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**Focus on Illinois Education Research Symposium**

*Illinois Education Research Council*



**Compendium  
of  
Abstracts**

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# **Potholes in the Road to College: How Students in the Chicago Public Schools Make Their Postsecondary Decisions**

Eliza Moeller and Vanessa Coca  
Consortium on Chicago School Research, University of Chicago

One of the most important trends in education over the past several decades has been the rise in educational aspirations of high school students, particularly among racial/ethnic minority students. However, this rise in aspirations has not been accompanied by a concomitant rise in college attendance. As a result, there is a gap between aspirations to attend college and actual college attendance, particularly for racial/ethnic minority and low-income students, who are attending college at lower rates than their White and middle-class counterparts. Addressing this gap is one of the most vexing problems in education today. While it is clear that high levels of academic preparation are important for college access and success (Adelman 1999), there is evidence that an information gap must also be addressed for first-generation college students (Venezia, Kirst, and Antonio 2003).

## **Purpose of Research**

Making a successful transition from high school to college is not an easy or intuitive process. It involves a series of decision points, each decision requiring information, guidance, and support for a student to make the right choice for him or herself, and first-generation college-goers are particularly at risk of not receiving adequate information. This paper uses quantitative and qualitative data to closely examine the process by which students in the Chicago Public Schools (CPS) make their postsecondary decisions, a series of decisions that we call the pathway to college; the points in the process where college-aspiring students tend to fall off the pathway; the extent to which these things vary by race/ethnicity and levels of academic preparation; and possible determinants of success or failure as students navigate this road.

## **Methodology**

This paper uses quantitative data from the Consortium on Chicago School Research (CCSR), as well as qualitative data collected as a part of the Chicago Postsecondary Transition Project to understand the College Pathway and its implications for CPS students. The quantitative data set draws from the Consortium's vast archive to synthesize data from several sources: student demographic data, high school transcript data, and ACT scores collected by CPS for all students; data from CCSR's 2005 survey of all CPS Seniors (Senior Survey), given in April, which asks students about their postsecondary intentions, as well as various supports received for postsecondary planning; student responses to CPS's 2005 Senior Online Questionnaire (SEQ), administered in June, which asks more detailed questions about postsecondary plans, as well as colleges to which students have applied and been accepted; and data from the National Student Clearinghouse (NSC), which tracks postsecondary enrollment. In total 6,185 CPS graduates are included in these analyses, which is the number of graduating CPS Seniors not in special education for whom we have data from all of these sources .

Using data from these sources, we are able to construct our College Pathway for our quantitative analyses. We begin by selecting for our analysis only those students who stated on the Senior Survey that their goal is to complete a 4-year degree. We then consider the proportion of students who:

1. Plan to continue their education the fall after graduation (using the Senior Survey)

2. Plan to attend a 4-year college the fall after graduation (using the Senior Survey)
3. Have applied to at least one college by graduation (using the SEQ)
4. Have been accepted to at least one college by graduation (using the SEQ)
5. Ultimately enroll in a 4-year college by the fall after graduation (using the NSC)

Demographic, transcript, and ACT data can then be used to compare outcomes for different groups of students, for example, by race/ethnicity and by level of academic qualifications.

Using data from the qualitative component of the research project, we can construct the same pathway for students and use our in-depth interviews to better understand the nature of students' decision-making process at each step in the pathway. In March of 2005, 105 Juniors from three CPS neighborhood high schools were selected to participate in the Chicago Postsecondary Transition Project. These students reflect the diversity of CPS, in terms of race/ethnicity, achievement, and curricular track. Now graduates, these students have been interviewed five times while in high school and have answered detailed questions about expectations of teachers and parents, possible sources of information and guidance, and conversations about future plans, as related to the college search, selection, application, and admissions process. Student interviews contextualize the nature of guidance at the high school level and provide concrete examples of college planning.

### **Summary of Findings**

In 2005, 40% of college-aspiring CPS Seniors successfully navigated the College Pathway, meaning that they completed each successive step and ultimately enrolled in a 4-year college the fall after graduation. An additional 9% enrolled in college without having completed each successive step. For the system as a whole, students experience the greatest risk of failing to follow the pathway at two points: the decision to attend a 4-year year school (20% of students don't know or have other plans) and ultimately achieving college enrollment (11% of students do not enroll after successfully navigating the College Pathway). Qualitative data confirms that support, guidance, and information in important areas like college search, college application, college selection, and financial aid are important determinants of successful or unsuccessful navigation of this pathway.

These risks, however, vary greatly by race/ethnicity, as well as by students' level of academic preparation. Latino students, for example, have a much higher risk than other students of falling off the pathway by deciding to attend a 2-year or technical school rather than a 4-year college, whereas African American students have a higher likelihood of not being accepted to institutions to which they apply. Most importantly, students whose academic qualifications afford them access to the most selective colleges and universities in the country are highly likely to successfully navigate the College Pathway, but are at higher than average risk of not enrolling in the fall. Qualitative data confirms that, for even our best-prepared students, enrollment in college is not an easy task, and strong support and guidance are needed.

### **Implications for Illinois Education**

Given the large number of high school students in Illinois who are potentially first-generation college students, our findings are important in that they shed light on how such students approach the pathway to college and what problems they encounter along the way. Our findings also suggest that a set of organized policies designed to address how, when, and the extent to which students are supported through this process could have a substantial impact on how students make their postsecondary decisions, and ultimately, students' success in college.

## Setting the Record Straight on New Teacher Attrition in Illinois

Karen DeAngelis  
Illinois Education Research Council

In this study, we examine new teacher attrition from the profession and from schools in Illinois. Using more than thirty years of data from the Illinois State Board of Education's Teacher Service Record (TSR) databases spanning the 1970/71 to 2005/06 period, we follow cohorts of new teachers, defined as teachers with one or fewer years of total teaching experience, to examine their movements within and out of teaching in the Illinois public schools (IPS). While we focus on new teachers' movements through their first five years following initial entry in teaching, we are able to track the cohorts for between one and thirty-five years, thereby allowing us to account for teachers who return to teaching in IPS after a year or more absence.

At the profession level, we present the attrition rates of new teachers in two ways. First, we report five-year attrition rates for each cohort, which represent the percentage of new teachers that left teaching in IPS sometime during their first five years. Teachers are tracked into their sixth year following initial entry to determine their movements through year five, and are tagged as having left the profession if they appear in the TSR as teachers in one year but do not appear as teachers in the subsequent TSR year. New teachers who switch to non-teaching positions but remain in IPS are counted in the attrition rates as well so that the results for Illinois can be compared to others' findings. In addition to the five-year rates, we report return-adjusted attrition rates, which account for the fact that a significant proportion of new teachers who leave during their first five years eventually return to teaching in IPS. While we recognize that teachers who stop out for any period of time pose a problem for schools and districts that need to replace exiting teachers in order to staff their schools, we believe these return-adjusted attrition rates are a better reflection than the five-year rates of new teachers' views of, and long-term commitment to, the teaching profession in Illinois.

At the school level, new teacher attrition from the profession is only one part of the story. In addition to those who leave IPS altogether during their first years following entry into the classroom (referred to as "leavers"), some new teachers move to teaching positions in other Illinois public schools within or outside of their district ("movers") or accept non-teaching positions in IPS ("changers"). The proportions of movers, leavers, and changers together constitute the total loss of new teachers from Illinois schools. In this study, we examine the status of new teachers at three points in time - after their first year, after their first two years, and after their first five years following entry into the profession - to provide snapshots of the impact of new teachers' movements on schools over time.

In contrast to the commonly held belief that upwards of 50 percent of new teachers abandon the teaching profession during their first five years, we find that about 40 percent of new teachers in IPS leave during their early years. Once returners are taken into account, however, new teacher attrition rates fall to between 25 and 30 percent, regardless of the locale of the school or the characteristics of students in the school in which they started teaching.

At the school level, about two-thirds of new teachers on average leave their initial schools during the first five years following entry. Interestingly, we find that school-level differences in teacher retention rates vary much more across schools with similar student characteristics than across schools with

different student characteristics, suggesting that it is other conditions in schools that affect school-level attrition rates.

Finally, we show that new teacher attrition rates in CPS are similar to those in other locales in the state. Moreover, a greater percentage of returners stay within CPS than is typical in other locales and geographic regions in the state.

# **The Sustainability of Comprehensive School Reform: Curriculum, Pedagogy, and School Improvement Planning**

Penny Billman, Northern Illinois University  
Carol Diedrichsen, Illinois State Board of Education

## **Purpose of the Research**

For the past four years, the researchers conducted statewide evaluations of the implementation and effectiveness of Illinois' Comprehensive School Reform (CSR) program, a federal-funded program for public schools, especially high-poverty and low-achieving schools, to implement scientifically based reforms that address seven specific criteria in order to increase student achievement. The entire 2007 annual evaluation will be available to symposium participants; however, the presentation focuses on the sustainability of comprehensive reform efforts as they relate to the curriculum, pedagogical practices, and planning processes. Five specific areas were investigated using data collected for the annual reports and the 2000-2007 Illinois CSR Summative Evaluation:

1. What curricular changes did schools make during and after the CSR-funded program?
2. What pedagogical changes did teachers and schools make during and after the CSR-funded program?
3. How did the processes used for school improvement planning at the building-level change during and after the CSR-funded program?
4. Were specific curricular, pedagogical, and/or planning process changes associated with increased academic achievement of subgroups of students?
5. Can the data from "surveys of enacted curriculum" be used effectively by teachers to analyze the curriculum and their classroom practices, as well as enhance the school improvement process?

A multi-method approach combining qualitative and quantitative techniques was used to collect data for 2000 through 2007.

## **Summary of Findings**

Approximately, 450 schools participated in the CSR program during the funding period of FY 2000 through 2007. Regardless of the comprehensive reform model implemented, each school reported curricular, pedagogical, and planning process changes. Overall, the most often cited changes involved instruction guided by state standards (93.2% rated as improved), increased coordination within grade levels (95.2%), improved instructional strategies (90.2%), more use of innovative strategies (89.8%), more use of best practices and research (87.7%), and increased involvement of teachers in school improvement process (89.3%). The written report describes each of these improvements in more detail, including how the schools visited actually implemented these changes.

Further analyses of specific types of curricular, pedagogical, and planning process changes indicated that schools differed in the degree to which changes were made. Preliminary analyses using the 2005 student achievement data indicate strong relationships between student academic improvement and planning processes that 1) focus on individual students and 2) integrate all programming at the school towards common goals. Several co-linear characteristics were noted, including a high morale among

teachers who described their schools as communities, systematic programs in place to assess student achievement relative to the Illinois State Standards at least three times during the year, and interventions using various pedagogical approaches implemented for individual students based on these assessments. When the 2006 ISAT and PSAE data become available, these analyses will be completed again to ensure replicability of findings and to complete the analyses by Title I subgroups.

The surveys of enacted curriculum research provided insights into how CSR schools could further improve curriculum, pedagogy, and planning processes. All of the high school teachers indicated the exercise helped them think about their schools' curricula and how they taught. They were able to compare their teaching approaches (use of hands on, problem solving, technology, etc.) with that of the comparable teachers in their district and within Illinois. For some, they became aware that even though they thought they were teaching to the Illinois State Standards, their schools' curricula were broader with less depth (memorize compared to higher level thinking) than the Illinois State Standards. The action plans outlined during the SEC follow-up sessions did impact school planning processes in nearly all of the schools.

An ancillary SEC analysis compared career and technical course content to the traditional core content and compared the instructional strategies used by teachers in these courses. This analysis will be completed and presented during the symposium.

The ancillary SEC analysis and the additional academic achievement analyses will be complete by April 1 to meet the reporting deadlines to the state and federal CSR program officers.

### **Implications for Illinois Education**

Many CSR schools successfully changed how they taught by focusing on ways to align instruction to the Illinois State Standards; implementing innovative, research-based instructional strategies; and integrating all programming so that it focused on the critical goals identified in their school improvement plan. The most successful schools focused on the achievement of individual students and established intervention strategies for those students falling behind.

CSR, as well as other reform efforts, appear to have facilitated changes within schools; however, specific critical characteristics identified in this research study, as well as other studies by the researchers, appear to be critical components of school improvement. Schools should assess themselves in terms of these critical characteristics during their School Improvement Plan process and seek technical assistance and professional development activities as needed.

Even those teachers and schools who considered their curricula to be aligned to the Illinois State Standards found the surveys of enacted curriculum (SEC) exercise helpful in identifying curriculum gaps and where the content was not covered at the same depth as indicated in the Standards. In addition, the exercise allowed teachers to compare their instructional approaches to others throughout the state; often resulting in teachers "raising the bar" on their self-expectations. The SEC exercise was at the high school level; however, the pilot suggests that the approach would be beneficial to an expanded group of high schools, middle/junior high schools, and elementary schools.

# **The Evaluation Design of Complex Professional Development Programs**

Maryann Durland  
Durland Consulting

## **Purpose of the Research**

The STARS 2005-06 program is a Chicago Public School professional development program for school teams consisting of the principal and 4-5 team members. STARS stands for School Teams Achieving Results for Students. STARS was designed to provide a cohesive framework for professional development targeting three results – organizational structure, impact on instructional practices and increased teacher leadership. Structure refers to the teams, who work to become collaborative teams within the context of a school-level learning community. Impact means changes in instructional practices school-wide, and increasing teacher leadership means that the process for impact is designed to be teacher driven and lead.

STARS is a complex longitudinal professional development model. It is complex because it focuses on processes, skills and knowledge; and it is longitudinal because the commitment is for the entire school year. On another level, it is complex because the program is designed to continue to add depth to the content and processes as schools mature and it is longitudinal in that schools can engage in STARS for multiple years.

Though STARS schools had been trained in 2002-03, this was the first year funding was available again, and the first year for an evaluation.

Training for schools and teams occurred during the summer of 2005 for five days, continued for 4-5 additional days of training throughout the school year. Schools and teams also participated in a learning fair in April 2006, where each school presented an overview of their STARS related achievements during the past year. In addition, teams developed and conducted a range of staff development within their own schools and prepared materials for “homework” for the training sessions. Therefore, the implementation of STARS is also complex.

There were three major goals for the evaluation; explore the role of the principal in implementing STARS at the school level, explore to what degree STARS is part of the school improvement planning process and explore how STARS implementation diffusion takes place at the school level and to what degree. In this evaluation, we applied a basic research model, in that we have tried to understand what implementation means as a foundation for later measuring implementation more distinctly and specifically and aligned to other variables such as student achievement. One major purpose of the evaluation was to develop a theoretical framework for the project that could guide research.

## **Methodology**

The Evaluation applied a mixed methods, mixed models design. Each model was used to both triangulate findings but to also provide a unique view of the project. Qualitative, quantitative, and relational data were collected and analyzed. Relational data included surveys for social network analysis methods and for creating sociograms of faculties. Data collection included an online and paper survey, interviews with principals and teams, observations, and artifact analysis.

## Population

Since the first training in the summer of 2002-03, 1076 individuals in 165 schools have been through STARS training. This evaluation explored the 2005-06 training and the experiences of the participants who were trained. For 2005-06, there were 423 total participants from 69 schools. There were 31 new schools added in 2005-06 and 38 returning schools. The returning schools had participated in the original training in 2002-03. The new schools had 182 teachers and principals and the returning schools had 241 teachers and principals. All participants were part of the evaluation design, however not all participants responded to surveys and other requests for data.

## Findings

Briefly, the most general findings include: 100% of participants feel that STARS training is successful for themselves and their schools. Using an assessment tool designed to measure the level of impact of training on the Marzano Nine Framework (the basis of the STARS content for instructional practices) teams indicated that they felt the biggest impact of STARS was in their own teaching. Moreover, a large majority also felt that the impact was at the team level and in many cases. The impact at the individual team member level was in terms of learning and implementing classroom instructional strategies, at the team level it was in terms of sharing instructional strategies and in creating a collaborative team.

To understand what implementation meant, we began with the STARS Framework. In the STARS framework, student achievement is impacted by instructional practices and teachers' knowledge about learning, instructional strategies and practices. From the model, one way to increase instructional practices and knowledge about learning within a school is through teacher leadership teams who can model for other teachers, who can work with peers to develop examples, who can mentor and coach other teachers, who can provide staff development and who can encourage other teachers to share practices and knowledge.

From a research design perspective, in order to determine if there is a relationship between STARS level of success and increased student achievement, implementation has to be clearly defined and measured. Once that is accomplished, then more refined implementation measures, instructional practice measures, school-level staff development measures, team development measures and leadership measures can be found or developed. Following a research protocol for moving from theory to research design, this evaluation focused on understanding, exploring and defining implementation as a first step. (Year Two Evaluation, 2006-07, will be completed by May 2006)

The evaluation findings indicated that there were three levels of implementation, which we have called models. The three models are the: Change agent model; Professional development model and Disengaged model.

The three models have a common framework; the three parts to the framework are components, characteristics, and level of success. The four components are principal leadership; school capacity on two levels -climate and communication, the STARS team and the school facility. Characteristics include organizational structures, strategic planning, instructional planning, processes, values, and tools. Levels of success are the school, STARS team, and faculty. Each model has specific descriptors for behavior, attitudes roles and/or attributes for each part of the framework, which clearly separate it from others. The current evaluation is focusing on validating the model and on developing more specific measures for each variable in the model. The implications for the development and evaluation of professional development are critical.

## **Keeping New Teachers: A First Look at the Influence of Induction in Chicago Public Schools**

Kavita Kapadia and Vanessa Coca, Consortium on Chicago School Research,  
University of Chicago

The Consortium on Chicago School Research (CCSR) recently conducted a study on first and second year teachers in CPS to determine the factors that influence their teaching experiences and decisions, with a particular look at the effects of induction. We find that although in general, novice teachers seem positive about their teaching experience, many contextual factors--individual, classroom, and school factors--affect the quality of their teaching experiences as well as their intentions. Our findings also suggest that the quality of mentoring as well as other supports provided to novices matter--whether or not they originate from formal induction programs. In summary, our study points to intensive contextual induction-- a combination of context- appropriate and sufficiently intensive mentoring and support- as a means to increase the likelihood that novice teachers will have good early teaching experiences that encourage them to continue in the profession.



## Studying Student Mobility in Chicago Public Schools

Julia Gwynne and Marisa de la Torre  
Consortium on Chicago School Research, University of Chicago

This study reports recent findings about student mobility in Chicago Public Schools (CPS). Educators and researchers have long been concerned with student mobility because of the disruptive effects that non-promotional school changes have on students, teachers, and schools. Students who change schools for reasons other than those related to grade structure (i.e. a change of schools between 8th and 9th grades) not only risk disrupting their own learning process, they may also create disruptions in the classrooms they enter. Teachers may be forced to slow down the pace of instruction or even re-teach material to ensure that mobile students are able to catch up to their new peers. As a result, the learning process of non-mobile students may also be negatively impacted when new students join their classrooms (Hanushek, Kain and Rivkin, 2001).

Research has shown that minority students, students from low-income families, and low-achieving students are disproportionately more likely to make non-promotional school changes (Rumberger, 2003). Because of the high concentration of these students in large, urban school districts such as Chicago, understanding patterns of student mobility is a critical component for understanding how teaching and learning might be affected. This study describes findings from the first six months of a two year study of student mobility in Chicago. We report on three important areas from the research conducted thus far: (1) new indicators of student mobility (2) student mobility trends in Chicago Public Schools (3) school level analyses.

**New Indicators of Student Mobility:** The most common measure of student mobility (used in the Illinois State Board of Education's school report cards and also by Chicago Public Schools) defines a school's mobility rate as the number of transfers in and out over the course of a calendar year divided by total fall enrollment. However, this approach can be problematic for several different reasons. First, it conflates two very different phenomena, exiting and entering a school; consequently, schools with the same score might in fact experience very different patterns of student mobility. In addition, it ignores the stable population of a school, which can be important for assessing the proportion of students who received the full effect of a school's instructional program (Ligon and Paredes, 1992). Finally, this type of mobility statistic often neglects an important dimension of student mobility: school changes that occur over the summer.

To address these shortcomings, we created four statistics to capture student mobility in CPS. Following Kerbow (1995), we chose to examine school stability and in-mobility and we created indicators of both statistics for summer and school year time frames. For the purposes of this presentation, however, we focus only on the school-year statistics. The school-year stability statistic reports the percent of students who remain enrolled in a school between September and May of a given academic year; a school's stability rate may also be thought of as the compliment to its out-mobility rate. The in-mobility statistic reports the percent of new students who enter a school between September and May of a given school year.

A comparison of our mobility statistics to that used by CPS yields some interesting findings. Schools that have a relatively low CPS mobility rate are schools that tend to have high stability and low in-mobility. Schools that have a relatively high CPS mobility rate are schools that tend to have low stability and high in-mobility rate. The correlation between our stability statistic and the CPS statistic is -0.75, while the correlation between our in-mobility statistic and the CPS one is 0.75 for the 2004-05 data.

However, the distinction between out- and in-mobility becomes crucial for schools that fall in the middle of the distribution of the CPS indicator.

For example, consider two schools with similar 04-05 CPS mobility rates. School A has a mobility rate of 25.5 percent and school B has rate of 25.3 percent. Based on this information along, one might think that these two schools face similar issues related to student mobility. However, school A is a highly stable school (91.2 percent) and also attracts a lot of students with an in-mobility rate of 11.6 percent. School B, on the other, does not do a great job of retaining the students they have (stability rate is 86.4 percent) and does not seem to attract new students (in-mobility rate is 5.1 percent). While School A needs to have policies and practices in place to accommodate approximately 3 new students in each classroom, School B should investigate why it loses nearly 4 students from every classroom.

**Trends in Student Mobility from 1995-2006:** The second part of this study reports trends in stability and in-mobility rates from the 1994-95 school year to the 2005-06 school year. We are particularly concerned with examining differences in trends by school level (elementary vs. high school), by race and ethnicity, and by socio-economic status.

A comparison between high schools and elementary schools reveals interesting differences. Although high schools have experienced increasing stability since 1995, elementary schools' stability rates have remained virtually unchanged for most of this time, with a slight decline since 2003. In large part, the improvement in stability for CPS high schools can be attributed to the decline in dropouts that these schools have experienced over the last several years.

When we examine trends in in-mobility, we see that high schools and elementary schools have both experienced declining in-mobility rates since 1995, and the rate of decrease is approximately the same for both types of schools. The decline in in-mobility is largely due to a decrease in the percentage of students who leave one CPS school to enter another mid-year.

Although the above findings suggest that student mobility has been in decline in the Chicago Public Schools, the next set of findings demonstrate that these improvements are not equally shared by all groups of students. For example, when we look at stability trends by race/ethnicity of students, we see that Asian, white and Latino students have become increasingly stable since 1995. While African American students experienced increasingly rates of stability between 1995 and 2000, their stability rates have declined somewhat since 2000.

These racial/ethnic differences are even more readily apparent in the trends in-mobility rates. Since 2000, Asian, white and Latino students have experienced declining in-mobility rates. The rates for African American students have remained virtually unchanged since 2000. We find similar patterns when we compare students based on their socio-economic status, with students from low socio-economic backgrounds experiencing less improvement.

**School Level Analyses:** Previous studies have shown that that schools located in high poverty areas tend to serve a population of students who are more mobile (Kerbow, 1996). This link is especially true for Chicago elementary schools. While the link is not as strong for high schools, the pattern is still there.

We use hierarchical linear models (HLM) to identify elementary and high schools whose stability rates are better or worse than expected given the composition of their student body. By doing this we want to uncover schools that manage to improve student mobility within the academic year. As part of future research we would like to study these schools and find out why their student mobility is different from other schools with similar students.

# **Committing to Keep Illinois Students In-State: Understanding College Choice, Student Migration Patterns, and Retention Strategies**

Diane Dean and Erika Hunt  
Illinois State University

Since the 1960's Illinois has suffered a growing imbalance of in- and out-migration among college-bound youth. Today, Illinois is only one of six states with net out-migration rates for college students, and nearly 20,000 students annually migrated to colleges in other states during the 1990's. The problem with sending the best and brightest of Illinois youth out of state to college is that few will return. While some policy analysts have suggested that student migration has inherent value-neutral phenomenon, others have suggested that student migration has inherent ensuing economic benefits associated with the gain and loss of educated citizenry. The projected loss in foregone state income and sales tax revenues alone over the lifetime of each lost cohort of student migrants is estimated at \$700 million, and there are numerous other economic and non-economic affects of student migration as well.

This study presents in-depth multi-method research and analysis on what matters to Illinois students and their families when choosing a college, why so many students are leaving the state, where they are going, and what the state might do to encourage greater retention.

The study shows that the highest concentrations of Illinois student migrants only go as far as adjacent states, accounting for nearly half of all student migrants. Their rationales behind this migration have implications for the affordability, quality, selectivity, distribution, capacity and marketing of Illinois colleges and universities.

Shifting the balance of student migration is an achievable goal, that can only be addressed through the combined efforts of many stakeholders in the Illinois education system. The report presents recommendations for the Illinois Board of Higher Education, the Governor and Legislature, colleges and universities, and high school guidance counselors.

The future of the state depends upon building and retaining an educated citizenry to sustain the economy and provide leadership for its government and institutions. Committing to keep Illinois students in-state is an investment worth making, and one we must make together.



## **Making the Grade: How Classroom Environments Affect Student Course Performance**

Jenny Nagaoka and Jonah Deutsch,  
Consortium on Chicago School Research, University of Chicago

High schools, especially in urban districts, are coming under increased scrutiny as families, educators, policymakers, and philanthropists rethink how to improve student outcomes. Previous research by the Consortium on Chicago School Research has demonstrated how high school grades are associated with improved student outcomes, including gains in student achievement, college enrollment, and college graduation. Given the importance of course performance in shaping both high school and postsecondary outcomes, in this presentation we examine why students get high or low grades. We use hierarchical linear models to examine what student behaviors such as attendance and studying contribute to higher grades. We then use survey and school administrative data to characterize classroom environments and examine how they shape the student behaviors that are associated with higher grades. We also provide case studies of different classroom environments in our fieldwork schools and how they shape student behaviors.



# **Shaping Teacher Candidates' Digital Portfolios: What Administrators Want for Hiring**

Rick Snoeyink and Joy Meyer  
Trinity Christian College

The purpose of this qualitative study was to learn administrators' perceptions of teacher candidates' digital portfolios for hiring purposes. Equipped with this insight, we, the education program faculty of a small Illinois private college, hoped to better advise our candidates in crafting their portfolios to position themselves more favorably in their quest for teaching jobs. Additionally, we wanted to learn how we could modify our portfolio system to provide the best benefit for administrators seeking to hire new teachers.

## **Methods**

### *Participants*

Since this was a qualitative study, the participants were purposively identified. We sought rich qualitative data from those who represented P-12 schools like those in which our candidates were most likely to seek employment. Our teacher education program had some sort of relationship with these administrators, either through our P-12 Advisory Board, placement of our candidates in their schools for field or clinical experiences, or ties with graduates of our program. We deliberately targeted them since they and those like them are most likely to hire our graduates. In all, 23 school personnel involved in hiring teachers provided input. These participants included a variety of principals, superintendents, and others responsible for hiring teachers. In addition the director of our adult studies education program, who is a retired assistant superintendent, as well as a retired K-6 principal, who now serves the college as an adjunct professor, agreed to participate.

### *Data Collection*

This study evolved as qualitative data from administrators gradually began to emerge. The first two phases were essentially focus group interviews, during which administrators viewed selected portfolios and offered their comments. Notes were taken of the discussions and minutes were produced. These first two focus groups served as a pilot study to help shape the next two phases, which were more rigorous attempts to gather focused qualitative data. The third phase involved sending email to 42 administrators in January 2006, inviting them to view selected portfolios online and then complete an online questionnaire, consisting of both objective and open-ended questions. While twelve questionnaires were completed, two other principals viewed the portfolios and emailed comments without completing the questionnaire. The fourth phase of this study involved presenting some of these candidates' modified portfolios via projector to the members of our P-12 Advisory Board at our May, 2006 meeting. The members present at this meeting were seven area school administrators along with four college faculty members. We examined the structure, layout, and content of the portfolios and also viewed edited video clips of classroom interactions that the candidates had included in their portfolios. A set of key questions was used to guide the discussion, which was videotaped and transcribed. After each phase, candidates had opportunity to shape their digital portfolios based on our preliminary interpretation of feedback from participating administrators.

The use of multiple sources of data, collected at various time intervals, provided data triangulation and helped clarify perspectives. As member checks, several study participants were also invited to read

this manuscript and offer their feedback, which concurred with reported results.

### *Data Analysis*

Qualitative data, including notes and minutes from the three focus group interviews at P-12 Advisory Board meetings, comments written on questionnaires, emailed comments, and the transcription of the last meeting were read multiple times and coded using a constant comparative method. Coding in this way involved looking for patterns, checking emergent categories against the data, arranging and rearranging into relevant categories, and then using the process of axial coding reassemble data that were splintered during the initial coding process. Responses to Lickert scale items on the online questionnaires were tabulated and mean scores were determined.

### *Summary of Findings*

Findings give evidence that administrators will use digital portfolios as a tool in the hiring process, but normally they have not been made aware of their presence or how to access them. If they are made aware of the portfolios, can easily access them, navigation is clear, and items they have traditionally used for hiring are available, they will make use of them in hiring new teachers. The traditional items they want in the portfolios include transcripts, resumes, student teaching evaluations, letters of recommendation, and certification information.

Another finding was that administrators would likely not use digital portfolios in the initial stages of the hiring process, but would use them to look more closely at candidates who had made the cut to the final few for a given position. At this point, they would more thoroughly examine the candidate's portfolio and take the time to view video clips of the candidate's teaching. Video was overwhelmingly viewed as a powerful tool to help in selecting teachers to hire. If the video was not done well, however, administrators cautioned that it could rule the candidate out of a job just as easily as to secure it.

Although many teacher education programs align digital portfolios with professional teaching standards, administrators did not value evidence of having met these standards. Instead, they assume that the teacher preparation institution insures that their candidates have met all the requirements.

### *Implications for Illinois Education*

The results of this study point out the benefits of using teacher candidates' digital portfolios for hiring new teachers and also provide rich insight on the common practice of using digital portfolios in teacher education programs in Illinois. Our results suggest that such programs can still use digital portfolios as a means of documenting fulfillment of standards, while at the same time encouraging candidates to tailor their portfolios for hiring. Knowing what administrators want in the portfolios of potential employees and that this tool will actually be used for hiring, allows teacher candidates to craft their portfolios in ways that benefit themselves and those who hire them. Also, administrators' use of digital portfolios, especially when they contain video clips of candidates in action, provides a richer and more accurate picture of candidates, which is likely to result in a better match between administrators' expectations and actual job performance by the new teacher. When digital portfolio systems allow easy access and give administrators what they want, they have the potential to change the way in which administrators hire new teachers.

## **Explore, Plan and ACT in Chicago Public Schools: What Matters for Educational Attainment?**

Steve Ponisciak

Consortium on Chicago School Research, University of Chicago

Students in Chicago public high schools take the Explore tests in the fall of grade 9, Plan tests in the fall of grade 10 and 11, and ACT (as part of the Prairie State Achievement Exam, or PSAE) in the spring of grade 11. Each administration includes tests in math, reading, science, and English. These tests are equated, so that adjacent tests (e.g. Plan and ACT) are on approximately the same scale. CPS has provided national average gains from the 10th grade administration of Plan to ACT. That is, for each score on the Plan scale, we know the median, 25th and 75th percentiles of students' scores on the ACT. We can therefore examine differences between students and schools in the extent to which they meet or exceed the national average gain, adjusting for prior achievement, as measured by the Plan score.

In almost every Chicago public high school, less than 50 percent of students met or exceeded the national median gain from Plan (in fall 2003) to ACT (in spring 2005). Only five schools saw at least 50 percent of their students meet or exceed the national median gain in math, while four schools met this criterion in reading, four in science, and six in English. Systemwide in 2004-05, 35 percent of students met or exceeded the median math gain; 27 percent met or exceeded the median reading gain; 33 percent met or exceeded the median science gain; and 34 percent met or exceeded the median English gain. Performance at the school level varied widely around these averages.

Our objective is to explain the differences between students and schools in their performance on the ACT, for students with the same Plan scores; we have also examined the gains from Explore to Plan, and our results are mostly similar to those described here. Our dataset consists of student test data on Explore, Plan and ACT; student demographic information; teacher background information, including university, major, age, certification; and school-level demographic and achievement data, all of which we received from CPS. All analyses were performed for math, reading, science and English, but only math is described here, and all analyses implicitly control for students' Plan scores as sophomores in the fall of 2003. In order to make sense of these differences, we first examined the relationship between students' grades and test scores. Almost 60 percent of students with above a 3.5 GPA in the math courses they took between tests (i.e. from the fall semester of their sophomore year, to the spring semester of their junior year, inclusive) met or exceeded the median math gain from Plan to ACT, while only 26 percent of the students with a GPA below 1.5 in their between-test math courses met or exceeded the median math gain. This pattern holds at the level of individual Plan scores – for students who have the same Plan score, the student whose math GPA is higher tends to have the higher ACT score.

When we look at performance within courses (that is, separating math courses into algebra, geometry, and other courses), we find the same result that we found for all math courses combined – students with higher grades are more likely to make the expected gain from Plan to ACT. However, high grades in higher-level courses are associated with larger gains than high grades in lower-level courses, as 28 percent of students with above a 3.5 in their between-test algebra courses made the expected gain, while 54 percent of those with above a 3.5 in their between-test geometry courses, and 58 percent of those with above a 3.5 in math courses beyond geometry, made the expected math gain. The courses a student can take are limited by performance in past courses, as well as by the course offerings of

the student's school. These factors limit our ability to claim that some courses are more relevant to successful performance on the ACT than others.

The distribution of achievement within a school also seems to have an effect on student gains from Plan to ACT. Higher-achieving schools are more likely to show gains for lower-performing students (when performance is judged relative to the system as a whole) than lower-achieving schools. For example, a student scoring 14, 15 or 16 on the Plan math test in fall 2003 (the CPS average Plan math score for students who took Plan in fall 2003 and ACT in spring 2005 was 15) would be a high-performing student in a low-performing school, or a low-performing student in a high-performing school. Such students would be expected to have a score two points higher on the ACT, based on the national data. However, these students' gains range from an average of -0.2 points in a school where the average Plan score was 12, to more than two points in schools with average Plan scores of at least 17.

Further analysis consists of hierarchical linear modeling of this data, when combined with student-, teacher-, and school-level controls. A full value-added analysis (using Explore, Plan and ACT) is not possible, because the time between test administrations is not the same. Other issues complicate our analysis, among them the lack of stakes associated with the Explore and Plan tests (the ACT is part of the state-administered PSAE, a high-stakes test).

Our preliminary findings suggest that if schools want to improve their students' performance on these tests, they should emphasize the importance of the grades students receive in their courses. In addition, when faced with a choice between being a low-achieving student in a high-achieving school and a high-achieving student in a low-achieving school, the former seems to be the better choice, as these schools tend to show larger gains for all students. Students whose teachers have an academic major in the area that they teach tend to show better gains than students whose teachers are teaching outside their area of expertise. School climate (as measured by surveys of students and teachers) and school demographics (specifically, the proportion of low-income students and the racial/ethnic mix of the student body) are also associated with student gains on these tests.

## **The Power of Experiential Learning in Recruiting Teachers for High-Need Schools**

Cindy Diehl Yang and Jan Fitzsimmons  
Associated Colleges of Illinois

ACI's Inner-City Practicum, an immersion experience for all education students at ACI member colleges is one initiative of ACI's Center for Success in High-Need Schools, a comprehensive, integrated initiative that provides the platform for launching new and exciting projects focusing on recruiting, preparing and retaining teachers for high-need schools. Learning about the community, allowing pre-service candidates to participate in a rigorous experience with children from high-need schools, engaging preservice candidates in rich discussions about urban issues and challenges, while providing a service to the community, are the critical factors of the immersion model.



## **Reverse Transfers and Swirlers: The Rule or the Exception? Evidence from the Illinois Public High School Class of 2002**

Brad White, Illinois Education Research Council and  
Yuqin Gong, University of Prince Edward Island

Using National Student Clearinghouse and ACT data, we have tracked college enrollments for the Illinois Class of 2002 (N=113,660) through their first four years after high school. This presentation will focus on reverse transfers and swirlers – those students who initially enrolled in a four-year institution and transferred to a two-year college, and those who alternated between two- and four- year institutions. We quantify and describe these students, examine their enrollment patterns, and explore the characteristics of institutions from which and to which these students transfer. Finally, we use ACT scores to describe the academic “mismatch” between these students and their various institutions.



## **The Arrival of AVID in Chicago's Public High Schools: Preliminary 9th Grade Outcomes**

Andy Brake and Jenny Nagaoka  
University of Chicago

Engaging students in a rigorous academic curriculum within a supportive learning environment is a central challenge facing large, urban school districts across Illinois and the United States. Policy makers, educators, and civic leaders understand that doing so is critical to improving the academic achievement and college preparation of low-income students of color in urban high schools. However, there are few large-scale reform models that have shown effectiveness at achieving these outcomes. The purpose of this paper is to explore the preliminary outcomes of a unique high school reform model, Advancement Via Individual Determination (AVID), and its implementation in the Chicago Public Schools (CPS). AVID is designed to improve the academic achievement and postsecondary options of its participants. Drawing on the Consortium on Chicago School Research (CCSR) at the University of Chicago's archive of data on CPS students and schools, the school performance outcomes of ninth grade students participating in the AVID program during the 2005-2006 academic year are compared with those of similarly-qualified non-AVID students in both AVID and non-AVID high schools. Using fixed effects modeling to estimate the impact of the AVID program on participants' school performance outcomes, these findings offer preliminary evidence of the effectiveness of the AVID model in CPS and offer promise for its effectiveness in similar large, urban school districts.



# **College Preparatory Curriculum for All: Implementation and Long-Term Effects of Raising High School Graduation Requirements in the Chicago Public Schools**

Elaine Allensworth  
Consortium on Chicago School Research

There is increasing recognition that too few high school students, especially in urban areas, are graduating with the skills needed for college and the workforce. In response, there is a national movement calling for more rigorous high school requirements. In 2005, the Illinois legislature passed legislation raising graduation requirements for all Illinois high schools, including requirements for Algebra and geometry and four years of language arts. Many other states are also in the process of raising curricular requirements for graduation.

Since the late 1980s there has been evidence that requiring all students to take college preparatory classes could produce higher overall levels of achievement and reduce gaps in achievement among students of varying socioeconomic status and race/ethnicity. More recent studies have concluded that students who complete a more rigorous high school curriculum experience higher achievement outcomes than students who complete a lower level curriculum. However, the applicability of existing research to the current state of curricular reform across diverse high schools is weak. Other studies have found very little evidence that increasing the number of credits required for graduation effects student achievement.

The most serious problems with the existing evidence are reliance on cross-sectional samples and problems of selection bias. Students who typically complete rigorous course sequences are those whose families have selected particular schools for them to attend, those who may be more motivated within their school, and those who have done well enough in previous courses to move on to advanced coursework. Students with access to more rigorous curricula tend to be concentrated in schools that are more college-oriented in other ways, and the “best” teachers are often selected to teach the most advanced courses within schools.

Other problems with the applicability of existing research on curriculum stem from limitations in their samples or outcomes. It is unclear whether the findings from these studies could be generalized over time, with outcomes other than achievement scores, or over students with various demographic backgrounds. For example, curricular reforms may have adverse effects on students’ educational attainment, even if they have positive effects on achievement. Furthermore, the existing research does not differentiate policy effects on low-achieving versus high-achieving students, nor does it tell us how schools have reacted to the curricular changes (e.g., tracking low-achieving students into “algebra” classes for low-achieving students versus integrating them into regular algebra classes) and how differences in implementation affected student outcomes.

In this presentation, we evaluate the implementation and efficacy of the 1997 policy requiring all students in Chicago public high schools to enroll in a college preparatory curriculum. We ask: 1) How were the curricular reforms implemented across students and schools? 2) Have these curricular reforms improved overall student outcomes? 3) Have the curricular reforms improved equity in the distribution of outcomes? This study is particularly timely for Illinois, where graduation standards have just been raised. It is too early to judge the effects of the new curricular standards for students in

Illinois, but because Chicago implemented college preparatory standards in 1997, we have sufficient time to gauge the effects of these standards on a number of outcomes, including college enrollment and persistence.

### **Methods:**

Data for this study come from CPS, which provided complete administrative records for all students for each semester, course transcripts, and elementary and high school achievement test scores and graduation records. In addition, we have linked each student's home address, and each school's address, to information from the 2000 U.S. census at the level of block groups, and to crime statistics provided by the Chicago Police Department to control for changes in social and economic context. These data are all linked longitudinally by student- and school-specific ID numbers. For this study, we use data on the entire population of cohorts of first-time freshmen in CPS high schools, beginning with the entering freshman class of 1994-95 through the entering freshman class of 2004-05—a total of 252,000 students. Our analyses are organized around cohorts of students who entered 9th grade in each high school before and after the reform was implemented. We use a comparative interrupted time series analysis.

### **Results:**

We found that high schools in CPS complied with the changes in graduation requirements immediately in some subjects (math), but more slowly in others (English). By the third year after the policy was implemented almost all regular education students enrolled in a college preparatory curriculum at the start of their freshman year. Students eligible for special education services were affected by the policy change more than regular education students, although adherence to the policy never reached all special education students in all schools. Only students entering high school with average or below-average test scores were affected by the policy, and those with very low achievement were most affected by the policy as they were least likely to enroll in college-preparatory courses in pre-policy years.

Schools varied considerably in the degree to which they needed to change their curriculum in response to the 1997 policy. Prior to the policy, there was substantial variability in the degree to which students enrolled in college preparatory coursework, even among schools with the same academic composition. Some schools with the lowest levels of incoming achievement enrolled all of their students in a college-prep curriculum prior to the 1997 policy, while others with incoming achievement that was average or above-average for the system only enrolled some of their freshmen in college prep classes prior to the policy. High-achieving schools that served both strong and weak students were least likely to enroll all of their students in college-preparatory coursework.

Failure rates in English and math did increase slightly after remedial classes were eliminated and all students enrolled in college-preparatory English and math, particularly among low-achieving students. However, the change in failure rates was very small compared to the change in enrollment in college-prep coursework; thus, many more students finished their freshman year with credits in college-prep English and math once they were required to take it. The biggest improvements in earning college-prep credits occurred among the lowest-achieving students, because they were least likely to take college-prep courses before the policy. Indicators of educational attainment—the percentage of students earning sufficient credits to move on to 10th grade and four-year graduation rates—changed little with the policy. Thus, although failure rates increased slightly, educational attainment did not suffer while more students achieved credits in college-preparatory classes.

# **An Illinois Teacher Quality Partnership: Preliminary Results from a Professional Development School Intervention**

David Walker and Chris Sorensen  
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Project REAL (Rockford Education Alliance), funded under the federal Teacher Quality Enhancement program, is using a university-community college-school partnership between Northern Illinois University, Rock Valley College, and Rockford Public School (RPS) District 205 in the creation of Professional Development Schools (PDS) in a high-need urban district as mechanisms to improve P-12 student achievement. This study will look at the data related to the overall goal of the partnership, to raise student achievement so that 75% of RPS students in the four partnership schools are meeting or exceeding standards on state assessments in five years, and also data affiliated with the Project's six objectives:

- 1: Creating Shared Decision-Making
- 2: Developing a Future Teacher Pool
- 3: Reforming Educator Preparation
- 4: Expanding Clinical Experiences
- 5: Providing Professional Development
- 6: Enhancing Managerial and Leadership Skills

When comparing control and experimental schools, the students from those schools should be very similar in terms of demographics and cognitive ability to assist in controlling mediating variables. Mediating variables, such as socio-economic status and English Language Learners, were used to compare the control schools in each of the four school categories with a selected experimental school to find the closest match. The rationale behind this study's quasi-experimental design was to control reasonably mediating factors that may influence the dependent variables of study (i.e., increasing student achievement in mathematics and reading over a five-year period at four schools). The baseline scores for the dependent variable were the 2003-04 Illinois Standards Achievement Test and Prairie State Achievement Examination scores in mathematics and reading. All potential control schools,  $n = 3$  for the high schools,  $n = 4$  for the middle schools,  $n = 13$  for the K-5 elementary schools, and  $n = 11$  for the P-5 elementary schools, were subjected to the same criteria and variables. The data for matching pertained to student demographics and student academic performance scores in mathematics and reading. Each potential control school was given a rank order based on the closeness of the match on each particular variable to the measure of that variable in the experimental school. The school-level data came from the Interactive Illinois Report Card. This database is used throughout Illinois to monitor student achievement.

The schools chosen for the control group did not receive the PDS intervention (e.g., the PDS way of preparing new teachers, teacher professional development, improvement of teacher practice). That is, these schools continued with their standard curriculum and student activities. Because of this, comparisons can be made between the control and experimental schools in the sense that differences between the two groups should relate at some degree to the effect(s) of a particular intervention if the schools being matched are of very similar characteristics from the beginning of the study.

The core goal of Project REAL is to improve P-12 student performance in mathematics and reading. During the baseline year, the percentage of students at the four experimental schools who met or exceeded Illinois' assessment for mathematics and reading was 50.38%. By the next academic year, 2004-05, that percent had increased by 0.75 of a percentage point to 51.13%, and by year 3 of the Project, the percent had grown by 8 percentage points to 59.13%, with a targeted increase established at 75%. For the control schools, the percentage of students in reading and mathematics combined who met adequate yearly progress for 2003-04 was 52.88%. By year 2, this percent had decreased by 3 percentage points to 49.81%, and by year 3 the percent had increased by about 5 percentage points to 55%.

The data collected indicated that three of the four experimental schools exhibited substantial growth in mathematics scores, while two of the four control schools showed growth in math during year 3. Further, when looking at score increases from another perspective, in terms of effect sizes, a very encouraging picture emerges. An effect size, as defined in this study, is the standard deviation difference between the current year and the baseline year data. Effect sizes employed in this study use benchmarks set at .20, .50, and .80 that represent small, medium, and large effects, respectively.

For year 3, the data for mathematics scores indicated that there was considerable growth for the middle school (MS) (.66) the P-5 elementary school (P-5) (.44), and the K-5 elementary school (K-5) (.21), while two of the four control schools demonstrated growth in mathematics ranging from .43 to .50. To put this into a score gain perspective, as a comparison, research has established that in the elementary grades, the average effect size for mathematics and reading test performance is about .70 (Kane, 2004; Schochet, 2005). As Schochet noted, "... an average test score gain of about .70 standard deviations suggests that a standardized effect size of .20 corresponds to roughly 3 months of instruction (assuming a regular 10-month school year). This is a large impact..." (p. 8). When looking at the current study's effect size in mathematics of .44 for the experimental P-5 school, initially, we would conclude that its effect size was approximately medium or close to .50. However when compared to an average mathematics score gain statistic, we see that even with an achieved smaller effect size of just .10 in this situation, there is relevant impact on the P-5 school's math scores because an effect of .10 equates to between 2 to 2.5 months of instruction. An effect size of .44 for the P-5 experimental school is very substantial. Additionally, it was found that in the area of reading there was even more growth for the experimental schools, with the MS (.60), the P-5 (.53), and the K-5 (.32) exhibiting extensive gains in terms of effect sizes from the baseline year. Three of the four control schools did show growth in reading varying from .22 to .75.

Working in real-world settings with large urban school districts presents challenges in implementing purely experimental designs, particularly when implementation involves whole school changes and requires the participation and commitment of the school leaders to have an effect on specific interventions. We believe this quasi-experimental design is an appropriate mechanism to study the results of interventions when true random assignment is not feasible for various reasons. While some control over mediating variables is lost, this design provides a stronger basis for interpretation of effects and patterns than would a single case pre-post design or some other approaches. We recommend that other implementers of PDS or school reform projects within Illinois consider this approach to evaluation. In addition, we believe this study demonstrates a potential positive impact, with significant effect sizes, for the PDS as a reform model. Further study might support a movement toward wider integration of the PDS model in Illinois districts and with Illinois teacher preparation programs.