the return is on such investment. In 1972 the Select Senate Committee on Equal Educational Opportunity published a student

1.1.3

Clive Belfield
Columbia University

that showed that the provision of a minimum of high school completion for males 25–34 would have generated \$237 billion in lifetime income (1970 dollars, or about \$1.2 trillion in 2004 dollars) with attendant tax contributions of about \$71 billion (about \$350 billion in 2004 dollars). The cost of providing that minimum education was estimated at about \$40 billion in 1970 dollars. Estimates were also made of the cost burden of inadequate education for public assistance and crime and criminal justice as well as reduced political participation, intergenerational mobility, and higher health costs. This presentation will describe the design of this type of study in 2005 with more sophisticated econometric models and data sets as well as adjustments for ability, general equilibrium effects, and the incorporation of test scores and a closing of the achievement gap. Some illustrative findings will be provided.

Henry Levin
Columbia University

Andrew Reschovsky
Discussant
University of Wisconsin-Madison

The Impact of Public Provision on Private Education Session 1.2

William Fowler
Session Chair
NCES

Why is Education Publicly Provided? Evidence from the Nineteenth Century Growth of Public Primary Schooling in the United States

1.2.1

Christiana Stoddard
Montana State University

William Fischel
Discussant
Dartmouth College

In the early nineteenth century, much of primary education in the United States was provided privately through private schools or fees at public schools. This changed over the course of the century as primary education came to be fully publicly funded. Why the change and what was the effect on education levels? This paper examines two potential explanations, both grounded in theoretical models of voters' behavior. In one, voters transfer wealth to themselves by publicly providing education. More unequal societies have higher levels of public subsidies although they may not have higher levels of education. In the other, voters transfer wealth to others to realize efficiency gains that come from higher aggregate education levels. In this case, more equal societies have higher levels of public subsidies and higher education levels. This paper examines the empirical relationship between wealth inequality and public education subsidies in the mid-1800s and the effect of public subsidies on attendance. It finds that relatively more equal states had greater public subsidies and that attendance rates were higher in states with greater public subsidies, especially for children from poor families. These findings provide new insight into the question of why so much education is publicly provided.

Determining the Supply of Private Schools

1.2.2

David Sjoquist
Georgia State University

Mary Beth Walker
Georgia State University

Sean Corcoran
Discussant
California State University-Sacramento

This study examines the determinants of changes in the supply of private schools. This issue has gained importance due to the increased public policy emphasis on school choice. There are two potential benefits deriving from enhanced school choice. First, removing students from poorly performing public schools is viewed as improving education for those students. In addition, there is some belief that public school performance can be improved through increased competition. Although most school choice policies under consideration involve moving students from one public school to another, the interest in charter schools and more general voucher programs indicates that issues concerning the supply of private schools warrant attention. School voucher programs that allow students to attend private schools are already in existence in several cities, a couple of states, and several private foundations.

The argument behind school choice derives from a model of economic competition. Vouchers will increase the demand for seats in private schools. Like firms in a competitive market, the increase in demand will increase the number of available seats either in existing private schools or through an increase in the number of private schools in the market. Given this increase in private schools supply, i.e., the increase in competition, it is then argued that public schools will respond by becoming more efficient and effective. Thus, two assumptions are critical to the success of a choice program are

two assumptions. First is the assumption that the number of private schools (or the number of seats in existing private schools) will respond to the increase in demand generated by the vouchers. If private schools are not available for students desiring to exercise the voucher option, having a voucher becomes irrelevant. The second assumption is that private school competition will increase public school performance. Although many studies have investigated the second assumption, Downes and Greenstein (1996) is one of the few studies that we are aware of to examine the supply of private schools.

This study utilizes pooled cross-sectional data by county for the state of Georgia. We estimate models to explain the numbers of private schools in terms of demographic characteristics and public school performance. We also estimate the survival functions for private schools. Our results, while preliminary, indicate that the number of private schools as well as the number of private school seats shows a relatively small response to public school performance measures, once demographic variation is taken into account, and that there are substantial births and deaths of private schools.

The Changing Landscape of Private Education in the Post-Serrano Period

The dramatic changes in the educational landscape in the last two decades provide a unique opportunity to examine how changes in public provision of education have altered the nature of the options available to families dissatisfied with their local public schools. Thus, it is surprising that the effects on private education of some of the most publicized changes, like the adoption by some states of stringent graduation standards for those attending public high schools, are not even discussed, much less measured. And most of the relevant research that has been done has focused almost exclusively on the changes in private school enrollment patterns that can be attributed to the changing educational landscape.

The goal of this paper is to document how changes in the educational landscape have changed the nature of the supply of private education in the United States. Since earlier research on the supply of private education has examined changes in a particular state or urban area, the starting point for the current research will be a brief description of the changes in the private education sector nationally. For example, the growing importance of schools with conservative Christian affiliations and the declining importance of Catholic schools are both well-known phenomena. But the extent of this shift in enrollment from Catholic schools to conservative Christian schools is less well known. Documenting such shifts will also help frame the central question of the research project: what factors have driven the observed changes in the private education sector?

The empirical work in this project will be based upon a national-level data set. Information on the location and religious affiliation of private schools drawn from national-level surveys of private schools conducted by the National Center of Education Statistics (NCES) for individual school years ranging from 1970–71 to 1999–2000 will provide the data for the study of national trends. That data will be merged with information on public schools drawn from the Census of Governments and from NCES's Common Core of Data. These data on schooling will then be combined with demographic data from the 1970, 1980, 1990, and 2000 Decennial Censuses. Various other data sources will be used to characterize changes in the public education landscape and changes in religious membership. Ultimately, the richness of this data set will make it possible to distinguish changes in the supply of private education that are attributable to education reforms from those changes that are results of broad demographic trends.

1.2.3

Thomas Downes
Tufts University

Lawrence Kenny
Discussant
University of Florida

Determinants of the Educational Attainment of Immigrants

Session 1.3

Thomas Parrish
Session Chair/Reactor
American Institutes for Research

Persistence in School among California's Immigrant Youth: The Impact of Generation Status

Increased immigration, coupled with the relative youth of the foreign born, has fueled a dramatic increase in the number of first- and second-generation youth (i.e., native-born children of foreign-born parents) in U.S. schools. One quarter of elementary and high school students in 2001 had at least one immigrant parent, triple the 1970 proportion. The potential impact of school resources, especially teacher characteristics, on educational outcomes is suggested by Schwartz and Stiefel (2003), who find that accredited teachers with master's degrees are associated with better student performance on standardized tests. These authors, however, do not examine whether impacts vary by generation status. Indeed, very little research examines how school context mediates immigrants' educational performance. This paper begins to fill the knowledge gap by analyzing how school characteristics differentially impact secondary school achievement across generations.

I use data from the National Education Longitudinal Study: 1988–1994 (NELS) to compare the secondary school achievement of first- and second-generation youth to native-born youth whose parents were also born in the United States (the “third-plus” generation). The NELS contains detailed measures of educational outcomes and the individual, family, and contextual predictors of achievement, data that are absent from most other nationally representative datasets. School contextual variables of interest include teacher credentials, teacher ethnicity and bilingualism, and dimensions of teacher and administrator enhancement of student learning (e.g., presence of outreach programs). Detailed ethnicity and national-origin categories—Caribbean, Cuban, Mexican, other Latin/South American, European/Canadian/Oceanian, Chinese/Taiwanese, Filipino, Vietnamese, other Asian and a residual “Other” category—are defined for descriptive and cross-generation multivariate analyses, although analyses that allow the impact of contextual effects to vary by both generation status and ethnicity are limited to Chinese/Taiwanese, Filipino and Mexican youth due to sample size constraints.

The analysis focuses on four dimensions of academic performance: (1) grade-point average in academic courses (ordered probit/logit); (2) advanced placement course-taking (probit/LPM); (3) participation in an academically oriented high school program (probit/LPM); and (4) high school completion status (graduated with a regular diploma, completed the GED, or dropped out of school; multinomial logistic regression). Where sample sizes are sufficient, hierarchical modeling is used to identify how school context differentially modifies the effects of individual-level predictors.

Preliminary results suggest that the school characteristics most influential for educational performance differ markedly across generations but are somewhat less variable across national origin and ethnicity groups within generations.

School Attendance and Enrollment Patterns Among Immigrant Students: Evidence from New York City

Recent evidence reveals that many immigrant children and children of immigrants perform as well or better than their third generation peers in school (e.g. Kao & Tienda 1995; Schwartz & Stiefel 2004). At the same time, conventional wisdom suggests that some immigrant children should be frequently absent from school and have repeated disruptions in school enrollment due to movements to and from their home countries. So far, no study has examined these assertions. The purpose of this paper is to examine the attendance and intra-year enrollment of elementary and middle school immigrant students in the largest urban public school system in the country—New York City. Us-

1.3.1

Deborah Garvey
Santa Clara University

Leanna Stiefel
Discussant
New York University

1.3.2

Dylan Conger
George Washington University

Amy Ellen Schwartz
New York University

Leanna Stiefel
New York University

ing data on over 600 thousand students, we explore whether there are raw differences between immigrant and native-born students in attendance and enrollment patterns, whether these patterns differ for immigrants according to their region of origin, and whether these differences are explained by other characteristics of students and their schools. Preliminary results indicate that immigrant students have higher attendance rates than native-born students, controlling for other student demographic characteristics, educational outcomes, and school fixed effects. Additionally, while immigrant students have a higher probability of exiting the school system mid-year than native-born in the uncontrolled models, they have a lower or equal probability in the models with controls. Substantial differences are found across the region groups.

Robert Bifulco
Discussant
University of Connecticut

Testing the Convergence Hypothesis in Immigrant Academic Achievement: A Comparative, Longitudinal Analysis

1.3.3

In 2001, Marcelo Suarez-Orozco wrote in a special issue of the *Harvard Educational Review* devoted to immigrants: “Yet some recent data suggest an unsettling pattern in need of further robust empirical and theoretical treatment: among immigrants today, length of residence in the United States seems associated with declining health, school achievement and aspirations.” (Vol. 71, No 3. p. 354.) While the hypothesis that the superior academic performance of immigrant students ‘disappears’ with time in the U.S.—that is, immigrant performance converges to match the performance of native born students—has intuitive appeal and face validity, relatively little quantitative research has examined this hypothesis. Further, there is a dearth of research that specifically examines the convergence hypothesis using a comparative, longitudinal design. Andrew Fuligni argues in the same issue that, indeed, there is: “a need for studies of acculturation that track the same immigrant children as they encounter and negotiate the potential differences between their own cultural traditions and those of the host society.” This paper takes a step in that direction, investigating the disparity in performance on standardized tests between immigrant and native-born students in New York City and estimating the change in this disparity over time. The study makes use of student-level data on all first through eighth graders in New York City public schools (roughly 650,000 students in each year) over a six year period beginning in 1995–96, tracking the students as they move through grades and schools. The data include information on students’ home language and English language proficiency, race/ethnicity, poverty status, gender, for example, along with information on the school attended, and the characteristics of that school. The centerpiece of our research is a student-level production function for education performance, which we estimate in a variety of ways including a specification using student fixed effects to control for unobserved differences in students. Our results are surprising and robust—immigrant students perform, on average, better than native born students, and the disparity increases over time, rather than decreases. Thus, our results point to divergence rather than convergence. Subgroup analyses identify differences across racial/ethnic groups in performance and acculturation.

Amy Ellen Schwartz
New York University

Leanna Stiefel
New York University

Henry Levin
Discussant
Columbia University

International Education Finance: OECD Session

Session 1.4

Catherine Freeman
Session Chair
National Center for Education Statistics

Stephen Heyneman
Session Discussant
Peabody College
of Vanderbilt University

International Comparisons of Education Expenditures

International comparisons of education finance data use purchasing power parities for currency conversion in order to adjust for price differences between countries and thus allow for volume comparisons. The resulting indicators are commonly interpreted as differences between countries in input volumes to the education sector—teachers, materials, buildings etc. This paper shows, however, that the ranking of countries is vulnerable to the method used for adjusting for price differences. If the general price level is adjusted, the indicator substantially overestimates the input volume in countries with high teacher wages, such as Switzerland and Germany.

Similarly, indicators of international trends in education finance are vulnerable to the method applied for adjusting for price differences between time periods. In particular, converting finance data to fixed prices by using the GDP deflator produces indicators that are highly influenced by export prices in small, open economies. For example, the indicator “change in expenditure per student” for Norway is close to being an inverse indicator of world market oil prices. The lesson to be learned is that additional information is required in order for analysts to be able to use such indicators without making errors of interpretation.

OECD Initiatives to Improve International Comparisons of Education Statistics

While considerable progress has been made in improving the comparability of international education statistics and indicators, much has still to be done. The diversity of education systems found in OECD countries has made it difficult to have comparable methodologies, definitions and programmes reported in data collections. This presentation explains how the OECD deals with statistics collected at a national level in order to produce indicators on finance comparable at the international level.

Trends on Financing of Education

This presentation provides a comparative examination of spending patterns in OECD countries. By giving more emphasis to trends in spending patterns, the presentation analyses how different demand and supply factors interact and how spending on education, compared to spending on other social priorities, has changed.

The Value and Limitations of Comparing Financial Statistics for U.S. Elementary, Secondary, and Postsecondary Institutions with OECD Countries

The OECD produces statistical indicators in its annual Education at a Glance (EaG) publication. The report is widely used today, partly as a result of extensive efforts made during the early 1990s to improve the comparability of the data. The proposed paper will show the extent to which the international finance comparisons with the United States in the latest of edition of EaG are affected by varying interpretations of the current survey definitions.

The comparability of the U.S. data is potentially limited in several important aspects. One key area is the distribution of expenditures across the levels of education. In many countries, the segmentation of finance data into preprimary, elementary, lower secondary, upper secondary, postsecondary vocational, and postsecondary academic corresponds to clearly recognized institutional types for which separate financial data are available. While the U.S. data are broadly comparable at the total elementary/secondary and total postsecondary aggregations, the distribution of finance data into the more detailed groupings involves many assumptions. Another set of comparability issues results from the lack of finance data for private elementary/secondary schools, which are entirely estimated for the U.S. Other potential comparability issues result from interpretation of definitions for postsecondary items, such as inclusion of auxiliary enterprises (such as dormitories, bookstores, food services, etc.), research installations, and treatment of student loans and grants.

1.4.1

Marie Arneberg
Norwegian Ministry of Education
and Research

1.4.2

Eric Charbonnier
Organization for Economic Cooperation
and Development (OECD)

1.4.3

Andreas Schleicher
Organization for Economic Cooperation
and Development (OECD)

1.4.4

Thomas Snyder
National Center for Education Statistics

This paper will analyze the sensitivity of U.S. assumptions on these basic criteria by reestimating three key indicators: Educational expenditure per student; Educational expenditures related to gross domestic product; and Expenditure on institutions by service category and by resource category. By altering the U.S. interpretation of the assumptions on the distribution of expenditures by level of student and estimation of private school data, the sensitivity of the U.S. comparisons on expenditures per student will be analyzed. The comparability issues involving indicators dealing with postsecondary education will be explored through alternative assumptions regarding the U.S. reporting of auxiliary enterprises, research installations, and student loans.

Education Finance Policy and Litigation

Session 1.5

Michael Rebell
Session Chair
Campaign for Fiscal Equity

John Augenblick
Session Discussant
Augenblick, Palaich, & Associates, Inc.

Sorting out the Role of Race and Ethnicity in Educational Production and Costs: Policy and Legal Implications

Race variables have long been important for explaining variance in student outcomes. It is generally well accepted that *ceteris paribus*, children from certain minority groups, ethnic backgrounds or national origin perform differently on standardized tests of reading, writing and/or mathematical knowledge, skills and aptitude. In U.S. Education policy, the Black-White achievement gap is often the center of attention (Rothstein, 2004). Most early (Coleman et al., 1966) and more recent education production function analyses (Taylor, 1998) account for race in at least one of two ways: (1) the race of individual students in relation to their outcomes; and (2) the composite race of the classroom, school or district peer group. Invariably, individual students' race is strongly associated with both level and value-added achievement gains. Despite the prevalence of racial/ethnic indicators in education production function literature, such indicators are noticeably absent in education cost analyses (with the exception of Downes and Pogue, 1994). We argue that it stands to reason that if race and ethnicity influence educational outcomes, controlling for other student characteristics and schooling inputs, that race and ethnicity variables must similarly influence the cost of achieving desired outcomes. We use education cost function analysis applied to the state of Kansas to test whether inclusion of race variables results in changes to education cost indices for Kansas school districts of varied racial composition. We then discuss the policy implications of allocating state aid to local districts according to race-influenced cost indices, and discuss the legal defensibility under equal protection challenges to this unique use of race as a plus factor in school finance.

1.5.1

Bruce Baker
University of Kansas

Preston Green III
Pennsylvania State University

Teacher Quality and Student Achievement: Does Property Wealth Impact Resource Adequacy

Equity, adequacy, accountability, and school finance reform are each issues addressed by the Kentucky Education Reform Act of 1990. Prompted by the landmark court decision *Rose v. Council for Better Education*, Kentucky has become a model for linking education policy and school finance. Recent school finance studies have indicated that resource equity among school districts in Kentucky has improved since the implementation of KERA. Attention has now turned to the question of adequacy. Differences persist in achievement between schools based on wealth. Using school level data, this study seeks to determine if a relationship exists between property poor school districts, quality teachers, and student achievement. The study findings indicate that CATS scores are significantly related to all six measures of teacher quality and local wealth. Further, the study finds that quality teachers, as defined by state statute, are available in all schools throughout Kentucky. Given the fact that test score discrepancies remain between relatively wealthy and poor schools, and that the variance

1.5.2

Robert Knoepfel
University of Kentucky

explained by measures of teacher quality is small, this study suggests that traditional methods of defining teacher quality are not sufficient to capture what matters in the instructional process.

Judicial Duties and Fiscal Realities: Do Economic Concerns Affect Judicial Decisions in Public School Funding Litigation?

Although much has been written about the over three decades of litigation since *Serrano*, an intriguing and largely unanswered question in school funding litigation is whether judges are influenced in their decisions in school funding cases by contemporary economic conditions. The purpose of this study is to examine: 1) What judicial opinions have said about this issue; 2) Whether other relevant sources of evidence tend to support or refute the views expressed in these opinions; and 3) What useful lessons future litigants, scholars, and others can learn from a thorough analysis of the law and evidence concerning this question.

Whether judges' decisions in school funding cases are influenced by contemporary economic conditions is an important question for all parties interested in school funding litigation. The answer to this question may assist future litigants in making better strategic decisions about funding cases. But given the significance of this question, surprisingly little has been written about this issue. To some, it may seem self-evident to simply expect judges to be influenced by the contemporary economic status of their state. And they may reason that even if judges wished to avoid being influenced by contemporary economic realities in the performance of their judicial duties, these judges surely realized that the legislators responsible for implementing judicial orders for funding reform, could not ignore these same fiscal realities. One could logically reason that politically astute judges, who did not wish to instigate a judicial-legislative showdown, would be unlikely to order any expensive new funding remedy in the face of serious budget shortfalls and a state constitutional requirement for a balanced budget. Nonetheless, many courts have adamantly held that state fiscal difficulties do not excuse failure to comply with constitutional mandates to support education, and no court has expressly acknowledged that economic circumstances affected their decision in these cases. This study tests the judicial rhetoric against the relevant facts, providing a thorough review and analysis of the law and evidence on whether judicial decisions concerning school funding litigation may be influenced by perceptions of the status of the economy.

1.5.3

John Dayton
University of Georgia

Anne Dupre
University of Georgia

Christine Kiracofe
Northern Illinois University

Impact of Voucher Design on Public School Performance: Evidence from Florida and Milwaukee Voucher Programs

This paper examines the impact of vouchers in general and voucher design in particular on public school performance. It argues that all voucher programs are not created equal. There are often fundamental differences in voucher designs that affect public school incentives differently and induce different responses from them. It analyzes two voucher programs in the U.S. The 1990 Milwaukee experiment can be looked upon as a "voucher shock" program that suddenly made low-income students eligible for vouchers. The 1999 Florida program can be looked upon as a "threat of voucher" program, where schools getting an "F" grade for the first time are exposed to the threat of vouchers, but do not face vouchers unless and until they get a second "F" within the next three years. In the context of a formal theoretical model, the study argues that the threatened public schools will unambiguously improve under the Florida-type program and this improvement will exceed that under the Milwaukee-type program. Using school-level scores from Florida and Wisconsin, and a difference-in-differences estimation strategy in trends, it then shows that these predictions are validated empirically. These results are reasonably robust in that they survive several sensitivity checks including correcting for mean reversion and a regression discontinuity analysis. The findings have strong policy implications.

1.5.4

Rajashri Chakrabarti
Harvard University

Do Schools Matter? Methodological Issues in the Measurement of Input Productivity

Christopher Roelke
Session Chair
Vassar College

Session 1.6

Does Maimonides Travel Well? Discontinuities, Sorting, and Class Size Reduction in Chile

In a well-known application of the regression-discontinuity design, Angrist and Lavy (1999) rely on the discontinuous relationship between enrollment and class size—an artifact of Maimonides’ rule—to estimate the impact of smaller classes on academic achievement in Israel. In Chile’s education system, such discontinuities are even more pronounced. This paper explores whether the sharp relationship between enrollment and class size can be used to identify unbiased class size effects. It argues that most estimates are biased by student sorting that is a by-product of the same incentives that produced a sharp discontinuity. It explores several approaches to removing such biases. The paper also illustrates the pitfalls that are likely to accompany the increasing number of applications of the quasi-experimental RD design to topics in education.

1.6.1

Patrick McEwan
Wellesley College

Mark Long
Discussant
University of Washington

How Much Do Schools and Districts Matter? Comparative Methodological Approaches

Under No Child Left Behind (NCLB), public schools and districts that fail to make “adequate yearly progress” (AYP) for two consecutive years are required to undergo a set of reforms and sanctions designed to improve student achievement. The scope of these reforms and sanctions widens as a school continues to fall short of AYP requirements to include the offer of transfer to children who wish to leave school, the provision of supplementary educational services outside of the normal school day, the replacement of school staff, and the conversion of the school to charter status. In response to these NCLB mandates, states are now devoting considerable attention to the task of distinguishing among effective and ineffective schools. Much less attention, however, has been given to identification of effective school districts, despite the considerable emphasis placed on district as well as school performance by NCLB.

1.6.2

James Phelps
Michigan State University

Michael Addonizio
Wayne State University

Lori Taylor
Discussant
Texas A&M University

This joint focus on school and district performance raises the question “How do district policies, leadership, procedures, and other characteristics influence the quality of teaching and learning in public schools?” This paper uses a rich longitudinal school-level database to estimate two alternative models of student achievement for approximately 600 elementary schools in Minnesota. One approach analyzes the residuals in a series of cross-sectional regressions to obtain estimates of the contributions of unobserved school and district characteristics to student performance. Here, our estimates of school and district fixed effects are considerably larger than the estimated effects of a set of observed school resource variables. This finding is consistent with Leibenstein (1966), who observed in his seminal article on x-efficiency in organizations that motivation, culture, and other organizational characteristics have far greater implications for efficiency than the allocation of inputs at the margins. These results will be compared with those obtained using hierarchical linear modeling and mixed models techniques.

Advances in Value-Added: Theory and Applications Related to Teacher Quality

Measuring the impact of teachers and other educational inputs on student achievement has long been a vexing problem. There are three major challenges: controlling for unobserved student ability, taking into account the impact of all past and contemporaneous school and family inputs and dealing with the potential endogeneity of school and parental input decisions.

1.6.3

Doug Harris
Florida State University

Tim Sass
Florida State University

The inadequacy of cross-sectional analysis to properly address these issues has long been recognized (e.g. Boardman and Murnane (1979)), yet only recently have large-scale longitudinal databases become available to exploit the potential benefits of inter-temporal analysis. Recent papers by Ding and Lehrer (2004) and by Todd and Wolpin (2004) explore some important issues, yet there is still much uncertainty regarding the most appropriate methodology for the analysis of large-scale administrative databases. For example, do fixed or random effects models provide more consistent estimates? Are lagged test scores a sufficient statistic for the entire history of school inputs? Do the restrictions imposed by the standard value-added approach significantly bias the resulting estimates?

This paper starts with a comparison of the theory and assumptions underlying the value-added models currently in use. This is followed by estimation of the various models using an eight-year panel of data covering all public school students in Florida. The data link students and teachers to individual classrooms and provide detailed information on the characteristics of both teachers and their pupils. We focus on the impact of teachers on student achievement and how the measured effects vary with the estimation technique employed. We also test some of the assumptions that are implicit in each model to advance knowledge about which value-added models are most likely to yield valid and reliable results.

Mike Podgursky
Discussant
University of Missouri-Columbia

National Board for Professional Teaching Standards Certification: Findings on Costs and Effects

Session 1.7

This session presents findings from several research efforts designed to better understand critical questions associated with National Board for Professional Teaching Standards (NBPTS) certification for teachers. Together, these papers will examine issues related to who applies for and earns National Board Certification, the impacts of National Board Certification on student learning and teacher career paths, the extent to which the National Board Certification process adheres to principles of high-quality professional development, and the cost of the National Board Certification process and of programs designed to support teachers during that process. Abstracts of the three papers included in the session are provided below.

David Monk
Session Chair
Pennsylvania State University

Marge Plecki
Session Discussant
University of Washington

National Board Certification and Its Impacts on Teachers and Students: Who becomes certified? Who do certified teachers teach, and how does certification affect student learning?

The National Board for Professional Teacher Standards (NBPTS) has grown rapidly over the last decade; today there are over 32,000 teachers certified by NBPTS as having advanced teaching skills. NBPTS supporters believe the National Board has and will continue to play a dramatic role in professionalizing teaching, positively changing the culture in schools, and ultimately aiding students' learning. There has been an increasing trend for school systems and states to provide incentives for experienced teachers to seek National Board Certification. As a result, a significant number of teachers have become Nationally Board Certified in a variety of subjects. It is important to understand how these incentives and other characteristics of schools and districts affect the likelihood that teachers, who themselves vary along observable lines (e.g., experience, race/ethnicity, gender), decide to attempt National Board Certification. It is also important to determine the factors associated with the success of Board candidates and the impact that Board certification ultimately has on student outcomes.

Schools and school districts are constantly seeking the most cost-effective ways to spend scarce educational resources to improve student learning. Therefore, perhaps most important to school systems is the impact of National Board Certification on pupil performance. We assess whether teacher quality, as measured by student outcomes,

1.7.1

Dan Goldhaber
University of Washington

Daniel Player
University of Washington

varies based on application for National Board Certification. This will lead to a better understanding of whether the assessment process accurately identifies exemplary teachers, and whether participation in the process itself improves teacher performance. The recognition and financial rewards often associated with NBPTS certification are believed to affect teachers' longevity in their profession and in which schools and districts they teach. We examine the potential impacts of NBPTS certification on teachers' career paths and where they teach. This session will present our findings from several studies on the impacts of NBPTS on teachers and students, with a focus on these research questions:

1. What factors affect the decision of individuals to seek Board certification?
2. What determines the success of applicants for Board certification?
3. What is the ultimate impact of Board certification on students?
4. What is the distribution of NBPTS-certified teachers across different districts, schools, and students and how do NBPTS-related district incentives affect this distribution?

Our data are based on administrative records of all teachers and students in North Carolina, maintained by the Department of Public Instruction of North Carolina (NCDPI); they include information on student performance on standardized tests in math and reading (in grades 3 through 10) that are administered as part of the North Carolina accountability system. We currently have data for teachers and students that can be linked together from 1996–97 to 1998–99; each year of the data include over 70,000 teacher records and over 1 million student records.

National Board Certification as Professional Development: Success Factors

While National Board Certification is primarily thought of as a process for certifying accomplished teachers, it can also be viewed as a form of professional development. Using data collected from eight National Board Certification candidate support program sites in six states, this study examines the key features and success factors of this model of professional development. Support programs were selected based on reputations for high-quality professional development and higher than average National Board Certification achievement rates, adjusted for the characteristics of their candidate populations. The paper identifies the professional development opportunities that are part of the requirements and core set of activities involved in National Board candidacy, as well as the professional development value added by the support programs, and analyzes these learning opportunities against principles of high-quality professional development. It uses quantitative analysis to identify program features that are significant to certification, while also considering the impact of candidate demographics and environmental factors such as state and district support for National Board Certification, with the goal of understanding what candidate support program elements work best for which teachers working in what circumstances. The paper concludes with implications for the improvement of National Board Certification as a model of professional development, for the improvement of NBC candidate support programs, and for the field of professional development more generally.

National Board Certification for Teachers: What Does it Cost?

The NBPTS certification process has been recognized not only as a way to identify exemplary teachers, but also as a potentially powerful form of professional development for teachers. This study examines the cost of the National Board Certification process, and focuses on the costs associated with programs designed to support candidates through this process compared with other forms of professional development. Extensive cost and resource data were collected from four sites selected on the basis of: (1) high to moderate success rates, controlling for other factors; (2) expected range of costs; (3) diversity of sponsorship; (4) replicable design; and (5) willingness to participate in the intensive data collection requirements of the study. A cost template was designed to guide data collection and to systematically estimate the full opportunity costs associated with the programs.

1.7.2

Carol Cohen
The Finance Project

1.7.3

Jennifer King Rice
University of Maryland

Jane Hall
University of Maryland

The analysis presents the costs of the National Board Certification process and support programs in terms of the total annual societal costs, the costs of various programmatic components, the costs of conventional budget categories, and the distribution of the cost burden across individuals and organizations. Costs of National Board Certification are compared with what is known about the costs of alternative forms of professional development. Information about what it costs to operate a National Board Certification support program, what sorts of monetary and non-monetary resources are required, what individuals and organizations are expected to provide those resources, and how the costs and resource requirements compare with other alternatives is needed to guide state and local policymakers as they consider various approaches to teacher professional development.

Accountability, Policy, and Spending

Session 1.8

Lloyd Blanchard
Session Chair
Syracuse University

Linda Cavalluzzo
Session Discussant
The CNA Corporation

Accountability Policy or Opportunity to Learn? The Impact of Accountability and Professional Development on Instructional Practice

This paper examines two competing perspectives regarding the impact of standards-based accountability policy on teachers' instructional practice using the 2000 National Center for Educational Statistics (NCES) School and Staffing Survey (SASS) database. The first perspective is derived from the behavioral predictions or "theory of action" put forth by accountability policy advocates. According to this view, a properly designed state-level accountability system will induce teachers to use state curriculum guidance and students' test results to modify their instructional practice in order to improve student performance. The second perspective is derived from the Cohen's cognitive theory that teachers' opportunities to learn will be the main determinant of policy implementation or change of teachers' instructional practice.

Analysis of the 2000 NCES SASS database using instrumental variables estimate and ordered probit/logit models shows that both accountability policy and teachers' opportunities to learn (measured by professional development participation) lead to teachers' more frequent use of state/district standards. However, the explanatory power of teachers' opportunity to learn variable is significantly larger than accountability policy. Furthermore, accountability policy produces an unintended consequence: teachers from states with strong accountability policy are more likely to group students within the classroom by achievement or ability level, which is discouraged by the state standards.

1.8.1

Kwanghun Lee
Michigan State University

Federal Funds for Teacher Education and Professional Development: A Political Analysis.

Thirteen federal departments and several semi-autonomous agencies (e.g. National Science Foundation) provide some support for educator recruitment, preparation, and/or development. The review of all 100+ federal teacher education programs in the U.S. is beyond the scope of this article. Instead, beginning with the National Defense Education Act of 1958, the major bills for federal aid to schools are analyzed to trace the level and nature of federal involvement in teacher preparation and professional development over time, and to assess the extent to which recent legislation seeks to redefine that involvement. The analysis of the legislation is organized around three dimensions: (1) the goals and assumptions upon which the policy is based; (2) the policy instruments developed to deliver the goals; and, (3) the funding of federal teacher education policy over time.

1.8.2

Lora Cohen-Vogel
Florida State University

Personal Spending on Professional Development: What are the Implications for Cost-Effectiveness Analysis?

1.8.3

Kieran Killeen
University of Vermont

Cost-frameworks for the study of professional development spending differ in the inclusion or exclusion of personal expenditures or donations towards professional development activity. Though much work has been done in the advancement of cost analysis and cost specification (e.g. Levin and McEwan), there is only limited research on the importance of non-system resources in the provision of K–12 educational services. As such, the research is not clear whether out-of-pocket spending by teachers can actually undermine a true understanding of professional development programming and cost analysis.

Relying on a randomized survey of teachers in four urban school districts and controlling for teacher characteristics, this conference paper highlights the rather substantial amount of out-of-pocket spending devoted to professional development activities. Survey items were extracted from a larger database compiled by the federally-funded Center for the Study of Teaching and Policy (CTP) at the University of Washington. The survey was administered from the spring to fall of 2001, using stratified random sampling by grade level. It included responses from teachers in 11 schools per district, five of which are elementary schools and 6 of which are secondary schools (three middle schools and three high schools). Results are weighted by school according to the number of total schools in the district at both elementary and secondary levels. Analyses utilize logistic regression to produce statements about the likelihood of individual spending given various school conditions. Following this description, the implications for cost-effectiveness research will be discussed.

Schools Influence on the Prevalence and Consequence of Teacher Accountability

1.8.4

Laura LoGerfo
Urban Institute

The No Child Left Behind Act of 2001 demands strict accountability for student learning, requiring schools to place highly qualified teachers in classrooms with disadvantaged students to close achievement gaps between the advantaged and the disadvantaged. This policy is designed to thwart educators who “write off” certain students as incapable of learning and do not hold themselves accountable for students’ outcomes. This paper asks who takes responsibility: Which teachers? In which schools? These questions are addressed by hierarchical linear analyses with a recent, nationally representative, longitudinal dataset of elementary schools and teachers. The study explores how first-grade teachers’ personal and professional backgrounds, as well as class characteristics and school context (e.g., structure and composition), are associated with teacher responsibility. Findings suggest that characteristics of teachers’ students are much less important to teacher responsibility than teachers’ efficacy and job satisfaction, with one important exception: class average socioeconomic status. Teachers are more likely to take responsibility for more socially advantaged children. Moreover, school sector and school leadership affect teachers’ willingness to accept responsibility. Teaching in Catholic schools and working with supportive administrative leaders are linked to significant increases in teacher responsibility. Being a “highly qualified teacher,” measured by teacher education and certification, as required by NCLB, does not appear to matter to teacher responsibility.

Why Do Teachers Work Where They Do?

David Monk
Session Chair/Reactor
Pennsylvania State University

Session 2.1

College Graduates of the 1990s: Who Teaches and Where They Choose to Teach

2.1.1

Marigee Bacolod
University of California, Irvine

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, consider-

able 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.

Eric Isenberg
Discussant
DePauw University

This paper 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. A nested logit model where a college graduate faces the sequential choice of teaching, and conditional on teaching, the location of the school, is then applied to the Baccalaureate and Beyond (B&B) Longitudinal Study. The B&B is a nationally representative cohort who graduated with their BA in 1993, 12 percent of whom had taught by 1997.

Preliminary 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 teacher salaries. This is especially true for women. However, wages do play a relatively more important role at the occupational entry decision, when male and female college graduates are deciding to teach. In addition, consistent with earlier findings, there is significant variation in teacher quality indicators across schools.

The Role of Teacher Networking in Teacher Transfer Decisions and Teacher Mobility

2.1.2

Jeremy Luallen
University of Florida

The topic of teacher movement into, out of and within the public school system has been given greater attention in the ever-expanding literature addressing public school policies and accountability issues. Past research suggests that student characteristics and salary incentives are important determinants of how teachers move among schools and school districts, but so far there has been little or no research into how teacher networks affect teacher transfer decisions. The focus of this paper is to highlight the importance of teacher networks by using the professional development policies already in place as a unique tool for measuring networks. Specifically this paper will address teachers' use of Master Inservice as a powerful means of networking and will outline the extent to which these networks affect a teacher's transfer decision. The evidence will show that a one standard deviation increase in the network measurement contributes to a 12.74% increase in teacher transfer rates per school. Thus teacher networks are a crucial element in influencing teacher transfer rates.

Randall Reback
Discussant
Columbia University

Staffing Classrooms: How Do Districts Find Their Teachers?

2.1.3

William Duncombe
Syracuse University

Forecasts indicate significant future teacher shortages both in New York and nationally, with certain fields experiencing extreme shortages. As districts nationally have begun to cope with increasing teacher shortages, one strategy they have used is to make changes to teacher recruitment and selection practices.

With this in mind, we have conducted a survey of New York State school districts on the recruitment, screening and selection process for fulltime teachers. The survey attempts to determine whether districts concentrate their advertising efforts only in the local area, or advertise in other parts of the state or in other states. We ask about the use of the internet for teacher recruitment, and whether it is linked to use of regional education agencies in New York. We ask several questions on which staff are involved in screening and selection, and what are the principal criteria they use.

Dana Balter
Syracuse University

James Wyckoff
Discussant
University at Albany

The paper will summarize the basic survey results and examine the characteristics of districts that use more "innovative" practices. The survey will be linked to the "personnel master file" in New York to examine how district hiring practices are related to the composition of recent hires into the district.

Estimation of School and District Costs: Problems and Solutions

Session 2.2

Jay Chambers
Session chair/Reactor:
American Institutes for Research

Assessing the Use of Cost Function Analysis in Estimating the Costs of Meeting State Education Accountability Standards: Lessons from Texas

In 2004, a large number of school districts in Texas challenged the constitutionality of the Texas system of school finance. In *West Orange-Cove et al. v. Neeley et al.*, the plaintiffs argued that because most school districts were at or near a state-imposed property tax rate ceiling and because the share of state education funding was declining, most school districts had inadequate funds to satisfy the student performance standards mandated by the Texas Educational Accountability system. To address the empirical question of whether school districts have insufficient resources to meet the state's accountability standards, two cost function analyses were conducted. One study, entered into evidence by the State of Texas, reached the conclusion that "... in aggregate, the level of education funding in Texas is more than sufficient to meet performance goals consistent with the state's accountability system." The other study, entered into evidence by the plaintiff school districts, concluded that in aggregate Texas school districts would need at least \$2 billion in additional revenue in order to satisfy the requirements of the accountability system.

In this paper, we (the authors of the plaintiff's study) describe the methodological similarities and differences between the two cost function studies, and provide an assessment of the reasons why the two studies arrive at such different results. We then attempt to draw some lessons about the use of statistical-based models in a judicial setting.

A Comparable Wage Model of School District Cost and Inflation

Educational dollars don't go quite as far in some parts of the country as they do in others. Therefore, there is considerable interest in developing a measure of the cost of education that can facilitate such comparisons and be used to adjust school finance formula.

One attractive mechanism for measuring geographic variations in cost is the Comparable Wage index (CWI). A CWI reflects systematic, regional variations in the salaries of workers who are not educators. Provided that those non-educators are similar to educators in terms of age, educational background and tastes for local amenities, a Comparable Wage index can be used to measure uncontrollable variations in the wages paid to educators.

Together, the 2000 Census and the Occupational Employment Statistics (OES) survey support the construction of just such an index. The resulting panel of index values measures the wage level for college graduates in all parts of the US for the years 1997 through 2003 and reveals substantial variation in purchasing power both across districts and across time. Interestingly the index suggests that in California, New York, Texas, Virginia, Illinois and New Mexico, the educational dollar can stretch at least 40 percent farther in one part of the state than in another.

Such inequalities in purchasing power undermine the equity and adequacy goals of school finance formulas. If states were successfully directing additional resources to school districts in high cost environments, then measured inequality within states should fall when differences in purchasing power are taken into account. Instead, preliminary analysis suggests that state efforts to equalize nominal spending may be leading them to greater inequities in cost-adjusted spending.

2.2.1

Jennifer Imazeki
San Diego State University

Andrew Reschovsky
University of Wisconsin-Madison

Michael Addonizio
Discussant
Wayne State University

2.2.2

Lori Taylor
Texas A&M University

William Duncombe
Discussant
Syracuse University

School Attendance and Size

The size of schools and districts in which they are located has become a salient policy issue in recent years. While consolidation of school districts and expanding high school size were in vogue from the 1960s until recently, funding agencies are now sponsoring projects to reduce school size under the assumption that smaller schools will lead to higher academic achievement. There has been some scholarly work that focuses on the effects of size on achievement and recently this literature has included district size and the competitive effects that size might generate on educational outcomes. In this paper, we focus explicitly on both district size and school size and look at a particular aspect of educational output. We argue that average daily attendance (ADA) is an output variable that is influenced by the enrollment in a school and the number of schools in a district. School attendance is critical to both achievement and dropout rates and is a directly measurable attribute of schooling. We use data from Texas schools and school districts to estimate size effects on this important policy variable.

Adequacy: Its Measurement and Conceptualization

Session 2.3

Panel

This panel discussion will report recent research related to adequacy and in press as a special edition of a journal, which will be made available to attendees. Verstegen and Addonizio will present two views of a conceptual framework for assessing adequacy, Jordan and Jordan will report on recent research as will Hughes with a focus on a single state. Baker will discuss adequacy for special populations.

Education Finance and Policy

Session 2.4

The Distribution of NCLB Costs and Benefits in New York State

President Bush's No Child Left Behind legislation has imposed what many consider an under-funded mandate. Many states claim that their allocations fall well short of what is needed to meet the new requirements. Research on the costs of educational

2.2.3

John Jones

Georgetown College

Eugenia Toma

University of Kentucky

Ron Zimmer

RAND Corporation

Robert Toutkoushian

Discussant

Indiana University

Terry Geske

Session Chair

Louisiana State University

Richard A. Rossmiller

Session Discussant

University of Wisconsin-Madison

Deborah Verstegen

University of Nevada-Reno

T. Jordan

University of Nevada-Las Vegas

K. Forbis Jordan

University of Nevada-Las Vegas

Bruce Baker

University of Kansas

Bruce Cooper

Fordham University

Michael Addonizio

Wayne State University

Jewell Gould

Session Chair

American Federation of Teachers

Jane Hannaway

Session Discussant

Urban Institute

2.4.1

Lloyd Blanchard

Syracuse University

reform confirm some of these claims, and a few scholars have estimated the cost of NCLB reform on a given state (Duncombe and Lukemeyer, 2002; Reschovsky...), but no study (to my knowledge) has examined the extent to which NCLB resources are distributed in accordance with need across a given state.

This paper will examine the impact of NCLB on New York State school district aid by comparing how aid funds received under NCLB were distributed across the state to the distribution that would result from an aid formula that systematically took into account the distribution of need across the state. In doing so, this study seeks to identify the distribution and geography of gaps in NCLB aid across the New York State.

Using administrative data from New York State Education Department, I will construct a cost model to predict the costs for each district of meeting selected performance standards pursuant to NCLB, and compare these predicted costs to the distribution of federal resources across New York State. Those districts that received more than their projected additional costs are said to have reaped benefits from NCLB, while those districts that received less than their projected additional costs resources are said to have incurred costs.

Linking Education Finance and Policy: Models for Change that Leave No Child Behind

The issues of equity and adequacy within school finance structures have been a focus of litigation and school reform efforts for over three decades; however, passage of No Child Left Behind (2001) has resulted in increased attention to these issues. The equity and adequacy of a state's school funding formula impacts the ability of schools to meet Adequate Yearly Progress (AYP) requirements. The research literature on national fiscal equity studies indicates that, in general, there is wide variation in the fiscal and structural ability of individual states and local school districts to implement education reform initiatives. How then, can federal, state, and local policymakers interact and work together in an effort to improve outcomes for everyone? This paper offers some ideas for change and illustrates how policies at the three levels of governance are linked and interrelated. It is organized into four major sections: the first section presents background information and a rationale for examining education reform, school finance structures, equity and adequacy, as they relate to improving outcomes. The next section summarizes the findings of national studies of school finance equity. The third section discusses policy implications. The final section makes recommendations for change and proposes two conceptual models. Both models take the collective suggestions of school finance researchers and illustrate how policies promoting cooperation and coordination at the local, state, and federal levels of government can interact to improve our nation's schools.

The NCLB Rebellion: Money, Politics, and Student Learning

This paper examines NCLB state-level political "rebellion" activities in contrast with the amount of money needed to meet the state standards, the number and percentage of students and schools not meeting standards, and the proportion of schools not making Adequate Yearly Progress. Political rebellion activities are defined as official state actions remonstrating against the NCLB act as represented in state gubernatorial, legislative and state board statements, resolutions, laws and/or legal actions. The amount of money needed is measured by current, standards-based state adequacy studies. These data will then be compared to the proportion of schools and students not making AYP or not meeting standards.

The logical expectation would be that the states with the greatest proportion of deficient schools and students, and with the greatest reported need for resources, would be the states with the greatest number of rebellion activities. However, the working hypothesis is that there is little relation between actual student and school needs (as identified by NCLB and by state adequacy studies) and the level of political rebellion. The rationale is that political policy statements about education bear little relationship to empirically determined needs.

2.4.2

Marilyn Hirth
Purdue University

2.4.3

William Mathis
Rutland Northeast Supervisory Union

Kevin Fleming
Castleton State College

Wendy Lecker
Campaign for Fiscal Equity

Correlations between the level of political activity, needed educational funds for adequacy, and actual NAEP averages provide many interesting sidelights.

Voices of PreService Teacher on Teacher Quality: Moving Beyond No Child Left Behind Legislation

Teaching is a complex problem solving activity and teacher quality components is a complex topic, and very hard to define. The Federal No Child Left Behind Legislation requires highly qualified teacher in every core academic classroom. Research studies on teacher quality has concluded that students exposed to high quality instruction learn more than other students, but the evidence on what makes a quality teacher are mixed. The major goal of teacher education institutions is to produce quality teachers for K–12 schools. But, there is a growing concern that the decline in the quality of public school teachers is attributed to their preservice learning. In this research study, we examined the perceptions of preservice teachers on teacher quality components. The major goals of the study were to (a) identify the perceptions of preservice teachers on teacher quality components, (b) to examine differences in the reported teacher quality components of traditional versus non-traditional participants, and (c) to see if the reported teacher quality components changed as a function of the participants' gender, ethnicity, and intended teaching level. Using the sequential exploratory design method, we found a number of perception differences on teacher quality components between traditional and non-traditional, blacks and non-black, men and women, and elementary, middle and high school preservice teachers. We also found that the participants perceived content knowledge (89.6%), teaching skills (83.2%), teacher attribute (80.8%) communication skills (75.3%), and teacher preparation (67.3%) to be the most important teacher quality components.

2.4.4

Comfort Okpala
Shaw University

Amon Okpala
Fayetteville State University

Charter Schools, Voucher Programs, and Local Control

Session 2.5

Rajashri Chakrabarti
Session Chair
Harvard University

Amy Ellen Schwartz
Session Discussant
New York University

The Effect of Charter School Competition on Traditional Public School Students in Texas

Texas has been an important player in the emergence of the charter school industry. We test for a competitive effect of charters by looking for changes in student achievement in traditional public schools following charter market penetration. We use an eight-year panel of data on individual student test scores for public school students in Texas in order to evaluate the achievement impact of charter schools. We control for student background in two ways. We estimate a model which includes campus fixed effects to control for campus demographic and peer group characteristics, and student fixed effects to control directly for student and student family background characteristics. We find a positive and significant effect of charter school penetration on traditional public school student outcomes.

2.5.1

Kevin Booker
Texas A&M University

Scott Gilpatrick
University of Tennessee-Knoxville

Timothy Gronberg
Texas A&M University

Dennis Jansen
Texas A&M University

Average Teacher Salaries and Yearly Increases in Charter Schools

Previous research indicates that charter schools may have less qualified teachers than traditional public schools (Burian-Fitzgerald, Luekens, & Strizek, 2004; Harris, 2003). One possible explanation for this disparity is that charter schools do not pay teachers competitive salaries. This paper explores teacher salaries in charter and traditional public schools using the 1999–2000 Schools and Staffing Survey. Specifi-

2.5.2

Marisa Burian-Fitzgerald
Michigan State University

cally, it compares both beginning teacher salaries and average yearly salary increases in charter and traditional public schools. Hierarchical Linear Modeling (HLM) technique is used to account for clustering of teachers within school systems and to control for factors that may influence the relationship between salary and years of experience. I find that, while salaries for first-year teachers are similar in charter and traditional public schools, teachers in charter schools receive smaller yearly salary increases. This results in a sizeable salary differential between experienced charter school teachers and their traditional public school counterparts. These findings suggest that charter schools may have difficulty retaining teachers as they gain experience. While charter schools may be able to compete with traditional public schools in initial teacher hiring, charter schools may lose teachers to public schools as teachers gain experience.

Do Vouchers Lead to Sorting Even Under Random Private Selection? Evidence from Milwaukee Voucher Program

This paper analyzes the impact of voucher design on student sorting, and more specifically investigates whether there are feasible ways of designing vouchers that can reduce or eliminate student sorting. It studies these questions in the context of the Milwaukee voucher program. Much of the existing literature investigates the question of sorting in a framework where private schools can screen students. However, the publicly funded U.S. voucher programs require private schools to accept all students unless oversubscribed and to pick students randomly if oversubscribed. The paper focuses on two crucial features of the Milwaukee voucher program—random private school selection and the absence of topping up of vouchers. In the context of a theoretical model, it argues that random private school selection alone cannot prevent student sorting. However, random private school selection coupled with the absence of topping up can preclude sorting by income, although there is still sorting by ability. Using a logit model and student level data from the Milwaukee voucher program, it then establishes that random selection has indeed taken place so that it provides an appropriate setting to test the corresponding theoretical predictions in the data. Next, using some alternative logit models, it demonstrates that these predictions are validated empirically. These findings have important policy implications.

2.5.3

Rajashri Chakrabarti
Harvard University

Improving Public Education through Strengthened Local Control

This paper compares and contrasts governance structures of widely held, publicly traded corporations and public school districts by examining the legal bases of both structures. In particular it compares the duty of care and duty of loyalty, and correlative obligations on directors and officers of both types of organizations. State oaths of office that govern the conduct of school board directors in forty-one states are reviewed, and found to be varied and generally far less demanding than the annual obligations facing corporate directors and officers.

A new structure of school board governance is developed, including suggested legislative language, that is based on the duties of care and loyalty and the business judgment rule. The underlying premise of this suggested approach is that each school board member and senior educational official should affirm that they will allocate resources and make educational policy for the sole purpose of ensuring that each student learn to the best of his or her intellectual capacity.

2.5.4

Roger Severino
The Beckett Fund for Religious Liberty

Robert Strauss
Carnegie Mellon University

Teacher and School Board Incentives

Session 2.6

Jacob Adams
Session Chair
University of Washington

Stephen Chaikind
Session Discussant
Gallaudet University

The Quest to Maintain Quality Teachers: Does Practice Act as Incentive

2.6.1

Yas Nakib
George Washington University

Allocating resources in education, especially teachers, is increasingly becoming important policy concern. While research has recently documented many of the aspects that explain the quality and training of teachers, there is still a lack of sufficient understanding of aspects of the teaching environment as they impact the quality and contribution of teachers. The recent education reform initiatives have certainly altered the conditions in which teachers work as well as their quality and contribution. Understanding the impact of these reforms is becoming a pressing question as we evaluate the success and implementation of these policies. This study while not undertaking all the broader and complex aspects that help us understand the role of the local context in shaping the success of policies, it attempts to answer a narrow yet important aspect of such context. This study attempts to answer questions concerning the practices in the composition and use of teaching staff in schools as they respond to the demands by reform policies. Among the conditions that this study analyzes, the primary focus involves the distribution and use of staff within schools and the role, if any, that incentives play to enhance the quality and contribution of teachers. Research questions addressed in this study include: 1) How are schools and districts allocating “quality” teachers in response to reform pressures? 2) Are they providing for significant teacher-support services and developing the existing teacher workforce through specific targeted policies? 3) What are the significant factors, if any beyond salaries and benefits, offered or exhibited by schools and districts that would work as incentives in hiring, retaining and utilizing “quality” teachers?

As this study attempts to answer these questions, it investigates whether the variation in type or intensity of reform policies make a difference in terms of attaining and retaining quality teachers. This paper presents findings from analysis of various data sources in explaining schooling practices and their role in shaping the success of reform policies.

Performance Pay Systems Preferences of Students Preparing to be Teachers

2.6.2

Anthony Milanowski
University of Wisconsin-Madison

The research to be reported assessed attitudes toward performance pay of students preparing for a teaching career at a large Midwestern public university in order to explore reasons for teacher resistance to pay for performance systems.

Though pay for performance for teachers is frequently discussed by both researchers and policy makers as a way to improve accountability and retain better teachers, relatively few U.S. school districts have attempted to implement performance pay systems, and several notable recent attempts to introduce them have been unsuccessful. Some evidence suggests that teachers tend to find performance pay systems threatening, and to see performance criteria as problematic. It is not known if these reactions are the result of teachers’ experience with teaching work and/or their socialization into a professional culture suspicious of performance distinctions, or whether teaching attracts people who are averse to the risk associated with performance pay and/or are uncomfortable with evaluation of performance. If the latter, systems that base substantial proportions of pay on performance may face an inherent obstacle.

It was hypothesized that if attitudes toward performance pay were based on personality and experiences prior to beginning teaching, students preparing to be teachers would prefer a pay system in which increases were not based on performance. It was

further hypothesized that among such students, personality and work values would influence preferences for pay systems. Hypotheses were tested using data from a survey of education majors at a large Midwestern public university. Preliminary results show that most students preferred a system that provided pay increases based on individual performance to a system based on group (school) performance or to one not based on performance. Measures of personality and work values were only weakly related to pay system preferences.

Reforming Reforms: Incentive Effects in Education Finance in Vermont

In 1997, Vermont passed Act 60, which reformed its education finance system to achieve greater equality of spending within the state. The reform included strong and transparent leveling-down incentives for wealthy states to reduce spending, and was politically very unpopular. It was replaced by Act 68 in February 2004, which made substantial changes to the Act 60 finance system. In this paper we analyze the incentives for local spending created by Act 60 and Act 68, and see how those incentives have been altered in reaction to the political response to Act 60. We then estimate the effects the change will have on spending inequality in Vermont. We find that Act 68 greatly reduces spending disincentives created by Act 60, changing the system to rely largely on leveling-up instead of leveling-down. As a result, it reduces spending disincentives disproportionately for wealthy towns, and increases inequality of spending in Vermont relative to Act 60. Because spending is quite inelastic with respect to tax prices, however, the increase in inequality is not very large relative to existing inequality. Act 68 does result in lower tax prices in all towns in Vermont and hence produces a moderate increase in education spending statewide. Our findings emphasize the importance of marginal effects of education finance, and suggest that understanding the way in which towns respond to the incentives those effects create is critical in designing successful education finance reforms.

2.6.3

Stephen Schmidt
Rensselaer Polytechnic Institute

Karen Scott
Union College

Teacher Quality and Teacher Retention

Session 2.7

Lora Cohen-Vogel
Session Chair
Florida State University

Susanna Loeb
Session Discussant
Stanford University

Teacher Retention and Mobility: A School and District Level Analysis

In this study, teacher retention and mobility in Washington's teaching force is examined at district and school levels as a means for exploring issues of equity and its relation to student achievement. While earlier statewide analysis of teacher retention in Washington indicates a relative stability of the overall workforce, both inter- and intra-district differences in teacher retention rates exist. In order to examine the nature of the differences between and within districts, a sample of 20 districts was selected for analysis. The sample includes districts that vary on the basis of enrollment size, region of the state, and student poverty levels.

A number of state databases were used in this study, with core data coming from the state's personnel database spanning the years 1997–98 to 2002–03. Analyses include a district- and school-level examination of the distribution and movement of classroom teachers (categorized as stayers, movers in district, movers out of district, and leavers). Student demographics, measures of student learning, and other school and district characteristics were examined, revealing how the teaching force is distributed across schools serving students within widely varying educational contexts. The research also takes a specific look at retention of novice teachers (those with less than five years of teaching experience), and teachers of color. Results of the study include

2.7.1

Margaret Plecki
University of Washington

Ana Elfers
University of Washington

the finding that within-district differences in teacher retention rates are greater than interdistrict differences. The data at the individual school and district levels, suggest that specific relationships exist between teacher retention, student poverty, and student achievement.

Investing in Teacher Quality: Evidence from Maryland and New York

The importance of teacher quality in producing higher student achievement implies that teacher policy is a promising direction for realizing goals of productivity, equity, and adequacy in public education. Not surprisingly, the past two decades hold numerous examples of policies aimed at enhancing teacher quality (National Commission on Excellence in Education, 1983; Carnegie Foundation for the Advancement of Teaching, 1983; Holmes Group, 1986; National Commission on Teaching and America's Future, 1996). The recent federal education legislation "No Child Left Behind" further underlines the importance of having a high quality teacher in every classroom in every school.

In this paper, we report on the teacher policy landscape in two states: Maryland and New York. Using a combination of focus group and interview data with State officials, district and building leaders, and classroom teachers, we review multi-level strategies for recruiting and retaining high quality teachers. We focus on several areas of educational policy: 1) the degree of alignment across levels of the education system in teacher recruitment and retention strategies; 2) the extent to which policies and resources are targeted to difficult-to-staff schools; and 3) the perceptions of district administrators, building principals and classroom teachers regarding the impact of current strategies. This paper serves as a progress report on the work we have conducted in Maryland and New York. The study will eventually be extended to include an analysis of investments in teacher quality in a third state: North Carolina.

The Distribution of Quality: Politics, Union Contracts, and Teacher Deployment

District and principal efforts to redistribute teacher resources is limited at best. Due to union contract provisions that favor existing district teachers and the most senior candidates, there is little flexibility in the system for principals to search for a teacher with a proven track record of success with low-performing students. Moreover, in some districts, union contracts restrict principals' ability to assign existing teachers within his/her school even when teachers hold appropriate licenses. Through the analysis of collective bargaining agreements in Florida's 67 school districts, the study seeks to answer to what extent do collective bargaining agreements differ between districts with respect to teacher staffing and assignment provisions, and do the provisions impede efforts to balance teacher resources?

Elusive Equity: Education Reform in Post-Apartheid South Africa

Session 2.8

Symposium

When, Nelson Mandela and other leaders of South Africa's first democratically elected government took office in 1994, they inherited a state education system that had lavished human and financial resources on schools serving whites while systematically starving those serving African, coloured and Indian learners. Their challenge was to transform this apartheid-era system into a new one that would further the democratic and egalitarian values of the new democracy while meeting its new economic and social needs.

2.7.2

Jennifer King Rice
University of Maryland

Dina Sparks
University of Maryland

Christopher Roellke
Vassar College

Lauren Duff
Vassar College

2.7.3

Lora Cohen-Vogel
Florida State University

La'Tara Osborne-Lampkin
Florida State University

James Guthrie
Moderator
Peabody College
of Vanderbilt University

Helen Ladd
Duke University

Edward Fiske
Consultant and former Education
Editor, The New York Times

In their new book, *Elusive Equity: Education Reform in Post-Apartheid South Africa* (Brookings, 2004), Edward B. Fiske and Helen F. Ladd describe and evaluate the strategies that South Africa has pursued at the national, provincial and local levels over the last decade in order to meet this challenge. They draw on previously unpublished school-level data, interviews with key officials and visits to dozens of schools to show how changes were made in school finance, teacher assignment policies, curriculum, higher education and other areas.

The authors focus on three central themes: the elimination of racial barriers in the state education system, the development of a unified and equitable school funding system, and the introduction of a new curriculum that embodied the precepts and goals of the new democracy. They conclude that the country has made remarkable progress toward equity in the sense of equal treatment of persons of all races. For several reasons, however, the country has been far less successful in promoting equal educational opportunity or educational adequacy. Thus equity has remained elusive.

In this session Fiske, a former Education Editor of the New York Times, and Ladd, Edgar Thompson Professor of Public Policy Studies and Professor of Economics at Duke University, will document South Africa's progress toward a more racially equitable education system and lead a discussion of how South Africa's experience is relevant to education finance and policy in the U.S. and other countries.

Teacher Compensation—Measurement, Trends, and Innovations

Session 3.1

How Does Teacher Compensation Compare? Methodological Challenges and Answers

Recent research in the economics of education has demonstrated the importance of teachers for students' academic success. The recent No Child Left Behind legislation raised the profile of this issue by requiring a qualified teacher in every classroom by 2005. This concern over teacher quality has generated renewed interest in both the sufficiency of teacher pay to attract high-quality staff and the efficacy of various dimensions of teacher pay. In this report, we review recent analyses of relative teacher compensation, examine some of the ways in which the conclusions of these analyses differ, and provide our own detailed analysis of trends in the relative weekly pay of elementary and secondary school teachers. We propose a method for finding occupations comparable to the teaching profession based on specific job skill requirements, and compare teacher pay with pay in these professions. We use hourly compensation and benefits data for teachers and professionals to estimate the extent of any "fringe benefits bias" that exists when comparisons of teacher wages are made without considering benefits, which frequently differ across professions. Last, we examine the data on hourly wages for teachers and other occupations found in the new National Compensation Survey (NCS), which is the basis for some new claims that teacher pay matches or exceeds the pay of comparable professions. Our examination of the NCS methodology for determining hourly wages concludes that it is an inappropriate source of data for comparing teacher pay to that of other professions.

Are Public School Teachers "Underpaid?"

Comparisons of pay and benefits of public school teachers to those of professional employees in other sectors are complicated by the fact that most teachers work under contracts that are nine or ten months in length rather than a full year. The author shows that this makes household survey data on weekly earnings in the CPS-ORG unreliable. In general, employer-reported data on salaries and benefits such as the National Compensation Survey (NCS) are preferred for this type of comparison. NCS data from metropolitan labor markets suggest that both pay and benefits for public school teach-

Marge Plecki
Session Chair/Reactor
University of Washington

3.1.1

Sylvia Allegretto
Economic Policy Institute

Sean Corcoran
California State University

Lawrence Mishel
Economic Policy Institute

Jeremy Lualen
Discussant
University of Florida

3.1.2

Michael Podgursky
University of Missouri-Columbia

Ruttaya Tongrut
University of Missouri-Columbia

ers compare favorably to those of other professionals and white-collar workers. They also exceed considerably pay and benefits levels of teachers in private schools.

Christopher Cornwell
Discussant
University of Georgia

Why Do So Few Public School Districts Use Merit Pay?

The general theory of incentives suggests that public school teachers will face weak performance incentives because of the nature of their work and workplace: teaching is complex and multidimensional work; schools have multiple goals that are vague and poorly observed; multiple (and mobilized) stakeholders are interested in public education. Others suggest that incentives in education are low not because of the nature of teaching, but because of the high degree of unionization among public school teachers. Despite the ostensibly slim odds suggested by both views, a few school districts and states nevertheless offer performance incentives for teachers in the form of merit pay. In this paper we present a principal-agent model in the context of public schools to help explain the factors that affect district decisions about merit pay. The model includes the possibility that both the nature of teaching and the political costs of reform associated with unionization play a role in these decisions. It predicts that districts will be more likely to offer merit pay when they have more information about teacher performance and less likely to do so when their teachers are unionized. It also suggests that, on average, teacher salaries will be higher in districts that offer merit pay. The results from our analyses suggest that the political costs of reform affect district merit pay decisions, but provide little evidence for the hypothesis that more information about performance makes merit pay more likely or that merit pay plans tend to increase teacher salaries.

3.1.3

Dan Goldhaber
University of Washington

Hyung-Jai Choi
University of Washington

Michael DeArmond
University of Washington

Daniel Player
University of Washington

Patrick McEwan
Discussant
Wellesley College

A Study of Resource Use for Instruction and Professional Development Using Different Reform Models with Different Levels of Resources in Different Contexts

Session 3.2

Allan Odden
Session Chair
University of Wisconsin-Madison

Analyzing the Costs of Instructional Improvement in the Midwest, West, and Northwest

This paper addresses the preliminary results of a resource allocation analysis of six elementary schools in three different states. The study compares how schools implementing different comprehensive school reform programs (Success for All, Accelerated Schools Project, and America's Choice) allocate resources differently from each other as well as from non-design schools. Using an expenditure model (see Odden, Archibald, Fermanich & Gross, 2003), which arrays resources according to the various educational strategies deployed in the school, and a professional development framework (see Odden, Archibald, Fermanich & Gallagher, 2002), the results show schools exhibit variations in resource allocation by reform model. The study reports the difference in implementation of the same school improvement designs in different contexts as well as different school designs in similar contexts. Further, the analysis addresses how schools implement designs in districts with different expenditures per pupil, accountability structures, and geographic contexts. Further research is suggested connecting these allocation patterns to student achievement as well as research determining whether design mandates alter resource allocation patterns in high per pupil expenditure states.

3.2.1

Allan Odden
University of Wisconsin-Madison

Sarah Archibald
University of Wisconsin-Madison

Michael Goetz
University of Wisconsin-Madison

Michele Turner
University of Wisconsin-Madison

Martin Orland
Discussant
Center for Education and National
Research Council

Resources for Instruction and Professional Development in the Northeast

In 1998 the New Jersey Supreme Court issued its fifth decision in a long-running school finance case, *Abbott v. Burke* (Abbott V). The Court's decision directed schools in thirty poor urban districts (the so-called Abbott districts) to adopt a comprehensive school reform (CSR) program by the academic year 2000–2001 and to implement additional programs and services, such as full-day kindergarten and family support teams. An integral part of the whole school reform effort in New Jersey is the delegation of both programmatic and resource allocation decisions to the school level. This paper explores how five elementary schools in one Abbott district in New Jersey allocated their resources in the 2004–05 school year in light of their CSR program, state regulations, and their district context, all of which have mandates and expectations for the allocation of resources in schools. These five schools use one of three whole school reform models—the Accelerated Schools Program (ASP), Comer, and Success for All (SFA). We use the expenditure structures developed by Odden, Archibald, Fermanich and Gross (2003) and Odden, Archibald, Fermanich and Gallagher (2002) to describe and analyze the type, level and mix of resources across the five schools, including a detailed look at expenditures on professional development. We find that district requirements and the Abbott mandates drive most of the schools' resource allocation decisions. The CSR model accounts for some variation, however, in the level and use of professional development dollars. These resource allocation patterns will be compared with those from schools using similar CSR models in other districts and states (Odden et al., Session 3.2.1).

Urban, Suburban, and Rural Districts: An Analysis of Teacher and School Resources

A school environment that fosters achievement requires certain resources at the teacher, school, and district level. This paper examines variations in characteristics and resource distribution at each of these levels across locales. More specifically, this paper focuses on the differences in the characteristics of students and teachers at the school level across six defined community types: large city; midsize city; urban fringe of a large or midsize city (suburbs); small town; rural; and rural urban fringe (exurbs). In addition to exploring the characteristics of teachers and schools across locales, this paper also examines fiscal characteristics of school districts. Among other fiscal variables, school district revenues, expenditures, and capital outlays are presented and analyzed by urbanicity. District level fringe benefits offered to teachers and the criteria used in the hiring of teachers are a final subject of analysis in this paper. Results indicate that there are a number of differences in resource allocations between schools located in rural areas and schools sited in the exurbs. Currently, many studies analyzing differences between school urbanicities employ only three distinct urbanicities, rural, suburban, and urban, with exurban schools being included with rural schools. This analysis suggests this may be a practice that should be reconsidered, as there are a number of important differences between teachers, schools, and districts in each locale.

Education Finance and Policy: An International Perspective

Session 3.3

Grade Repetition and Early Withdrawal among Adolescents in Rural Kenya

Common characteristics of adolescents' schooling in developing countries include tuition costs at public schools, school choice availability and at times, the choice of

3.2.2

Margaret Goertz
University of Pennsylvania

Betheny Gross
University of Washington

Michael Weiss
University of Pennsylvania

Martin Orland
Discussant
Center for Education and National
Research Council

3.2.3

Catherine Freeman
National Center for Education Statistics

Deven Carlson
American Institutes for Research

William Sonnenberg
National Center for Education Statistics

Kim Reuben
Discussant
Urban Institute

Helen Ladd
Session Chair
Duke University

Thomas Snyder
Session Discussant
National Center for Education Statistics

3.3.1

Tracyann Henry
Union College

acquiring basic education. These characteristics in turn, structure the schools' quality and the acquisition of basic education into an investment venture at the family level. In this model of basic education with varied school quality and non-mandatory attendance, grade repetition and dropout are two important and arguably competing risks faced by the adolescents. This paper uses a sample adolescents residing in rural Kenya and are exposed to this model of schooling, to investigate surviving primary school. A proportional hazard model framework is used in this investigation by first treating grade repetition and dropout as independent events and then as competing risks. Additionally, the potential endogeneity of school quality in explaining either grade repetition or dropping out, and grade levels (instead of age) as the survival time variable are introduced. Findings reveal that community and family contributions to the schools are positively related to school quality. Furthermore, students from wealthier households and students attending schools with comparably higher qualities have a higher survival rate in the school system. The results also show that grade 6 poses the highest risk of dropout among the adolescents.

Public School Expenditure and Parental Education on Youth Literacy in Sub-Saharan Africa

The educational systems in Sub-Saharan Africa have experienced natural and human-made disasters like increased debt burden, poor governance, wars, epidemic, and inadequate funding. In almost every Sub-Saharan African nation, literacy efforts tend to be constantly disrupted by war and economic disasters. Although literacy rates have increased in recent years, there are still close to 900 million illiterates in developing nations, representing nearly 25 percent of the world's youth and adults. Research have shown that government play more important role in the economies of nations where human development is high than in countries where it is medium or low. Education promotes open-mindedness, and with it the ability to adapt to new techniques and situations. Youth literacy rate in Sub-Saharan Africa have remained very low when compared to rates in other regions because of the unequal access to educational opportunities. Religious and ethnic diversity may contribute to youth literacy rate and subsequently impact the development process of any nation. Because literacy contributes to the economic and social performance, it is necessary to conduct a study on the role of school expenditure, parental education and religion on youth literacy in Sub-Saharan Africa. Using a cross-sectional data of 38 Sub-Saharan countries we examined a) the role of public education expenditure on youth literacy; b) the relationship between parental education and youth literacy; and finally; c) the role of religious affiliation of parents in explaining youth literacy. Our results are inconclusive regarding the roles of religion and government expenditures on education, but we found that adult illiteracy is statistically significant in explaining changes in youth literacy

3.3.2

Amon Okpala
Fayetteville State University

Comfort Okpala
Shaw University

The Politics of Diversity: Headscarves, Immigration and Public Financing of Religious Education in France

This paper will review the philosophical, political and financial implications of the recent decision by the French General Assembly to continue the deep tradition of secularity in French public schooling as evidenced by its decision to ban the display of religious symbols in public schools.

The French educational system, though strongly influenced in its past by the Roman Catholic church, over the last two centuries has had a strongly secular cast, a preference supported by the political establishment and a resolutely secular teaching corps. This paper will review the current challenges to the officially secular nature of public schooling in France that have surfaced over the last few years as the number of Muslim children in French schools has grown rapidly and the implications for public funding of religious schools.

France has had a strong and deep tradition of secular schooling. Though usually considered in the U.S. as a Catholic country, in fact there is an almost two-century old commitment to a 'common education' for all French children under the control of

3.3.3

Carolyn Herrington
Florida State University

a secular teaching corps. Diversity in background, religion and culture was officially suppressed by the Paris-controlled educational interests. The French educational system has been recognized world-wide as being a heavily centralized system and one whose primary purpose is to prepare citizens of the Republic.

Recent growth in the numbers and diversity of the Muslim community in France has challenged long standing norms around the secular stance of French public schools and the teaching force.

The paper will review historically the establishment of the secular school system during the Third Republic and public financing of lay Catholic schooling over this time period. It will then analyze the recent tensions that have surfaced as the school system has attempted to accommodate religious diversity within the system.

Policy Analysis of the 2004 Higher Education Financial Reform in England

The Higher Education Bill was passed in the Parliament in England in January 2004. The bill drastically increases the tuition approximately three times to raise revenue for the universities and proposes a new mechanism of tuition payments to ensure equity of educational opportunities. The bill raises heated debates in England and was passed in parliament by a small margin of 5 votes. This presentation introduces the Higher Education Bill in England, analyzes controversies, evaluates the reform actions, and discusses challenges in the field of financing higher education.

3.3.4

Sophia Lee
The Ohio State University

High Performing Schools: Do We Know How They Do It?

Session 3.4

Steven Jacobson
Session Chair
University at Buffalo-State University
of New York

Anthony Rolle
Session Discussant
Peabody College
of Vanderbilt University

Uncommon Schools, Uncommon Results: Case Studies of Three New York State Schools Closing Racial Test Score Gaps

This paper examines schools with atypical racial test score gaps, where non-white students have “beaten the odds” by performing as well as or better than white students. Using a unique dataset of student ELA (English Language Arts) and math pass rates for all schools in New York State, we identify these atypical schools and describe them statistically. We then select three schools for study using qualitative methods of inquiry that examine hypotheses from other qualitative studies of school-level test score gaps. Findings of the qualitative work suggest a number of factors that may contribute to school success in eliminating gaps: teachers’ understanding of data and their ability to link data to instructional practices; strength of principal’s leadership skills; and high parental expectations. We recommend that the study be replicated to include a larger group of successful schools, in addition to a comparison group of schools that have not been successful in reducing test score gaps.

3.4.1

Colin Chellman
New York University

Meryle Weinstein
New York University

Leanna Stiefel
New York University

Amy Ellen Schwartz
New York University

How Are High-Performing Schools Spending Their Money?

Given the requirements posed by the No Child Left Behind Act and the fact that state school finance systems across the country are being challenged in court, schools require information regarding the most effective allocation of their resources in terms of education outcomes across grades, subjects and subgroups of students. The goal of the study is to assist in improving the effectiveness of resource allocation among

3.4.2

Chrys Dougherty
National Center for Educational
Accountability

public schools by improving the understanding of how the distribution of teachers, time and money is related to education outcomes in public elementary schools in Texas. The study first carries out an econometric analysis of educational achievement and resources. It then uses a school expenditure system developed by the Center for Policy Research in Education at the University of Wisconsin at Madison (CPRE-UW) to identify the expenditure structures of a sample of higher performing public elementary schools and compares them to those of a sample of average-performing elementary schools. It is hypothesized that identifying the differences in the way money, teachers and time are allocated across programs, functions, subjects and grades within schools will reveal key details about the more effective teaching strategies at the higher performing schools. Findings from this case study hold huge promise for a large-scale analysis of school-level expenditures in Texas public schools.

Options to Narrow the Achievement Gap: Examining Education Spending Ratios Across Different Student Types and Funding Sources

As accountability focuses attention on achievement gaps, many districts struggle to link spending with the performance of various student subgroups. With allocation formulas that increasingly account for the learning needs of different types of students, policymakers must make decisions on how much to spend on each student type, while lacking information on current spending ratios and what the spending ratios for differing types of students look like in other locales. With funding patterns differing from state to state and district to district, and with spending investments buried in budget streams and layers of service delivery, identifying current spending trends can be difficult. This study seeks to examine the education spending ratios across student subgroups and highlight and explain typical and atypical spending patterns for major types of student need. We focus on four states: North Carolina, Ohio, Texas, and Washington. In addition to state-level data, we will also examine a sample of school districts within each state. First, we create a profile of the investments of public monies dedicated to address the special learning needs of various types of students. Next, we compare investments by different funding sources (federal, state, and local) and characterize the patterns of spending across states and locales. Finally, we compare our findings to existing research on funding student needs, in order to best inform policymakers' decisions regarding spending investments to narrow the achievement gap.

Successful School Leadership in High Poverty Schools: An Examination of Three Urban Elementary Schools

Increasing accountability, environmental and organizational complexity, and the perception of a shortage of high quality school leaders make it imperative that policymakers learn more about the practices employed by principals who have improved student performance in high poverty schools. This study examined three high poverty urban elementary schools that have shown improved student achievement during the tenure of their current principals. Using New York State report card data and a multi-perspective interview protocol to triangulate the perceptions of administrators, teachers, support staff, parent and students at each site, the cases identify and examine the policies and practices that contributed to improved student performance. The findings reveal that in addition to a core set of basic practices necessary for school success: setting directions, developing people and redesigning the organization (Leithwood & Riehl, 2003), the three principals responded to the challenges of their high poverty communities by establishing safe, nurturing environments for children and adults; setting high expectations for student performance and holding everyone—students, faculty, parents and themselves—accountable for meeting those high expectations. All three set a clear direction for the school and then influenced their school community to move in that direction by modeling desired behaviors and practices. Policy recommendations include the use of monetary incentives for principal recruitment to high poverty/low performing schools, and strengthening administrator preparation and practice to model the core skills for school success, especially as they pertain to high poverty urban communities.

Lynn Mellor
National Center for Educational
Accountability

Veronica Brinson
National Center for Educational
Accountability

3.4.3

Marguerite Roza
University of Washington

Kacey Guin
University of Washington

Chelsey Coyte Devenyns
University of Washington

3.4.4

Stephen Jacobson
University at Buffalo-State University
of New York

Sharon Brooks
University at Buffalo-State University
of New York

Corrie Giles
University at Buffalo-State University
of New York

Laurie Johnson
University at Buffalo-State University
of New York

Rose Ylimaki
University at Buffalo-State University
of New York

State Merit Aid and College Admissions, Enrollment, and Preparation

Yut'se Thomas
Session Chair
New Jersey State Department
of Education

Session 3.5

Mary McKeown-Moak, *Discussant*, MGT of America

State Merit Aid Programs: Motivations, Consequences, and a “Master” Solution

3.5.1

Lauren Henderson
Peabody College
of Vanderbilt University

This paper discusses the pros and cons of current broad-based state merit aid programs, after which it suggests a solution that would be more equitable and effective. To begin, the author examines the history of financial aid in American higher education, tracing it from its beginnings where the aid offered was a combination of need- and merit-based aid, through the shift to predominantly need-based aid in the mid-twentieth century, and ending with the recent rise in merit-based financial aid programs. Immediately following is a brief overview of the California Master Plan, which once again combined merit- and need-based aid, but is said to be the predecessor of state merit aid programs. The author then offers a detailed examination of five different state merit aid programs: the Georgia HOPE Scholarship (1993), the Michigan Merit Award Scholarship Program (1999), New Mexico Success Scholarship (1997), the Florida Bright Futures Scholarship Program (1997), the Tennessee Education Lottery Scholarship (2004). Then, using the Harvard University's Civil Rights Project, “Who Should We Help? The Negative Social Consequences of Merit Scholarships,” as a starting point for discussion, the author looks closely at the motivations for the development of these programs, including the increase of access and attainment, to award students who perform well academically, and to help put an end to “brain drain” and its negative effect on state economies. While these programs work well in response to some of these motivations, they fail to solve and even create more problems in some instances. For example, research shows that merit aid programs keep students in their home state, yet because they often award Caucasian, middle- and upper-class students, they actually promote class and racial inequity. Finally, this paper outlines suggestions that, if applied to merit-based aid, would help correct the problems discussed. Those same suggestions are then incorporated into a program in the style of the California Master Plan that could serve as an alternative to broad-based state merit aid programs.

Exploring Public School Programs for College Preparation and Enrollment

3.5.2

Timothy Zeidner
Peabody College of
Vanderbilt University

The nexus between K–12 and higher education still remains a largely unexplored field. While “k–16” or “p–16” research has begun to surface recently, the relationship between what happens in secondary schools and how that affects the probability of students going directly on to postsecondary higher education institutions has largely been unaddressed. If school finance is interested in outcomes beyond simply meeting the standards of No Child Left Behind, or other benchmarks, then its eye should be towards how well it prepares students to access higher education.

This paper specifically addresses the role of higher education preparatory tests (i.e., PSAT, SAT/ACT, AP) and school programs (i.e., help filling out school application, filling out financial aid application) and how participation in these activities and programs affects one's likelihood of going directly on to college or university. Specifically, how do these activities and programs influence students in the middle range of their schools (B or C average GPA) and their probability of attending college or university within a year of graduation?

The paper suggests that, holding background variables constant, as students participate in these “Higher Ed Help” programs and activities, their predicted probability of going directly on to college increases dramatically. Furthermore, it suggests that between school variation in students that go directly on to college can be explained

in part by the strength of these programs and its atmosphere in their respective schools.

Consequently, these findings indicate a need for greater resource allocation in districts and schools in funding these existing school programs in order to give greater access and motivation to students who manifest desires for postsecondary education.

The Impact of Florida's Bright Futures Scholarship Program on Whether and Where Students Attend College

3.5.3

Lora Cohen-Vogel
Florida State University

The purpose of the study is to examine state-funded merit-based college aid programs, specifically, Florida's Bright Futures Scholarship Program, and its effects on the attendance rates and college choices of the state's students. Specifically, it seeks to understand whether merit-aid programs like Bright Futures differentially impact whether and where students of varying races/ethnicities and abilities attend college as well as the implications for racial and ability stratification among colleges. The project involves analysis of student records data available from Florida's Department of Education. In a policy environment that seemingly favors merit aid to its needs-based predecessors, it is crucial for policy-makers and institutional researchers and planners alike to understand the social and economic implications of the shift.

A Closer Look at Early Admission in U.S. Colleges: Is there an Equity Efficiency Trade-Off?

3.5.4

Rajashri Chakrabarti
Harvard University

Since the 1990s, concurrent with a large increase in the premium to attending the most selective colleges, the number of students admitted early to U.S. colleges has gone up significantly. Such programs have become the gateway for more than one-third of the class at America's best universities, including about half of each entering class at Harvard and Princeton. This paper argues that early admissions is associated with an equity-efficiency trade-off and investigates the gains and losses from this process for the various players involved.

Joydeep Roy
Economic Policy Institute

We set up a model incorporating uncertainty, where universities cannot observe the 'true' quality of their applicants. So it is in the interests of the best applicants to send a signal that identifies them as such. We argue that early admissions, by increasing the probability that a candidate's quality is revealed during the application process, provides for such a signaling game. However, applying early is costly and can prohibit poorer but equally meritorious applicants. In such circumstances, the system induces a tradeoff—it ensures a better match between a college and its students, but at the cost of magnifying the advantages of the wealthy and the well-connected. We extend the analysis to investigate the pervasive strategic interactions between students and colleges in a multi-college setting, and evaluate the different types of early admissions programs (early action, single-choice early action and early decision). Understanding these strategic interactions is key to understanding the nature of early admissions, and is crucial for informed debate at a time when college education is becoming more and more important.

Teachers, Certification, and Student Achievement

Session 3.6

Carolyn Herrington
Session Chair
Florida State University

Catherine Sielke
Discussant
University of Georgia

Is National Certification an Effective Signal of Teacher Quality

Many states and districts are moving toward more targeted compensation policies as a way to attract higher quality candidates into the teaching profession and to encourage increases in productivity among current teachers. Rather than align pay increases only to level of education and years of experience, for example, many school systems have started to tie pay increases or bonuses to National Board Certification (NBC). But the practice has been questioned, in part because of a lack of empirical evidence that NBC is an effective signal of teaching quality. The present study uses data from a large urban school district to examine the association between student gains in mathematics in the ninth and tenth grades, NBC, and other indicators of teacher quality. Based on a variety of different specifications and student subsamples, we find robust evidence that NBC is an effective indicator of teacher quality.

3.6.1

Linda Cavalluzzo
The CNA Corporation

Highly Qualified Teachers and Student Achievement: The Effects of Teacher Certification, Preparation, and Experience

The purpose of this paper is to explore the impact of teacher characteristics and preparation—particularly teacher certification—on student math achievement and reading achievement at the first-grade level. Policymakers and researchers are constantly looking for ways to improve K–12 education, and the focus on teachers and their qualifications has been one enduring approach for educational improvement. This is natural, given that teachers are the principal resource of public education and occupy the largest share of K–12 education budgets (Wayne & Youngs, 2003). As such, teacher characteristics are becoming increasingly more important. This is reflected in the most recently adopted national standard for public education, the federal No Child Left Behind Act of 2001 (NCLB). NCLB calls for a highly qualified teacher in every classroom. According to legislation, “highly qualified” is defined as full certification, a bachelor’s degree, and demonstrated competence in subject knowledge and teaching skills. The bar is set high. But existing literature on the effects of teacher characteristics on student’s achievement is inconsistent at best. It is unclear what teacher characteristics are important and for whom they are important in terms of the increased student achievement (Wayne & Youngs, 2003).

3.6.2

Kristie Rowley
Peabody College
of Vanderbilt University

To study the effects of teacher characteristics on student achievement, I use data from the Early Childhood Longitudinal Study (ECLS), a nationally representative data set of kindergarten classes from the 1998–99 school year. Participants are selected as kindergarteners and are followed over time. They are tested in math and reading in both the fall and spring of each academic year. Using the ECLS allows for building on prior research on teacher certification and preparation in that most of the existing studies use teacher characteristics to predict academic outcomes of middle and high school students. The proposed research offers new insight into the effects of teacher characteristics on students who are potentially more susceptible to educational interventions (see Kurlaender & Yun, 2002; Jepsen & Rivkin, 2002). Additionally, the ECLS includes surveys of teachers, school administrators, and children’s parents; therefore, unlike other studies of a similar nature, the ECLS allows for improved measures of children’s home environment and backgrounds. To make use of the nested nature of the data, I use Hierarchical Linear Modeling (HLM) to complete my analysis. Preliminarily, I find teacher certification in elementary education to be positively correlated with student math achievement; however, years of experience and level of education do not yield significant results.

Estimating Impacts of Teacher Qualifications on Student Achievement Controlling for Peer Effects

3.6.3

Duncan Chaplin
Urban Institute

Sheila Isanaka
Urban Institute

Cost Analysis of the Florida School Districts' Role in Alternative Teacher Certification

Attracting, training, and retaining high quality teachers are the foremost challenges for public school districts and schools. States and districts have turned to alternative pathways to attract people who might not otherwise turn to teaching as a career. Given competing demands for limited resources, it is imperative to understand the costs of alternative certification programs. This study estimates the costs of alternative certification programs in Florida using the ingredients method set forth by Levin and McEwan (2001). Monetary values of each ingredient are estimated based on available information. This report draws on numerous sources of information, including previous analyses of alternative certification in Florida, FACP program documents, and state reports (student enrollment and average salary). A survey of district coordinators, administered in June 2004 provides the preponderance of data for this analysis. Participant data from the FLDOE are used to create groups of districts based on size of program as measured by total participants. We find that on average, the costs per participant are \$6004. There appear to be economies of scale generated by the very largest programs as the cost per participant is lower. Districts using the state-developed programs have higher costs, but also tend to have smaller programs.

3.6.4

Patrice Iatarola
Florida State University

Kyle Ingle
Florida State University

The “Improved” School Finance: Implications for Programmatic Research, Court Cases, and Production Functions

Session 3.7

The “improved” school finance attempts to determine how resources are used in classrooms and schools, rather than neglecting this step as conventional production functions do. This symposium presents an overview of this conception, and then applies it in three papers examining a programmatic reform in California, a potential solution to the school finance case Council For Fiscal Equity v. State of New York, and statistical analysis of educational production functions using NELS88 data.

W. Norton Grubb
Session Chair
University of California, Berkeley

Richard Rothstein
Session Discussant
Economic Policy Institute

Evaluating a State-Sponsored School Improvement Program through an “Improved” School Finance Lens

3.7.1

Laura Goe
Educational Testing Services

Next Steps for Results: The Improved School Finance and CFE v. State of New York

3.7.2

Luis Huerta
Teachers College

The “Improved” School Finance and the Identification of Effective Resources: Explorations with NELS:88 Data

3.7.3

W. Norton Grubb
University of California-Berkeley

Marcel Paret
University of California-Berkeley

Teacher Attrition, Class Size, and Teach for America

Session 3.8

Lyle S. Krause
Session Chair
Alberta Teachers Association

David Frisvold
Session Discussant
Peabody College
of Vanderbilt University

The Effect of Class Size on Teacher Attrition: Instrumental Variables Estimates from New York State

Although policy makers are concerned about teacher attrition, there is limited research on the effect of potential policy instruments beyond teacher salary on teacher attrition. This research investigates the causal relationship between class size and teacher attrition in New York State using data on New York State teachers, schools, and class size reduction policies. Recent New York State and federal class size reduction policies provided funds for schools to hire additional teachers, which led to smaller class sizes in some elementary school grades. Both of these policies targeted schools and districts with the largest class sizes or the most poorly performing students, and both policies recommended that grades for additional teachers be decided based on prior class size and grade level. The plausibly exogenous variation in class size across grades resulting from additional teachers hired through these policies is used to construct instrumental variable estimates of the effect of class size on teacher attrition.

3.8.1

Emily Pas
Syracuse University

Conduct, Class Size, and Comprehension

The inability to find consistent effects of class size on student achievement has puzzled researchers. Lazear (2001) proposes a model of endogenous class size choice where schools optimally place more disruptive students into smaller classes. This paper uses the National Education Longitudinal Survey (NELS), a nationally representative sample of students in eighth and tenth grade, to explicitly test whether better behaved students are placed in larger classes. We estimate student behavior from teacher reports and, using instrumental variables, find strong evidence that, within schools, better behaved students are sorted into larger classes. Given this result, the lack of evidence on class size effects may be a result of poor methodology and not a true zero effect. Motivated by this possibility, we then examine whether class size reductions, controlling for behavior, increases student performance on standardized exams. The evidence suggests that omitting student behavior biases estimates against finding benefits of class size reductions.

3.8.2

Angela Dills
Clemson University

Sean Mulholland
Auburn University-Montgomery

New Teacher Exit: The Influence of Student Behavior Issue

Teachers with less than five years of experience have high attrition rates from teaching. This issue is critical because new teacher turnover adversely affects student outcomes and causes financial strain on school districts. Previous research describes six organizational factors that contribute to teacher stress and job dissatisfaction. This paper investigates whether those same factors affect the probability that a teacher intends to leave the field of teaching. The results of the logistical regression indicate that a new teacher's intent to quit is related to a lack of decision-making opportunities within his or her classroom, unclear expectations set forth by the school's administration, and delinquent behavior exhibited by students at the school. However, the effects of these three factors are modest in comparison to the effect of salary on the probability of the teacher's intent to leave teaching.

3.8.3

Sharon Kukla-Acevedo
University of Kentucky

The Effects of Teach For America on Students: Findings from a National Evaluation

This paper reports on a randomized experiment to study the impact of an alternative teacher preparation program, Teach For America (TFA), on student achievement and

3.8.4

Steven Glazerman
Mathematica Policy Research, Inc.

other outcomes. We found that TFA teachers had a positive impact on math achievement and no impact on reading achievement. The size of the impact on math scores was about 15 percent of a standard deviation, equivalent to about one month of instruction. The general conclusions did not differ substantially for subgroups of teachers, including novice teachers, or to subgroups of students. We found no impacts on other student outcomes such as attendance, promotion, or disciplinary incidents, but TFA teachers were more likely to report problems with student behavior than were their peers. The findings contradict claims that such programs allowing teachers to bypass the traditional route to the classroom harm students.

Daniel P. Mayer
Maynard School District

Paul T. Decker
Mathematica Policy Research, Inc.

Public School Choice and the Quality of Choice Schools

Session 4.1

Ed Muir
Session Chair/Reactor
AFT

Not All Charter Schools Are Created Equal: Differential Effects of Charter Schools In North Carolina

A number of analyses show that charter school students in North Carolina make smaller gains and achieve at lower levels than they would have in traditional public schools. Charter schools in North Carolina are also more segregated along racial and socioeconomic lines, on average, than nearby traditional public schools. This study extends existing analyses to examine if these aspects of the North Carolina charter school program create disparate impacts for different groups of students. In particular, we will use an extensive set of student panels together with information from charter school plans to see how different types of students sort themselves across different types of charter schools, and to determine if the effect of attending a charter school varies across different types of charter schools and different types of students.

4.1.1

Robert Bifulco
University of Connecticut

Helen Ladd
Duke University

Doug Harris
Discussant
Florida State University

Oversight of Nonclassroom-Based Charter Schools in California

Schools that provide nonclassroom-based instruction have represented a rapidly proliferating segment of schools within the charter school movement in California over the past decade. Nonclassroom-based schools differ from traditional schools in that they deliver instruction outside the confines of the classroom setting. Nonclassroom-based instruction encompasses home-schooling and various forms of independent study and distance-learning. The potential for the misuse of public funds has been high in these schools due to the nature of the instruction they provide. They use facilities and teachers in a different manner from other types of schools and may have lower cost structures. Therefore, disproportionate amounts of public per-pupil revenues may end up in the hands of school administrators in these schools. In October 2001, the California legislature passed Senate Bill 740 (SB 740) to strengthen the oversight of nonclassroom-based schools and implement cutbacks in state funding for schools failing to meet specified spending standards. As of late 2004, the SB 740 funding determination process has been implemented for three consecutive school years. Since the implementation of the new regulations began, concerns about their impact have grown. In this study, we take a look at the legislatively mandated funding determination process and examine the impact it is having on revenues, expenditures, and instruction of nonclassroom-based schools. The findings not only provide insights into the operation of these schools, but have strong implications for policies directed towards greater fiscal oversight of charter schools.

4.1.2

Cassandra Guarino
RAND Corporation

Ron Zimmer
RAND Corporation

Dylan Conger
Discussant
George Washington University

The Supply and Demand for Public School Choice

This study examines parents' demand for sending their children to a public school located outside their residential school district. Using a unique data set that contains information concerning both inter-district transfers and rejections of transfer applications, I am able to identify which school district characteristics attract the greatest demand for incoming transfers. Next, using historical data on school enrollments, I investigate whether the transfer space rejections appear to be more closely related to actual capacity constraints or related to concerns about potential negative peer effects due to demographic differences between districts and their neighbors. These estimates contribute to the literature concerning the parental demand for schooling and provide information concerning the potential effects of the No Child Left Behind Act's school choice provisions on the redistribution of student enrollments.

4.1.3

Randall Reback
Columbia University

David Sjoquist
Discussant
Georgia State University

What Determines Teacher Pay? The Roles of Competition, Degrees, and Labor Market Opportunities

Session 4.2

Jewell Gould
Session Chair/Reactor
AFT

What Different Benchmarks Suggest About How Financially Attractive It is to Teach in Public Schools

There is significant public policy concern that teacher salaries in the United States are insufficient to make teaching in public schools a financially attractive occupation, consequently limiting the number of high quality individuals who choose teaching as an occupation. This concern has been particularly acute of late, given that new research shows teacher quality to be the most important schooling variable influencing student achievement and that a combination of increasing student enrollments, an aging teacher workforce, and class size reduction policies have resulted in what is considered by some to be an imminent teacher shortage. Though the actual magnitude of the crisis is a subject of continuing debate, the perception of a teacher shortage may serve the important purpose of focusing public policy on the necessity of recruiting high quality teachers.

4.2.1

Dan Goldhaber
University of Washington

Daniel Player
University of Washington

Christiana Stoddard
Discussant
Montana State University

In response to the concerns about a teacher shortage, various policymakers and high profile reports have recommended an increase in teacher salaries. This is consistent with a widespread perception that teachers are poorly paid and have lost ground economically when compared to those employed in other occupations. Is this perception correct? The short answer is this: it depends on how teacher salaries are measured and to what they are compared. This paper evaluates teacher salaries relative to other occupations, focusing on what the right comparisons are for teachers with different training and education experiences. Based on these comparisons, we discuss how financially attractive it is to teach in public schools for individuals with different training and backgrounds.

How Reduced Barriers to Entry into Teaching Changes the Teacher Workforce and Affects Student Achievement: The Case of New York City

Demographic changes and new policies, such as class size reduction, are increasing the need for new teachers and, with it, the need for a greater understanding of effective programs for encouraging individuals to enter teaching and succeed in the classroom. In low-performing schools with high proportions of poor and non-white students, the qualifications of teachers are already substantially worse than in better performing urban and suburban schools (see for example, Lankford, Loeb and Wyckoff, 2002). As the demand for high-quality teachers increases, these disparities are likely to worsen, as schools with better working conditions and higher salaries bid away the better qualified teachers from already difficult-to-staff schools. Many urban districts

4.2.2

Don Boyd
The Nelson A. Rockefeller Institute of
Government

Pamela Grossman
Stanford University

Hamp Lankford
University at Albany

have begun to rely on new teacher preparation programs that greatly reduce course work and experiences in schools prior to becoming a teacher, but provide supports and additional coursework during the first teaching years. Using data on all students and teachers in grades three through eight in New York City, this study assesses the effects of such programs on the teacher workforce and on student achievement. It addresses three questions: (1) How do the achievement gains of students differ by the teaching pathway of their teachers? Specifically, do students of teachers that enter the classroom with reduced coursework preparation and few field experiences learn more or less than those of traditionally certified teachers. (2) Do students learn more with alternatively certified teachers than they would have if this pathway were not available? (3) Is there differential attrition by pathway into teaching?

Susanna Loeb
Stanford University

James Wyckoff
State University of New York at Albany

Marigee Bacolod
Discussant
University of California, Irvine

The North Carolina \$1,800 Teacher Bonus Program: An Initial Evaluation

As in other states, many North Carolina schools, particularly those serving disadvantaged students, face the challenge of hiring and retaining high quality teachers. In 2001, North Carolina responded to these challenges by introducing an \$1,800 bonus program for certified teachers of math, science and special education in eligible middle and high schools, where eligibility was based on high proportions of disadvantaged students or of those with low test scores. The purpose of this paper is to evaluate this bonus program.

The paper will be a shorter and more analytical version of an evaluation that we prepared for the NC Department of Public Education. That evaluation is based on both qualitative data (surveys of principals and all eligible teachers, with a 73 percent response rate) and quantitative data (teacher employment data and student test scores) in eligible and comparison schools over time. We conclude that despite the fact that the program was not well implemented, it nonetheless succeeded in its goal of increasing retention rates of math and science teachers in low-performing schools.

4.2.3

Charles Clotfelter
Duke University

Elizabeth Glennie
Duke University

Helen Ladd
Duke University

Jacob Vigdor
Duke University

Dale Ballou
Discussant
Peabody College
of Vanderbilt University

Resource Distribution

Session 4.3

Lawrence Picus
Session Chair
University of Southern California

Marge Plecki
Discussant
University of Washington

A 30-Year Analysis of the Impact of Education Finance Litigation Reform on Resource Distribution

State court decisions, starting with the landmark *Serrano v. Priest* (1972) case, are a primary driver of school finance reform efforts. Indeed, 45 states have had the constitutionality of their public school funding mechanisms challenged, while more than 2 out of every 5 states' mechanisms have been declared unconstitutional on equity and/or adequacy grounds. Given this reality, this paper examines the extent to which court mandated reform based on equity versus adequacy grounds effects within-state inequality. A state-fixed effect model is used to evaluate the impact of court mandated finance reform on three horizontal equity measures for over 10,000 districts in 46 states over three decades. Preliminary results suggest differences between equity and adequacy are more apparent than real.

4.3.1

Matthew Springer
Peabody College
of Vanderbilt University

Keke Liu
Peabody College
of Vanderbilt University

The Assessment of Vertical Equity for Students in State Education Funding Systems: A Fifty State Study

The purpose of this paper is to assess how and to what extent states provide vertical equity for students in their elementary and secondary education funding systems. In the face of federal mandates for higher achievement for all students such as the No Child Left Behind Act, it is imperative that students at risk of academic failure receive sufficient resources to be academically successful. A substantial body of research exists that identifies these risk factors as poverty, race/ethnicity, urbanicity, disability, limited English proficiency, and family characteristics, such as low parental education attainment. This typology of risk factors, developed by Land and Legters, provides the framework for analysis for the study. Data sources include the Common Core of Data (CCD) and individual state chapters of Public School Finance of the United States and Canada, 1998–1999. Because the research is exploratory in nature, no formal hypotheses were drawn. The research design entails a mixed method approach utilizing (1) a content analysis of Public School Finance of the United States and Canada, 1998–1999 in order to collect, describe, and classify the range of funding programs that address the risk categories and (2) quantitative analysis of funding levels of these programs and their impact on total state aid available to pre K–12 students, using CCD data. The quantitative analysis includes descriptive and multivariate statistical analysis. The multivariate analysis allows for calculation of implicit weights assigned by states to each of the risk categories

4.3.2

Randall Vesely
University of Wisconsin-Madison

Changes in School Finance Funding Patterns: 1970–2000

The purpose of this paper is to determine the degree of association between the changes in selected school finance variables for each state and a set of post 2000 school finance and demographic status variables for each state.

School finance litigation has been initiated in 90% of the states since the landmark Serrano decision in California in 1971. In the 38 instances in which the state's high court had rendered a decision as of March 2004, the plaintiffs had prevailed in 21 states. The concern in this paper is the direction and magnitude of the changes in selected school finance funding variables over the 30-year period and the extent to which they are associated with post-2000 school finance status variables.

The study addresses the following research question: What is the relationship between the change in the value of selected school finance variables between 1970 and 2000 and the state's scores on selected post-2000 school finance status variables?

A correlation matrix including both the change and status variables will be developed; changes in the selected school finance variables will be calculated, and a series of regression calculations will be conducted to determine the degree of association between the independent change variables and the various dependent status variables individually and in combination.

4.3.3

K. Forbis Jordan
Arizona State University

James Crawford
University of Nevada-Las Vegas

Teresa Jordan
University of Nevada-Las Vegas

Comparing Spending Inequities Within and Across Districts: A Longitudinal Examination of Education Spending in Texas

Discrepancies in funding across school districts have been the topic of policy debate for over 30 years. Legal battles in many states have paved the way for changes in how state funding formulas are determined. In the wake of inter-district funding litigation and policy reform, a different level of inequity has recently come to the attention of researchers and policymakers. This inequity comes at the intra-district level, where schools within the same district receive varying levels of funding. While previous studies demonstrate inequities at both the inter- and intra-district level, few have examined these inequities over time, and none have compared trends in the variation of the two levels. This study seeks to make that comparison for the state of Texas using financial data from the Academic Excellence Indicator System (AEIS) for years 91–92 to 03–04. Since litigation and education finance policy, such as the “Robin Hood” law, has focused on leveling the playing field across districts within Texas, we anticipate that measures of disparity within the state of Texas have decreased over this thirteen-

4.3.4

Marguerite Roza
University of Washington

Kacey Guin
University of Washington

year period, while levels of disparity among schools within select Texas districts have remained the same, or possibly increased. Utilizing a weighted student index, we calculate inter-district variation for the state and intra-district variation for five large Texas school districts: Austin, Cypress-Fairbanks, Dallas, Fort Worth and Houston. Next, we determine if certain types of funding drive inequities at the state and individual district level. Finally, we discuss policies that may impact these inequities.

The Political Economy of Choice

Session 4.4

Tiebout Choice and the Voucher

This paper examines who is likely to gain and who is likely to lose under a universal voucher program. To examine that issue, we build on the work of Epple and Romano (1998, 2003), who focus on the ‘cream-skimming’ aspects of increased stratification by student characteristics, and on the work of Nechyba (2000, 2003), who also draws attention to the complications that arise from the interaction of schooling and housing markets. Thus, we focus on the idea that gains and losses under a universal voucher depend on two effects: changes in peer quality and changes in housing values. We show that the direction and magnitude of each of these effects hinges critically on market structure, i.e., the amount of school choice that already exists in the public sector. In markets with little or no Tiebout choice, changes in peer quality create an incentive for high-income households to vote in favor of the voucher and for low-income households to vote against voucher. In contrast, in markets with significant Tiebout choice, changes in housing values create an incentive for high-income households to vote against the voucher and for low-income to vote in favor of the voucher. Using data on vote outcomes from California’s 2000 voucher initiative we find strong evidence that the voting behavior of high and low income households is consistent with those predictions.

The Public Choice of Educational Choice

The very small literature explaining 1) how citizens have voted in two California voucher referenda, 2) how legislators have voted on voucher bills in Florida and Congress, and 3) the variation across states in charter school provisions is summarized. New empirical evidence summarizing the variation across states in the success of voucher referenda and voucher bills is examined. Voucher bill characteristics and state features play important roles. Voucher bills have been passed only in the more conservative Republican states, and almost all of the successful voucher programs have been targeted at struggling large school districts. Additional empirical work seeks to explain why these targeted voucher programs have been more successful.

The Political Economy of School Choice: Why Did School Choice Policies Expand so Rapidly During the 1990s?

School choice is one of the most widely touted educational reforms currently advocated in the United States. Among the many varieties of school choice policies, two have gained popularity in recent years—open enrollment (allowed in 44 states) and public charter schools (allowed in 42). Relative to other types of school reform, such as vouchers and strict accountability measures, school choice policies proliferated during the 1990s. What has driven this recent movement for greater school choice? In this paper, we use a political economy framework to identify the factors that contributed to the expansion of school choice policies during the 1990s. Using data from a variety of sources, at both the state and district level (including the decennial Censuses, the Schools and Staffing Survey, the NAEP, and a national database of charter schools), we attempt to distinguish between two explanations for the ris-

Carolyn Herrington
Session Chair/Reactor
Florida State University

4.4.1

Eric Brunner
Quinnipiac University

Jennifer Imazeki
San Diego State University

Thomas Downes
Discussant
Tufts University

4.4.2

Lawrence W. Kenny
University of Florida

Eugenia Toma
Discussant
University of Kentucky

4.4.3

Sean Corcoran
California State University-Sacramento

Christiana Stoddard
Montana State University

Sheila Murray
Discussant
RAND Corporation

ing demand for greater choice: dissatisfaction with public school performance and increased population heterogeneity (which itself produces heterogeneity in preferences for education). Understanding the sources of this rise is necessary to identify conditions where choice is likely to meet its intended goals, to interpret the results of student achievement studies and to identify the effects of choice laws on outcomes like student sorting, selection, and residential mobility.

Higher Education Finance

Session 4.5

Bruce Baker
Session Chair
University of Kansas

Angela Dills
Session Discussant
Clemson University

Using Policy Research to Influence Higher Education Policy: Preliminary Case Study Evidence

This paper develops a strategy and framework for examining the influence of policy-focused research on state higher education policy, and presents preliminary evidence from a case study of a charitable foundation's efforts in this area. Recent research on macro-level policy reform sheds light on some specific political factors that affect policy formulation. For example, research is most likely to be used when political views compete for institutional dominance concerning the importance of the problems, how they are framed, and which proposed solutions will receive consideration. Policy research may also play an important "softening up" role by keeping issues on the policy agenda. This paper will present a research strategy and offer preliminary insights into these relationships. While it is rarely possible to determine a direct causal link between policy research and policy reform, we will examine the linkages between policy analysts and policy makers. This research framework will seek to identify ways to measure immediate and intermediate outcomes that are plausibly, and in many cases empirically, related to improving policies. This paper will present our research framework and initial analyses of data collected thus far, including interviews, grantee surveys, analysis of web site traffic, and document analysis, and describe next steps in the study.

4.5.1

Gary Henry
Georgia State University

Dana Rickman
Georgia State University

Ross Rubenstein
Syracuse University

Private Giving to Tennessee Public Higher Education: A Heuristic Examination of Trends and Issues

Public higher education finance policy tends to focus primarily on two main revenue sources: state appropriations and student tuition revenue. Historically, an overlooked revenue stream for public higher education is private giving, yet data on the extent and nature of private fundraising at a statewide level is rare. In order to understand private fundraising activity in Tennessee, an exploratory study was conducted across all Tennessee public higher education institutions across 10 years. The authors chose this heuristic approach in order to provide baseline data that will serve as a first glimpse into the nature of private giving activity in Tennessee. The researchers analyzed activities, abilities and future capacity for voluntary support of higher education across all public four year and two year institutions. The paper analyzes a 10 year history of fundraising, sources, uses, capacity and effort. The findings highlight levels, trends and differences in fundraising across institution type, mission and region.

4.5.2

Russ Deaton
Vanderbilt University

Jonathan Thornhill
Vanderbilt University

Conceptualizing the Relationship between K–12 and Postsecondary Education Funding at the State Level

The common conception of the relationship between K–12 and higher education funding at the state level has been that K–12 trumps higher education. Our goal in

4.5.3

Bruce Baker
University of Kansas

this study was to explore empirical evidence of a two-way relationship between state funding of public K–12 and postsecondary education over time and to attempt to conceptualize this relationship through one of four lenses: structural, political, legal or economics-related. We construct three ten-year panel data sets, using (a) institution level data (universe of K–12 districts) on state and local revenues for K–12 education from the Census Bureau’s Fiscal Survey of Local Governments, (b) institution level data on state revenues and tuition on public 4-year postsecondary institutions from the Institutional Postsecondary Education Data System, and (c) state budget revenue and expenditure data from the U.S. Census Bureau, we construct a series. We use our panel data sets to explore relative growth rates of state allocations to K–12 and postsecondary education, and state and local, or tuition, revenues at the institution level. Our intent is to develop and empirically test a classification scheme involving political, economic, legal and organizational dimensions that influence the interplay between K–12 and postsecondary financing.

Christopher Morpew
University of Kansas

The Cost and Quality of Preschool Programs

Session 4.6

Jay Chambers
Session Chair
American Institutes for Research

Patrick McEwan
Session Discussant
Wellesley College

The Cost of Quality Preschool: Adapting A Best Practices Model to the Local Level

A growing body of research shows that children who attend quality preschool programs have higher rates of school readiness, better language and math abilities, and fewer behavior problems. While the benefits are greatest for disadvantaged children, new studies indicate that children from all income groups derive some benefits. Only two states (Georgia and Oklahoma) have so far implemented universal access to preschool, but several others have either begun implementing universal preschool programs or are at various stages of the planning process. Our presentation has two parts: (1) The development of a best practices model to conduct a statewide cost estimate for preschool for all; and (2) how we adapted this model to provide technical assistance to 12 California counties that have received planning grants to phase in voluntary access to preschool for all four-year-olds. The “Preschool for All Toolkit” includes how to localize the key elements of a quality preschool program, how to estimate enrollment in existing formal early care and education programs, and how to project the demand for preschool spaces at the local level. The planning process eventually translates into a cost estimate to make preschool accessible to all children. The cost estimate methodology, adapted from a model originally developed by the Institute for Women’s Policy Research (IWPR) and Early Childhood Policy Research (ECPR), builds on the existing supply of preschool, Head Start, and other early care and education programs. Budget estimates are developed for “before” and “after” implementation of preschool quality standards in a variety of program settings. The end result is a systematic plan to phase in preschool services to all children, on a voluntary basis, over a 10-year period.

4.6.1

Susan Muenchow
American Institutes for Research

Irene Lam
American Institutes for Research

Preschool Program Expenditure Study (PPES): An Exploration of How These Identified High Quality Programs are Using Their Resources

The cost of high quality preschool, together with the expenditures surrounding their services, has been an area that is under-explored in school finance. This on-going study examines how a sample of California Children and Families Commission (CCFC)-funded preschool programs are utilizing their resources. Applying quantitative and qualitative case analyses to twelve highly ranked preschool programs in

4.6.2

Jay Chambers
American Institutes for Research

Kanya Mahitivanichcha
American Institutes for Research

California, the study addresses the following questions: 1) How much is currently being spent by each type of high quality preschool program per FTE child? 2) What proportions of the budget do programs allocate across functions? (E.g., How much of the budget goes towards instructional services versus welfare services?) 3) Where variations in payroll expenditures exist across program type, what patterns do we observe based on cost-adjusted compensation levels, standardized salary levels, and public school salary levels? 4) How do teachers in these high quality programs allocate their time across activities? (E.g., What proportion of their time is spent on direct classroom services versus preparation and parental contact?) 5) Where variations exist in spending patterns, how do these relate to county characteristics such as poverty rate, linguistic diversity and proportion of children with special needs? 6) How do the resources and spending patterns in these programs compare to standards in the Universal Preschool Program model? Given the complex and varied nature of preschool programs, together with the mixture of purchased services and in-kind contributions, we rely on both qualitative and quantitative approaches to understand the twelve programs in their contextualized variations.

Hemmie Jee Wang
American Institutes for Research

Do Others Matter? Responses of Schools to Their Markets

Richard Rothstein
Session Chair/Reactor
Columbia University

Session 4.7

Will I See You in September? An Economic Explanation for the Standard School Calendar

4.7.1

William Fischel
Dartmouth College

Primary and secondary schools around the world show a remarkable uniformity in their calendars: (1) Students proceed from one age-graded level to the next on an annual basis. (2) The academic year in both the Northern and Southern Hemisphere begins in late summer and ends near the start of the following summer. (3) The school year's beginning is preceded by the longest vacation period of the year. None of these characteristics is the path-dependent product of an agrarian society. Rural American schools of the nineteenth century (1) were ungraded and had no "academic year," (2) were as often held in summer as in winter, and (3) had "vacations" of no particular uniformity.

Kim Reuben
Discussant
Urban Institute

This article will argue that the summer vacation functions as a coordinating device. A uniform beginning date preceded by a long vacation period facilitates the geographic mobility of teachers and families with children by allowing them to end the school year (and, for children, grade-level studies) in one place and move to the next school and grade in time to start the next academic year. Summer is a low-cost time for a long school vacation because it provides joint benefits to both movers and stayers. Summer weather permits lower-cost transportation of household goods for movers and offers amenable conditions for outdoor recreation for stayers. Summer vacation's greater-than-average length allows schools to collect incoming movers and begin students at the same time.

The positive support for the hypothesis comes from American and European international schools in the Southern Hemisphere. Schools that cater to European and North American families that are likely to return to the Northern Hemisphere in fact keep a Northern Hemisphere school calendar. Likewise islands in the Southern Hemisphere with close ties to nations in the Northern Hemisphere, such as Tahiti, American Samoa, and the Falklands, keep a Northern Hemisphere school calendar, while their nearer independent neighbors do not.

The article closes by proposing that the school calendar may be an example of self-ordering by decentralized social institutions. In this respect the school calendar is like the standard work week and work day. Cast in this light, the typical school calendar may have coordination benefits that outweigh the capital costs of having school buildings idle during an extended period. This could also explain the unpopularity of year-

round education schemes, at least those whose calendars require starting dates other than late August or early September.

Competition and Compensation in Education

Competition-based school reform is increasingly popular in education policy circles. The number of U.S. charter schools is growing at an astounding rate. Vouchers are in place in Florida and implied in the federal No Child Left Behind Act of 2001. School districts throughout the country are experimenting with subcontracting campuses to private firms.

The increasing popularity of policies that foster school competition dovetails with a burgeoning economics literature on the relationship between competition and school performance. One interesting dimension of the problem that has received little attention is the relationship between competition and the compensation paid to teachers. The literature on school competition implies that at least some school districts have market power. That market power could manifest itself in the educational labor market in two ways that have very different implications for compensation. If school districts behave as typical monopsonists or oligopsonists when hiring teachers, then policies that are designed to enhance competition among schools could lead to higher salaries for school district personnel, *ceteris paribus*. However, if the school district's position as a monopolistic provider of education services generates economic rents, there are few parties to whom those rents might be dissipated besides school district personnel. To the extent that teachers are able to appropriate a share of the economic rents generated by the market power of school districts, increased competition could actually lead to lower salaries.

To explore the empirical relationship between school competition and school compensation, this study uses panel data from more than a thousand Texas school districts and 270,000 teachers over the four school years from 2000 through 2003. The analysis suggests that a lack of competition in the public school system has indeed led to monopsony power for school districts, and that increased wages are the likely result of increased competition. As such, the costs of implementing competition-based school reforms may be greater than generally assumed.

Does the M.A.T. Have a Signaling Value?

I ask whether master's degrees signal the commitment of new teachers to remain in teaching, which may be especially important for high-ability teachers, who tend to exit the profession early. This provides an alternate explanation for the master's premium in teaching because there is little documented productivity gain of a master's degree on student test scores.

I use the National Longitudinal Survey of Youth to investigate the effect of teacher ability (measured by AFQT scores) and the interaction effect of teacher ability and master's degrees on duration in teaching. If the master's degree serves as a signal of commitment to teaching by high-ability teachers, the effect of ability on duration will be negative, but the interaction effect of ability with a master's degree dummy variable will be positive.

I also use the School and Staffing Survey to measure the relative size of the master's premium across urban, suburban, and rural districts. If the degree is a signal, the premium should be greatest in urban districts, second highest in suburban districts, and smallest in rural districts because the alternative job opportunities for talented teachers are lower in rural areas. A human capital model predicts the opposite.

4.7.2

Lori Taylor
Texas A&M University

Jeremy Luallen
Discussant
University of Florida

4.7.3

Eric Isenberg
DePauw University

Dan Goldhaber
Discussant
University of Washington

Teacher Compensation and Student Achievement

Session 4.8

Leanna Stiefel
Session Chair
New York University

Anthony Milanowski
Session Discussant
University of Wisconsin-Madison

The Relationship Between Teachers' Salaries and The Quality of the Supply of Recent College Graduates to Teaching

4.8.1

Karen DeAngelis
Washington University in St. Louis

The workings of the teacher labor market were analyzed to provide some closure to an important, lingering question in educational policy: Do teacher salary policies have an impact on the quality of individuals attracted to teaching? I examined the salary-quality relationship by examining whether states with relatively high teachers' salaries compared to the salaries of non-teaching recent college graduates attract higher quality individuals to teaching than states with relatively low teachers' salaries. Four Recent College Graduate Surveys (RCGS) spanning the 1981–1991 period served as the primary source of data. Although the RCGS do not contain individuals' test scores, they do reveal the name of the institution from which each participant graduated. As a proxy for the quality of each participant, a predicted SAT/ACT score was calculated based on participants' individual characteristics and the median SAT or ACT score of their undergraduate institutions. A fixed-effects panel model was estimated for two samples of recent college graduates—females only and males and females combined. The results indicate that teachers' relative salaries were significantly related to the difference in quality between female graduates in the teacher and non-teacher samples. During the study period, states in which teachers' salaries rose the most witnessed smaller differences in predicted test scores between female non-teachers and females in the teacher supply sample. Thus, salary policies for teachers can be used to narrow the gap in quality—as measured by academic test scores—between female non-teacher recent college graduates and female recent college graduates attracted to teaching.

Dodging Bullets: Building Effective Salary Alternatives for Teachers

4.8.2

Debbi Harris
Michigan State University

This paper examines some of the obstacles faced by the Minneapolis School District as they introduce an alternative compensation system they hope will help them to recruit, retain, reward, and grow high quality teachers. The voluntary Minneapolis Professional Pay Plan emphasizes the role of professional development in excellent teaching and rewards teachers for improving their skills.

Based on a series of interviews with middle school teachers and district personnel, four obstacles to the policy's success emerge. These are: teachers' limited understanding of the policy, their unwillingness to accept the district's professional development recommendations, their limited interest in financial incentives, and their perception that the policy will be short-lived.

This policy is complex and evolving and teachers are unclear about what they are being asked to do. In addition, they are reluctant to cede control over their own professional learning as many of them are unconvinced that the district will offer sustained, high quality offerings as part of Professional Pay. The reward amounts are insufficient to motivate many of them to either increase their effort beyond current levels or to substitute rewarded activities for their current professional learning activities. Finally, teachers are pessimistic about the district's long-term commitment to the policy and have few incentives to embrace the hard work necessary to earn rewards if the financial rewards for doing so will be short lived.

Is There A Relationship Between the Teachers' View of Compensation Factors and What They Do in the Classroom?

4.8.3

There is a lack of understanding between policy makers at all levels and teachers as a group as to what are motivators in compensation packages. The authors used focus groups of teachers from urban, suburban and rural districts in Ohio to react to some of the issues growing out of the proposals to revise teacher compensations plans in order to direct dollars to improve student achievement. Based on the focus group interviews the authors developed a survey instrument that was administered to a group of 539 teachers attending Ashland University's 2004 summer school classes at five different program centers.

James Van Keuren
Ashland University

Howard Walters
Ashland University

Harold Wilson
Ashland University

Based on the survey data, the authors will present a statistical analysis that will examine whether or not there is a significant relationship between the view of compensation factors by teachers and what they do in the classroom. The comparison will also include the ranking of the top five compensation factors by teachers. A statistical analysis of the demographic items in the survey will be done to determine the heterogeneity of the sample.

Teacher Salaries, Teacher Characteristics, and Student Achievement in High Need Schools in Louisiana

4.8.4

In this paper, we discuss the results from a study of the relationship between teacher salaries, teacher characteristics, and student achievement in Louisiana. We investigated this relationship with a focus on high need schools, i.e., high-poverty, high-minority, urban, and rural schools that often have difficulty recruiting, paying, and retaining teachers who meet the requirements of the No Child Left Behind act. In the face of dwindling state budgets, significant policy efforts in the three states are aimed at teacher salary increases for these difficult-to-staff schools, but policymakers expect improvements in student achievement as a result. For this study, we hypothesized that higher teacher salaries and the characteristics that higher salaries buy (including certification, education levels, and teaching experience), would be mediated by school context and positively related to student achievement.

Lotte Smith-Hansen
Southwest Educational Development
Laboratories

Zena Rudo
Southwest Educational Development
Laboratories

In this paper we also demonstrate how research results can be effectively communicated to policymaker audiences through the use of maps and other graphic display techniques. The translation of research findings into useful information for policymakers is a continuing challenge for researchers. Maps combine descriptive, comparative, and geographic information in a single display, and add a visual and spatial representation of findings. Maps are not always advised, however, since they may not fully communicate results of complex statistical analyses, and may be restricted to a limited number of geographic units (school districts, counties, or regions). Additional advantages and disadvantages of various techniques for communicating research findings to policymakers will be discussed.

Special Education: Fiscal Encroachment, Accountability, and District Resources

Session 5.1

William Hartman
Session Chair
Pennsylvania State University

Thomas Parrish
Session Discussant
American Institutes for Research

Fiscal Encroachment of Special Education Programs: Results from Pennsylvania

5.1.1

The study investigated the possible fiscal encroachment of special education programs for public schools in Pennsylvania on regular education programs. Three primary questions formed the basis for this study.

William Hartman
Pennsylvania State University

1. What is fiscal encroachment and based on the definition, how is it measured?

Multiple definitions or concepts were examined, reviewed for conceptual soundness, tested for feasibility, and finally selected for the study.

2. Are special education programs fiscally encroaching on regular education programs in Pennsylvania?

Using the selected definitions and measuring techniques, all 500 public school districts in Pennsylvania were examined for evidence of fiscal encroachment for the period 1995–96 through 2000–01.

3. Is fiscal encroachment related to district characteristics?

Analyses were conducted to test the impact of a variety of district characteristics on fiscal encroachment. The characteristics included: district size in terms of enrollment; district location in terms of urban, suburban, and rural; district wealth in terms of aid ratio; demographic characteristics of students such as the percent of enrollment from low-income families; and combinations of these factors.

The Effect of State Accountability Policies on the Participation of Student with Disabilities in Large-Scale Assessments

Despite federal mandates, most states and school districts grapple with how to include students with disabilities in large-scale assessments and how to close the achievement gap for this subgroup of students. Some students who receive special education services are able to take the statewide regular test under standard conditions, but many take the regular test using one or more accommodations. An accommodation is a change in standard test conditions or procedures that is supposed to mitigate test access problems that a pupil with disabilities may have when taking a test while maintaining the integrity of the test. All 50 states have policies that list which assessment accommodations may be provided on statewide tests. For example, in 2003 the read aloud accommodation was allowed by 5 states for all of their tests for students with disabilities under all conditions, while 41 other states allowed the read aloud accommodation only for particular tests (usually the mathematics test) or under certain conditions. This paper uses regression analysis to analyze the effect of variations in state accommodations policies on the participation rates for students with disabilities.

School and District Resources for Special Education: Who has what? What difference does it make for students with disabilities?

The proposed paper presentation will focus on the types of resources received and allocated by districts and schools to support special education, an examination of which districts and schools are most likely to have access to those resources, and the impact of those resources on students with disabilities in a variety of areas (e.g., participation in state and districtwide testing programs, proportion of students dropping out of school).

Data are based on the second wave of survey data collected from a nationally representative sample of districts and schools during school year 2003–2004 for the Congressionally mandated Study of State and Local Implementation and Impact of the Individuals with Disabilities Education Act (SLIIDEA). The types of resources examined as part of SLIIDEA include financial assistance, technical assistance, personnel and professional development. Study findings indicate that controlling for background demographics, specific types of resources, most notably professional development provided by districts and schools, can have a significant positive impact on outcomes for students with disabilities. Moreover, findings indicate that large districts and urban districts are most likely to receive and use such resources. These findings should be quite useful to policymakers interested in efficient targeting of scarce resources to obtain better results for students with disabilities.

Robert Franklin
North Schuylkill School District

5.1.2

Sheryl Lazarus
University of Minnesota

5.1.3

Fran O'Reilly
Abt Associates, Inc.

Tammy Ouellette
Abt Associates, Inc.

Ellen Schiller
Abt Associates, Inc.

Higher Education Financing: Examining Its Determinants, Quantifying Its Consequences

Session 5.2

David Mustard
Session Chair/Reactor
University of Georgia

College Quality and Early Adult Outcomes

This paper estimates the effect of various college qualities on a set of early adult outcomes, using panel data from the National Education Longitudinal Study. I compare the results using four different methods of estimation that have been used in prior studies. In general, I find that college quality does have positive significant effects on the outcomes studied. However, particular college qualities tend to only affect some types of outcomes and not others. Furthermore, I find that the sign on the estimated coefficients are generally consistent regardless of what method is used for estimation. However, non-OLS methods tend to produce larger point estimates, larger standard errors, and lower rates of significance. This study points to the importance of examining the educational production function as a complex process with many inputs that can each have their own effects on outcomes of interest.

5.2.1

Mark Long
University of Washington

Deborah Garvey
Discussant
Santa Clara University

State Merit Aid Programs and Stratification by Ability

Since its inception in 1993 Georgia's HOPE program has distributed over \$1.5 billion in merit scholarships to over 400,000 students. National attention has been focused on the scholarship and at least 15 other states have implemented or proposed merit-aid programs using the HOPE model.

This expansion of state-financed merit aid has occurred against a backdrop of an increasingly integrated US market for higher education, as increasing competition from geographic integration has substantially widened the distribution of inputs, tuition and student aptitude across colleges, and narrowed the distribution of student aptitude within colleges (Hoxby, 1997). Epple, Romano and Sieg (2000) find that colleges with average student quality (represented in part by test scores) near the median of the quality distribution provide discounts to more-able students, suggesting that peer effects are important in the production of higher education. Thus, institutional merit aid is essentially a college's implicit wage payment for peer quality and HOPE-style scholarships operate in the same way for in-state colleges. However, because the schools within a state typically differ in terms of selectivity, competition among scholarship recipients for admission to the top schools should lead to further stratification by ability and race, to the extent the two are correlated.

Using data from Peterson's undergraduate database, covering the period from 1989–2001, we consider the effects of Georgia's HOPE Scholarship on ability sorting. Specifically, we estimate difference-in-differences regressions of college quality, measured in terms of the percentage of students who score in various ranges on the SAT exam. The data show that state-sponsored merit aid programs increase the enrollment of high ability students for college. Furthermore, they increase the ability stratification of institutions within states—the effect is largest for the highest ranked institutions. Consequently, merit aid contributes to the trend towards greater sorting by ability in US higher educational institutions.

5.2.2

Christopher Cornwell
University of Georgia

David Mustard
University of Georgia

Amy Ellen Schwartz
Discussant
New York University

States' Relative Education Priorities: An Empirical Investigation

A natural relationship between the primary, secondary and tertiary levels of education is created both by demographic linkages and a common goal of increasing human capital. Nonetheless, comparative public support of K–12 and higher education has rarely been considered holistically in empirical research. The relative emphasis states place on funding the successive levels of education reflects an implicit resolution to the question, how should state taxpayer resources be allocated between development of universal basic skills, and advanced skills acquired by a smaller frac-

5.2.3

Megan Streams
University of Kentucky

Kim Rueben
Discussant
Urban Institute

tion of the state population? In this study, I use a dataset covering 48 states from 1984 through 2001 to explore the interrelationship between public funding support for K–12 and higher education across states and time. The dependent variable is the ratio of state-level support for higher education to own-source (state, intermediate and local) support for K–12 education, and is intended to capture the relative priority placed on publicly funding the two levels. Key independent variables include fiscal centralization of K–12 education and an indicator of State Supreme Court findings of unconstitutionality of the school finance system. Together these factors are hypothesized to change the balance of public funding between the two levels of education; if strong budgetary competition exists between the sectors of education, I expect an increase in K–12 fiscal centralization to have a negative relationship with support for higher education relative to K–12. If the court mandates for reform serve as a signal to prioritize K–12 education, the negative effect of increasing centralization in the presence of such a decision should be even greater. This hypothesis will be tested by interacting litigation status with centralization in the model, which will also control for other variables expected to affect budgetary decision-making.

A Look at Education Finance Litigation in Pursuit of Equity and Adequacy

Session 5.3

Carolyn Herrington
Session Chair
Florida State University

Lynn Moak
Session Discussant
Moak, Casey, & Associates, LLP

Adequacy and Equity: The Shift in School Funding Philosophy

While the idea of adequacy in school funding has been involved in school funding litigation since it began in the 1960s, the early emphasis in litigating school funding was primarily focused on whether or not a state’s mechanism for funding schools met a fairness or equity test. In the last decade the focus of funding schools has shifted to the recognition that funding all schools equally may not be the best answer for schools’ financial needs. The question of school funding has shifted to one of whether or not there is sufficient and differentiated funding to meet the programming needs demanded by varying school populations.

While there are well established methodologies for determining the equity of funding schools, similar methodology for determining adequacy of funding is still emerging. This brief examines different methods for adequacy studies. It also examines the recent studies performed in the states of New York, Arkansas and Arizona in order to compare and contrast the methodology and findings of these studies with a particular emphasis on the Arizona findings.

5.3.1

Richard Wiggall
Northern Arizona University

Strict Scrutiny or Reasonable Basis: Exploring Policy and Legal Ramifications of Potential Court Decisions

Missouri’s K–12 school finance system will likely face significant changes in the near future, which may be driven by a court decision from a pending equity/adequacy lawsuit. A court decision would determine if education is a fundamental right provided by language of the Constitution of Missouri, and whether or not the state public education system and its finance system will be placed under requirements of strict scrutiny or reasonable basis standards of constitutional interpretation. Because policy development will vary significantly depending on the nature of the constitutional interpretation, this policy paper posits scenarios stemming from potential application of either strict scrutiny or reasonable basis standards, including but not limited to the revenue mix (property, sales and income taxes), local autonomy and effort, and cost of living differences. This paper seeks to flush out significant policy and legal issues that may arise from various scenarios.

5.3.2

John Jones
Missouri State Teachers Association

Angela Hull
Missouri State Teachers Association

State Level Challenges to Education Finance Formulas: Is Georgia Keeping Its Constitutional Promise to Provide an Adequate Education

5.3.3

Charlotte Robinson
Georgia Department of Education

Luke Cornelius
State University of West Georgia

The Consortium for Adequate School Funding in Georgia (CASFG) filed suit against the State of Georgia on behalf of its members on September 14, 2004. State officials had been warned that a lawsuit was pending to force the restructuring of the state's education finance formula. Despite the efforts of the current governor to address the concerns of the rural systems about the funding formula, many small systems allege they must use the power of the courts to have their voices heard in a timely manner. The current education finance method is known as the Quality Basic Education (QBE) formula. Governor Perdue appointed a QBE Task Force with representation from rural, suburban, and urban districts to design a plan to present to the legislature for reforms. As of September 2004, 51 of Georgia's 180 school systems have joined CASFG. These systems are mostly small rural districts that contend they have no choice but to force this critical issue into the state courts. Many of these systems have low property values and claim they cannot come close to providing the same educational opportunities as larger systems in suburban and urban areas. The current Georgia litigation will be one more phase in the evolution of education finance litigation.

The plaintiffs in CASFG v. State allege that the local educational systems are not able to provide an adequate education to students as a result of the mismanagement of the QBE formula. The presenters will discuss the current education funding situation in the state of Georgia, focusing on the question of whether Georgia is keeping its Constitutional promise of providing an adequate education. This presentation will be centered on an analysis of program and instructional quality and how this, as well as student outcomes, compares to states, such as New York, where the courts have overturned the funding formulas. The main question is what can or should Georgia learn from these precedents?

In order to determine program quality and compare student outcomes, the presenters will analyze the availability of Advanced Placement courses, International Baccalaureate programs, foreign language courses, and other resources between wealthy and poor districts. The presenters will also analyze the data, especially standardized test scores, relied on by CASFG to establish their claim of inadequacy. How does local funding effort compare between districts and what is the percentage of state funding? Teacher salaries and graduation rates will be evaluated as well. This information will be compared and contrasted with other recent litigation including Campaign for Fiscal Equity v. New York, DeRolph v. Ohio, Rose v. Council for Better Education, and Tennessee Small School System v. McWherter. Is Georgia's funding formula in line to follow the same path of these states, or is Georgia holding the line with providing students and schools the level and quantity of resources to maintain its Constitutional promise to provide an adequate education?

Constitutional Amendment and School Finance Litigation in Florida

5.3.4

Carolyn Herrington
Florida State University

Because of the high degree of inter-district equity built into its school finance formula, the state of Florida has been spared much of the judicial and legislative turbulence that has marked public school financing in many states. However, over the last few years Florida has seen a notable increase in school finance litigation. Based primarily in concerns surrounding the persistent low performance of Florida students, litigation has also been spurred by recent constitutional and statutory changes. These changes are potentially dramatic in their import and challenge, in a number of ways, the legal framework that currently supports the funding of public education throughout the United States.

In 1998 the citizens of Florida considerably strengthened the education article in the state's constitution. The new constitutional language now states that "the education of children is a fundamental value" of the people of Florida, and states that it is "a paramount duty of the state to make adequate provision for the education of all children." Furthermore, it reads, "this provision shall be made by law for a "uniform, efficient,

safe, secure, and high quality system of free public schools and that allows students to obtain a high quality education....” In addition, in 1999 accountability legislation also authorized the first statewide voucher program in the United States. This program authorizes students attending public schools receiving a grade of F, in any two out of four years, to attend participating private schools with state vouchers. This program has prompted at least one lawsuit in the state court system in which the challenges are based, at least in part, on the new education article. In addition, citizens of the state have added provisions to the state constitution requiring large reduction in class sizes and funding of programs for pre-schoolers. Finally changes in the last legislative session to the state funding formula regarding the cost of living factor has prompted threats of litigation from the large urban school districts in the state.

This paper will review the state of school finance litigation in Florida including litigation related to the 1998 amendments to the Florida constitution and the 1999 school reform act which included a statewide voucher program. It will also review and analyze the additional constitutional amendments and their fiscal and judicial implications.

Eighth Grade Schooling Forms, Rural Education, Title I Funding, and Health Insurance Costs

Session 5.4

Marilyn Hirth
Session Chair
Purdue University

Jewell Gould
Session Discussant
American Federation of Teachers

Re-Examining the Effects of Middle Schools: A Comparison of Eighth Grade Schooling Forward on the Transition to High School

Several large urban districts, such as Philadelphia and New York City, have recently undertaken reforms to eliminate their middle schools. Although these middle school reforms are based in research, the majority of studies that have examined middle schools have not compared them to other forms of eighth grade education. As a result, remarkably little is known about how middle schools influence student performance, relative to other forms of schooling in eighth grade. In part, the absence of such comparisons is due to the fact that few districts have multiple forms of eighth grade school. One of the few districts that does is the School District of Philadelphia, which currently has roughly equal numbers of middle schools and K–8 schools. In this paper, we use data from a longitudinal study of Philadelphia public school students to examine the effects of middle schools, relative to K–8 schools. Interview data from nearly 1500 students and their parents have been linked with Philadelphia School District records, offering a unique opportunity to study the impact of students’ connections upon their performance in school. We use propensity score matching techniques to examine whether students in middle schools have worse academic and social outcomes as they move into ninth grade. Previous research with these data has shown that there are few differences in eighth grade outcomes by school type. In this analysis, we extend these findings to determine whether school form influences student outcomes in a particularly vulnerable year of schooling, the first year of high school. Our results reveal some domains in which attendance at a middle school results in worse outcomes (e.g., greater rates of course failure); however, most ninth grade outcomes are similar regardless of the type of eighth grade school a student attended.

5.4.1

Christopher Weiss
Columbia University

Alexandra Murphy
Columbia University

Measuring Resource and Outcome Discrepancies of Black Belt School District in Tennessee

5.4.2

Gary Peevely
Tennessee State University

Rodney E. Stanley
Tennessee State University

Edward P. French
University of Tennessee-Knoxville

Literature: Tennessee is part of the United States that contains a set of school districts in an area known as the Southern Black Belt. Named for the black fertile land, and utilized for the agricultural industry for hundreds of years, these school districts have disproportionately been inadequately funded. One correlating factor of poverty in the Black Belt school districts of Tennessee is low student standardized test scores. *Research Question:* Are Black Belt school districts witnessing lower instructional expenditures and standardized test scores than non- Black Belt school districts? *Data & Methodology:* Data for this study were gathered from the Tennessee Report Card for Education covering a period of ten years. Pooled time series cross-sectional regression analysis was the data-testing device employed in the study. *Findings:* The findings suggest that Black Belt school districts are spending significantly less on per pupil instruction, as well as capital expenditure for education. *Limitations:* Policymakers should be cautious about the generalizability of this study because it only represents those Black Belt school districts in Tennessee. *Future Studies:* Future studies should incorporate all Black Belt school districts in the south to determine if other states are witnessing the same funding discrepancies and academic outcomes as Tennessee.

Federal Title I Funding Distribution: Are the Poorest Children Receiving Their Share of the Funds?

5.4.3

Carolyn Brown
California State University
-Dominguez Hills

This study explored school level distribution of federal Title I funds in New York City Schools, Chicago Public Schools, and the Los Angeles Unified School District. The purpose was to determine if funds were being allocated in a manner that could be defined as equitable and if these districts were using Title I funds to supplement or supplant state and local allocations to school. Title I allocation to all schools in the three districts for the 2003–2004 school year were analyzed using descriptive statistics and linear regressions. Equity was defined in terms of vertical equity—larger per pupil allocations for higher poverty schools.

The results of the analysis showed a school-level distribution of the Title I funds that was more variable than would have been expected. Chicago was found to have a vertically equitable distribution model serving only the poorest schools (over 85% poverty, while New York and LAUSD showed a more horizontally equitable distribution. The three districts per pupil allocations ranged from \$280 average of LAUSD to over \$900 average in New York City. New York was the only district of the three to show clear evidence of using Title I funds to supplement state and local funds.

Developing a Model to Study Health Insurance Costs for Active and Retired Teachers

5.4.4

Angela Hull
Missouri State Teachers Association

Health insurance costs have risen substantially in the private and public sectors, prompting much discussion by both employers and employees as premiums siphon away funds available for salaries. State laws vary regarding health insurance for active and retired K–12 teachers. Some states operate government-sponsored active and retiree insurance systems. Other states have laws providing districts with numerous options for insuring active teachers while state government sponsors retirement insurance, including self-insurance, government-sponsored pools, other pools (often state school boards associations) and bidding for providers. The purpose of this paper is to explore the development of a model to examine cost differentials in these various types of health insurance arrangements. Is any particular policy option less costly for states and school districts? This research has substantial challenges, and therefore discussion is critical to this paper presentation. After providing significant background, the following questions are posed: What is the most useful unit of analysis, the state or the school district? (Are cross-state comparisons useful when districts are able to utilize different options? How would the districts in states with mandatory government-sponsored insurance be considered?) Active and retiree systems may or may not operate separately, so how should those be examined?

Determining Adequacy: Present Methods and Future Prospects

Session 5.5

Robert Toutkoushian
Session Chair
Indiana University

Jacob Adams
Session Discussant
University of Washington

Resource Adequacy Study for the New York State Commission on Education Reform

5.5.1

Paul Gazzo
Standards & Poor's School
Evaluation Services

Measuring the Relationship Between School Finance Adequacy and State Outcome Standards: A Case Study of New York and Texas

5.5.2

The purpose of this paper is to show how the analyses of adequacy in K–12 school funding may be compared across states and how this comparison can be linked to state outcome standards. The paper builds on analyses originally conducted as part of a study to determine the cost of an “adequate” education in New York State (Chambers, Levin and Parrish, (2004). The New York Study relied upon an amalgam of the professional judgment approach to developing adequate instructional programs and statistical analysis in the subsequent costing-out of resources specified implied by these program designs. However, the professional judgment in this study was based on consensus in New York State as to what comprises an “adequate” education; namely, providing an opportunity for every student in the state of New York to meet the Regents Learning Standards.

Jesse Levin
American Institutes for Research

Jay Chambers
American Institutes for Research

While each state in the U.S. faces idiosyncratic circumstances affecting the cost of achieving adequacy, the resource standards established for the New York Adequacy Project provide a useful starting point for the consideration of adequacy in other states. Considerable time and effort went into the development of the instructional models and resource specifications, and it would be of interest to see what implications the cost of implementing these models would be in different states and how the incremental costs relate to existing outcome standards for students.

To this end, this study addresses the following two questions:

What would it cost to achieve New York “adequacy” in Texas if we were to superimpose the instructional models developed by the New York professional judgment panels (PJPs) on public schools in the State of Texas?

Given the dramatic differences in actual spending levels between New York and Texas, our first question asks whether the instructional models specified by New York State educators require extraordinarily higher expenditures in Texas.

How would the differences in additional resources necessary to achieve adequacy in the two states relate to the differences in the student outcome standards applied in the two states? This second question focuses on whether the additional resources required to achieve adequacy appear to make sense given the difference between New York and Texas with respect to the state achievement standards and the performance the students.

Reframing the Measurement of Equity and Adequacy in Education Finance: Empirical Tests for Contemporary Causes of Action

5.5.3

In the 20 years since the publication of Berne and Steifel's Measurement of Equity in School Finance few significant systematic developments have occurred in the evaluation of state school finance formulas. Yet, methodologies for understanding state

Bruce Baker
University of Kansas

school finance policies have advanced significantly, most notably recent developments in the measurement of education costs and educational adequacy. In addition, the nature of legal challenges to state school finance policies has changed since the early 1980s when the emphasis remained on achieving horizontal equity and fiscal neutrality. Current strategies challenge the adequacy of financing under state education clauses and relative adequacy of funding to different populations toward achieving minimum outcome standards, including high school exit exams (substantive due process). In response, state school finance formulas have become increasingly complex and arguably immune to conventional analysis. This paper integrates methodological advancements in the measurement of educational adequacy and relative adequacy (relative cost) with recent and emerging legal arguments to propose a new framework and system of statistical tools for evaluating the efficacy of state school finance formulas. We draw on the seminal work of Berne and Stiefel to propose specific units of analysis and statistical tests for evaluating core components (such as legislatively adopted cost adjustment systems) and aggregate distribution effects of state aid formulas, tying units of analysis and statistical indicators to specific causes of action in state school finance litigation. We provide example analyses, along side conventional analysis, using data from several states including Texas, Kansas, Missouri and Nebraska.

Preston Green III
Pennsylvania State University

Higher Education Finance: Faculty Salaries, College Growth, Merit Aid and State Support

Session 5.6

Timothy Caboni
Session Chair
Peabody College
of Vanderbilt University

Ross Rubenstein
Discussant
Syracuse University

The Effects of Research Output on Faculty Salaries: Differences by Institutional Type, Gender, and Age

Through the lens of the emerging economic theory of higher educational institutions, we look at the relationship between salary and prestige. Starting from the premise that academic institutions seek to maximize prestige, we hypothesize that monetary rewards are higher for faculty activities that confer prestige on their employing institution than for other types of activities. We also expect that since maximizing prestige is a more important goal at research institutions than at other types of four-year institutions (doctoral universities, comprehensive universities and liberal arts colleges), the relationship between salary and engaging in prestige-generating activities will be strongest in research universities.

Using data from the most recent wave (1999) of the National Study of Postsecondary Faculty (NSOPF), this paper uses regression analysis to examine the determinants of salaries for full-time faculty in four-year institutions. The results are consistent with the theory that faculty members are financially rewarded for enhancing the prestige of their institutions. The coefficients on short and long term research output were significant and positively related to salary. Similarly, an additional hour per week spent on research or being a principal investigator (PI) on a grant had a positive and significant impact on faculty salary. We found a positive and significant interaction between employment at a research institution and three variables related to enhancing prestige: selectivity of the institution where the faculty got the PhD, being a principal investigator on a grant and hours per week spent on research.

5.6.1

Tatiana Melguizo
University of Southern California

Myra Strober
Stanford University

Using a Micro-Indicator Approach to Analyze Growth at Colleges and Universities

The proposed study would use micro-indicators of institutional financial and enrollment data from the Integrated Postsecondary Education Data System (IPEDS) to

5.6.2

Thomas Snyder
National Center for Education Statistics

analyze the financial and enrollment growth of Historically Black Colleges and Universities (HBCUs) compared with other colleges and universities between 1976 and 2001. While aggregate national data have documented extensive growth in higher education at both HBCUs and other institutions, many colleges have not seen large-scale enrollment growth, and in fact, some have closed. The micro-indicator approach would address this aggregation simplification by showing the dispersion of financial and enrollment indicators computed at an institutional level over time to examine the varying growth experiences. The three micro-indicators on enrollment growth and financial stability used in the study are based on recommendations for institutional level indicators from Strategic Indicators for Higher Education (Taylor and Massy, 1996). The three index measures will be summarized through percentile deviations, by type and control of institution, and by HBCU/non-HBCU sector. It is expected that the analysis will document that much of the enrollment and financial growth that has been observed between 1976 and 2001 is due to the opening of new institutions, and major expansions at a relatively small number of institutions. It is expected that many smaller private and public liberal arts colleges, typified by many of the HBCUs, will show more modest growth than would be suggested by aggregate data. This analysis will help to document the weaknesses in using simple aggregate data to analyze the postsecondary sector at the national level.

Politics, Promise, and Pitfalls in the Southeast: State-funded Merit Aid for College

Since 1993 ideal-type merit-aid programs awarded without regard to household income have been adopted in 11 states, 8 of which are located in the Southeast. Our study seeks first to examine whether state-to-state policy spread or diffusion (Walker, 1969) explains the near universal adoption of broad-based merit aid in the southeastern United States. In short, we ask is the making of broad-based merit aid policies marked by state-to-state emulation? Do adopting states share borders with adopters? Second, through analysis of documents and interview transcripts, we attempt to substantiate the mechanisms through which policy migration occurs. What mechanisms propel the diffusion of policies that disburse college financial assistance to high performing students? Convenience? Competition between states for student “market share”? National and regional networks of higher education professionals?

5.6.3

Kyle Ingle
Florida State University

Lora Cohen-Vogel
Florida State University

Trends in State Support for Higher Education, 2004–2005

Fiscal Year 2003–04 was called higher education’s “perfect storm,” a confluence of six sets of trends that created the “perfect storm” for funding of public higher education. This paper reviewed the six trends and placed FY2005 funding in the context of how higher education weathered last year’s perfect storm. Has the damage been cleaned up, and higher education returned to a relatively calm state? After the most severe fiscal downturn since comparative state funding data have been kept, in FY2005 higher education state funding increased over FY2004 levels, but still did not reach FY2003 levels. State higher education appropriations reached \$63.7 billion in FY2003, dropped to \$60.3 billion in FY2004, and exceeded \$63.0 billion in FY2005, an increase of \$2.7 billion or 4.5 percent over FY2004 original appropriations, but a 1.1 percent decrease from FY2003 original appropriations. Average tuition and fees at public four-year institutions jumped 10.5 percent, \$5,132 in FY2005 compared to \$4,645 in FY2004. Average tuition and fees at public two-year colleges also increased significantly, up 8.7 percent from \$1,909 to \$2,076 in FY2005. To offset increases in higher education costs, students received over \$122 billion in financial aid in 2004, an 11.5 percent increase, but more students were denied aid, or had aid reduced. The federal government provides the majority of financial aid, although 48 percent of all aid is in the form of federal loans. Grant aid has declined, but the Pell Grant, conceived as the base for all federal financial aid, now provides only 11 percent of aid.

5.6.4

Mary McKeown-Moak
MGT of America

An Update on the School Finance Situation in Texas

Session 5.7

Lori Taylor
Moderator
Texas A&M University

Janet Hansen
Respondent
RAND Corporation

Panel

A panel discussion of the major issues and likely legislative responses in the wake of the legal finding that the school finance system of Texas is unconstitutional.

Lori Taylor
Texas A&M University

Catherine Clark
Texas Association of School Boards

Harrison Keller
Texas School Finance Project

Lynn Moak
Moak, Casey & Associates, LLP

Procurement Practices, Financial Autonomy, Spending and Performance

Session 5.8

William Duncombe
Session Chair
Syracuse University

Julie Cullen
Session Discussant
University of California-San Diego

What Do We Know About the Procurement Practices of New York State School Districts?

Procurement of supplies, materials, equipment and services is one of several important functions of school business offices. While spending for these items and services represent a relatively small part of district operating budgets, they are essential to the daily delivery of educational services. Managing procurement, however, is frequently a complex and time-consuming process due to laws and rules that govern public purchasing. Although state and administrative regulations stipulate how school districts must procure goods and services, very little is known about what happens in practice.

The authors surveyed 679 New York State school districts in an effort to document procurement practices and the major constraints, if any, school business officials identify as limiting their ability to purchase goods and supplies efficiently. The survey also identifies innovative purchasing techniques of school districts that have been used by state and local governments to realize unit cost and administrative savings. Data from the survey are used to explore how purchasing practices impact the financial management of school districts. The authors seek answers to the following questions: What district characteristics influence the adoption of various procurement techniques? Does the use of recommended and innovative procurement practices impact spending? Is there a role for the state to help districts manage procurement?

5.8.1

Cynthia Searcy
Syracuse University

William Duncombe
Syracuse University

An Analysis of Sample Attrition in Evaluating the Impact of Performance Driven Budgeting on Student Academic Performance

This paper examines the impact of Performance Driven Budgeting (PDB), adopted by New York City Public Schools, on student performance using student-level co-

5.8.2

Dae Yeop Kim
Portland State University

hort data. I constructed a cohort dataset that includes the universe of students in grade 3 of all New York City public schools beginning in 1995–96. Then, records on the 3rd grade cohort students were gathered for the subsequent four years through 1999–2000. Using the 5-year panel data on the third grade cohort, this paper explores whether being in a PDB school rather than a non-PDB school influences changes in student performance on the reading test, controlling for student fixed effects and other key student and school characteristics. In particular, it demonstrates how to correct for selection biases caused by sample attrition in evaluating the effect of PDB on student performance.

Using State Education Databases for Research on Teacher Salaries, Teacher Characteristics, and Student Achievement

In this era of standards-based reform, researchers, policymakers, and practitioners must better understand how educational inputs, such as teacher salaries, class size, and the supply of qualified teachers, can most effectively support student achievement. In this paper, we discuss the results of a recent study on how state education databases can be used for research to answer policy questions about the relationship of these instructional resources and student achievement, while focusing on the availability and quality of data on teacher salaries. In this study, we conducted a systematic investigation of state education databases in Arkansas, Louisiana, New Mexico, and Texas. Specifically, we collected and examined data that measure teacher salaries, teacher characteristics (such as certification, education, and experience), and student achievement. We then determined the usability of the data for research purposes, based on the criteria of availability, accessibility, accuracy, consistency, and completeness.

We found that the databases in the four states provide many measures that can be used to answer a range of important policy questions and provide much more refined measures than are available through federal sources. We also uncovered many challenges, such as limited access to the data, lack of documentation, and problems with data quality. These problems included incomplete full-time equivalency data for staff positions to prorate salaries to the various functions performed by one individual (such as teaching and being a principal) and inaccurate data for teachers who are teaching at multiple schools in multiple districts. Additionally, the databases lacked data at the level of the individual teacher to address some current policy concerns such as benefits, salary supplements, and incentives paid to teachers in hard-to-staff areas. Nevertheless, we concluded that the data can and should be used for research to guide policy. This study informs education researchers and policymakers about the capacity and limitations of the databases in these four states.

School Finance Reform

Session 5.9

Students FIRST: Arizona Takes on School Construction and Renovation

Impact of a School Finance Reform on Housing Stock and Residential Segregation: Evidence from Proposal A in Michigan

Local financing of public schools in the U.S. leads to a bundling of two distinct choices—residential choice and school choice—and increases the degree of socio-

5.8.3

Lotte Smith-Hansen
Southwest Educational Development
Laboratory

Zena Rudo
Southwest Educational Development
Laboratory

Christopher Roellke
Session Chair
Vassar College

Julia Koppich
Session Discussant
Julia Koppich and Associates

5.9.1

Nancy Schilling
Northern Arizona University

5.9.2

Joydeep Roy
Economic Policy Institute

economic segregation across school districts. A school finance reform can go a long way in weakening this link and diluting the extent of neighborhood sorting. In this paper I study Proposal A, the Michigan school finance reform of 1994. Proposal A resulted in a comprehensive equalization of per pupil expenditures within the state and in the process ended local discretion over school spending. Using panel data on Michigan K–12 districts from 1990 to 2001 and data from the decennial censuses, I investigate whether the reform had any significant effects on spatial segregation. I find that there was a positive effect of the school finance reform on housing stock and property values in the lowest spending districts, implying a relative reduction in neighborhood stratification. But the results also suggest a continued high level of demand for residence in the highest spending communities. A similar picture emerges when I look at decennial censuses—there were significant improvements in the lowest spending districts in several socioeconomic indicators, but the richer districts continue to maintain their superiority. I argue that the cause of the continuing preference for richer communities is neighborhood peer effects or ‘local’ social capital. At a time when increasing polarization of the U.S. population is an issue of significant concern, these findings have significant policy implications.

Public Education Funding in Maryland: Student Equity vs. Taxpayer Equity

For decades, low-income and low wealth school districts have fought against the discriminatory impact of education finance and funding policies within their states. Public school funding in most states has historically been linked to local property taxes. Because of the relative disparity between property rich and property poor districts, funding inequities have been common among local school districts.

The primary purpose of this paper is to determine the level of disparity in student equity and taxpayer equity amongst Maryland’s 24 school districts. The analysis focuses on how Maryland school districts finance local school expenditures, their level of tax effort and their capacity to fund school programs.

The study is focused over a 5-year period, (school years 1995/96–2000/01] and uses comparative and horizontal equity analysis to examine trends and disparities in public school funding between Maryland’s 24 school districts. The analysis uses linear regression to examine what relationship if any exists between student equity and taxpayer equity in these 24 districts. These measures are examined across geographic regions in the state, by district and by wealth groups.

Early findings indicate that there were disparities on all measures in the school districts.

Strategies for School Funding Reform after DeRolph

The fight for school funding reform in Ohio has been long and tedious not unlike the experience of many other states. However, the political animosity and partisanship that have built up over the years involving the issues inherent in the numerous decisions have arguably created a state of siege where the remedy for DeRolph has been ignored. The action by the Ohio Supreme Court not to retain jurisdiction and prohibit any other court in the state from pursuing a remedy is in the judgment of the Coalition a refusal by the Court to obey the rule of law.

As John Dayton school finance researcher related in a recent article battles are usually fought on two fronts litigation and arousal of public sentiment. Moyer in DeRolph II emphasized that if the public wants the system changed then, it will let the legislature know it through such arousal (DeRolph v. State,(1997) 78 Ohio St. 3d @ 246)

The paper will identify current strategies being undertaken by the Ohio Coalition for Equity and Adequacy of School Funding- DeRolph plaintiffs-, grass roots organizations individual school districts and other state professional organizations and individuals to continue the path to school finance reform mandated by the Ohio Supreme Court in DeRolph I and II and reaffirmed in DeRolph IV.

5.9.3

Petronella James
Morgan State University

Linda Loubert
Morgan State University

5.9.4

Sandra McKinley
University of Toledo

Generating, Allocating, and Comparing School District Revenues

Margaret Goertz
Session Chair/Reactor
University of Pennsylvania

Session 6.1

School Finance and the Insurance Value of the Property Tax

This paper investigates the use of the property tax to finance schools, specifically focusing on the stabilizing role property taxes have played over the last 20 years. Special attention is given to the links between the extent of property tax financing and spending levels for schools in the last state budget crisis. We will examine how court finance equalization cases have sometimes assailed the role of the property tax, and we will examine how spending has fared in states that have adopted alternate taxing instruments as compared to those who are still reliant on the property tax but use foundation grants or other methods to equalize spending.

6.1.1

Sheila Murray
RAND Corporation

Kim Rueben
Urban Institute

Helen Ladd
Discussant
Duke University

A Unified Approach to Measuring Horizontal and Vertical Equity in School Funding

Following the development of funding formulas for distributing revenues to public schools, policymakers became interested in knowing whether these formulas were successful in helping states attain stated objectives. Two types of equity are of primary interest to researchers. The first is known as vertical equity, which states that school corporations with student populations that are more costly to educate should receive more funding than other corporations. The second principle, horizontal equity, asserts that comparable school corporations should receive comparable levels of funding, and is often referred to as “the equal treatment of equals.” Ideally, the funding formula for a state attempts to both provide more funding to school corporations with greater need, and comparable funding to school corporations with the same need.

6.1.2

Robert K. Toutkoushian
Indiana University

Robert S. Michael
Indiana University

Jennifer Imazeki
Discussant
San Diego State University

While the concepts of vertical and horizontal equity are straightforward, their measurement has proven to be difficult. Researchers have developed a range of methods for assessing each, and each has limitations. In this paper, we introduce a unified approach to assessing horizontal and vertical equity that relies on the statistical relationship between a school corporation’s per-pupil revenues and the complexity of the population from which the corporation draws its students. We propose that vertical equity be assessed by the percentage of variation in per-pupil funding accounted for by a school corporation’s complexity, and horizontal equity should be measured based on the variations in actual versus predicted per-pupil funding levels. We explain these various measures and then illustrate how they can be calculated and interpreted using data for the 292 public school corporations in Indiana.

Profiling the Mechanisms by which Districts Allocate Resources which Benefit Schools

Education finance research increasingly has focused on intradistrict resource distribution, yet little is known about the mechanisms used for resource delivery and their effectiveness. Resource distribution mechanisms are the vehicles used to get resources to schools and students, including: per pupil funding formulas, programs, central services, block grants, specialists, etc.

For many district decision makers, the budgeting alternatives for distributing resources are not clear and the value of using one mechanism over another is unknown. For example, if a district leader chooses to address LEP student needs with a pool of centrally managed bilingual experts, versus allocating a flat per pupil figure to schools, does this choice affect the distribution of costs among schools?

This study profiles and categorizes the various mechanisms by which districts allocate resources. Specific research questions include: 1) what mechanisms do districts

6.1.3

Marguerite Roza
University of Washington

Claudine Swartz
University of Washington

Ron Zimmer
Discussant
RAND Corporation

use to allocate resources that impact schools; 2) how can these mechanisms be categorized in the context of current public budgeting practices; and 3) which mechanisms advance, or hinder, the following policy priorities: school level equity, student level equity, uniform resource distribution, site or central control of resources, spending portability, and accountability?

Equity, Adequacy, and Local Effort

Session 6.2

David Danning
Session Chair
Massachusetts Teachers Association

Lawrence Getzler
Session Discussant
Virginia Department of Planning and
Budget

Rewriting Policy to Promote Equity for All Students: A Case Study

School funding in California is in what seems to be a perpetual crisis. With per pupil expenditures among the lowest in the country, Californians continue to watch as funding for education is slashed at the state level. As California's budget woes have worsened, Santa Monica voters have supported local propositions that raised taxes and the two city councils have worked to make available additional revenue to support both supplemental programming and the continuation of core school system initiatives.

Throughout the 2003–2004 academic year, the Santa Monica-Malibu Unified School District's Board of Education considered changes to its Acceptance of Gifts Policy intended in part to provide ways to funnel additional resources to its most economically impacted schools by addressing imbalances in the flow of gift funding to its schools. The school system's schools are located in very different neighborhoods and fund-raising by, for example, Parent Teacher Associations, has distinctly different outcomes at the schools. One school's community raised just under three-quarters of a million dollars last year, while other schools' communities work equally hard to raise a few thousand dollars.

In this paper, we describe the policy formation and public debate process that culminated in Board approval of the much-contested policy. We describe the model for equitable redistribution of resources embedded in the policy, then look at the cultural politics that shaped the debate for the district and the communities it serves as well as some of the unintended consequences of the policy debate. We discuss the likely outcomes of the first year of implementation (currently underway) and district plans for monitoring the use and impact of the resources over time.

Defining Rural in the Context of Adequate and Equitable Education Funding: A Geospatial Based Methodology

This study investigated the spatial relationship influences on education finance equity. Lawsuits such as the Tennessee Small School Systems v McWherter (1993, 1996) reflect the enduring struggle among urban, suburban, and rural school districts for equal funding. The measures of rurality and urbanicity in most education finance litigation has used demographics, that may no longer be the most appropriate metric to determine equity and adequacy in the distribution of school funding amidst the fast changing economics in the U.S. today. This study developed and tested a model that (1) uses varying degrees of rurality, such as the eight gradations used by the Bureau of Census and the Cleland Index of Rurality, (2) refined the definition of rurality based on spatial relations that are independent of demographics, (3) added a fiscal adequacy context that is spatial in scope, and (4) linked achievement metrics that are also spatial in scope. In addition, the study replicated and compared some of the "classical" equity measures such as GINI Coefficient to the utilization of geospatial measures and geographically weighted regression.

6.2.1

John Deasy
Santa Monica-Malibu Schools

Donna Muncey
Santa Monica-Malibu Schools

6.2.2

Gary Peevely
Tennessee State University

Robert Harrison
Tennessee State University

School Facilities and Student Achievement: Is There a Relationship

6.2.3

Barbara DeLuca
University of Dayton

Steven Hinshaw
Centerville City Schools

Beyond Money: Identifying the Relationship of Social, Community, Political, and School Characteristics to Local Effort

6.2.4

Angela Hull
Missouri State Teachers Association

Several equity and adequacy studies of Missouri's system have noted a growing resource disparity. New legislative and gubernatorial leadership faces a pending equity/adequacy lawsuit. Established via 1993 statute following a court order, Missouri's current school finance system rewards school districts for local effort. The minimum levy level to begin maximizing state funds is \$2.75 per \$100 of assessed valuation, but Missouri statute requires a minimum levy of only \$1.25. Why would districts and their communities choose not to take the incentive provided in the formula? And if they have, what are those districts' characteristics, including those staying just at the minimum incentive level of \$2.75? This research purports to take analysis beyond examining differences in resources based on local tax effort and reframes the discussion to examine the relationship between local levy amounts and social, community, political and school variables. The purpose is to expand the understanding of inequity beyond financial considerations—to identify the social structures affecting equity in order to develop more effective policy solutions in the future. The purpose of the AEFA paper is to introduce this study—including its conceptual framework, hypotheses and methods—in order to generate discussion regarding its conceptual underpinnings and methodology.

Local and State Tax Initiatives: Are There Better Ways?

Session 6.3

Deborah Cunningham
Session Chair
New York State
Department of Education

Kieran Killeen
Session Discussant
University of Vermont

Virginia's Car Tax Rebate: An Entitlement that Redistributes Funds from Poor to Wealthy

6.3.1

Lisa Driscoll
Virginia Tech University

In 1998 Virginia implemented an immensely popular "car tax rebate" which amounted to a statewide entitlement program for those citizens who owned personal use vehicles. The program transferred state funds that equaled a percentage of the local levy on the first \$20,000 of a vehicle's assessed value. Effectively, the rebate supplanted with state money, a proportion of the local personal vehicle tax liability of the owner.

The rebate was structured to be phased in gradually, subject to state revenue thresholds; 12.5% in 1998 to end at 100% in 2002. The only qualifier to receive the rebate was to own a personal use vehicle that was assessed at least \$1,000. This tax was hailed as equitable, because almost everybody in the state received the rebate due to the almost ubiquitous ownership of automobiles.

The rebate has promulgated a number of unintended consequences. Primarily, the rebate appears to be driving a redistribution of state revenue disproportionately from poor fiscal capacity localities to higher fiscal capacity localities based on the observation that higher fiscal capacity localities are more likely to possess vehicles that are assessed at higher dollar values and greater numbers of these vehicles. These localities can lay claim to extraordinary amounts of state funds as "rebates."

An equity analysis of this proposition is made through the comparisons of state income tax revenue by locality, the number of eligible vehicles, their value, and the fiscal capacity of localities through examination of various equity measures and regression analyses. Since Virginia school district boundaries are coterminous with local governments and do not possess taxing authority, the future trends of this policy have important consequences for the effective fiscal capacity available to school districts.

The Impacts of Homestead Property Tax Exemptions on School Finance Equity

This paper explores the impacts of a major property tax exemption program passed in New York State in 1997, called the School Tax Relief Program (STAR), on school district equity. STAR is unique in two ways. First, the exemptions are fully reimbursed by the state and the incidence of exemptions is huge including all the residential property owners. STAR is essentially a type of matching aid to school districts because the state reimbursements for the loss of local property taxes by STAR exemptions are determined not only by the total exemption amounts but also locally determined tax rates; the higher tax rates the greater reimbursement from the state to school districts. Since STAR is regarded as a simple property tax cut policy in New York State, its distributional impacts have been ignored. As a result, the current structure of STAR produces conflicting results with those pursued by state aid currently available in New York State.

This paper first explains the distribution of STAR benefits to show greater amounts of benefits went to the wealthier districts. And then, it performs simulations for revised STAR programs with changes of key policy parameters, such as tax cap, cost adjustment factors, and renter benefits. Such simulations show how the homestead property tax exemptions for school districts could be designed in line with school finance equity. All the necessary data for the paper were collected and the primary data analysis has been completed.

How to Throw Money at Education

A half century ago when I first started teaching, I soon discovered as did my fellow beginners that we were in the center of an ongoing argument over money. Millage elections and legislative as well as gubernatorial races were sure to include the matter of school funding. Statements about it ranged from the proverbial sublime to the ridiculous. I really only objected to them when one time they became personal. Our local newspaper decided one day to print the names and salaries of all of the teachers, including me, under a headline reading “Are these people worth this?”

The constant statement made against school people and citizens who favored added education funding was that “You can’t improve education by throwing money at it.” For many, many years I long considered this to be an utterly absurd statement. I remember challenging those who used it to show me where and when money had been thrown at education. This usually ended this discussion.

All that was long before I met the twenty first century version of the Arkansas General Assembly. For from this group I finally saw money being thrown at education as well as items called education which in reality had nothing to do with teaching and learning, yet had appeal to certain politicians.

The real throwing is that millions and millions have been distributed to already wealthy school districts without any requirements as to their use or any dependable end product. To so expend the taxpayers school funds with so little concern as to its benefits to children seems highly improper.

However to be sure that growing school districts would still have fiscal problems regardless of legislative largesse, a piece of permissive legislation was adopted. It allows for the creation of special tax districts called Tax Increment Financing districts or T.I.F.s. Within such a district school receipts from property taxes remain level while any increases go to the city for “continued development” of the T.I.F.

If this sounds vaguely familiar it is really a twenty-first century rehash of the ideas of a nineteenth century economist named Henry George. George, who even once ran

6.3.2

Tae Ho Eom
Rutgers University.

6.3.3

Martin Schoppmeyer
University of Arkansas

for the Mayor the New York was the champion of the Single Tax. This was to be a tax on the unearned increment in the value of land which seems to be the basis of the new legislation.

The effect of this on local school finance is rather evidently to prevent its increase as needs increase. The paper will explore these financial inventions in detail as well as their strange relationship

Financial Engineering for Stable State Education Funding

The policy challenges inherent in public and education finance share much in common with situations found in financial markets. Combining common financial portfolio concepts with public finance business cycle research produces a framework that is useful for evaluating current taxes and for appraising proposed tax policy. In financial markets, expansions and contractions in the macro economy cause market returns to vary over the business cycle. Using well-established methodology, financial market analysts evaluate expected return and risk through decomposition into systematic and nonsystematic components. Similar to its application in financial markets, this simple regression framework also allows identification of non-cyclical versus cyclical growth for individual tax revenue sources. It also fosters separation of tax revenue uncertainty into systematic and nonsystematic components. As in the case of financial markets, the portfolio methodology allows state government analysts and decision makers to evaluate alternative taxes by their anticipated contribution to expected revenue and risk. Application of this framework shows that the taxes selected to fund education strongly influences expected revenues and their associated risks. It also provides a framework for investigating and evaluating education finance options such as rainy day funds that might be used to smooth revenues so that they better satisfy the demands for stable education funding at the state level.

6.3.4

Ray Nelson
Brigham Young University

Cost Adjustments, Cost Simulations, and Measurement of Educational Productivity

Session 6.4

William Fowler
Session Chair
National Center for Education Statistics

Sean Corcoran
Session Discussant
California State University-Sacramento

Improved Financial Reporting by Employing NCES Geographic and Inflation Cost Adjustments

This paper continues previous NCES research on cost adjustments in education. NCES has just received a contractor-created geographic and inflation indexes from Bureau of Labor Statistics (BLS) data sets for the period 1998–2003, which will be released as an NCES data set. This paper applies those geographic and inflation cost adjustments to NCES reported expenditure data, and compares how those adjustments modify the nominally reported data.

6.4.1

William Fowler
National Center for Education Statistics

Developing a Model to Simulate Costs of Various Education Policy Scenarios for States

The Human Services Policy Center (HSPC) has joined a multidisciplinary, multi-institutional team—the School Finance Redesign Project—in its efforts to design a new framework for financing public education. HSPC’s role in the project is to apply its “policy cost modeling analysis,” developed successfully for early education, to estimating the costs of K–12 finance systems that support improved student performance. In this analysis, we simulate the effects of various policy decisions, translating knowledge about children’s learning directly into cost estimates. These cost estimates vary depending on the package of instructional, non-instructional, and organizational policies selected. We also analyze the degree to which alternative funding strategies target funds to disadvantaged students and communities.

6.4.2

Richard Brandon
University of Washington

Ben Rarick
University of Washington

Karen Manship
University of Washington

The model estimates per-pupil costs by using a combination of the research literature, consultation with educational experts, and analysis of actual spending and allocations. By building costs on a per-pupil basis, we can adjust the mixture of costs according to student characteristics. Then aggregate costs for schools, districts, and states can be estimated according to their particular student profiles.

HSPC's model enables policy makers to test different mixes of staffing, class and school size, professional development, pre-K, enrichment, and other instructional expenses, plus non-instructional expenses such as social and health services programs. By comparing different approaches, we can identify key components that support and enhance improved student performance.

This presentation will discuss the progress of this project and challenges encountered.

Measuring Educational Productivity in Standards-Based Accountability Systems: Introducing the SES Return on Spending Index (RoSI)

The paper "Measuring Educational Productivity in Standards-Based Accountability Systems; Introducing the SES Return on Spending Index (RoSI)" introduces and describes a new methodology for analyzing the educational "return" which public educational entities, such as school districts, receive for their financial investment in education. The RoSI approach provides diagnostic information about the comparative educational return on resources generated by school districts. In combination with the "Error Band" method and the "Risk-Adjusted Performance Index" described in earlier Standard & Poor's methodology reports (which will be briefly reviewed as well), the application of the RoSI allows the identification of school districts that achieve better educational performance for a given level of spending, while simultaneously considering the proportional enrollment of economically disadvantaged students served.

This analysis approach is currently being implemented as one of a complex suite of offerings available to the public within the expansion of Standard & Poor's School Evaluation Services to cover all 50 U.S. States, Puerto Rico and Washington, D.C.. Taken together with additional indicators and indices, the RoSI approach facilitates insightful and objective data-driven analysis of public education data for educational decision makers, parents, educators and policy makers.

6.4.3

Martin Hampel
Standards & Poor's Performance
Evaluation Services

Accountability and Its Consequences

Session 6.5

Edward Hurley
Session Chair
National Education Association

Christopher Roellke
Session Discussant
Vassar College

The Impact of State Accountability Programs on Student Achievement: A Look at the Evidence

A critical provision of the federal No Child Left Behind (NCLB) education legislation requires every state to develop and implement an annual accountability plan for all districts and schools. Prior to the law's enactment, many states were already implementing various kinds of accountability systems. Thus, there is a history of accountability-based school reform in the U.S. that can help us anticipate the impact of NCLB-style accountability reforms on student achievement.

The overall objective is to gather the currently available evidence on the question: What is the impact of statewide accountability programs on student achievement? In this presentation, we will present the results of a systematic review of the research on the impact of state accountability plans. The systematic review strategy is advo-

6.5.1

Virginia Hudson
George Washington University

Gary Ritter
University of Arkansas

cated by organizations such as the What Works Clearinghouse (sponsored by the U.S. Department of Education) and the Campbell Collaboration. The systematic review method takes a comprehensive approach in seeking out appropriate studies so that (nearly) all of the relevant studies are identified. The objective is a search that is objective and transparent and thus results in a set of studies that fairly represents the existing evidence. This strategy then calls for a careful and critical synthesis of the results, in contrast to a simple recounting of the research. We will be prepared to present the preliminary findings from our study for AEFA's March 2005 conference.

Does Accountability Policy Diminish Teacher Intrinsic Motivation? Evidence from the 2000 NCES SASS Database

6.5.2

Kwanghyun Lee
Michigan State University

Does accountability policy decrease teachers' intrinsic motivation to teach? Self-determination theory (SDT) in psychology states that controlling mechanisms such as performance-contingent rewards, threat of sanction, and imposed goals will turn agents' perceived locus of causality from inwardly to externally directed, thus undermining agents' intrinsic motivation. SDT implies that teachers under the pressure of strong accountability policy will be more likely to lose their intrinsic motivation for teaching. Analysis on 2000 National Center for Educational Statistics Schools and Staffing Surveys database using ordered probit and ordered logit models confirms that teachers under strong accountability policy are more likely to mention that they would not become a teacher again if they were to start over, controlling for other variables. They also respond that it is a waste of time to try to do one's best as a teacher, which shows that teachers working under the strong accountability policy are losing intrinsic motivation. Further analysis using a probit and logit model displays that teachers who respond that they would not become a teacher again and it is a waste of time to try hard to teach well are more likely to leave teaching. The evidence suggests that accountability policy adversely affects teachers' intrinsic motivation and, by extension, may pose unanticipated adverse impacts on the quality of public education.

Double Standards for Graduate Rate Accountability? Or None?

6.5.3

Christopher Swanson
Urban Institute

Achievement testing is the centerpiece of the state accountability systems mandated by the federal No Child Left Behind Act (NCLB). Until recently, the public attention directed towards achievement scores has largely eclipsed the crucial role that graduation rates play in NCLB accountability. But as a new body of research on graduation rates has gained wider currency, we are just now coming to an uncomfortable realization—the nation appears to be facing a crisis in high school completion. These findings have prompted much-needed investigations into several key areas: the origins of the law's concern about graduation rates; status of graduates and dropouts for NCLB accountability; the consequences of using different ways to define and measure graduation rates; and state strategies for incorporating graduation rates into their federal accountability plans. In previous work, the author has shown that states have significant flexibility over several key elements of graduation rate accountability: (1) choice of method for calculating graduation rates, (2) the target levels set for graduation rate performance, (3) whether to allow "any improvement" to qualify as making adequate yearly progress, and (4) whether accountability will be based on the performance of individual student subgroups. This paper builds on these recent studies and presents a new empirical analysis. The current study explores implications of the choice states make at the critical junctures when deciding on the rules that will govern their NCLB accountability systems. In other words, how high are the standards states are setting for graduation rates? In light of the study's findings, a set of concluding recommendations are made for ways in which graduation rate accountability could be made "smarter."

Continuity and Accountability in a Changing Political Environment: The Politics of Education in Florida

Public opinion surveys over the years have shown that education is either the most important issue or among the top five issues mentioned by Floridians when they are asked to identify problems in our state. As policy makers respond to this concern and attempt to craft education policies, they encounter a formidable challenge: how to maneuver across a constantly changing—and often politically charged—intergovernmental landscape (Kirst, 1970; Wirt & Kirst, 2001). Although there is general agreement that education is an important issue, public opinion surveys also show that Floridians differ considerably on the root causes of problems, the best solutions to them, and the order in which problems should be tackled.

This policy brief will describe some of the more formidable challenges that confront educational policymaking today in Florida focusing on three in particular: a rapidly growing and diversifying population, the mixture of federal, state and local jurisdictions, and volatility in political party affiliation. The brief will finish with a look at three policy changes that have emerged over the last five years from unexpected sources: two from amendments to the Florida Constitution and one from a Republican administration in the White House that just 10 years ago was trying to reduce federal involvement in public schooling. These three are: dramatic changes to the state educational governance structure, a strengthened role for the governor in Florida and a new expanded role for the federal government under the 2000 re-authorization of the federal elementary and secondary education act.

6.5.4

Susan MacManus
University of South Florida

Carolyn Herrington
Florida State University

Funding for Adequacy: The Maine Way

Session 6.6

David Silvernail
Session Chair
University of Southern Maine

William Mathis
Session Discussant
Rutland Northeast Supervisory Union

Development of Maine's Adequacy-Based Funding Model, 1997 to 2005

In 1997, the Maine legislature directed the State Board of Education to develop a new funding model to support the achievement of Maine's new learning standards. Using a combination of methodologies the state board developed a new adequacy-based funding model which the Maine legislature passed into law in 2004. This presentation will describe the development of the new funding model and the strategies used to gain support for and, ultimately, passage of Maine's new adequacy model, the Essential Programs and Services Funding Act of 2004.

6.6.1

David Silvernail
University of Southern Maine

Research Strategies for Selected Cost Components of Maine's Adequacy-Based Funding Model

Maine's Essential Programs and Services Model is designed to determine the necessary cost of providing an adequate education for the students in each school district on the basis of student and district characteristics. The cost model consists of components such as teacher-student ratios, a regional salary index, special education, transportation, and adjustments for specialized student populations and small, geographically isolated schools. A variety of methodologies were used in modeling the various components, including regression analyses, simple means, expert panels, and a successful schools approach. This presentation will introduce the components and survey their methodologies and results.

6.6.2

James Sloan
University of Southern Maine

Essential Programs and Services Funding Act: Achieving Equity for Students and Taxpayers by Funding for Adequacy

Funding public education in Maine has always been a joint effort of the state and local communities. However, in the last decade the state percentage of funding has decreased to approximately 43%. With passage of the Essential Programs and Services Funding Act of 2004, Maine will begin implementing a new funding formula based on a minimum mill expectation rate for all local communities and a state share of 55% by 2010. This presentation will describe this new funding formula and how it impacts both student and taxpayer equity.

6.6.3

James Rier
Maine State Department of Education

Adequacy, Accountability, and Financial Autonomy

Session 6.7

Anthony Rolle
Session Chair
Peabody College
of Vanderbilt University

Anne Miller
Discussant
Association of School Business
Officials, International

Adequacy and Accountability: A Study of Resource Sufficiency and the New Learning Standards in New York City High Schools

6.7.1

Tyrone Bynoe
Cumberland College

High Stake Accountability Policy: Troubling the Assumptions about Teachers

This paper presents an analysis of data collected from teachers in Colorado (1999) and Oklahoma (2003), concerning their perceptions of accountability. Data were collected about internal or personal accountability and attitudes concerning three of the five components of performance-based accountability systems used at both state and federal (NCLB) levels.

Results indicate a strong sense of personal accountability, primarily to self and students, which plays out in teacher isolation within classroom. Also indicated is a willingness to be held accountable by external mechanisms for items over which they have some sense of control. Particularly interesting is teachers' seemingly negative attitude to the rewards component within the systems.

These results are discussed using the frameworks of organizational, business, and policy models, particularly the Stein's Culture of Policy Conceptual Model (2004). Conclusions offered indicate that because assumptions about teachers inherent in the models may be incorrect, the stated goals of both state and federal accountability may be impossible to achieve.

6.7.2

Judith Mathers
Oklahoma State University

A Comparative Analysis of U.K. and USA High School Principals' Perception of their Financial Autonomy

The primary purpose of this paper is to discover how perceptions of managerial autonomy influence the approach of principals to budget planning and implementation. Principal perception of autonomy is crucial when dealing with management authority as it helps shape both school policy and operations directly impacting school staff morale.

Previous research studies have concentrated on evaluating the effectiveness of school budgetary planning specifically comparing outcomes from centralised and decentralised districts, and from schools with and without site based management. This paper digs deeper to try and understand how perceptions of financial and managerial

6.7.3

Valerie Storey
Peabody College
of Vanderbilt University

Christina Hart
Peabody College
of Vanderbilt University

autonomy of principals in both the USA and the UK affect school finance and budget planning and implementation.

There are several shared challenges for school principals in both the USA and the UK, currently navigating the educational financial terrain. First, is how to increase school resources. Secondly, how to mobilize those resources to increase effectiveness while providing an adequate and/or equitable education for all students and finally how to maintain focus, harnessing the funding and budgeting process in a manner that results in improved student learning.

Using an international comparative method the authors conduct a preliminary examination as to how perceptions of managerial autonomy affect principals in their decision making process and ultimately school finance and budget implementation.

Education Spending and Pupil Performance: Impact of Curt Ordered Reform and Voucher Program

Session 6.8

James Guthrie
Session Chair
Peabody College
of Vanderbilt University

James Smith
Session Discussant
Management, Analysis, & Planning

The Past as Prologue: An Evaluation of Funding Adjustments Made in Wake of Leandro vs. North Carolina

In 1997, the North Carolina Supreme Court ruled in *Leandro v. State of NC* that the states system of school funding was constitutional. This paper examines trends in finance for the districts that were both original plaintiffs in the case (low wealth districts) as well as those districts that signed on as plaintiff intervenors (high wealth districts). Overall, we find that horizontal inequity has increased for plaintiff counties over time. We find that state supplied low-wealth district supplemental funding did not offset increases in horizontal inequity for plaintiff districts over time. We find that plaintiff counties were not isolated in their disadvantaged state, but were part of clusters of districts that faced inequitable funding themselves. Finally we find that it is the system of funding that perpetuates inequity, and not just the funding amounts themselves. That is, we believe that the type of local funding allowed within the school funding formula perpetuates these inequities.

6.8.1

Eric Houck
Peabody College
of Vanderbilt University

Matthew Springer
Peabody College
of Vanderbilt University

Impact of School Finance Reform on Resource Equalization and Academic Performance: Evidence from Michigan

The state of Michigan radically altered its school finance system in 1994. This was a legislature-led reform that took place somewhat unexpectedly and without the intervention of any courts. The new plan, called Proposal A, significantly increased state aid to the lowest spending districts and limited future increases in spending in the richest ones. In effect Proposal A essentially abolished local discretion over school spending. I investigate the impact of Proposal A on distribution of resources and educational outcomes in Michigan. In the process this paper offers a first detailed look at the effectiveness of a legislature-led school finance reform. Using panel data on Michigan K-12 districts from 1990 to 2001 and a difference-in-differences estimation strategy, I find that Proposal A was quite successful in reducing inter-district spending disparities. There was a significant narrowing of the spending gap between the highest spending and the lowest spending districts, though because of the staggered nature of the reform inequalities still persist. The effect on academic performance is significant but more modest. There is evidence of considerable gains by the lowest spending districts, which had earlier been lagging behind, in state tests. But as yet these gains do not show up in tests administered nationally like the NAEP and ACT. The results are largely unchanged when I use the two neighboring states of Indiana and Ohio to control for secular region-specific trends.

6.8.2

Joydeep Roy
Economic Policy Institute

What Does Money Buy? An evaluation of the results of New Jersey's Abbott IV decision

For the nearly half a century, education production literature has examined the relationship between school resources and school outcomes. One counter-intuitive finding from this literature has been that increased funding does not always lead to increased outcomes. Nonetheless much litigation, including New Jersey's Abbott IV decision, prescribes more funding for schools in hopes of increasing outcomes.

New Jersey's Abbott v. Burke school finance litigation has been going on for nearly two decades. After several court cases and unsuccessful attempts by the legislature to adequately respond to the court's mandate, the 1997 Abbott IV Supreme Court decision ordered the state to ensure parity in regular education funding between 30 of the state's poorest school districts (called "Abbott" districts) and its wealthiest suburban communities by adding nearly \$250 million of "parity" funding to raise the spending levels in the Abbott districts to the same levels as the state's wealthiest suburban districts.

New Jersey's situation allows us to examine whether the immediate influx of new funds is related to improved student achievement. We will use simple descriptive statistics and multivariate analysis to examine the New Jersey funding and testing data from the last five years to compare the Abbott districts with the rest of the state. The overall question addressed in this study is: has the increase in funding for the 30 poor Abbott districts been associated with an improvement in performance on state test scores.

Can Increasing School Participation and Monetary Loss in a Voucher Program Affect Public School Performance?

The Milwaukee voucher program, as implemented in 1990, allowed only non-sectarian private schools to participate in the program. Following a Wisconsin Supreme Court ruling, the program saw a major shift and entered into its second phase, when religious private schools were allowed to participate for the first time in 1998. This led to more than a three-fold increase in the number of private schools and almost a four-fold increase in the number of choice students. Moreover, due to some changes in funding provisions, the revenue loss per student from vouchers increased in the second phase of the program. This paper analyzes, both theoretically and empirically, the impacts of these changes on public school performance in Milwaukee. It argues that voucher design matters and that the choice of parameters in a voucher program is crucial as far as impact on public school incentives and performance are concerned. In the context of a theoretical model of public school and household behavior, the paper establishes that the policy changes will lead to an improvement of the public schools in the second phase of the program as compared to the first phase. Using data from 1987 to 2002 and a difference-in-differences estimation strategy in trends, the paper then shows that the theoretical prediction is validated empirically. This result is robust to alternative samples and specifications, and survive several robustness checks including correcting for mean reversion.

6.8.3

Joshua Barnett
University of Arkansas

Gary Ritter
University of Arkansas

6.8.4

Rajashri Chakrabarti
Harvard University