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Illinois Education Research Council



**Compendium
of
Abstracts**

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SUMMARY OF THE ILLINOIS TEACHER DISTRIBUTION PROJECT **Managed by The Education Trust, funded by the Joyce Foundation**

Peter Ballard, Lynne Curry, Heather Peske, Jennifer Presley, and Veenay Singla

Now that states have established academic standards and assessments, we have a clearer picture than ever before about which students are receiving the educational opportunities they need, and which are not. Not surprisingly, many of our greatest challenges lie with traditionally underserved low-income and minority students, many of whom reside in large urban areas.

The latest research unequivocally demonstrates the profound impact of teachers on the education of their students. But just as the promise of effective teachers is a key element of any strategy for helping low-income and minority students move ahead, the often-pervasive uneven distribution of effective teachers to those students is one of the key barriers holding those students back. Although highly qualified and effective teachers can be identified in every community, study after study shows that low-income and minority students are disproportionately assigned to the least experienced, least qualified and/or least effective teachers. Moreover, previously low-achieving students are often far more likely to be assigned to ineffective teachers than to effective teachers. In short, even as we know that we can help students with effective teachers, we also know that we're often failing to do so.

On April 13, 2004, The Joyce Foundation approved a grant to the Education Trust to work with key state and local education leaders in Ohio, Illinois and Wisconsin, with an additional focus on Cleveland Municipal School District, Chicago Public Schools, and Milwaukee Public Schools, in a comprehensive approach to study and improve the distribution of effective teachers serving low-income, minority and low-performing schools.

In Illinois, the state project is managed at Illinois State University and the data analysis is conducted by the Illinois Education Research Council. In Chicago, the project is managed and data analyzed in the Research office at Chicago Public Schools. Both projects have broad and representative Working Groups, acting as both advisors and hands-on participants during the process.

The Project: May, 2004—May, 2006

In each state, the project is conducted and directed by two coordinated and overlapping working groups of key education stakeholders, one at the state level and one at the local level. The working groups consist of representatives from the different branches of government and both K-12 and higher education, with additional participation by business, community and teacher union leaders. With assistance, coordination and analysis support provided by the Education Trust, the working groups are engaged in a three-stage process, collaborating and sharing information with one another. While core elements of analysis are similar in each state and in each district, each project is coordinated and executed in a manner that considers the unique features of each state and city, and both current and previous state and local teacher quality efforts.

Three Project Phases

- Phase I: Collection and analysis of data regarding the teacher distribution scenario in the three states and districts
- Phase II: Additional research into causes and contributing factors where distribution “mismatches” occur
- Phase III: Policy recommendations for state and local action

Progress from Phase I (July 2004-June 2005)

Illinois State Level Working Group

Illinois was in the fortunate position of being able to draw on the work that the Illinois Education Research Council has been undertaking for the past three years to examine the distribution of teacher quality in Illinois. That research used regional and school demographic frameworks to address this research question, and had begun to examine the association of teacher quality with student achievement. Initial discussions among working group members endorsed the need to analyze state level teacher distribution data region-by-region, recognizing the geographic and economic diversity of Illinois, and expressed further interest in understanding the relationship between teacher quality and student performance. The IERC had created a Teacher Quality Index (TQI), combining teachers’ academic background variables known to correlate either positively or negatively with student achievement into a school-level average indicator of teacher quality. Results show that much of the teacher sorting among schools is occurring within districts, although differences among districts within regions are also important. The analyses also show that schools with higher minority and poor student populations tend to have lower TQIs. The IERC is now extending its analysis, using the TQI as a school-level measure of teacher quality, and further examining its association with additional school characteristics. The IERC will present data showing the distribution of teacher quality in Illinois, and the importance of schools’ TQI to school performance outcomes, student college readiness and college choice.

The State Working Group is now moving on to Phase II, and will be designing a collaborative approach to site selection for qualitative research that will further elucidate the initial IERC findings.

Chicago Working Group

The initial project plan hoped that the selected school districts would also be able to examine the distribution of teacher quality within the districts, and to link teacher quality and student performance more directly through classroom-level data. The IERC research had already identified Chicago for separate analysis, and the policy research report IERC 2005-1 provides information on Chicago as well as the regions of the state. CPS schools have among the lowest school TQI scores of all schools in the state. The Chicago Working Group is building on this initial research, and seeking to provide further depth to their understanding of teacher quality distribution through additional data collection and analysis. CPS researchers will provide an update on their progress and future plans.

COLLEGE PLANS AND ENROLLMENT OF CHICAGO PUBLIC SCHOOLS 2004 GRADUATES

Gudelia Lopez and Melanie LaForce
Chicago Public Schools, Department of Postsecondary Education

The Chicago Public Schools (CPS) have begun tracking CPS students from high school through their postsecondary path. Using this data the Department of Postsecondary Education will modify existing postsecondary access programs and supplement schools and students with additional resources. The two pieces of data used in understanding students' postsecondary plans and college enrollment are the 2004 CPS Senior Exit Questionnaire (SEQ) and the National Student Clearinghouse (NSC) data for the Class of 2004.

For the first time, Chicago Public Schools has actual college enrollment data for the district as well as each individual high school. According to the NSC data, 47% of CPS Class of 2004 graduates enrolled in some postsecondary institution by October 31, 2004. Of these students 40% enrolled in a two year institution and 60% in a four year institution. In order to really understand students' college enrollment information we utilized students' SEQ responses to create three major categories of students, students who planned to continue their education, students with other postsecondary plans and students with no known postsecondary plans. While in each group, there is a percentage of students who enroll in college, the highest percentage of student who enroll occurs in the group of students who planned to continue their education.

We delved deeper into the group who planned to continue their education and developed two groups, students with concrete college plans and students without concrete college plans. Students with concrete college plans (meaning they had been accepted and planned to attend a specific college) were more likely to enroll in college, enroll in a four year institution, enroll full time, and enroll in very selective colleges.

Other analyses indicate males enroll in college at a lower rate than females, Asian students enroll in college at higher rates than other racial/ethnic groups, and students who take rigorous coursework, such as Advanced Placement or International Baccalaureate courses, are more likely to enroll in college, enroll in a four year institution, enroll full time, enroll in institutions outside of Illinois, and enroll in very selective colleges.

MISSION POSSIBLE: STRATEGIES OF SUCCESSFUL PRINCIPALS IN ACHIEVING AND MAINTAINING ACADEMIC IMPROVEMENT

Penny Billman, Ph.D., Senior Research Associate, Northern Illinois University

Marilyn McConachie, Executive Assistant to the Vice-President for Administration and University Outreach, Northern Illinois University

Lee Patton, Policy Adviser to the Vice-Provost for Academic Affairs (and) Senior Research Associate, Northern Illinois University

Purpose of the Research

The enactment of the federal *No Child Left Behind Act of 2001 (NCLB)* established a rigorous mission: All students will meet high achievement standards by 2014. A common thread of objections argues that (1) not all students can achieve high standards and (2) demographics are more important than school practices in determining academic achievement. In 2003-2004, the Illinois State Board of Education and Northern Illinois University piloted two awards for schools that contradicted both points. Winners of the Spotlight Schools (for high poverty, high performing schools) and the Academic Improvement Awards (for schools that made significant gains in performance) beat the odds, reduced the achievement gap, turned around failing schools, and sustained success in unexpected ways and places. For these 121 schools, the mission of achieving and maintaining academic improvement is possible.

Research has indicated the critical role school leadership plays in realizing meaningful, comprehensive change. This study focused on those strategies deemed by the principals of the award-winning schools as most critical to the success of their schools, the implementation of the strategies, and the critical elements needed for the strategies to work.

Research Methodology

Four data-collection methods were used: interviews with principals of the award-winning schools (69 principals, 57% response rate); dialogues with a subset of *Spotlight* principals; review of materials submitted by the principals; and informal follow-up discussions with selected principals and teachers. Overall, interviews and/or materials from 79 schools (65%) provided data for this study. The responding schools had similar characteristics to the pool of 121 schools. Data analysis included identifying trends and patterns and differences in approaches used by schools due to size, poverty, location, or level of instruction. Qualitative and quantitative techniques were used to analyze the data.

Summary of Findings

When asked which factors are most important in improving academic performance, the principals described six critical actions common to most of the award-winning schools. See chart below. Schools differed on the emphasis placed on each of the critical actions and on strategies to implement change; however, they all had a shared vision: to create a climate based on the student and on continuous improvement of teaching and learning. This foundation was critical to the success of academic improvement and was the first step in the change process. A school focused on students strives to deliver instruction based on individual students' needs and finds ways to continuously improve learning and teaching. The success of this endeavor is based on the availability of human, fiscal, and facility resources; professional development opportunities for the school community; and assessment data. With these supports in place, the school is positioned to

(1) build leadership capacity within the school to support ongoing improvement; (2) create a teaching team capable of delivering quality instruction; and (3) maximize parent and community involvement. The research summarized the advice offered by the principals on how to implement each of the individual critical actions.

Six Critical Actions for Academic Improvement

Create a positive learning environment focused on the student.

- Create a shared vision of where the school is headed.
- Assess the climate and culture of the school, the families, and the community.
- Establish strong relationships among all stakeholders.
- Decide how you can get from where you are to where you need to be.
- Prepare for the long-haul; meaningful change will take time and be ongoing.

Build leadership within the school to support ongoing improvement.

- Establish the role of the principal.
- Build teams for shared responsibility.
- Make data-driven decisions.
- Concentrate on a few initiatives with high probability of large differences.
- Hold everyone accountable for improvement.
- Celebrate successes as the school continues to improve.

Establish a quality teaching team.

- Build and maintain a quality teaching team. Hire wisely.
- Align the curriculum to IL standards, set grade-levels goals and benchmarks.
- Provide time for teachers to plan at grade-, school- and district-levels.
- Value and reward hardworking, dedicated teachers taking controlled risks.

Deliver instruction based on individual students' needs.

- Use data to set high expectations for each student and monitor progress.
- Use best practices, research-based methods, and technology to maximize learning time, especially in early childhood, reading, writing, and math.
- Keep class sizes and instructional groups small.
- Implement supplemental before school, after school, and tutoring programs, especially to help those falling behind.

Involve parents and the community.

- Maximize parent and community involvement. Include them in SIP.
- If some parents are not participating, determine why and how to involve them.

Provide resources to support improvement.

- Use state, regional, educational, and professional resources.
- Provide professional growth activities for administrators, teachers, and staff.
- Provide reliable, valid data for improvement plans for the school and for individual students.

THE ECONOMIC IMPACT OF COLLEGE STUDENT MIGRATION ON THE STATE OF ILLINOIS

Ryan Smith, Joliet Junior College and Andrew Wall, Eastern Illinois University

Purpose

This study had two purposes. The first purpose was to use a social rate of return analysis to define the economic impact of college student migration on the State of Illinois. Secondly, this study aimed to use human capital theory to develop a policy approach towards college student migration in the State of Illinois. The intended audience is primarily state policy makers.

Since the 1970's, Illinois has been the second highest net exporter of college students in the nation.¹ Today, Illinois is one of six states with net out-migration rates for college students and graduates.² High college student migration rates are problematic because over 50% of all Illinois emigrants attend higher priced public colleges, compared to about only 33% of all migrants in the nation. This is particularly surprising in light of the fact that most national public college migration can be explained through interstate tuition reciprocity agreements and financial aid incentives for out-of-state students; Illinois has none. Illinois residents could be sending a message to state policy makers about the perceived quality of public institutions. Secondly, a college student migrant is much less likely to return to their native state upon graduation, meaning Illinois could be losing on investments made in human capital.³

Methodology

Design. This study employed a social rate of return analysis to examine the economic impact of college student migration on the State of Illinois. Social rate of return is a measure of the future economic benefits to society or an individual made from investments in education.

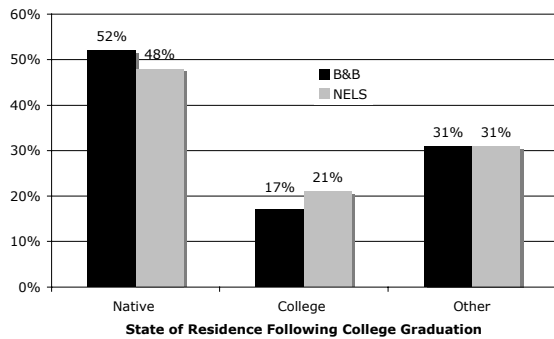
In order to conduct a social rate of return, not only must the number of college student migrants be found, but also the impact of college student emigration and immigration on the stock of residents with college degrees who live in Illinois. While the number of college student migrants can be found through the Integrated Postsecondary Education Data System (IPEDS), only two large datasets, administered by the National Center for Education Statistics (NCES), track the residence and migration of college graduates: the Baccalaureate and Beyond (B & B) Survey and the National Education Longitudinal Study (NELS). Sample sizes for individual states are too small to use B & B and NELLS, but as the following figure shows the two datasets show remarkably similar residence and migration patterns for college graduates. For instance, a state can expect that about 50% of their high school graduates who attend college in another state will eventually reside in their native state, compared to about 82% of students who attend an in-state college. Adding a level of validity, the post-graduate residency and migration patterns for Illinois will be estimated using both B & B and NELLS.

¹ See generally, National Center for Education Statistics.

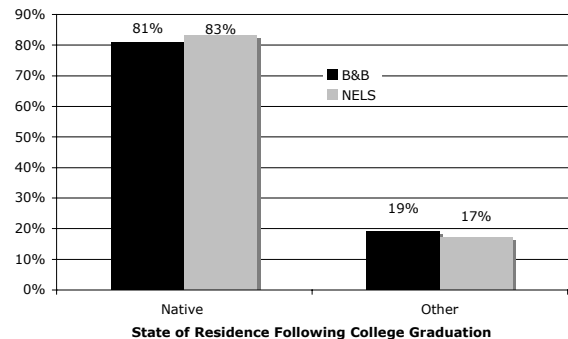
² Presley, J. B. (2003, September). *Illinois higher education: A comparative analysis*. Edwardsville, IL: Illinois Education Research Council.

³ Perry, K. K. (2001). *Where college students live after they graduate*. (ERIC Document Reproduction Service No. ED453739).

Where College Students who Attend Out-of-State Colleges Live After Graduation⁴



Where College Students who Attend In-State Colleges Live After Graduation



Note. Native refers to the state where a college student graduated high school; College refers to the state where the student graduated from college.

Population. This study included all postsecondary institutions outside the State of Illinois and in the United States that enrolled at least one first-time, first-year college student who is a resident of the State of Illinois during the Fall 2000 semester.

Data collection. Data collection occurred in three stages. First, college student migration data was obtained from IPEDS through the Peer Analysis System (PAS), a web-based data collection tool. Through PAS, the name, city, state, IPEDS 6-digit institutional identification, and the number of first-time, first-year college students from the State of Illinois was downloaded in text format. The second data collection stage addressed the social benefits of higher education as measured through the earnings of high school and college graduates, or the net educational premium (NEP). Income data was collected from the U.S. Census Bureau current population survey.

In social rate of return analyses, social costs include private and social costs. Private costs include tuition -- minus state subsidies for financial aid -- and opportunity costs associated with attending college. For Illinois college student migrants, tuition costs were collected from IPEDS PAS for all 4-year colleges in this study's population for the 2001 fiscal year. Because the State of Illinois does not subsidize the educational costs of students who attend out-of-state colleges and universities, social costs were not included in the analysis.

Results

In Fall 2000, a total of 21,217 Illinois residents emigrated to all colleges and universities and 9,403 immigrated to Illinois, for a net migration of -11,814. This study was primarily concerned with 4-year college and university migration, of which the net migration rate was -10,414. The social benefits, as measured through NEP, were \$1,452,627 -- the amount a college graduate can expect to earn above and beyond a high school graduate. Average tuition and fees at all out-of-state colleges, minus government and institutional aid, was \$4,956, or \$19,824 over 4 years. Opportunity costs were calculated at \$59,926, or what a high school graduate can expect to earn over 4 years.

The stock of college graduates living in Illinois due to college student immigration and emigration for 4-year colleges was estimated to be between -4,554⁵ and -5,451.⁶ After controlling

⁴ Perry (2003); Adelman, C. (2004, March). *Principal indicators of student academic histories in postsecondary education, 1972-2000*. Washington, DC: U.S. Department of Education.

for multiplier effects in the economy and the impact of taxes, the private and social rates of return for college student migration was calculated at 16.07%. This rate of return analysis showed the state of Illinois can expect to lose \$164,758 over the course of *each* college graduate resident's lifetime. The net annual loss to the State of Illinois in 2000, then, is between \$688,029,408 and \$824,449,032.⁷

Discussion

The results of this study have the following policy implications for the State of Illinois:

- One can theorize the State of Illinois somehow benefits from adopting a “free-rider” approach to college student migration by allowing other states to subsidize the education of its students. Social rate of return analyses, however, include private and social costs. Social costs, then, still exist but are just passed along to state residents who pay higher prices to institutions in other states.
- In light of high migration rates to public colleges (nearly 30% of all first-year students at the University of Iowa are Illinois residents), Illinois should consider mission differentiation among its institutions, particularly since many migrants attend public, selective liberal arts colleges (like Truman State and Bowling Green) or large, public flagship universities (like the Universities of Wisconsin or Missouri).
- Tuition reciprocity agreements with other states could be an effective strategy in raising the stock of college graduates living in Illinois from other states. Since Illinois college student migrants do not appear to be sensitive to price, tuition reciprocity agreements could have a negligible impact on out-migration rates, but could significantly impact the immigration of college students into Illinois from other states.
- Illinois should consider residency initiatives strategically aimed at college graduates.
- Illinois should consider the development of a database to track the migration patterns of its students. (Although discussions about comprehensive tracking databases have been held in recent discussions regarding the reauthorization of the Higher Education Act).
- Finally, Illinois should consider further initiatives aimed at providing incentives for high school graduates to attend in-state colleges and universities, like tuition discounts or merit scholarships.

⁵ Using B & B, assumes 52% of emigrants return to Illinois after graduation, 81% of in-state college students remain in Illinois, and 17% of college student immigrants from other states establish residency in Illinois.

⁶ Using NELS, assumes 48% of emigrants return to Illinois after graduation, 83% of in-state college students remain in Illinois, and 21% of college student immigrants from other states establish residency in Illinois.

⁷ These figures represent $(4,554 * \$164,758) = \$688,029,408$ and $(5,451 * \$164,758) = \$824,449,032$.

FROM HIGH SCHOOL TO THE FUTURE: USING CHICAGO'S TRACKING SYSTEM TO EXAMINE COLLEGE PREPARATION, ACCESS AND GRADUATION

Elaine Allensworth and Vanessa Coca, Consortium on Chicago School Research

High schools have not traditionally focused on post-secondary outcomes because most school systems do not know what happens to their students after they graduate. Therefore, a first step in supporting high school reform in this area involves building new data systems and indicators of performance to create accountability. This panel presents first-year results from a research-practice collaboration between the Chicago Public Schools (CPS) and the Consortium on Chicago School Research. In this panel, we present data on the postsecondary outcomes of graduates of the Chicago Public Schools from 1998 through 2003. We begin by looking at who is going to college, and how this relates to their high school performance, the high school they attended, and their demographic characteristics. We show that CPS graduates are much less likely to attend 4-year colleges and selective-enrollment colleges than students nationally, and we begin to explain why these differences exist. We also show dramatic differences across high schools in the city in their students' postsecondary outcomes. Next, we look at how high school preparation (GPA, ACT, advanced coursework, participation in the International Baccalaureate curriculum) is related to college attendance. We look specifically at the effects of courses that provide transitional content (e.g., 4th-year mathematics and AP courses) on shaping students' college outcomes and how schools differ in their course offerings and participation rates in more rigorous courses. Finally, we show 4-year college completion rates of CPS graduates from 1998. We show that college completion is dependent upon preparation upon leaving high school, particularly students' GPA, as well as characteristics of the colleges themselves, such as their overall graduation rate and their location.

**MAINTAINING STUDENT ENGAGEMENT IN MATHEMATICS AND SCIENCE IN
THE MIDDLE SCHOOL YEARS: EVALUATING THE IMSA EXCELLENCE
2000+ PROGRAM**

Chris Kolar, Susan Bisinger and Evelyn Ho-Wisniewski,
Illinois Mathematics and Science Academy

IMSA Excellence 2000+ (E2K+) is an innovative after-school enrichment program for Illinois middle school students who are talented, interested and motivated in mathematics and science. The program also includes a substantial professional development component for participating teachers. Two of the program's goals are to maintain or increase students' interest, involvement and literacy in science and mathematics, and to enhance the knowledge and skills of middle school science and mathematics teachers. The program is also trying to help close the access and achievement gap that develops between students in urban and rural/small town areas of Illinois and those in other areas of the State with more resources. In this first year of the study, two surveys were administered to the 22 participating E2K+ sites in Fall 2004. First, a student activity survey was completed by both non-E2K+ and E2K students profiling their participation in elective math and science activities outside of the classroom during the previous year. The survey instrument also asked about the presence of various items in their homes related to science and mathematics (i.e. a computer, telescope, chemistry set) based loosely on items from the National Educational Longitudinal Study (NELS 2000). The intent of this instrument allows us to track student engagement in math and science during the middle school years when student interest typically declines. The repeated measures design of the project examines middle school students' interest and engagement in informal, elective activities in math and science throughout the three years they are involved in the E2K+ program.

TURNING THE MOUNTAIN UPSIDE DOWN: HOW THE INTERACTIVE ILLINOIS REPORT CARD BRINGS DATA FOR DECISION-MAKING INTO ILLINOIS CLASSROOMS

Harvey Smith, Northern Illinois University, and John Ourth, Illinois Principals Association

Purpose of the Program

This presentation will demonstrate the features of the Interactive Illinois Report Card (IIRC), a comprehensive web site that displays state test results, learning & curricular materials, AYP results, school improvement information, school comparisons, and data analysis features for all public schools and school districts in Illinois. Developed at NIU in partnership with ISBE, IIRC's mission is to help improve student achievement by providing accessible, easy to understand, useable data on districts, schools, and individual students, including links to the Just For the Kids website for each school. The IIRC presentation will also include information on the individual Student Data Services developed through collaboration with the RESPROs, the Illinois Principals Association, and the Illinois Business Roundtable. These partners are making IIRC Student Data Services and training widely available to schools in Illinois' System of Support. Their goal is to turn the mountains of data upside down, so that teachers can study the performance of students in their classrooms and apply their analyses to improve teaching and learning.

Description of the Program

To provide data for making decisions, the IIRC--

- Displays online, interactive report card data that is easy to navigate;
- Uses colorful graphical displays to promote understanding of annual and trend data;
- Links test results to content standards, sample test items, and student work samples;
- Shows six years of trend data and allows comparisons of schools, districts, and cohorts;
- Includes school and district school improvement templates with data filled in; and
- Posts individual student data from state assessments and other tests to a secure site.

IIRC report card data is provided by ISBE. The IIRC has built this into a longitudinal archive which displays graphically for all schools and districts six years of data rather than just one. Information from ISBE about how to improve achievement, including class-room resources developed by Illinois teachers, is easy to find in one location on the IIRC.

To utilize Student Data Services, a district's student test results are posted on a secured, password-protected area of the IIRC website. IIRC can load student records from state assessments as well as other standardized assessments such as COGAT, ITBS, Plan, Explore, and ACT. The student data can be used by teachers and SIP teams to target instructional improvement for individual students and to prepare school improvement plans.

All schools and districts "in status" (under state or federal sanctions) are eligible for funding to have their individual student data posted on the IIRC, and receive training. Initially Dr. Smith trained trainers throughout the state to understand, analyze, and apply findings from both the

“public” side of the IIRC and the detailed results available for individual students and groups of students. Now trainers include active and retired administrators, school improvement staff from ROEs and RESPROs, staff of the Illinois Business Round Table, and National Board Certified Teachers. As of May 1, about 1100 schools are receiving IIRC individual student data services, with more indicating interest. Subscriptions are relatively inexpensive (\$250 to \$300 per school). Some districts subscribe on their own; others are funded through their ROEs, RESPROs, or Learning Technology Centers, or through IBRT.

Summary of Findings

Teachers and administrators across Illinois have found the IIRC easy to navigate and easy to understand, as evidenced by positive response of teachers and administrators in numerous workshops. They have appreciated having a tool to help with data-driven decision making in this time of accountability and school improvement. The individual student data results are particularly helpful for identifying specific instructional needs of subgroups such as African-American, Hispanics, and low-income students. With this information, educators can redesign curriculum and focus on students with problems in targeted areas for special instruction. Principals can look at students on either side of the “Meets” and “Below Standards” line whose knowledge and skills in certain areas need to be strengthened in order to help them meet standards. And by using the comparison features of the IIRC in conjunction with Just for the Kids Best Practices site educators can quickly see that low income does not and should not necessarily mean low performance. Moreover, they can quickly find strategies for raising performance of all students.

Implications for Illinois Education

In this era of data-driven accountability, the IIRC supplies valuable tools for educators who need to understand more precisely the strengths and weaknesses of individual students and groups of students in meeting the Illinois Learning Standards. With comprehensive and useable data in hand, schools have a far better chance of meeting the rising requirements for Adequate Yearly Progress.

EVALUATION OF INNOVATIVE PRACTICE TO SUPPORT UNDERACHIEVING MIDDLE SCHOOL STUDENTS

Linda Robinson, Ed. D., Olivet Nazarene University

This three year study sought to address the issue of underachievement in an upper Midwest middle school. Through a multi-component intervention that included a personal leadership curriculum for students, a mentoring program, after-school homework labs, and professional development sessions for teachers, the researcher sought to answer the following questions: (a) What impact will a course using personal leadership curriculum have on the academic performance of participating underachieving students? (b) What value will the underachieving students place on being a participant in a mentor-student relationship? (c) What impact will professional development opportunities that focus on meeting the needs of underachieving students have on the degree of engagement of underachievers as observed by classroom teachers? (d) What will be parent perceptions of the intervention process and its effects on the student both in and out of the academic setting?

GPA gain scores, differences in pre- and post-referral rate and pre- and post-absenteeism were analyzed utilizing an ANCOVA with Terra Nova scores as coefficient. Findings revealed that the intervention had a positive impact on all areas except attendance. Qualitative data gathered from surveys and interviews that mentoring was perceived as an important aspect of student success, that professional development was well utilized and impacted learning and that parents were supportive of the program.

Implications of the study would suggest that a continuation of the personal leadership course within the school day would be beneficial for students experiencing underachievement. It also supported the use of a mentoring program along with a homework lab. Professional development should include relationship building workshops along with training in the design and implementation of problem based learning.

MODELS OF REFORM AND THEIR IMPLICATIONS FOR SCHOOL LEADERSHIP

Mark Smylie, University of Illinois at Chicago,
David Schalliol, Consortium on Chicago School Research
Albert Bennet, Roosevelt University
Holly Hart, Consortium on Chicago School Research

This paper presents findings of longitudinal analyses of citywide principal and teacher survey data that track changes in school leadership across three periods of school reform in Chicago: radical decentralization, recentralization and high stakes accountability, and instructional reform and human capital development. These analyses trace changes in characteristics of the principal workforce, the nature of principals' work, and sources of support for school leadership. This descriptive and exploratory paper identifies relationships between models of school reform and these three dimensions of school leadership. We examine theoretical perspectives of organizations and their environments and contingency theories of leadership which may explain relationships among reform models, changes in school leadership, and implications for the role of leadership in promoting school improvement.

VALUE ADDED ANALYSIS OF THE CHICAGO PUBLIC SCHOOLS

Steve Ponisiak, Consortium on Chicago School Research

Much analysis of educational outcomes, prompted by the NCLB law, is focused on a snapshot of student performance or on simple test score trends, without acknowledging factors that may affect student performance. Building on earlier work, we estimate student learning gains on the Iowa Tests of Basic Skills (ITBS) in the Chicago public schools at the level of the grade-within-school. We use a three-level hierarchical cross-classified model to examine the effects of schools on students. Our value-added model consists of repeated measures that are cross-classified by students and schools. We assume the effects of schools are cumulative, so, for example, the effect of a student's school in first grade remains with the student in fifth grade and beyond. Earlier models did not include assumptions about the form of the change in gains; in our model, we can include such assumptions and estimate the relevant parameters, or we can use a simpler (but more computationally intensive) model that makes no such assumption. We conclude by comparing reading and math results (which are similar), and comparing our results with NCLB percentage proficient statistics (which are not similar).

A CRISIS AT THE CORE: AN IN-DEPTH LOOK AT COLLEGE/WORK READINESS IN ILLINOIS

Julie Noble, Ph.D., ACT, Inc.

ACT Inc, as a national testing organization, has significant assessment data from large student populations throughout the nation and world. In particular, we are uniquely positioned with regard to the state of Illinois, due to our involvement in the Prairie State Achievement Examination System (PSAE). Illinois is currently one of two states where over 99% of all public high school students complete the ACT (as part of the PSAE), including the course/grade information and student information sections of the assessment. Using this information, along with national information gathered from over 1.2 million high school graduates tested in 2004, ACT is able to present an in-depth look at the current status of Illinois student preparation for college and work.

Supporting research for this presentation includes ACT's College Readiness Benchmarks, which represent the level of achievement required for students to have a high probability of success in credit-bearing college courses such as English composition, college algebra and biology. These benchmarks correspond to ACT Assessment scores on the respective English, Mathematics and Science subject area tests. In this presentation we present overall readiness rates for all Illinois students, plus indications of the readiness status of identifiable population subgroups. The presentation also looks at the projected readiness of Illinois students in the classes of 2006 and 2008, based on data from over 60,500 Illinois eighth graders and 129,300 Illinois tenth grade students.

MATH AND SCIENCE TEACHER WORKFORCE: CHARACTERISTICS AND POLICY IMPLICATIONS IN A LARGE ILLINOIS SCHOOL DISTRICT

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Purpose:

The primary purpose of this project is to understand that characteristics of the math and science teacher workforce in the Chicago Public Schools (CPS) so that this information can be used to address pertinent issues in the district. One of the most important reasons for understanding the dynamics of CPS' teacher workforce is that it is widely accepted that teacher quality has an impact on student success and achievement. Because of this, it is essential that district policies which aim to improve teacher quality be supported by an understanding of the current characteristics of the district's teachers.

One of the main questions this analysis focused on was teacher credentialing in terms of increasing educator quality. An understanding of what types of education, endorsements, and experience teachers have aids the district in (1) evaluating whether current programs to improve educator quality address teachers' needs, and (2) helps the district pinpoint gaps in educator quality and design programs to concentrate on these. Analysis of current programs involves both formative and summative evaluation. Formative evaluation presently underway involves determining whether current offerings such as professional development and university courses leading to endorsements are addressing the specific needs of teachers with regards to content knowledge and subjects of endorsement. Current summative evaluations involve whether teachers are receiving endorsements through completion of the university courses they are attending.

This project discusses efforts underway by the Office of Mathematics and Science to address district needs using an analysis of teacher workforce dynamics. Discussion focuses on how teacher quality data have been used so far in the district, and how this type of data may be used to shape future policies.

Methodology:

Data for this project were obtained by combining two datasets obtained from CPS' Department of Human Resources and Office of Technology Services. Data from the 2004-2005 school year are based on 2104 teachers who were listed as teaching at least one math or science course at the high school level as of November, 2004. There were 1015 high school teachers who taught math, 977 teachers of science, and 112 teachers who taught both math and science.

Summary of the findings:

Endorsements and degrees

Endorsements. In regards to teacher qualifications, in 2004-2005 the majority of high school math and science teachers had an endorsement in their subject area, with 78% of math teachers endorsed in math and 77% of science teachers endorsed in science.

Degrees. In 2004-2005, 51% of math teachers had a postsecondary degree in mathematics. Science teachers tended to have slightly more postsecondary degrees, with 60% of science teachers having some sort of postsecondary degree in science.

Special Education. Of the math teachers who lacked a math endorsement, 71% were endorsed in special education. Of the science teachers who lacked a science endorsement, 63% were endorsed in special education. This lack of subject area endorsements may have a significant impact on the district under changes to NCLB requirements for special education teachers.

District policies

Recruitment. Another important purpose for which teacher quality data will be used is to gain a better understanding of the issue of recruitment. The analysis of the 2004-2005 teacher quality data showed that there were three main universities that awarded degrees to CPS teachers of math and science. These universities were: University of Illinois – Chicago, Chicago State University, and Northeastern Illinois University. In fact, analyses show that the majority of CPS teachers with degrees in math and/or science received them from universities in Illinois. This has important implications for the way in which the district conceptualizes the process of recruiting its teachers, and also has the potential for CPS to improve teacher quality by collaborating with the universities from which the majority of CPS teachers are recruited.

Program questions. Teacher quality data also have important implications for how the district conceptualizes its professional development offerings for math and science teachers. Knowledge of how many teachers are teaching core courses offers insight into the scope of any professional development program, while an understanding of teacher experience can inform the types of professional development offered and how it is tailored to the backgrounds of the teachers in that particular field. Teacher quality data can also be used as part of a formative evaluation of the types of credentials needed by CPS teachers. The data may also influence the types of programs offered by the district, and summative evaluations can use teacher quality data to help determine if current programs are having the desired effect.

Distribution of endorsements. It is important to understand whether teachers are endorsed in the class that they are teaching (e.g., teachers endorsed in chemistry are teaching chemistry rather than biology), and to understand how the percentage of teachers with aligned endorsements may differ depending on the subject. Second, it is important to know how the percentage of teachers with aligned endorsements differs among schools. In 2004-2005, the percentage of math teachers who were teaching a class with a clearly aligned endorsement and/or major was 74%. For science teachers, the number teaching a class with a clearly aligned endorsement and/or major was 55%.

Example: Algebra Problem Solving Taskforce and teacher quality data

The use of teacher quality data by the Algebra Problem Solving Taskforce provides an excellent example of how this data was used to examine program implementation, and to highlight potential strengths and weaknesses of Algebra Problem Solving teachers in order to improve policies to strengthen program implementation. This part of the presentation will focus on how teacher quality data helped the taskforce shape their recommendations about the program for the 2005-2006 school year.

REDEFINING UNDERGRADUATE STUDENTS' PERCEPTIONS OF TEACHING THROUGH PRE-SERVICE OPPORTUNITIES

Linda B. Pincham, Ed.D., Roosevelt University

Undergraduate education majors are often young and naïve and do not have a strong sense of what teaching entails. Although they declare a major in education, realistically, they spend the first two years of their academic lives, taking general education courses or building their academic discipline. They are not exposed to the world of teaching, and traditionally, will not be exposed to observe real classroom settings until the beginning of their junior year. This study explored a model that was developed for Roosevelt University's Scholars Teach and Reach or S.T.A.R., all undergraduates, who were placed at an early stage in a Chicago K – 8 school to observe and work directly with school-aged children and a cooperating teacher. (S.T.A.R. students are scholarship recipients recruited from CPS to enter Roosevelt's teacher education program.) Results center on the discussion of the S.T.A.R. students' experiences and their perceptions on teaching.

As a cohort, S.T.A.R. freshmen (n=eight) were placed in a K – 8 Chicago public school to volunteer 30 clock hours (three hours a week for ten weeks) during the spring semester, as part of their early pre-service teacher preparation. The freshmen were introduced to the field of teaching through the course EDUC 102: S.T.A.R Seminar II, held each Friday morning in a classroom at the school. In addition to the introduction to teacher education, EDUC 102 is a course designed to equip students with the decision to decide which program area they wish to pursue in teacher education. Other objectives of the course include the following: 1) build a knowledge base of the foundations of education; 2) define an educational philosophy; 3) develop awareness of multicultural and diverse settings and their impact on teaching; and 4) practice instructional strategies directly in the classroom.

The freshmen were each matched with a teacher from the school who served as both a cooperating teacher and mentor. Mentor teachers were assigned to the freshmen according to the freshmen's grade- level interest. During this early pre-service learning experience, S.T.A.R. freshmen maintained a portfolio composed of the following: (1) a reflective journal, (2) a collection of pictures/snapshots illustrating their work with children, and (3) a summary of four education-related activities they attended with their mentor teacher, i.e., staff development, field trips, department meetings, etc.

The S.T.A.R. students are undergraduates mainly concentrating on their general education coursework during their freshman and sophomore years. Unlike their upperclassmen peers, they enter the classroom and school setting without any prior field observations where they are directly exposed to children in a real classroom environment. Therefore, this was their first direct classroom experience as well as their first course in introduction to education. Of the eight students, four were Hispanics, two were African Americans, one was of Bosnian origin, and the last was of Polish descent. All students were traditional-aged students, 18 to 19 years old. All were female, with the exception of one Hispanic male.

For the purpose of this study, an open-ended survey was used. Twelve questions on the survey focused on the students' expectations of teaching, their personal experiences at the school site, the usefulness of the course EDUC 102, and the encouraging and discouraging aspects of their experiences. At the end of the spring semester, the freshmen students completed the survey. The surveys were anonymous and were returned to the instructor in a sealed, self-addressed envelope.

The instructor analyzed the freshmen's responses on the survey. Their responses were all recorded and tallied under each question.

The success of the S.T.A.R. program was dependent on several variables: the mentoring component of the program, EDUC 102, and the placement for the field experience itself. The students were carefully matched with a cooperating teacher, a teacher considered to be a master teacher by his or her own peers. These teachers did not fear of "letting go" of their pupils for the benefit of the S.T.A.R. students. They willingly and eagerly put the S.T.A.R. freshmen to work, allowing them to observe their teaching but also giving them hands-on responsibilities. Students excitedly shared their experiences—good and bad—with their faculty mentors and the S.T.A.R. coordinator.

The course designed for the freshmen held at the school was another important stabilizer. It provided a seminar for sharing of concerns and successes. Students were introduced to ideas and then had the opportunity to experiment in a real classroom. Finally, the actual school itself provided a well-rounded experience for the students. It was not a perfect setting, and the freshmen saw the "flaws" of teaching and the general day-to-day operations of the school.

These experiences of the S.T.A.R. students are types of opportunities that should be provided each year, beginning with the freshman year. Pre-service experiences such as this model have the potential to provide undergraduates with the not so "rosy-colored glasses" and to help them see the larger picture.

Waiting until the onset of student teaching where students assume the various roles and responsibilities of full-time teaching is much too late. Particularly for the undergraduate or younger student, several experiences in a variety of schools and classrooms are desperately needed. Providing hands-on experiences early in a preservice teacher's academic career contributes to building the art of pedagogy. Whether innate or acquired, most prospective teachers will benefit greatly if given an early opportunity to explore teaching.