

**15th Annual
Focus on Illinois Education Research Symposium**

Compendium of Abstracts



ILLINOIS EDUCATION RESEARCH COUNCIL

**November 9–10, 2017
Naperville, Illinois**

**Illinois Education Research Council
at Southern Illinois University Edwardsville**

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THURSDAY, NOVEMBER 9

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Surveys on Early Education Organizational Conditions: Are They Related to Classroom and Child Outcomes?

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The Ounce of Prevention Fund

Large investments in high-quality early childhood education (ECE) aim to prepare students, particularly those who have historically been at risk of academic struggles, for kindergarten and beyond (e.g., Heckman & Masterov, 2007; Yoshikawa et al., 2013). However, income-, race-, and language-based achievement gaps upon kindergarten entry persist (e.g., Mulligan, Hastedt, & McCarroll, 2012; Puma, Bell, Cook, & Heid, 2010). In addition, despite years of efforts to improve classroom quality, studies confirm that preschool classroom instructional quality remains low, with the majority performing well below the scores associated with promoting children's academic and social gains (Aikens et al., 2010; Burchinal, Vandergrift, Pianta, & Mashburn, 2010; Early et al., 2007; Ross, Moiduddin, Meagher, & Carlson, 2008).

Research from K-12 settings has taught us the importance of attending to the organizational conditions of a learning setting, which has largely been ignored in the ECE research and practice field. For example, prior research on elementary schools identified five school-level organizational constructs empirically linked to school improvement (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010). Teacher and student surveys measuring these five essential supports strongly predicted which schools were most and least likely to show student improvement over time (Bryk et al.). As the field continues to improve practices in ECE settings, attention to these organizational conditions is critical for driving further improvement efforts.

This proposed paper will share findings from a quantitative validation study of a new set of surveys designed to measure these organizational conditions in early education settings (Ehrlich, Pacchiano, Stein, & Luppescu, 2016). Employing the Rasch IRT model to develop a parent survey and adapt an existing K-12 teacher survey, authors ensured internal reliability of measures and explored potential bias across settings (center vs. school) and language on the parent survey.

To examine concurrent validity, survey data were collected in winter/spring 2015-16 from 41 school- and 40 center-based pre-kindergarten sites in a large Midwestern city. Using administrative data, we examine whether site-level differences on six constructs (effective leaders, collaborative teachers, family involvement, supportive environment, ambitious instruction, and parent voice) are related to the following outcomes: (1) teacher-child interactions (CLASS-PreK; Pianta, LaParo, & Hamre, 2008), (2) child development growth scores (Teaching Strategies GOLD; Teaching Strategies, 2010), and (3) student attendance.

Hierarchical linear models are used to nest data points within sites (school- or community-based programs). Initial results (see Table 1) indicate significant relationships between the Effective Leaders and Collaborative Teachers constructs and all three CLASS domains. There are also strong relationships between four of our six constructs—effective leaders, collaborative teachers, parent influence, and supportive environment—and student attendance. Lack of associations between some of the constructs (e.g., parent voice and ambitious instruction) and student outcomes will be discussed.

The larger goal of these surveys is to support schools and centers in identifying areas of strength and for improvement. Findings from this validation study—both positive and null—can inform proper ways to use these surveys, and areas for further development to better capture parent voice.

Surveying Parents on Organizational Conditions in Early Education Settings: Challenges, Strategies, and Lessons Learned

Debra Pacchiano, PhD, Vice President, Translational Research
Amenda Stein, PhD, Director, Research & Evaluation
Maureen Wagner, Program Associate
The Ounce of Prevention Fund

Stacy Ehrlich, PhD, Managing Director and Senior Research Scientist
University of Chicago Consortium on School Research

Parents are key stakeholders in education; they provide a unique perspective on the ways schools or programs are, and are not, structured to support their child's learning and development (Froiland, Peterson, & Dawson, 2012). Yet, systematically garnering parents' perspectives and input is not a common practice and can be methodologically challenging (Hu, Zhou, & Li, 2017). This paper describes the authors' approach to developing a parent survey measuring organizational conditions. With a focus on early education (EE), a time when families are most involved in their child's education, we share challenges encountered and strategies implemented to improve the functionality and reliability of the survey.

A larger team is adapting an existing set of K-12 surveys measuring five organizational conditions (Bryk, Sebring, Allensworth, & Easton, 2010) for use in EE settings, including modifying existing teacher surveys and developing a new parent survey. Development included several rounds of cognitive interviews, testing and analysis using Rasch IRT models, and survey refinement—thus relying on both qualitative and quantitative input. This paper focuses on lessons learned from the most recent analyses, stemming from a validation study relating survey measures to student and classroom outcomes.

Data were collected in 2016-17 from 81 sites across a large, Midwestern city (n=41 school-based; n=40 center-based EE sites). Surveys were collected from 2,464 parents across these sites. Rasch analyses determined internal reliability of the measures (a set of items on the surveys); see Table 1 for measure reliabilities. Quantitative validation analyses then explored whether a combination of these parent voice measures were related to classroom and student outcomes.

The current paper articulates overall challenges faced in trying to measure parents' perspectives about their child's educational setting. These include: a high percentage of extreme, positive responders (Table 1); high correlations between some parent measures (Figure 1); and a lack of relationships or associations in unexpected directions with classroom and student outcome measures. In response to these concerns, the authors conducted interviews with practitioners and family engagement experts to inform future rounds of edits. We received feedback that portions of the survey were not engaging, felt impersonal, and that measures were not in the proper order. Additional qualitative work conducted in a subset of validation study sites suggested that one reason we may see such extremely positive responses is that not all parents are aware of what the counterfactual looks like. Analyses relating survey measures to outcomes have also revealed that measures sometimes unintentionally ask parents about experiences that are related to lower-quality practices rather than higher-quality.

The proposed paper will share these observations and describe revisions underway to improve our measurement of family perspectives of EE organizational conditions (Table 2). These revisions are benefiting from both quantitative and qualitative data collected from parents and practitioners, including new constructs that emerged from how parents talked about organizational conditions in both weakly- and strongly-organized EE settings. The authors will discuss implications of our approach and findings for parent survey development practices and future research.

Measuring Organizational Conditions in Early Education: Qualitative Findings Matching Survey

Debra Pacchiano, PhD, Vice President, Translational Research
Marueen Wagner, Program Associate
The Ounce of Prevention Fund

Holly Lewandowski, President, Evaluation for Change

This study tested the validity of new surveys designed to measure organizational conditions in early education (EE). While most education tools are externally validated using quantitative methods, the authors tested the concurrent validity of these surveys using traditional quantitative approaches enhanced by deeper qualitative exploration.

Research shows that high-quality EE has the potential to prevent or reduce already-existing achievement gaps when children are 3 and 4 years old (e.g., Institute of Medicine & National Research Council [IOM & NRC], 2015; Weiland, & Yoshikawa, 2013). Towards improving the quality of EE, the field has developed assessments of classroom-level structures and made investments focused on what occurs inside the classroom (Atchison & Workman, 2015; IOM & NRC, 2015). Those efforts have not moved the needle perceptibly on instructional quality (Burchinal, Vandergrift, Pianta, & Mashburn, 2010; Office of Head Start, 2013, 2014, 2015). Research on whole school improvement indicates that strongly performing educational settings engage in coherent, orchestrated action across five organizational conditions (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010). EE has neither incorporated these constructs into quality definitions (Connors & Morris, 2015), nor a valid and reliable tool to assess them.

The authors are part of a larger team that adapted an existing set of K-12 surveys measuring organizational conditions for use in EE settings, including modifying existing teacher surveys, developing a new parent survey, and conducting rounds of pilot testing and survey refinement using Rasch analysis. The current paper has two goals, to: (1) describe what pre-kindergarten programs with strong or weak organizational conditions, based on their survey responses, actually look like once you are inside the program, and (2) assess whether those on-the-ground experiences match expectations based on the constructs the survey was designed to measure.

This study was conducted in a large, diverse Midwestern city. Two sites with strong organizational conditions and two sites with weak organizational conditions (1 center and 1 school each) were selected from a sample of sites included in a larger quantitative validation study (40 center- and 41 school-based). EE programs for qualitative data collection were sampled from a rank-ordering of teacher/parent survey responses that had been received by spring 2016. Visitors were blind to which sites were ranked “strong” and “weak” based on survey responses. Visits lasted 3 consecutive days. Individual interviews with 7-10 staff members and focus groups of 5-10 parents were conducted in each site. Researchers also developed an observation protocol for common areas and took photo documentation. All interviews were transcribed verbatim and iteratively coded using NVIVO software in three analyses cycles: descriptive, thematic pattern, and conceptual model building.

Qualitative analyses indicate that the on-the-ground conditions overwhelmingly match teacher and parent survey responses (appendix tables 1-5), thus contributing to the evidence that the surveys are externally valid. In addition, the qualitative findings synthesize complementary quantitative and qualitative findings to develop a more complete and nuanced understanding of how key organizational conditions manifest in EE settings. Lastly, we’ll discuss how the qualitative data helped interpret, clarify, and illustrate the quantitative survey findings.

Illinois Longitudinal Data System: Recent Progress & Opportunities for Researchers

Elliot M. Regenstein, ILDS Governing Board,

Jonathan Furr, Executive Director
Charlie Rosemond, Data & Outcomes Manager
Education Systems Center, Northern Illinois University

This session will provide updates on the recent progress of the Illinois Longitudinal Data System (ILDS). It will highlight the ILDS' research priorities, processes, and projects, and it will include an interactive discussion with participants on how the ILDS can best support the needs of the research community.

Outmigration in Illinois and Human Capital in Illinois

Eric Lichtenberger, PhD, Deputy Director Information Management & Research
Illinois Board of Higher Education

This presentation will provides an in-depth account of the residence, migration, and enrollment patterns of two overlapping groups of students: 1) Illinois high school graduates as they transition to college; and 2) first-time full-time freshmen who have graduated from high school within a twelve month time-frame. Using data from the Illinois State Board of Education that was merged with National Student Clearinghouse enrollment information, we first present the initial enrollment patterns for three cohorts of recent high school graduates from Illinois. We supplement that information with the IPEDS residence and migration survey specific to first-time full-time freshmen that establishes the students' residency relative to where they are enrolled. The presentation will also highlight key findings from previous Illinois-specific outmigration research studies, as well as a recent analysis of tuition discounting at Illinois public universities and their out-of-state peers.

Acceleration Programs in Minnesota: Characteristics and College Pathways of Students Who Participate

Elisabeth Davis, PhD, Senior Researcher
American Institutes for Research

Acceleration programs are academically challenging courses in which high school students can simultaneously earn credit toward a high school diploma and a postsecondary degree (dual credit). These programs include Advanced Placement courses, concurrent-enrollment courses, Postsecondary Enrollment Options courses (a dual-enrollment program in Minnesota), International Baccalaureate courses, and others. Since the Postsecondary Enrollment Options Act of 1985 (Postsecondary Enrollment Options Act, 2015), policymakers and practitioners in Minnesota have used acceleration programs as a strategy to improve students' college readiness and college success.

Despite the widespread use of acceleration programs, little information exists on the types of students and schools that access these programs and participants' postsecondary pathways such as whether and where they enroll in college. Members of the Midwest College and Career Success Research Alliance collaborated with Regional Educational Laboratory Midwest to conduct a study that provides a broad description of acceleration programs in Minnesota, including rates of participation, descriptions of student participants, and participants' postsecondary outcomes.

The study team obtained and analyzed data from the Minnesota State Longitudinal Education Data System provided by the Minnesota Office of Higher Education. The study examined student participation rates and success in acceleration programs available to Minnesota high school students and compared college pathways and outcomes between participants and nonparticipants among the 2011 cohort of high school graduates.

Analysis of the 2011 cohort of Minnesota high school graduates revealed six main findings related to participation and success in acceleration programs, the types of colleges that award dual credit, and college outcomes. First, almost half of 2011 Minnesota high school graduates participated in at least one acceleration program during high school. Second, about half of participants in acceleration programs who enrolled in a Minnesota college within two years of high school graduation were awarded at least one dual credit at the college level. Third, racial/ethnic minority students, students eligible for the federal school lunch program (a proxy for economic disadvantage), and students with lower academic achievement participated in acceleration programs at a lower rate than their peers. Fourth, racial/ethnic minority students and students eligible for the federal school lunch program who participated in acceleration programs were not awarded dual credit by the college in which they enrolled at the same rate as their peers. Fifth, the majority of Minnesota colleges in which participants in acceleration programs enrolled and were awarded dual credit were selective or very selective four-year colleges. Finally, participation in acceleration programs was associated with higher rates of enrollment in Minnesota colleges. Further, even when participants were not awarded credit by the college in which they enrolled, program participation was associated with higher rates of college readiness as measured by students taking only nonremedial coursework, and persisting to the second year of college.

The results of this study might point to the contribution of these programs to student outcomes, but more rigorous research is needed to draw a causal inference about the impact of acceleration programs on these outcomes. In addition, these results raise several considerations for educators and policymakers, including the potential importance of expanding acceleration program opportunities for underrepresented students and re-examining state data collection procedures to classify acceleration programs more comprehensively and document differences between types of programs.

Supporting a Linguistically and Culturally Diverse ECE Workforce

Lucy Gomez-Feliciano, Director of Education and Health
Logan Square Neighborhood Association

Gudelia Lopez, PhD, Consultant

Early childhood education (ECE) has beneficial effects on high school graduation rates, on the number of years of education completed, on earnings, on reducing crime and teenage pregnancy, and on children's early learning (Yoshikawa et al., 2013). Research has found that Latinos benefit more from preschool participation than other children (Gromely, 2008). Furthermore, with Latino children making up 20.3 percent of children enrolled in preschool in Illinois (US Census Bureau, 2011-15), programs that are responsive and sensitive to the needs of the children and their families would help to fully realize these benefits.

One important strategy is to increase the number and credentials of bilingual and minority ECE educators who are linguistically and culturally competent. However, as many ECE educators are non-traditional students, increasing the credentials of minority and bilingual educators is not an easy task. Effective programs for early childhood educators have provided counseling, tutoring, financial assistance, and support from peers through a cohort model (Institutes of Medicine, 2015).

This session provides context for the need to increase the number and credentials of bilingual and minority ECE educators and presents findings from an evaluation of the ECE Cohort Program, a partnership between Logan Square Neighborhood Association and City Colleges of Chicago's Truman College. The Program successfully supported individuals working toward an Associates in Applied Science in Child Development. The participants in Cohort 1 increased their knowledge about early childhood education, and all except one attained higher credentials. With the projected need for preschool teachers and a growing Latino population, programs that support experienced Latino and bilingual ECE educators attain higher education are needed.

In Search for Effective Multicultural Training: An Empirical Validation

Dorota Celinska, PhD, Associate Professor of Special Education, Roosevelt University

This study compares the multicultural learning outcomes across two multicultural course formats, the traditional on campus course and the international course. Quantitative and qualitative methodologies (standardized self-report and permanent product analysis) were used to measure student openness towards diverse clients, reflection on own multicultural learning, and application of multicultural competencies to unfamiliar cultural contexts. The participants were 29 graduate students in counseling, psychology and education from a Chicago-land university. The current results support the add-on value of the international format for multicultural learning outcomes. The study offers insights into the effectiveness of multicultural training formats that may enhance the design of such trainings in Illinois for P-12 and higher education professionals.

Bilingualism Roadblocks: Voices from Bilingual Teachers

James Cohen, PhD, Associate Professor of ESL/Bilingual Education

John Evar Strid, PhD, Assistant Professor of Applied Linguistics

Autumn Gathings

Amor Taylor

Raven Stepter

Northern Illinois University

For more than ten years, the Illinois State Board of Education (ISBE) has reported a shortage of bilingual teachers in Illinois. In fact, for several years in a row Spanish bilingual teachers have been in the top 5 most in need teachers in Illinois (ISBE, 2014). To assist in meeting this shortage, school districts have been recruiting teachers from Spain, Mexico and Puerto Rico for over a decade.

Part of the reasoning behind this problem is that Americans traditionally have not supported the notion of bilingualism (de Jong, 2011). Immigrants come to the U.S. and are expected to drop their language and become “American”, which typically means learning/speaking English at the expense of their heritage language (Wright, 2010). Unfortunately, this belief system manifests itself in schools and classrooms, where English only instruction for immigrants is stressed (Cohen, McCarthy, & Strid, 2016).

To counteract this belief system, teachers need to respect and support home languages as part of the child’s cultural context (Cohen et al., 2016). Unfortunately, most teacher candidates studying to teach in the K-12 system have had little experience with language learning. They therefore frequently unknowingly become cogs in the assimilationist machine that cause immigrants to drop their native language and become monolingual in English within two generations (Rumbaut, Massey, & Bean, 2006). In this time of the devaluing of immigrants and their languages and cultures and failure on the part of most Americans to learn other languages and cultures, we need to focus attention on the importance of other languages and the need for greater language learning in the US (Garcia, 2011).

With this context in mind, the linguistics professor in our ESL endorsement program collected 137 pre- and 129 post-class surveys from his students about their attitudes towards PK-12 ESL students and language learning. Moreover, they provided a written description of their personal language learning experiences and their subsequent perspectives. 30% of the students rated themselves as bilingual, with 70.43% of these bilinguals describing themselves as heritage speakers. The non-heritage bilinguals represented only 11.37% of all candidates who did not have exposure to an additional language growing up, giving an estimate of the low success rate of language learning/teaching in the US.

From line by line coding of the surveys, the overall findings demonstrate that most of our candidates for teaching ESL have had little experience with learning languages, giving them limited understanding of the processes involved with learning language and culture. In addition, many have impoverished metalinguistic awareness (Bialystock, 1988) and demonstrated a relatively unprepared ability to serve as cultural border crossers for students (Bartolome, 2002).

Implications for the knowledge learned from this study are many. When the majority of our teachers have not had a successful language learning experience, whether of their heritage language or second language, this indicates that both colleges of education and school districts have to place more of a focus on language acquisition pedagogy, theory, and advocacy so that teachers can be more apt in providing support for the acquisition of additional languages. Moreover, our society as a whole, from the government down, needs to place more stress on the role languages play in our daily lives, so that people will be more welcoming to learning additional languages. Learning languages can potentially bring learners to a new level of understanding of other cultures (Pae, 2012). For this reason, transforming education toward openness to multilingualism and the importance of language learning will permit our society to progress in a more positive direction.

Black Boys and Texts: A Look at Dialogic Literacy Experiences

Melissa Gyimah

Angela Fortune

University of Illinois at Chicago

While our nation wrestles with tensions, questions, or frustrations with immediate, meaningful and practical solutions for improving and advancing the progression of literacy education for Black males, we often fail to draw on historical framings to inform the discussion. Historically, Black males productively engaged in communal traditions of collaborating in meaningful dialogue around the reading and writing of texts often related to greater political, social, and moral issues in the world and directed toward social and cultural transformation. This study explored a contemporary framework, Dialogic Literacy Experiences (DLE) that builds on historical literacy practices, to foster elementary-aged Black males' engagement with texts. During a 10-week case study, a multidisciplinary reading model (MDRM) was implemented to engage participants in dialogic exchanges with and around disciplinary texts. Analysis of video data and written artifacts revealed multiple ways in which students were responsive to a dialogic literacy environment: 1) they began to access their personal and academic identities more fluidly, 2) their reading and writing performance improved significantly, and 3) they showed a keener understanding and curiosity of their local environment while also making global connections. In this presentation, we discuss how engaging Black boys in Dialogic Literacy Experiences (DLE) in the classroom context can nurture a unique and powerful relationship with text.

Engaged Teaching Practices and Student Value of Mathematics: An Assessment of Eighth-Grade Students in the United States and Korea

Daniel House, Director, Institutional Research
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International assessments provide unique opportunities to examine instructional practices and student characteristics and their relationship to achievement outcomes. Further, the results of international assessments allow comparisons of educational practices that contribute to policy discussions. Findings from international mathematics assessments have indicated that students in Korea typically score higher than international averages. The purpose of this study was to examine the relationship between specific engaged learning activities and student beliefs and mathematics achievement for eighth-grade students in the United States and Korea. Students included in this study were from the Trends in International Mathematics and Science Study (TIMSS) 2015 assessment. Eighth-grade students from the United States and Korea were examined. Because of the complex sampling design of the TIMSS 2015 assessment, jackknife variance estimation procedures using replicate weights were used to provide unbiased variance estimates for each variable. Several measures of engaged teaching were significantly associated with achievement test scores for students in the United States and Korea. Further, several student beliefs about mathematics were related to achievement for students in both countries.

Degrees with Less Debt

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The higher education landscape is becoming increasingly more adverse for students of color, first-generation students, and low-income students. Postsecondary enrollment and completion rates for traditionally underrepresented populations continue to be disproportionately lower than for their more advantaged peers (Chen & Carroll, 2005; Nunez & Cuccaro-Alamin, 1998; Yeado, 2013). Affordability, or lack thereof, is cited as the primary reason students are not able to complete their degrees (Davenport, 2013).

This presentation summarizes two recent IERC studies – one on colleges serving students from the St. Louis area and another on Illinois colleges. Both studies use publicly-available data to explore and identify postsecondary institutions that are successful serving first-generation students, students of color, and low-income students by helping them to advance to graduation with less debt. The studies highlight the top institutions and explore institutional correlates that relate to these success patterns.

Unequal Opportunity in Illinois: A Look at Who Graduates College and Why it Matters—A Meta-Analysis

Lisa Castillo Richmond, Director of Strategy

Monica Martinez

The Partnership for College Completion

The Partnership for College Completion—a new nonprofit organization focused on eliminating achievement gap in higher education and increasing overall rates of degree completion in northeastern Illinois—released their first report in September 2017, a meta-analysis, that examines recent data and research on college attainment in Illinois. This report combines findings from several recent analyses produced by state and national organizations and agencies to create an overall picture of college-going patterns and completion rates over time in the state. Key findings in college affordability, access and enrollment, and completion and success include:

- A postsecondary education is no longer affordable for many low-income students and their families in Illinois. A low-income family must now set aside approximately 2/3 of their total income for college.
- The cost of attending college in Illinois has far outpaced the amount of Monetary Award Program (MAP) grants available, which help make college possible, especially for students of color.
- Between 2011 and 2015, African-American student enrollment has declined dramatically (-25%), with the steepest declines seen in community college participation. African-American students are over-represented in community colleges and for-profit institutions, while Latino students are over-represented in community colleges.
- Illinois has the second highest net migration of college freshmen to other states' public colleges, a 70 percent increase over a decade.
- Socioeconomic and racial achievement gaps in the state are significant and have not decreased over time:
 - African-American students who start at four-year institutions complete at approximately half the rate of their White peers (33.7% vs. 66.4%).
 - Only 37 percent of low-income students complete college in six years, compared to 75 percent of their more affluent peers.

Mentoring Latino Students for College Success

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Access, Equity & Student Success

Jennifer C. Hernandez
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This case study examined a Student Success Scholarship (SSS) program implemented by a Latino nonprofit organization (LNPO) in 2013. The SSS program was designed to advance student persistence and retention through its model of providing financial assistance, networks of information for navigating college systems both on and off campus, and mentoring. Nine community college students served as the focus group for the qualitative research presented herein. By studying their interactions with the SSS program, we sought to learn: (1) What prompted these students to apply for the SSS? (2) How engaged were students with the SSS mentoring program? and (3) How did SSS mentoring support the students' college outcomes?

The theoretical framework for this case study is built upon Latino college success discourse and literature for mentoring college students. Esparza, and Colón (2008) found outcomes for Latino students who were supported by natural mentoring relationships (NMRs) to demonstrate positive academic outcomes, greater expectancy of success, and higher educational expectations.

Data was collected between 2013-2016 and included: 1) recordings of SSS students' interactions with the LNPO through its networking luncheons, leadership events, conferences, and one-on-one mentoring meetings; 2) biannual surveys distributed to SSS students for progress feedback; 3) observational field notes collected during LNPO events attended by SSS students to record interactions occurring between SSS students in attendance, SSS students and mentors, and SSS students and invited guests; 4) personal reflections obtained from SSS students about their college and mentoring experiences. Through triangulation of the data, we cross-referenced our sources to bring forward the diversity of our focus groups' experiences and perceptions during their community college trajectory.

Our data pointed to positive outcomes for focus group members whose participation was noted to be moderately to highly interactive with the SSS program's offerings. The NMRs that developed between SSS students and their mentors pointed to positive evidence supporting their degree attainment. Student data affirmed their SSS mentor played a critical role in learning how to gain access to information networks on and off campus. Presently, 66% of focus group members earned associate's degrees and have transitioned to a four-year university.

This study was prompted by statistical data pointing to low college attainment levels for Latino students in Illinois. We examined a SSS program model with a strong mentoring foundation. Our data affirmed a coordination of financial assistance, networks of information and professional mentors both on and off college campuses supported college success outcomes.

How Policy Can Help Reduce Inequality Through Better Attendance: Full vs. Half-day Prekindergarten

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University of Chicago Consortium on School Research

Growing literature suggests that attendance is a key indicator of students' success in school; students who attend school more have better test scores and grades (e.g., Gottfried, 2009) and are more likely to graduate high school (Allensworth & Easton, 2007; Rumberger, 1995). Recent research on pre-kindergarten (pre-k) students shows that attendance is similarly crucial—chronically absent pre-k students are more likely than regular-attenders to have lower kindergarten readiness skills, be chronically absent in future years, and be retained by third grade (Connolly & Olsen, 2012; Ehrlich, Gwynne, Pareja, & Allensworth, 2014). They are also more likely to be from low-income families, live with a single parent, and be racial/ethnic minorities. This is especially concerning because the impact of high absenteeism is more detrimental for high-risk students (Ehrlich et al., 2014; Ready, 2010).

Understanding contexts in which children are more likely to regularly attend school can inform future policy decisions aimed at reducing educational inequalities. In recent years, local policy changes in Chicago have increased the availability of full-day pre-k programming, particularly in neighborhoods identified as high need (i.e., high numbers of at-risk pre-k eligible students but low numbers of enrollment). Our analyses explore whether attendance differs in full-day versus half-day pre-k programs, and whether those findings hold for all students—in particular, students most at-risk of low attendance. One study links full-day pre-k to better attendance (Reynolds et al., 2014); the current paper extends this question to a more diverse sample enrolled in a broader set of pre-k programs, and addresses how policy changes around the availability of full-day programs is associated with changes in student attendance.

Administrative data from 2012/13-2015/16 from Chicago Public Schools provided information on roughly 24,000 pre-k students served each year. Over 80% of students are eligible for free/reduced-price lunch and more than 85% are Black (38%) or Latino (46%). Three-level HLM analyses nested students within time within schools. Models indicate (Table 1) that district-wide, attendance has improved over the last four years. Although overall Black students had worse attendance than students of other racial/ethnic backgrounds, the improvement over the years was largely accounted for by (1) increased enrollment of Black students in full-day programs, and (2) higher attendance rates for Black students in full-day compared to half-day programs. This holds even after controlling for background characteristics, such as poverty, English learner status, homelessness, gender, age, and special education status. This “benefit” of full-day was not significant, however, for Latino students.

With intentional policy efforts to increase full-day programming in neighborhoods with underserved populations, our findings show that: (a) there is increased enrollment in full-day among children most at-risk for low attendance and (b) these students have better attendance than their counterparts enrolled in half-day programs. Because attendance is related to learning outcomes, this as a critical step towards creating equitable opportunities for learning in the early years, providing better opportunities for Black, high-poverty students—who traditionally have lower attendance than any other racial/ethnic group—with programs that better meet their needs so they can be present to learn.

Increasing Pre-kindergarten Attendance: Supporting Data Use for Improvement

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University of Chicago Consortium on School Research

Previous research links pre-kindergarten attendance with attendance and academic performance in subsequent grades (e.g., Connolly & Olsen, 2013; Ehrlich, Gwynne, Pareja, & Allensworth, 2014). In one analysis, as many as 80 percent of chronically absent third graders were chronically absent for at least two years prior (Ehrlich et al., 2014). Pre-k attendance is an early warning indicator that can identify potentially at-risk students; however, relatively little is known about how schools use these data. Increasingly frequent calls for data-driven decision-making at all levels (federal, state, district, and school) make imperative an understanding of the conditions under which data-use routines can enhance school efforts to increase attendance, particularly during early childhood.

Previous research highlights a gap in evidence linking data use in schools to improvements in student outcomes, such as attendance (Weiss, 2012). In addition, the literature draws a key distinction between uses of data for research, improvement, and accountability purposes (Bryk et al., 2015). Prior studies suggest that organizational conditions, particularly the existence of structures and supports to socialize data use among staff are critical to data use for improvement (Weiss, 2012; Marsh, 2012; Daly, 2012). This paper explores how schools use student attendance data, focusing on the structures and supports associated with effective efforts to increase pre-k attendance.

The study draws on interview data from a larger mixed-methods study exploring school-based efforts to increase pre-k attendance in a large Midwestern urban district. This paper uses data from in-depth, semi-structured interviews with school staff (teachers, administrators, and staff; n=30) in five elementary schools selected for maximum variation on multiple variables, including location, racial composition, pre-k program type, and pre-k attendance rates/trends (three with pre-k attendance improvements in prior years and two that were stagnant). Interviews were transcribed verbatim and coded thematically to construct a detailed cross case comparative analysis.

Analyses highlight the importance of creating safe, transparent spaces within schools for staff to discuss and interpret attendance data collectively and, consistent with previous research, underscore the importance of developing mechanisms for acting quickly, consistently, and collaboratively on those data. Results also suggest that effective systems and structures to socialize and support data-use can also improve the quality of pre-k teachers' engagement with parents and families by reinforcing timely, regular, and solutions-focused communication between schools and families. Cross case comparison results suggest that strong structures and supports for socializing regular data use are associated with improvements in pre-k attendance over time.

Near universal calls for data use in schools, including recent changes to federal policy under ESSA, make tracking and addressing absenteeism, particularly during early childhood, a critical priority of school improvement efforts. These findings demonstrate the importance of creating regular systems and structures to socialize and support teachers' use of data to increase student attendance. Although pre-k attendance is currently not included in many state and district accountability policies, these findings suggest some key considerations. Holding schools accountable for increasing pre-k attendance seems relatively straightforward; however, these results underscore the complexity of creating the organizational conditions to support teachers' use of data in doing so.

Improving Teacher Preparation Policy and Programs: Building a High-Quality Teacher Workforce in the State of Illinois

Samantha Buck, Office of the Governor
and member of the National Governor's Association workgroup on teacher preparation in Illinois

This report was created in response to the reported teacher shortages throughout Illinois. The Illinois Governor's Office was awarded a grant to create a strategy for improving teaching preparation in the state to better address state need. The group analyzed data to gain a clear understanding of the landscape in Illinois and understand the variety of issues facing the teaching profession. Then, the group examined best practices from within the state and across the country targeted at addressing these specific issues. Using these best practices, the group created a set of recommendations targeted at various stages in the pipeline: recruitment, training, and career pathways. While none of these recommendations on its own is a silver bullet, the authors of this report feel that taken together the recommendations laid out in this report have the potential to improve the quality of teachers in Illinois and thus the outcomes of our students.

Supporting School Readiness Through Increasing Executive Functioning Skills

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The SIUE East St. Louis Kindergarten Readiness Camp was designed to help prepare those East St. Louis students who have not been able to participate in a high-quality early childhood program for kindergarten. The project focused on increasing executive functioning skills, through specifically planned activities. In this way, children learned skills that would not only help them in Kindergarten but throughout their entire schooling careers. We utilized the Minnesota Executive Functioning Scale to pre and post-test our students, and found that more than 50% of those that completed the camp had improved in regards to their executive functioning skills. Our hope is that by providing students with a curriculum that lets them practice and refine their executive functioning skills, they will be better prepared for school success than a sole academic focus.

Gender Bias in Teacher Interactions During Math Activities: A Framework for Video Data Analysis

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Gender-related disparities in math achievement and confidence pose a unique challenge that warrants further attention and understanding (Cimpian et al., 2016). Women are vastly underrepresented in high-level science, technology, engineering, and mathematics professions (Else-Quest et al., 2010). Research has indicated that this gender gap in math achievement is due to stereotype rather than actual gender differences in math ability (Else-Quest et al., 2010; Beilock, 2009). Teachers may use different verbal communication and interaction styles during mathematical activities with male and female students (Simpson & Linder, 2016). Teacher interactions with children during math activities should be examined for deeper understanding.

The purpose of this study was to develop a framework for describing teacher interactions with male and female students during math activities in preschool classrooms. Using video collected in urban Head Start classrooms, we created an instrument that combines qualitative and quantitative approaches to video data analysis to understand how the experiences of male and female students compare. Developing this framework is the first step in a longer-term project that will examine whether teachers interact differently with males versus females during math-related activities and if those differences have an impact on child math outcomes.

As part of a larger research study, lead and assistant teachers were asked to identify times when they planned to engage children in a teacher-led, intentional interaction around mathematics. Project staff then video-recorded these interactions from beginning to end. Approximately 160 teachers were video-recorded. We used a sub-sample of these videos to develop a coding system. The framework was created by first operationalizing the types of interactions we might expect to observe based on extant literature. Then, we watched a sub-sample of videos to refine our list of interaction types and record prevalent themes. Finally, we developed a rubric of qualitative descriptors of child behaviors that could be used for coding purposes.

Social Justice Curriculum for Elementary School Children

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Social justice education aims to empower children through fostering critical awareness of power and inequalities that impact children's lives and experiences, and through teaching social problem solving and advocacy skills so that students may learn to become agents of social change within their own communities. This paper describes a social justice curriculum that has been developed and implemented in a small private elementary school located in a socioeconomically and socioculturally diverse urban area. The curriculum focuses on promoting a global and multicultural critical perspective that is integrated throughout the academic curriculum and also focuses on teaching students social advocacy and social problem-solving skills. The curriculum is unique in that it focuses on children of elementary school age.

Positioning English Language Learners: The Role of Teachers and Instructional Pedagogy

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The study focused on the dynamics of classrooms in which the teachers interact with ELLs, with a specific focus on how teachers offer or limit opportunities for the students' participation in classroom activities. Utilizing the Positioning Theory and cultural relevant pedagogy framework, the study intended to examine classroom teachers' views of their roles with regard to English Language learners (ELLs), and investigate the relationship between their teaching approaches and the students' reactions and positioning of themselves in the classroom. Two research questions guided the study: 1. How do regular classroom teachers describe their roles with regard to ELLs? And 2. How do the teachers' pedagogical approaches relate to the ELLs participatory actions in the classrooms?

A case-controlled design was used to observe and interview three classroom teachers in in three grade levels; preschool, first grade and second grade. Data from field notes and interviews observations was analyzed descriptively using Spradley's (1980) taxonomy and Merriam's (1998) two stages of analysis: The within-case analysis – within the classroom and the cross-case analysis – with another classroom. The observation data were triangulated by the interview data. Data from interviews (teachers and students) were coded [open coding system (Strauss & Corbin, 1999) using Ladson-Billings' (1995) culturally relevant pedagogy that illuminated the teachers' roles and approaches and their attempts to meet the students' needs.

Results reported three findings: First, teachers' views of their roles varied based on their positioning of themselves as teachers for all students, as teachers for regular education students or as teachers for a single subject; second, the teachers' different approaches were related to the ELLs different levels of participation and their positioning of themselves as powerful or powerless students, and finally, the teachers' approaches need to focus on what are the ELL student's needs and how are they being met.

Using *The Hate U Give* to Promote Sustainable Literacy Habits with Secondary Inner-City Students

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Nationally, 37% of twelfth-graders assessed by NAEP achieved a score that indicates likeliness to be academically prepared for college. Out of that 37%, 48% of black students achieved a score of below basic on the reading assessment. The NAEP data shows that black students continue to struggle with literacy, which leaves educators questioning how to interrupt this data in light of the additional social struggles these students face as they move to environments governed by mainstream values. To get at these ideas and help students build sustainable literacy habits, we used *The Hate U Give* (Thomas, 2017), a young adult novel that examined contemporary racial issues with a focus on police brutality and accountability, identity, and social class, to gauge students' understanding of these issues and if and how they have experienced them personally, and to relate this potential self-relevance and relatability to their reading experience. In addition, we used their local knowledge as they revealed their beliefs about themselves, their experiences, and literacy in general.

Mentoring You Pilot Program

Carol Collum, EdD, Education & Business Consultant

Darcel Washington, Consultant

The purpose of this study will assist Mentoring You in evaluating the effectiveness of Bandura's Social Cognitive Theory and identify the best service delivery method of implementation for low-income inner city youth.

Mentoring You is a pilot program of 22 youth ages 5 through 12 that is focused on leadership development, life skills coaching, and mentorship which ultimately leads to reducing violent behavior. The program is conducted at the Maywood Park District once a week for 1.5 hours over a duration of 5 weeks.

The goal of Mentoring You is to transform the youth from the inside out while utilizing Social Cognitive Theory, which involves the process of human learning and behavior change (Bandura, 1986). Character education and learning about themselves and how to treat others are also major components of the program.

The methodology utilized during the sessions would include ice-breakers, open discussions and student-led dialogues, mentor-rich activities, professional development activities, role playing, and hands-on activities. The desired program outcome would be early exposure to students of character education and to increase awareness about violence prevention in a positive learning environment. Upon completion of this study, Mentoring You will conduct exit surveys to assist in the data collection process to assess the attainment of program goals.

Examining the Linguistics of Adolescent Mathematical Writing

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Regularly, in the popular and academic presses, is the need for “change” in Illinois’ educational system. Many people believe that the need for change is clearly stated though standardized test scores (NWEA, PARCC). For others, it is the long-term results of job acquisition. Whatever the perspective, one way to change education is by taking a current topic and looking at it through a different lens.

Mathematics is a written language. For the past 35 years, adolescent mathematical writing has been studied by mathematics educators, mathematics teachers, and/or mathematicians. As a result, a narrow definition of mathematical writing emerged, focusing only on the scripted words (Morgan, 1998). Seo (2015, 2017) expanded this definition to include symbols, nominalizations, and images. Symbols are markings on a surface that denote a meaning, and that meaning changes according to context (Harris, 1995; Rotman, 2000). Nominalizations are words that are highly condensed, such as geometric acronyms, with complex meanings (Billig, 2008; Lemke, 1995). Finally, images include anything that isn’t a symbol or nominalization (O’Halloran, 2008).

The purpose of this presentation is to look at a common activity in mathematics class, writing, differently. Instead of a mathematical lens, it is examined through a linguistic lens, focusing on the writing aspects as opposed to the mathematical aspects. Using writing samples from junior high school students (n=27), this presentation will focus on the lexicon, syntax, and diction of adolescent mathematical writing. Students were asked to complete mathematical writing prompts in English/language arts (ELA) and math classes. All students wrote differently for their ELA teachers than for their math teachers. In ELA classes, students used more scripted words, and in math class, students used more symbolic texts. Nevertheless, linguistically, all students conveyed the same meanings, even though the context changed.

The current pedagogy of math education isn’t reaching all adolescents. There needs to be a different way of approaching this content area. Many people, including mathematicians and mathematics teachers, will agree that math is its own language. With a language comes linguistics. For example, with the symbol “ $2X$ ” it can be a subject, predicate nominative, or predicate, depending on its context. If educators understand the linguistics of this language, then it should be able to be taught similar to other symbolic languages, such as Chinese. However, currently, it isn’t taught that way. Books on mathematical linguistics exist, but they focus on mathematical concepts and binary functions, not necessarily the written language itself.

Enable Computer Science for All in Chicago

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Don Yanek, Chair, Department of Computer Science
Andrew Rasmussen, PhD, CS4All Project Coordinator
Chicago Public Schools

With President Obama's announcement of CS4All in February 2016, there has been a surge in the number of districts that are planning for or newly implementing computer science (CS) offerings at their schools. Those districts at the beginning phases of implementing CS as an elective have not yet faced many of the hurdles they will need to surmount in creating equal opportunities for all students. The Chicago Public Schools (CPS) has surmounted many of these initial hurdles and has recently mandated CS as a graduation requirement for all students. The foundational course that meets the CPS graduation requirement is Exploring Computer Science (ECS), which is a curriculum and professional development program that was developed at the University of California at Los Angeles (UCLA). The Chicago Alliance for Equity in Computer Science (CAFECS) was one of the first programs to implement and sustain the ECS program outside of Los Angeles starting with a pilot during the 2011-12 school year. During the first year of policy implementation (2016-17), roughly 2/3 of the high schools successfully offered the requisite computer science. The remaining schools have until the 2019-20 school year to begin offering ECS by the time the first cohort graduates. In this poster, we examine the factors that enabled the initial growth of computer science in CPS and laid the foundation for the graduation requirement. Keys to the success of ECS growth prior to the graduation requirement were access to a high-quality curriculum and professional development program, strong university partnerships, and the development of teacher leadership. However, volunteerism only goes so far. While the schools that initially offered ECS prior to the graduation requirement generally reflected the demographics of CPS, those schools that had not yet implemented an ECS course in the first policy implementation year tended to be smaller and more likely to be on academic probation than schools that were offering ECS. The graduation requirement will ensure that ECS continues to spread to all high schools by focusing district resources where they are most needed and holding stakeholders accountable for implementing the graduation policy.

Reimagining Introductory Biology: A Pilot Study

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Illinois Mathematics and Science Academy

The Illinois Mathematics and Science Academy's (IMSA) Office of Institutional Research is currently conducting a pilot study to compare and contrast the effectiveness of a new, one-year introductory Biology course, Advanced Biological Systems (ABS), with the traditionally offered one-semester Scientific Inquiries-Biology (SI-Biology) course. The ABS course was designed to provide both educators and students with the time necessary to cover all required biology state learning standards while still pushing students to move past a one-dimensional view of science in their understanding of the field. The pilot study aims to identify whether the ABS course leads to better teaching and learning of complex biological concepts as well as improved student outcomes when compared with the SI-Biology course. In order to identify the impact of the course on subsequent outcomes, students in the Classes of 2020 and 2021 have been/will be randomly assigned to either the treatment (ABS) group or control (SI-Biology) group using a stratified, random sampling method. Students' outcomes and engagement will be assessed using a variety of measures. In addition, data on teacher practice—including weekly team meeting notes and teachers' observations—will be collected. Evidence and implications from the random assignment of the Class of 2020 will be presented as well as the current project status and future plans.

**Benchmarking Personalized Learning in Illinois:
A New National Survey of K-12 Instructional Practices**

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Tom Hoffer, Senior Fellow, Education and Child Development Studies
Michael McNicholas, Senior Study Director, Education and Child Development Studies
NORC at the University of Chicago

This poster provides an overview and preliminary findings from a new national survey of K-12 teachers focused on their use of personalized learning (PL). Objectives of the survey, conducted in June-July 2017 by NORC and the University of Chicago Survey Lab, were to collect data which can be used by state and local programs engaged in advancing PL to benchmark their efforts. In Illinois, Chicago Public Schools is developing PL programs in conjunction with PL program developer LEAP Innovations, and LEAP is also working with other Illinois districts. The benchmarking objective is relevant to other states and localities, as well, including several states with which the Center for Reinventing Public Education (CRPE) is currently working to build PL programs including a consortium of New England states, California, Colorado, Ohio, Texas, and Wisconsin. The national benchmarking study of teacher PL practice was developed by CRPE to support comparisons between their partner states (the New England consortium, CA, CO, OH, TX, and WI) and between those partners and the nation as a whole. The survey questions were adapted from a survey of teachers in PL schools that LEAP developed for its participant network in the Chicago area, and which reflects the LEAP Learning Framework (LEAP, 2016).

Supporting Ambitious Principal Preparation by Studying Principal Career Mobility Patterns

Kathleen Parkinson, Visiting Research Specialist
Samuel Whalen, PhD, Director of Research
Center for Urban Education Leadership
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The University of Illinois at Chicago Center for Urban Education Leadership (CUEL) works in partnership with the Ed.D. in Urban Education Leadership program to study school leader development and impact for the purpose of continuously improving how we deliver principal preparation. In response to studies that point to the negative effects of principal turnover on teacher retention and school performance, the CUEL has begun to study the mobility patterns of our Ed.D. program students to help them obtain a principalship, and persist in the principalship long enough to positively impact teacher and student outcomes. The purpose of this poster is to expand our first-time placement, tenure, and retention measures to include early career school leaders' first five post-residency employment years. We describe the placement and mobility patterns of four cohorts of residency completers with complete employment histories ($N = 69$). The first cohort was hired in the 2009-2010 school year, and tracked through the 2013-2014 school year. The last cohort was hired in the 2013-2014 school year, and tracked through the current 2017-2018 school year. We categorized residency completers by the number of positions they were employed in over first five post-residency employment years. We found that 29.0% of residency completers remained in the same position over the first five years of employment, 52.2% held two positions, 11.6% held three positions, 11.1% held four positions, and 2.8% held five positions. The average number of positions held was two. The majority of those who held two positions were hired as assistant principals, and then promoted to the principalship (61.1%). The average number of years spent in the first position across all cohorts was 2.67 years, versus 2.71 years in a second position, 1.33 years in a third position, and 1 year in a fourth position. The variation in five-year mobility patterns among persons based on gender, race/ethnicity, and age when hired in the first position will be further described in the poster. In addition, the poster will explore whether school characteristics linked to ethnicity and poverty bear on the number of placements and mobility patterns of early career school leaders over the first five years of post-residency employment.

The Impact of Social Media and Technology Use on the Social Skills of College Students: A Pilot Study to Inform Educators

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This research examines the effects of social media and technology use on the social skills of college-aged students, thereby impacting current and future productivity, disposition, and communication skills in educational and professional settings. The results of this study could provide valuable information relevant to employers and professors. The use of social media and technology has increased drastically in the last few years. Lenhart, Purcell, Smith, & Zickuhr (2010) reported that 67% of teens use social networking and 81% of adults ages of 18-29 report using the internet. There are many reasons students use social media and technology; examples include convenience, entertainment value, and socializing (Rideout, Foehr, & Roberts, 2010). Consequences of technology reliance include decreased face-to-face interactions coupled with social media usage, which may hinder social skills, an important component of academic learning and vocational achievement in teamwork and collaboration. This pilot study consisted of undergraduate and graduate students currently enrolled at Governors State University in Fall 2017. Participants completed an electronic survey on self-reported social skills and social media use. Data was analyzed quantitatively to examine the effect of technology use on the college students' social skills, as well as to explore the significance of several variables: gender, ethnicity, age, and major/program.

Creating a Talent Pipeline for the Bioeconomy in Illinois and Regionally

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This poster presentation will showcase a unique educational partnership, funded through an almost \$10 million grant awarded by the U.S. Department of Labor Trade Adjustment Agreement Community College and Career (TAACCCT) program, and striving to create a talent pipeline for the bioeconomy in Illinois and regionally. The mission of the Building Illinois' Bioeconomy (BIB) Consortium is to deliver a job-ready workforce to meet the needs of employers in the state and the region in the growing sector of the bioeconomy, while also connecting students to education programs that orient them towards careers with living wages and pathways out of poverty. Extensive research shows that there is a severe gap between the existing workforce and the needs of the companies across many sectors including the bioeconomy and related industries. As the United States continues to advance in the bioeconomy sector, current employers struggle to fill open positions, which hinders their ability to grow. Meanwhile, jobseekers might not be qualified to fill those positions and better their lives with high pay jobs, without acquiring additional education and gaining additional expertise. The BIB Consortium has strived to address these needs through programs integrating remedial education, stackable certifications, and hands-on training, as well as through targeted outreach to underprivileged and underserved populations in much need of education and training, thus providing a model for addressing the skills gap. The BIB Consortium is a partnership between a four-year university and four community colleges spanning the state of Illinois: Southern Illinois University Edwardsville (SIUE), Lewis and Clark Community College, Southeastern Illinois College, Lincoln Land Community College, and Carl Sandburg College. The BIB Consortium interrelated focus areas pertain to bioenergy and water, arguably the two most important economic issues of our times, and include bioprocess, bioenergy, drinking water and waste water treatment and plant management, restoration ecology, and agricultural watershed. The BIB Consortium encompasses short term programs leading to certificates, two year programs leading to Associate of Applied Science degrees, and possibilities of articulation into an innovative four-year program in Integrative Studies leading to a Bachelor's degree. Through the BIB Consortium, students are able to utilize case management, a combination of on-campus, hybrid, and online coursework, internships, and soft-skills training to prepare to meet the growing need for qualified candidates in the bioeconomy. Additionally, the TAACCCT grant has allowed the higher education institutions which have partnered through the BIB Consortium to pilot cutting edge approaches related to education and training, including career ladders, rolling enrollment, prior learning assessment (PLA), and earn and learn options. The TAACCCT grant also allows SIUE and its partner community colleges to start scaling up the innovative approaches to education and training developed, moving from a piloting stage into a well-integrated set of institutional practices. The poster presentation will feature the BIB Consortium's strategic partnership, flexible curriculum, portfolio of innovative education and training activities, and thinking forward towards sustainability. Furthermore, the presentation will outline the implications of this comprehensive approach to education and training implications for Illinois education policy.

U.S. Job Search of Chinese Students in Non-STEM, Non-Business Professional Master's Programs

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Understanding the needs and job search practices of non-STEM, non-Business (NSNB) Chinese students who desire to enter U.S. workforce is paramount, given the large number of Chinese students in U.S. higher education. Aiming to examine the challenges and opportunities, resources provided, and the best practices, this research incorporates artifact analysis, survey, and interviews. The study reveals the significance of U.S. education experience and previous working experience, the importance of leveraging bilingual and multicultural strengths in networking, and the increasing attention on the new immigration policies. It implicates that NSNB international students who aspire to enter U.S. workforce face more challenges than opportunities and need more guidance in their U.S. job search. Accommodating these students' need would potentially promote international students' enrollment.

Understanding the Landscape: Illinois Community Colleges and Registered Apprenticeships

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Illinois and the city of Chicago have some of the highest unemployment rates in the country for youth ages 16-19 and 20-24, and both lead the nation in Black youth unemployment (Cordova, Wilson, & Morsey, 2016; Ross & Svajlenka, 2016). Furthermore, based on 2014 data, in Chicago 16.4% of 16-19 year olds are employed, which is significantly lower than the national average of 28.8% (Cordova et al., 2016). Furthermore, only 12% of Chicago Black youth ages 16-19 and 41% of youth ages 20-24 were employed (Cordova et al., 2016). Unemployment among racial groups historically underserved only reinforces segregation of communities and greatly reduces the potential for social mobility. Specifically, in Chicago there is a striking relationship between communities that feature high proportions of Black, Latino, and low income individuals and high rates of unemployment among youth (Cordova et al., 2016). Therefore, perhaps paid career and technical education (CTE) apprenticeships could alleviate this inequity, as young people would be engaged in employment that applies to both their studies and career interests (Carnevale, Smith, Melton, & Price, 2015).

For this study, we conducted an environmental scan of community colleges in Illinois that partner with industry to establish CTE apprenticeship programs. CTE apprenticeships are an opportunity to earn a salary during supervised on-the-job training, while engaging in related academic instruction (e.g., complete coursework that includes math as well as verbal and occupation-specific content), and upon completion students earn an industry recognized credential (U.S. Department of Labor, n.d.). Using mixed methods approaches, the primary source of data for this study was a survey sent to all Perkins coordinators to understand the extent to which registered apprenticeships are currently integrated into CTE programs at Illinois community colleges. We then followed up this survey with interviews of Perkins coordinators who participated in the survey as well as any CTE faculty involved with supporting registered apprenticeships. The interviews helped identify factors that were perceived as either supportive or barriers to scaling up CTE apprenticeship programs.

According to survey responses, most registered apprenticeship programmatic offerings were in Manufacturing, with Architecture/Construction followed by Health Science as the second and third most offered. Also, community colleges indicated partnering mostly with Industry (75%) followed by non-profits, foundations, and/or community-based organizations (50%) to develop registered apprenticeship programs. However, community colleges were less likely to partner with state agencies (25%), K-12/secondary education (18.75%), unions (18.75%), and other community colleges (12.5%). The interviews suggest that industry partners play a significant role in the objectives and design of registered apprenticeship programs, with Manufacturing being the industry with the most apprenticeship offerings and employment opportunities. Also, the leaders we spoke to had a clearer sense of their enrollment and employment data, but did not consistently consider how demographic data could reveal what subpopulations (especially race/ethnicity) were underrepresented in their apprenticeship programs. Finally, a few of the community colleges have well established registered apprenticeship programs, yet, most who were interviewed indicated their institutions are still in the early stages of developing registered apprenticeship programs.

While apprenticeships may serve as an effective strategy for improving employment among youth, especially underserved youth, little is known about the extent to which apprenticeships are currently integrated into CTE programs in Illinois. This baseline study provides an environmental scan thoroughly designed to describe the utilization of CTE apprenticeships in Illinois and the CTE programs these apprenticeships are embedded in. Ultimately, this study will serve as a baseline for future research, by providing a clearer picture of existing usage of apprenticeships and illustrating the potential to scale up apprenticeships to improve youth employment prospects for underserved minority and low-income youth.

Interdisciplinary Educational Programming to Improve STEM Literacy Among First Generation College Students

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Matthew Feldmann, PhD, Owner and Principal Investigator

John Chick, PhD, Field Station Director, Great Lakes Field Station, University of Illinois

The Southern Illinois University Edwardsville Center for STEM Research, Outreach, & Education and Illinois Natural History Survey, University of Illinois Urbana-Champaign hosted an intensive (362 contact hours) and interdisciplinary research program for ten undergraduate students from throughout the United States in the summer of 2017. Funded by the National Science Foundation Research Experience for Undergraduates (REU) program (Award No. 1659633), the program's objectives include promoting scientific literacy and communication, critical thinking and STEM skills, and archaeological and ecological interdisciplinarity among first generation college students. Throughout the program, students gained practical experiences by conducting both archaeological and ecological field and laboratory research, with evening sessions designed to help the growth and confidence of first generation college students. The program culminated with students creating a research poster and presenting their work to local scholars. Using local rubrics considering both critical thinking and STEM understanding, self-administered competency surveys, and items from the National Assessment of Education Progress and the American Association for Advancement of Science, we found significant gains in nearly all identified program objectives. Students had significant growth in program specific content, STEM skills and discipline specific skills, STEM critical thinking skills, and scientific communication skills.

Examining the Ecology of Preschool Expulsion Decision Making

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In Illinois, the high and racially disproportionate rates of preschool expulsion led to the passing of SB1557 that prohibits expulsion in early childhood programs throughout the state. This legislation highlights the necessity to better understand this disciplinary practice and the actionable ways it can be prevented. When a child of any age gets expelled, the blame tends to be placed on that specific child and his/her potentially persistent and challenging behaviors. However, though the impact of ecological factors on children and their behavior is well accepted in the field, it is far less common that attributes of the teachers, classroom, or center are considered as contributors to severe disciplinary action. Using data from 130 Chicago teachers in early childhood settings, the current study seeks to broaden the lens of preschool expulsion by investigating teacher's perceptions of their contextual environments. More specifically, logistic regression models will be used to predict the likelihood of a teacher requesting expulsion based on their perceptions of their own emotional intelligence and depressive symptomology, the prevalence of challenging behaviors in their classroom, and their overall center climate. Preliminary findings speak to the role of depressive symptoms and center climate on teacher's expulsion requests.

Chicago Area Teachers' Perceptions of Parents: Possible Protective Factor for Preschool Expulsion

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Across the United States, rates of preschool expulsion exceed those in K-12 settings and little is known about antecedents of such disciplinary decisions. Studies in publically funded programs have shown that a teacher's perception of a child and knowledge of the child's family may be related to the risk of expulsion. The present study explores the transactional nature of the relationships between educators and families. Through a mixed-method design, this study explores how teachers' perceptions of, and approaches to their interactions with parents, is associated with their requests to children be expelled from their preschools. Specifically, research questions include: 1) Do teachers who tend to request expulsions differ from those who do not in their perception of parents; 2) in their experience of programmatic support working with parents; and finally, 3) Does the comparison of these groups yield differential themes around teachers' attribution of child behavior problems to parents and styles of engagement with parents? Teachers who have more negative perceptions of parents' and perceive less center support working with parents were more likely to request an expulsion in the past year. Qualitative comparisons yield differential themes around teachers' attribution of child behavior problems to parents and styles of engagement with parents between teachers who request expulsion and those who do not make such requests.

Perceptions of Non-Exclusionary Discipline Policy in Illinois

Diana Zaleski, PhD, Instructional Resource and Professional Development Director
Illinois Education Association

The Illinois legislature passed Senate Bill 100 (SB100 or Public Act 99-0456; 2015) as a reaction to the fact that Illinois reported higher gaps than the nation between the suspension rates of Black students and White students (U.S. Department of Education Office for Civil Rights, 2014). SB100 requires school districts to amend their local student discipline policies to eliminate zero-tolerance policies, and encourages school districts to implement preventative and non-exclusionary discipline procedures. This study proposes to examine the impact of SB100 after one year of implementation. To date, the results indicate that while many schools have not implemented this law with fidelity, there is evidence that Illinois teachers are receptive to learning about and applying proactive non-exclusionary discipline strategies.

Examining Teacher Responses to Teacher Evaluations

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Vanessa Gutiérrez, Research Analyst

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Eric Brown

University of Chicago Consortium on School Research

Recently implemented teacher evaluation systems have produced an influx of data and measures on teacher performance. While there is early evidence that teachers have the potential to improve their instruction under strong evaluation systems, there is little research on how evaluation systems and the data it produces translate into instructional improvement. Using interviews with 25 teachers in five Chicago Public Schools, we explore teachers' use of evaluation data and processes. We focus on the extent to which teachers find the evaluation system useful to their practice--including reports of what they find useful and for what purpose as well as identify factors influencing teachers' response to evaluation and their perceptions of value. These findings can help schools and districts better understand the conditions that impact whether and how teachers use an evaluation system; and hence how a teacher evaluation system can be used to improve instruction and student outcomes.

Training Teachers in Virtual Environments

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Although teachers have been trained in real classrooms for generations, Portner (2005) suggests that teachers need added support during their induction year, specifically in classroom management skills. Furthermore, Dieker, Hynes, Hughes, and Smith (2008) report that prospective teachers need more early and sustained experiences with children in the classroom. One way to provide these sustained and early experiences is in a safe, low-stress environment, which can be accomplished through Virtual Learning Environments (VLE). VLEs are rapidly demonstrating utility for expanding experiential learning for teacher candidates.

VLEs incorporate the coursework with “real life” situations in a simulated environment. These experiences offer safe, flexible, and appropriate training conditions to practice pedagogical skills. In these environments teacher candidates are coached and given real-time feedback, rather than after-the-lesson feedback. Additionally, in the VLEs there are avatars that are able to provide real-time responses, interruptions, questions, and answers. The research on VLE classrooms indicates that there is a nine second suspension of disbelief, in which the teacher candidates feel as though they are teaching in a real classroom rather than in a simulated classroom (Dieker, et.al., 2008).

The objectives of the study focused on the teacher candidates’ perceptions, growth, and reflections of a VLE experience. The experiences included virtual classroom simulations, in the moment coaching/feedback, and peer critiques. This type of environment has been shown to increase teachers’ confidence and proficiency on topics such as classroom management or instruction (Dieker et al., 2008). Therefore, the researchers of this study also used previous research to inform this study.

The theoretical framework used in this study focused on the trajectory of novice to expert behaviors of change through intervention studied by Patricia Sawyer Benner (1982). While the theory was originally used in the nursing profession, the foundations of the perspective are applicable to the virtual reality scenarios with future teachers. Through the use of the Dreyfus model (Dreyfus, 2004) that describes the trajectory of moving novice teachers to expert teachers through four levels, the virtual professional practice lab and simulations aim to create proficient and expert teacher candidates before interacting with “real” students in order to best serve students and teacher candidates.

In this qualitative study, two college courses integrated the use of the VLE to train teacher candidates and give them an opportunity to practice their pedagogical skills in a low risk environment. Each teacher candidate was given the opportunity to plan a lesson, implement the lesson in the virtual reality simulation, and receive feedback from the professor and peers. To analyze the effects and impacts of the VLE experience, surveys were distributed to students and qualitatively analyzed. The proposed presentation will share the process for integrating the VLE into the coursework and findings of the qualitative analysis.

Developing and Implementing a Competency-Based Credential System in Illinois

Stephanie Bernoteit, EdD, Senior Associate Director for Academic Affairs and P-20 Initiatives
Illinois Board of Higher Education

Joni Scritchlow, Senior Program Director
Illinois Network of Child Care Resource and Referral Agencies

Johnna Darragh Ernst, PhD, Professor of Early Childhood Education
Heartland Community College

Nancy Latham, EdD, Professor, Early Childhood Program
Illinois State University

This presentation will provide an overview of the development and implementation of a competency-based system supporting the attainment of industry-recognized credentials. Participants will gain information on the statewide partnership model, the innovative competency development approach, and how competencies are used as the infrastructure across a statewide professional development system. The poster presentation will support knowledge of how the novel, holistic competency-development and assessment processes are being used as an infrastructure within the statewide professional development system, supportive of seamless workforce development pathways. How key partnerships between state agencies and institutions of higher education contributed to competency-based system development and implementation will be shared.

Hiring and Retaining Illinois Early Childhood Educators: Results from a Statewide Survey

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Karen Yarbrough, Facilitator for Illinois Team
Innovation to Incubation

Stephanie Bernoteit, EdD, Senior Associate Director for Academic Affairs and P-20 Initiatives
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Research confirms, that more than any other variable, it is the adults that interact with young children that have the greatest impact on children's health, developmental and educational outcomes.¹ Both the science of early development and education and the continued growth of early childhood programs have resulted in increased attention on the Illinois early childhood (EC) workforce. The projected growth between 2014 and 2024 nationally for preschool teachers is 7%² and in Illinois it is 14%³. Many stakeholder groups, including the Illinois Early Learning Council (ELC) and the Governor's Cabinet on Children and Youth, are focused developing evidenced-based policies to increase and support a well-qualified and diverse EC workforce in Illinois.

To more accurately assess the need for qualified staff and identify the challenges related to hiring and retaining, the Illinois Office of Early Childhood Development (OECD) and the University of Illinois at Chicago College of Education collaborated to launch the Illinois Early Childhood (EC) Educator Supply and Demand Survey. The purpose of the survey was to examine the relationship between the Illinois supply of qualified EC teachers and assistants and the demand across targeted age ranges (e.g. infant toddlers vs. prek), program types (e.g. school based vs. child care and within child care – center versus family), and funding sources (PFA, CCAP, private tuition, and Headstart). The data is being analyzed to determine the gap between the demand and the supply for qualified EC staff and the relationship of various factors (e.g. compensation, geographical region, position, and qualification requirements) to the gap. EC administrator's perspectives and experiences related to recruiting, hiring, and retaining qualified staff was also included in the survey.

The survey was programmed on uic.qualtrics.com and a web-link was developed for online administration. Using listservs from Illinois Headstart, INCCRRA, ISBE, City of Chicago DFSS and CPS, and OECD the online survey link was sent to EC administrators responsible for hiring EC teachers and assistants across all sectors and funding streams. The survey was accompanied with a letter from Education Secretary Purvis. It was open between May 10, 2017 and June 7, 2017 during which more than 700 EC administrators responsible for hiring responded. The responses reflected both school-based preschool and licensed child-care programs and were geographically representative of the entire state.

It Really Does Take a Village: Preliminary Findings from Year One of the Illinois Early Development Instrument Pilot Project

Mark Nagasawa, PhD, Assistant Professor
Jaclyn Vasquez, Associate Director, Illinois Early Development Instrument Project
Cristina Pacione-Zayas, PhD, Director of Policy
Erika Gustafson, doctoral student
Carlos Lopez
Rebecca Halpern
Erikson Institute

This is the first public presentation of preliminary findings from the first year of the Illinois Early Development Instrument Pilot Project (EDI Pilot). The EDI is a population based measure used to learn about how kindergarteners in a community are developing within their neighborhood contexts (Janus & Offord, 2007). The EDI Pilot is a three-year intervention working with child-focused community collaborations to use data obtained with the EDI to inform their efforts to span systemic gaps that exist between programs focused on young children (such as Maternal and Child Health, child care, IDEA Part C, Head Start, etc.), elementary schools, and other community initiatives that are relevant to young children's well-being, later school performance, and life chances (e.g., neighborhood safety). The year one pilot communities are East St. Louis (ESTL) and the villages of Kankakee, Bradley, and Bourbonnais (KBB).

Illinois' Early Childhood Innovation Zones: A New Model for State Policy?

Bradford White, Interim Director
Illinois Education Research Council

Leah Pouw, Director of Community Systems Development
Illinois Action for Children

This presentation details the IERC's recent evaluation of efforts made by Illinois Action for Children to spur experimentation with systemic change strategies to increase the number of Illinois' most vulnerable children enrolled in high quality early learning programs. Funded by a Race to the Top-Early Learning Challenge grant, the Innovation Zones initiative supported capacity building efforts in 11 underserved Illinois communities. The initiative targeted improvement strategies for two primary outcome measures: 1) enrolling and serving more children (birth to kindergarten) from priority populations in early learning programs; and 2) increasing the number of early learning programs participating in the state's quality rating and improvement system.

Over the duration of the grant, zones obtained modest gains in enrollment overall and quality ratings increased across all zones and within each zone. This initiative marks a new approach to delivering statewide education policy allowing communities to develop context-sensitive strategies and promoted creative solutions to common problems in the early childhood system.

Shifting a Financial Desert to a Financial Oasis - Perceptions from the Head Start Community about the ASSET Financial Education Program

Jami Curley, PhD, St. Louis University

Anne Robertson, PhD, University of Denver

Poverty undermines the well-being of many families with young children and has been particularly detrimental since the Great Recession. Financial education and asset building opportunities, integrated into social services, may help families overcome these barriers and achieve financial well-being.

This study reports results from a 3 year long evaluation of the ASSET project. The longitudinal mixed-methods approach included Head Start parent participants and Head Start staff participants. Results show gains in financial knowledge, financial attitudes and financial behavior, subsequent to participating in the intervention. Reflections from administrators suggest that involvement in the ASSET program was shifting the cultural context within HS from a “financial desert” where financial goals and resources were rarely discussed to a “financial oasis” culture where money management is being openly discussed.

A Machine Learning Approach to the Identification of Students in Need and its Implementation in a Northern Illinois School District

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School District U-46

Steven Smith, PhD, Data Scientist
Hoonuit, LLC

Early Warning Identification Systems (EWIS) that provide advanced warning about which students need additional support have become increasingly popular within many school districts throughout the country. However, these systems can vary greatly in terms of accuracy in limiting over- and under- identification. This result causes a mismatch between resource allocation and student need.

This paper presents a machine learning approach to Early Warning Identification System (EWIS) development and its implementation in a medium-sized school district in Northern Illinois. Using a cohort panel of data consisting of 2,755 students over five years, a variety of machine learning algorithms (in addition to logistic regression) were specified to predict the likelihood of on-time graduation. The resulting Area Under the Curve (AUC) from a ROC analysis was used to select the model used for estimating the likelihood of on-time graduation for current 9-12th grade students. Careful consideration was also given to the rate of misclassification at all coordinates of the AUC and the calibration of the probabilities.

Once probabilities were generated for current students, the school district examined the distribution of the probabilities along with considering the ROC output data. Because all students had probability estimates of their likelihood of on-time graduation, cut scores were developed based on students' relative risk which coincided with the district's existing RTI/MTSS framework.

Findings suggested that machine learning and regression approaches can accurately predict on-time graduation for students at 9th grade or earlier, but one doesn't necessarily always outperform the other. Moreover, findings also showed support for Kuhn & Johnson (2016) in that it is generally advantageous to fit a wide variety of well-researched and well-tuned algorithms rather than fitting several algorithms of the same type (i.e., bagging, boosting, and tree models rather than all being tree-based models). Finally, practitioners have given initial positive feedback regarding accuracy, clarity, and the ability to determine the relative risk of students within an RTI/MTSS framework.

This session will cover a variety of topics on machine learning, such as data splitting and estimating performance, data pre-processing, resampling, model training and tuning, comparing models, and finally but perhaps most importantly – turning output into action. School administrators and practitioners will leave with the knowledge and resources to determine which type of EWIS may be best suited for their students, as well as how the data can be used to make decisions on actual students. Those in academia will leave with additional ideas and resources on the application of Machine Learning within applied predictive modeling and the educational domains.

An Examination of Future Orientation and Self-Efficacy in Young Adolescents At Risk

Denice Love, Millikin University,

Brittany Acree

Rachel Dick

Decatur Public School District

Many schools struggle with how to help their adolescents at risk of failure. This study looked at the efforts of one innovative middle school and analyzed what they might already be doing that was effectively supporting these students. In addition, data was collected to gauge the *future orientation* and *self-efficacy* of their adolescents at risk, as the literature suggests that these two constructs are highly correlated with school success for adolescents. We found that the Project-Based Learning, Academic Support Program, and Peer Mentoring the school was already implementing were all effective ways of helping at-risk students to achieve more. We also found that, while most of these at-risk students had a vision for their future which often included college, and tended to describe themselves as confident in their abilities to “realize their dream future”, these struggling students rated themselves relatively low in self-efficacy when it comes to the factors that are most critical to academic success. Commonly referred to as Executive Function skills, studying for tests, managing time well, getting help when they needed it, and completing homework, were all areas where the students lacked confidence in their abilities. In other words, these struggling students were likely to be very confident in their abilities to achieve their dream future, but not nearly as confident in their abilities to complete the very tasks that will help them do so. Given the importance of these Executive Function skills, we provide suggestions for how this school and others might provide explicit instruction and practice with the skills that could influence the ability of adolescents at risk to successfully realize their dream futures.

Sharing The Classroom: A Professional Development Opportunity for Teachers and Social Workers

Anne Robertson, PhD, University of Denver

This paper examines the impact of a program based on positive youth development and social emotional learning (SEL) principles in two high poverty urban middle schools. The program uses a service learning pedagogy to put these principles into practice, where students have the opportunity to design and implement projects that matter to them or their communities. Adults, in this case masters of social work (MSW) students and licensed social workers, provide positive mentorship as program facilitators, sharing the classroom with the teacher to implement the program for students, weekly, for an entire academic year. A longitudinal mixed-methods design was implemented and qualitative data analysis yielded unexpected results associated with the professional development of teachers and social workers involved in the program. Data suggests that participation in weekly program sessions for students contributed to positively shifting adults' perceptions of students, and expanding the repertoire of SEL associated classroom management strategies which, in turn, over-flowed into other areas of the school culture. This case analysis proposes a theoretical shift to applied interdisciplinary professional development that incorporates SEL strategies implemented in the classroom and through service learning as part of a comprehensive program.

An Immersive Collaborative Approach to Principal Internships

Maureen Kincaid, EdD, Education Department Chair
Kathleen King, Assistant Professor, Education
Kathy Black, EdD, Assistant Professor, Education
North Central College

The purpose of this inquiry is to identify best practices associated with implementation of the State principal internship requirement. Specifically, this study focuses on a principal preparatory institution involved in the 2013 US Department of Education leadership grant awarded to the Center for the Study of Education Policy: the Illinois Partnerships to Advance Rigorous Training (IL-PART) grant. This heuristic study focuses on the implications of partnering with a high needs district in implementing a full-time immersive administrative internship, specifically regarding candidate recruitment/screening, mentorship, supervision, and assessment support.

Principals Leveraging Instructional Leadership Teams for Ambitious Instruction

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Scholars and practitioners in educational leadership are increasingly understanding how successful principals are achieving and sustaining improvements within schools. Principals who are making demonstrable changes in their schools, *and sustaining them over time*, are combining elements of transformational and instructional leadership to gain deeper understandings of systemic problems affecting their schools (Marks & Printy, 2003; Leithwood & Sun, 2012). This is primarily achieved by implementing clearly articulated, organizationally shared educational values through complex, context-sensitive, “layered” strategies that are progressively embedded in the schools’ work, culture, and achievements (Day, Gu, & Sammons, 2017). Principals cannot do this work alone and must harness the potential of teacher leaders. However, the literature on how principals build and leverage teacher leaders to advance ambitious school improvement is underdeveloped (Stosich, 2017). In this paper, we explore the organizational strategies and granular leadership moves principals make to advance teacher leadership through the affordances of ILTs.

Piloting Comprehensive School Leadership (CSL) Hubs as a Collective Approach to Strengthen School Leadership

Erika Hunt, PhD, Illinois State University

Over the last year, a 33-member Advisory Committee met and identified three key strategies based on survey findings and a review of the research and national models of best practices. Through this, the Comprehensive School Leadership (CSL) Hubs were conceptualized including a mission statement, key strategies with indicators, and the recruitment of four “pilot ready” sites. Comprehensive School Leadership Hubs are designed to “serve as a regional/local connection point that brings the schools, universities, and communities together to attract, place, support, and retain school leaders that are well trained to meet the needs of the whole child within a culturally responsive context that maximizes regional resources, builds regional capacity, and creates a highly successful, sustainable leadership pipeline.” This presentation will share information around the CSL hubs and the three key strategies that will fulfill their main purpose.