

**NO CHILD LEFT BEHIND ACT (NCLB):
IMPROVING TEACHER QUALITY STATE GRANT PROGRAM
FISCAL YEAR 2010 GRANT ALLOCATION**

Submitted for: Action.

Summary: This item recommends approval of 10 grants for the No Child Left Behind Act (NCLB)– Improving Teacher Quality State Grant Program. This federally funded grant program is authorized under the NCLB Act of 2001. The NCLB - Improving Teacher Quality (ITQ) State Grants are provided to eligible partnerships comprised of Illinois colleges and universities and high-need Illinois public school districts.

Program Purpose:

- Improve long-term student achievement in core academic subject areas, primarily mathematics and science.
- Increase the number of highly qualified teachers in the classroom and highly qualified principals and assistant principals in schools.
- Develop an environment of collaboration among P-12 school districts and universities and their units that prepare teachers and school administrators.
- Improve teacher and principal quality through research-supported innovation in teacher and principal preparation programs.

Program Benefits:

- Supports partnerships that improve teachers' knowledge of subjects they teach and improves the abilities of higher education institutions to prepare quality teachers for our schools.
- Enables students to meet the Illinois Learning Standards in core academic subject areas and teachers to demonstrate the skills, knowledge, and traits of highly qualified teachers.
- Supports activities designed to increase administrator knowledge of instructional and curricular leadership.
- Enhances assessment of learning and teaching at all levels.

Action Requested: That the Board approve the allocation of \$2,950,997 in NCLB - ITQ State Grants to 10 partnerships specified in this item.

STATE OF ILLINOIS
BOARD OF HIGHER EDUCATION

**NO CHILD LEFT BEHIND ACT:
IMPROVING TEACHER QUALITY STATE GRANT PROGRAM
FISCAL YEAR 2010 GRANT ALLOCATION**

Background/Importance

Since fiscal year 2004, the Illinois Board of Higher Education (IBHE) has awarded competitive teacher and principal professional development grants to eligible partnerships comprised of colleges and universities and high-need public school districts located across the State of Illinois. A major change instituted in fiscal year 2007 was the requirement of an external evaluation jointly agreed to by the project directors and the Board of Higher Education. Grantees were asked to allocate funds for the evaluation and dissemination of their project's outcomes. The importance of improving teacher quality was emphasized by President Obama in his speech on education before the Hispanic Chamber of Commerce on March 10, 2009:

"To complete our race to the top requires the third pillar of reform — recruiting, preparing, and rewarding outstanding teachers. From the moment students enter a school, the most important factor in their success is not the color of their skin or the income of their parents, it's the person standing at the front of the classroom."

**Purpose of the NCLB Improving
Teacher Quality State Grant Program**

The Improving Teacher Quality State Grant Program (ITQ), authorized under Title II, Part A, of the No Child Left Behind (NCLB) Act of 2001, supports professional development and teacher and school leader preparation activities across all core academic subject areas to assist schools in increasing the academic achievement of all students through the preparation of highly-qualified teachers and school leaders. Partnerships made up of institutions of higher education and high-need school districts provide professional development aimed at improving and increasing teacher and school leader knowledge in core academic areas. Partnerships focus on effective, scientific research-based instructional strategies aligned with the *Illinois Learning Standards* for core academic subject areas and the *Illinois Professional Education Standards*.

ITQ Partnerships Support the Public Agenda

The ITQ grants directly support Goal One of the Public Agenda For College and Career Success - *Increasing educational attainment to match best-performing U.S. states and world countries*. The ITQ grants will help to eliminate the achievement gap by providing high-quality professional development to teachers in high-need school districts, thus improving student achievement. Illinois, like the nation, suffers a significant and enduring disparity in academic achievement and educational attainment affecting racial and ethnic minority students. Students

suffering from the achievement gap – predominantly students of color – will make up the largest segment of Illinois’ population growth over the next two decades.

Eligible Applicants

As defined by the U.S. Department of Education, applicants eligible for ITQ grant funds must be partnerships comprised of, at a minimum:

- An approved public or private institution of higher education and the division of the institution that prepares teachers and principals;
- A school of arts and sciences, and;
- A high need Illinois public school district. A high need public school district is defined as a school district that (a) serves not fewer than 10,000 families with incomes below the poverty line, or for which not less than 20 percent of the children served by the district are from families with incomes below the poverty line; and (b) for which there is a high percentage of teachers not teaching in the academic subjects or grade levels that the teachers were trained to teach, or for which there is a high percentage of teachers with emergency, provisional, or temporary certification or licensing.

Funding Priorities for Grant Applications

Priority consideration is given to proposals that target one or more professional development opportunities for:

- Low performing, “high-need” schools;
- Professional development aligned to state standards;
- Projects that help to provide middle and high school mathematics and science teachers with the tools and knowledge needed for students to meet the standards in order to be prepared for college-level mathematics and science courses;
- Teacher recruitment and/or induction activities;
- Projects that increase access for teachers and students from historically underrepresented and underserved groups, and;
- Professional development linked to student achievement.

Annual Symposium and Informational Meeting

The IBHE staff, along with NCLB consultants from Illinois State University, hosted a symposium in Bloomington on November 17, 2009. The theme of the symposium was “Effective Professional Development Resulting in Long-Term Student Achievement.” The agenda included a discussion of state strategy and policy issues. The annual symposium gives project teams an opportunity to share lessons learned with other partnership throughout the state. Partnerships participated in three facilitated breakout sessions in the morning. Those sessions were titled:

- Partnership Structures;
- Effective Professional Development; and
- Evaluation to Sustain Long-Term Student Achievement

In the afternoon session, staff provided an informational meeting to give an overview of the new RFP. The new RFP was developed using a new format modeled and aligned after the

federal *Race to the Top* grant program administered by the US Department of Education. As with *Race to the Top*, the ITQ RFP demands rigorous evaluations and focuses on effective professional development resulting in measureable student achievement gains.

Dr. Paul Vogt explained the importance of designing a quality evaluation plan and logic model. A logic model helps document the school/university relationship and documents how each partnership represents a coherent, systemic set of processes likely to make a difference in teacher quality that is both demonstrable through evaluation and sustainable over time. A walkthrough of the entire RFP followed and time was allocated for questions.

Review Process for Grants

All 19 applications were reviewed by IBHE staff, NCLB consultants, and two out-of-state reviewers with extensive knowledge of the ITQ program. Once all projects were individually reviewed, a consensus review was convened to discuss the strengths and weaknesses of each project and a consensus team score was assigned for each ITQ project. After the consensus review, follow-up teleconferences were scheduled with some projects to clarify specific project goals and objectives. These follow-up teleconferences were very beneficial and helped to clarify some outstanding issues perhaps not clearly described in the proposal. All projects were reviewed based on the following review criteria published in the FY2010 Application:

- **Collaborative Planning:** How well does the proposal provide clear evidence of involvement by all partners, including teachers, administrators, and institutions of higher education, in the collaborative design of the Improving Teacher Quality State Grant Program project?
- **Need for Professional Development:** How well does the proposal provide clear evidence of the K-12 school students' and educators' need for professional development?
- **Eligible Project Activities:** How well does the proposal clearly explain how the professional development activities can produce long-term, systemic change and include goals, objectives, and activities that reflect a program of sufficient duration, size, scope and quality that, if implemented, will yield improvements in teaching and learning? Does the proposal explain how the professional development activities are based on research and proven to increase student achievement?
- **High Priority Activities:** How well does the proposal incorporate appropriate elements to address the high priority considerations?
- **Evaluation Process:** How well does the proposed evaluation process assess the effectiveness of the activities in relation to the stated goals and objectives in producing improvements in teaching and learning? Is a reputable external evaluator identified?
- **Budget:** How well does the proposed budget reflect cost-effectiveness and demonstrate consistency with the scope of the proposed objectives and activities?

Project Monitoring

The IBHE staff, along with external consultants paid with NCLB administration funds, will monitor fiscal and programmatic activities throughout the year. As was done in 2009,

partnerships are provided with technical support and suggested interventions throughout the year as part of the grant monitoring process.

An initial orientation meeting will be scheduled for April that will include key project team members and the external evaluator to refine evaluation plans. Throughout the year, site visits in the field will be scheduled to study how the partnerships impact student achievement.

Summary

Each of the partnerships recommended for funding in Table 1 provides high-quality, research-based professional development aimed at improving teacher quality, the academic achievement of elementary and secondary students across Illinois, and teacher preparation programs across the state. While these NCLB grants can support professional development across all core academic subject areas, the majority focus on professional development for teachers of mathematics and science, areas of identified need throughout Illinois. Accompanying this item as Appendix A is a listing of more detailed information for each partnership recommended for funding. This information was provided by each project director.

The informational items include:

- Lead Institution
- Project Title
- High Need School District
- Partnership Members
- Core Academic Areas
- Grade Level
- Grant Amount
- Project Director
- Project Synopsis

The staff recommends the adoption of the following resolution:

The Illinois Board of Higher Education hereby allocates fiscal year 2010 grants totaling \$2,950,997 for the No Child Left Behind - Improving Teacher Quality State Grant Program to the institutions specified and in the amounts shown in Table 1. In the event that funds are not requested by a partnership in their entirety, the Executive Director shall have the authority to re-allocate funds to another partnership.

Table 1
ILLINOIS BOARD OF HIGHER EDUCATION
NCLB - IMPROVING TEACHER QUALITY STATE GRANT PROGRAM
FISCAL YEAR 2010 - PROJECT ALLOCATION

Board Item #	Lead Institution(s)	High-Need District Partner Districts	Project Title	Recommend Amount
1	DePaul University	Chicago Public Schools Alcott High School Chicago Vocation Career Academy Notre Dame High School for Girls	Content-Focused Professional Development with Lesson Study	\$296,429
2	Loyola University Chicago	Chicago Public Schools (Area 10)	Supporting Middle Grades Science Professional Development in CPS Mathematics	\$290,609
3	Northeastern Illinois University	J. Sterling Morton (District 201) Morton East High School Morton Freshmen Center Morton West High School	PASAS Plan for Academic Success for All Students	\$298,847
4	Northern Illinois University	Rockford Public Schools (District 205) Auburn High School Guilford High School Jefferson High School Rockford East High School	Promoting Achievement through Literacy Skills (PALS)	\$276,000
5	Roosevelt University	Chicago Public Schools Chalmers Elementary Dumas Elementary	Differentiating Prof. Dev: A Data Driven Model for Literacy	\$295,251

Table 1 (continued)
ILLINOIS BOARD OF HIGHER EDUCATION
NCLB - IMPROVING TEACHER QUALITY STATE GRANT PROGRAM
FISCAL YEAR 2010 - PROJECT ALLOCATION

Board Item #	Lead Institution(s)	High-Need District Partner Districts	Project Title	Recommend Amount
6	SIU - Carbondale Illinois State University	Anna and Cairo Carbondale, Carterville Carterville, Dongola, Eldarolo Harrisburg, Murphysville Sparta, Vienna	Southern Illinois Partnership for Achievement in Math & Science	\$298,936
7	SIU - Carbondale	Cairo Murphysboro, Meridian Steelville Emmanuel Chester St. John's Lutheran Learning Technology Center VI South St. Mark's Lutheran	RAMPD UP: Rural Access to Math Prof. Dev.: Unparalleled	\$298,989
8	SIU - Edwardsville	Centralia and East St. Louis 40 public schools 2 charter schools 14 private schools	Students Learning Science through a Sustained Network of Teachers	\$299,000
9	St. Xavier University	Chicago Public Schools - Area 2 5 Elementary Schools Blaine, Breneman, Clinton Disney and Stockton	Developing 21st Century Critical Thinking Skills	\$297,942
10	University of Chicago	Chicago Public Schools Donoghue North Kenwood Oakland	Teacher Leadership for Elementary Mathematics and Science	\$298,994
Total New Projects				\$2,950,997

APPENDIX A

ILLINOIS BOARD OF HIGHER EDUCATION

**Fiscal Year 2010
No Child Left Behind
Improving Teacher Quality State Grant Program**

Partnership Profiles

April 6, 2010

Lead Institution: DePaul University

Project Title: Content-Focused Professional Development with Lesson Study

High Need School District: City of Chicago School District 299 (Chicago Vocation Career Academy and Alcott High School)

Partnership members: Notre Dame High School for Girls and Consortium on Chicago School Research (CCSR)

Core Academic Area(s): Math & Science

Grade Level(s): High School

Grant Amount: \$296,429

Project Director: Dr. Akihiko Takahashi
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Project Synopsis: The proposed project is a three-year effort between DePaul University’s School of Education and Mathematical Sciences Faculty to help high school teachers in Chicago improve mathematics instruction and boost student achievement. The project involves sustained, intensive collaboration with teachers from two Chicago Public high schools, but include, activities designed to reach other teachers as well, and to impact district policy.

The project addresses both teacher knowledge—of math curriculum, content and pedagogy—and teacher expertise—their ability to use their knowledge to create and teach effective lessons. Teacher knowledge is addressed through workshops during the summer and school year; teacher expertise is addressed through lesson study, a process through which teachers design, test, and reflect on lessons together, and thereby help each other learn new approaches to teaching and new insights into student learning.

The primary goal of the project is to increase the number of students who pass Algebra in 9th grade and eventually meet state standards on the PSAE in 11th grade. The intended outcomes for teachers include a deeper and broader knowledge of math curriculum, content, and pedagogy encompassing high school and elementary mathematics; a common vision of mathematics teaching and learning; a greater quantity of collaborative around solving the problems of teaching; and more effective classroom practices. For high school administrators, the project aims to strengthen their commitment to supporting teacher collaboration around solving instructional problems.

Teachers and administrators outside the project will have opportunities to observe lessons developed by teachers in the project and participate in discussions. These experiences enable them to learn from the work of the teachers in the project while simultaneously learning about the lesson study approach to professional development. On the university level, results and materials from the project will influence future pre-service and in-service teacher programs.

Lead Institution: Loyola University of Chicago

Project Title: Supporting Middle Grades Science Professional Development in CPS

High Need School District: Chicago Public Schools Area 10

Partnership members: Loyola University Chicago School of Education and Loyola University Chicago College of Arts and Sciences

Core Academic Area(s): Science

Grade Level(s): Middle School

Grant Amount: \$290,609

Project Director: Dr. Rachel Shefner
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Project Synopsis: This project is in response to an RFP from the Illinois Board of Education for the FY2010 ESEA Improving Teacher Quality State Grant Program. IBHE “intends to fund projects that provide research-based professional development for in-service teachers in “high need school districts” with measurable outcomes that include student achievement gains.” The project we propose will continue and expand current work being done in middle grades science by providing professional development for in-service teachers to facilitate and support expert implementation of research-based curricula in middle grades classrooms while enhancing alignment to state standards in order to improve student achievement. Loyola University Chicago’s Center for Science and Mathematics Education (LUCSME) will carry out this project in partnership with CPS Area 10 schools.

The LUCSME has been a major player in providing professional development for CPS middle grades and high school science teachers since the Center’s inception in 2002. Two of our current CPS projects, the SEPUP Implementation Center and the Cluster 4 Middle Grades Project (C4MGP) relate directly to the current proposal. In partnership with CPS OMS staff, LUCSME has coordinated and facilitated professional development for sixth-eighth grade science teachers in the implementation of the Investigating Earth Systems curriculum for sixth grade and the Science Education for Public Understanding Program for seventh and eighth grades since 2003. Since FY2006 we have partnered with CPS, UIC, the Chicago Community Trust and the MacDougal Family Foundation in enacting the C4MGP, which includes management of university instructional coaches, IES and SEPUP professional development, and providing courses for teachers to obtain their science endorsement.

In the project, teachers in selected Area 10 schools (selection will be done in collaboration with the Area 10 CAO, Isabel Mesa-Collins, and other Area 10 staff) will receive professional development of two types. One type of PD is centered around the middle grades research-based science curricula

(SEPUP, IES) and includes pedagogical approaches and some content. Findings by the CCSSO from a cross-state analysis of mathematics and science teachers in 14 states confirm that long-term professional development which focuses on both content and pedagogy yields significant effects (Blank, RK, N de las Alas and C Smith, 2008). Teachers also will receive in-school support from an instructional coach in order to assist with curriculum implementation and content support. Over time, expert curriculum users from Area 10 will be trained to deliver PD.

The other type of PD is centered around school and area-level collaborative sessions in which teachers will analyze their own classroom practices (content covered, time on topic, cognitive demand, instructional practices) and compare the alignment of their classroom practices to state standards and assessments, and to student achievement data. This analysis is facilitated through use of the Survey of Enacted Curriculum (SEC) (Blank, RK, A Porter, and J Smithson 2001). The SEC data have been used in a number of urban school districts as a tool for improving instruction through a series of collaborative data analysis discussions between science teachers, principals and district leaders (Blank, RK and Hill, S 2004). The middle grades curricula have been coded for the SEC, which will greatly enhance the utility of this exercise in that the alignment between classroom practices and state standards will be readily apparent, and needed instructional adjustments can be easily determined.

The project will provide needed professional development on both teacher and school-based level as well as provide expert guidance in using data to improve instruction, which will work toward the long-term outcome of improving student achievement in middle grades science.

Lead Institution:	Northeastern Illinois University
Project Title:	PASAS Plan for Academic Success for All Students
High Need School District:	J.S. Morton High School District 201
Partnership members:	J.S. Morton East High School and Freshman Center and J.S. Morton West High School
Core Academic Area(s):	English
Grade Level(s):	High School
Grant Amount:	\$298,847
Project Director:	Dr. Mary Massie Senior Literacy Specialist, Chicago Teachers' Center Northeastern Illinois University 770 N Halsted, Suite 420 Chicago, IL 60642-5972 (312) 563-7138 m-massie@neiu.edu

Project Synopsis: The Plan for Academic Success for All Students (PASAS) is a teacher professional development project. The goal of this project is to improve teacher knowledge and use of English and Social Studies content and research-based instructional strategies coupled with classroom-based support for implementation of new learning and active participation in professional learning teams. This will lead to improved student achievement as measured by college-readiness benchmarks. The main professional development activities in the project design include:

- English and Social Studies content seminars aligning with ILS/Common Core.
- Training in research-based instructional strategies and differentiated instruction.
- Classroom-based coaching to connect new learning to practice.
- School-based horizontal and vertical teams to connect learning to practice.
- Cross-disciplinary literacy teams to collaborate and review teacher observations and student work.

The outputs from the activities include:

- Improved teacher instruction, with increased integration of research-based strategies, and differentiated instruction.
- Alignment of units, curriculum maps, and common local assessments with standards.
- Demonstrations of standards-aligned lessons and units, including showcases and walk-throughs, by and for teachers.
- Resource toolbox of units, lessons, best practices and assessments for dissemination digitally and via publication.
- Ongoing formative and summative assessments of student and teacher growth.
- Foster and maintain a network of educators committed to improving teaching and learning.
- Disseminate work, resources, and research findings of project processes and results regionally and apply them to other departments internally.

The anticipated systemic change is:

- Improved, standards-aligned, differentiated classroom instruction in English and Social Studies with ongoing professional learning teams maintaining and extending improvements, leading to improved student achievement in classrooms and on state and national college readiness benchmarks.

Lead Institution: Northern Illinois University

Project Title: Promoting Achievement through Literacy Skills (PALS)

High Need School District: Rockford Public School District 205

Partnership members: Northern Illinois University College of Visual & Performing Arts and Northern Illinois University College of Health & Human Sciences

Core Academic Area(s): All

Grade Level(s): HS Teachers

Grant Amount: \$276,000

Project Director: Dr. Connie Fox
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Project Synopsis: Rockford District 205 has identified inadequate literacy skills as a major cause of low student achievement in all subjects at the District's four high schools. Northern Illinois University (NIU) will join the District in establishing a professional development program that ensures every high school teacher is highly qualified and that enables high school teachers in all subject areas to raise student achievement by improving their content knowledge and their ability to integrate literacy instruction into their teaching. The PALS project also will strengthen the leadership skills of principals who guide the implementation of changes in their schools.

Design of the PALS project. An executive-level coordinating committee will oversee all activities. Teams in each high school will implement activities, and an NIU Collaboratory will direct redesign of teacher preparation programs. With a consistent focus on increasing student achievement, this project's primary strategy is to offer intensive, sustained professional development to teachers and principals that will lead to improvements in instruction and school leadership. Improvement plans developed at the district level and at each high school will drive project activities. Improving reading is the number one priority in these plans, so professional development activities will center on integration of literacy instruction across the curriculum. An expansive 21st Century Skills approach to literacy will include reading and writing as well as information, visual, and digital literacy applied to all the core content areas. Teachers also need skills in differentiating instruction, such as focusing on how to handle a variety of different reading levels in a classroom. In learning strategies for differentiation, teachers will gain skills in using data to measure changes in literacy performance and to design interventions.

The PALS program uses three tiers of professional development in a research-based model. First, the 37 high school teachers who are not highly qualified will be provided with support to attain HQ status. This includes six reading specialists who are not highly qualified who will enroll in courses to earn the Reading Teacher Endorsement, a program that will be offered to all interested high school teachers. Second, all high school teachers will have opportunities to attend intensive summer

academies that will be followed by year-round meetings, coaching, mentoring, and co-teaching with NIU faculty. Third, principals will also participate in summer academies to support them in implementing school improvement plans in reading and other innovations.

Outcomes of PALS project. As a result of the PALS activities, student achievement at the high schools will increase. All teachers will be highly qualified; teachers' content knowledge and pedagogical skills will improve; classroom instruction will become more effective; the number of reading specialists will increase; and curriculum at RPS and in NIU teacher preparation programs will be aligned with emerging state standards. Increased knowledge and skills of principals will strengthen school leadership. Transformed teacher education programs will prepare strong teacher candidates for high-needs schools.

Systemic impact of the PALS project. Teachers participating in PALS will conduct action research on the impact of PALS activities on student achievement and will report formative and summative results in order to fine-tune activities and quickly disseminate successful practices. Professional development and student activities that get positive results will be expanded to the alternative high schools, middle schools, and elementary schools. Finally, the results of the PALS project will be used to improve NIU's teacher and principal preparation programs in ways that prepare candidates to work successfully and raise student achievement in high-needs schools. As a project with a solid research base implemented by an effective, long-standing partnership, PALS expects to provide a national model for reform in low-performing, high-needs urban high schools.

Lead Institution: Roosevelt University

Project Title: Differentiating Prof. Dev: A Data Driven Model for Literacy Workgroups

High Need School District: Chicago Public Schools 299

Partnership members: Roosevelt University College of Education, Roosevelt University, College of Arts and Sciences, and Chicago Public Schools District 299

Core Academic Area(s): Literacy

Grade Level(s): K-8

Grant Amount: \$295,251

Project Director: Dr. Teryl Ann Rosch
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Project Synopsis: A lack of differentiated professional development is a primary cause of teacher turnover, particularly in high-need schools where teachers face more challenging work conditions. In Chicago, where 90 students drop out of the educational system daily, the need to form a dynamic confluence of collaboration of partners working with schools serving the neediest populations is critical.

Schools with strong teacher cooperative relationships focused on curricular alignment are very likely to show substantial academic improvement (Chicago Consortium on School Research, 2010). To ensure that each classroom is led by a highly-effective teacher who receives the support needed to be successful, this project will emphasize explicitly instructional change based on student growth data.

Roosevelt University will collaborate to develop and implement a data-driven model of literacy work groups for administrators and teachers—new, early career, and veteran— in two elementary schools within the Chicago Public Schools District 299. The model will ensure that teachers receive sustained support over multiple years to become proficient teachers who use effective instructional strategies to engage and nurture their students to succeed in reading and other core academic subjects. CPS schools will include services into their School Improvement Plans, and several work teams will be established altering school structures in order to increase vertical and horizontal communication between teachers and administrators.

In order for differentiated professionalism to occur, this proposal: (1) involves teams of elementary teachers, administrators, and university faculty in planning; (2) provides opportunities for follow-up activities such as coaching, diagnostic clinics, classroom modeling, and tandem teaching; (3) engages, supports and holds administrators accountable for implementing and sustaining strategies to improve reading instruction; (4) employs the latest scientifically-based research on

instruction; (5) provides teachers with frequent, meaningful and actionable feedback that articulates clearly how individual performance compares to district and state teaching standards; (6) provides teachers with assessment data and tools to monitor the performance of their students and; (7) provides opportunities for sharing across work teams. By increasing teachers' abilities to reach all learners, regardless of learning style or disability, this project will ultimately improve the learning experience for all students.

This sustainable professional development model is expected to result in increased retention of teachers in these high-need schools and better academic performance of their students. Ultimately, this project will drive improvements in courses and instructional delivery methods in teacher preparation curriculum of Roosevelt's College of Education.

Lead Institution: Southern Illinois University Carbondale

Project Title: Southern Illinois Partnership for Achievement in Math & Science

High Need School District: Cairo CUSD 1 and Anna CCSD 37

Partnership members: Carbondale Elementary School District 95, Carterville Community Unit School District 5, Dongola School Unit District 66, Eldorado Community School District 4, Harrisburg Community Unit School District 3, Herrin Community Unit School District 4, Murphysboro Community Unit School District 186, Sparta Community Unit School District 140, and Vienna School District 55

Core Academic Area(s): Math & Science

Grade Level(s): 4-8

Grant Amount: \$298,936

Project Director: Dr. Frackson Mumba
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Project Synopsis: The proposed Southern Illinois Partnership for Achievement in Math & Science (SIPAMS) program creates a unique collaborative partnership between two universities, Southern Illinois University Carbondale (SIUC) and Illinois State University (ISU), and 11 school districts in southern Illinois. A fundamental goal of this program is to improve mathematics and science teaching and learning in grades four-eight in participating schools by providing a professional development program that is focused on content, pedagogy, curricula articulation and mentoring. The intended outcomes are: increased teachers' content knowledge and pedagogical skills (short-term outcome), improved instructional practice (mid-term outcome), and increased student achievement in mathematics and science (long-term outcome). The program will be conducted through professional development activities in summer with four follow-up sessions during the school year, in each of the three years of the grant. The activities will focus on addressing the goals and objectives of the project. This program's defining features emphasize teachers working together with experts in content, pedagogy, and technology while staying in control of developing pedagogical solutions to meet classroom needs. The participants will include SIUC & ISU professors in the mathematics, sciences, mathematics and science education, content-related reading, curriculum specialists from the partner school districts, principals; and elementary and middle school teachers and their students. All these participants are of central importance in the effective implementation of the program, since they will form an inquiry-oriented learning community. Scientists and mathematicians will provide insight into the methods that are used in the fields to pursue a scientific process of discovery and problem-solving. Pedagogical specialists will present models for integrating science, mathematics, and technology, including content-related reading strategies, and effective ways of teaching mathematics and science in diverse classrooms such as inclusive classrooms.

Lead Institution: Southern Illinois University Carbondale

Project Title: Rural Access to Math Professional Development: Unparalleled Performance (RAMPD UP)

High Need School District: Cairo Community Unit School District #1

Partnership members: Carbondale Elementary School District #95, DeSoto Community School District #86, Meridian Community Unit School District #101, Murphysboro Community Unit School District #186, St. John Lutheran School, Chester St. Mark's Lutheran School in Steeleville, Immanuel Evangelical Lutheran School in Murphysboro, Regional Office of Education #30 (and Learning Technology Center VI South)

Core Academic Area(s): Mathematics

Grade Level(s): K-8

Grant Amount: \$298,989

Project Director: Jackie Cox, Ph. D.
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Project Synopsis: Rural Access to Mathematics Professional Development: Unparalleled Performance (RAMPD UP) will serve to not only broaden the scope of critical thinking skills and mathematical thinking across the southern Illinois region, but also will establish the infrastructure needed to sustain Cognitively Guided Instruction in the classroom. Overall this project will increase student achievement in mathematics and improve critical thinking skills by providing teachers with the administrative support structure, classroom tools and knowledge of how students develop their mathematic thinking over time. By first addressing any anxiety some teachers have regarding mathematics and providing them with interventions that not only help them but can also be taught to their own students, mathematics can now become a time of exploration and not fear. Through analysis of teachers knowledge and their students needs based upon assessment data, teachers will be provided intense review of mathematical concepts from numeration to algebra. On a parallel path, teachers also will be provided with the research-based foundation of how their students' mathematical thinking develops and how they can efficiently and accurately pinpoint their own students' understandings through carefully crafted problems that assist the students in building upon their own mathematical knowledge. Throughout this three-year project, school administrators will be fully apprised of the principles of Cognitively Guided Instruction and provided tools for how they can regularly assess and strengthen their teachers skill set in its classroom usage. Teachers also will be supportive through the development of a cadre of teacher leaders experienced in the employment of Cognitively Guided Instruction in the classroom. This cadre will be provided additional professional development in how to sustain and support this instruction throughout the region. Nearly 100 teachers will be involved in the process along with 15 administrators from both public and faith-based schools in the region.

Lead Institution: Southern Illinois University Edwardsville

Project Title: Students Learning Science through a Sustained Network of Teachers

High Need School District: East St. Louis, East Alton-Wood River, Madison, East Alton, Cahokia, Venice; Belleville, Centralia

Partnership members: Granite City, Belleville East, Edwardsville, Roxana, Highland, Okawville, Valmeyer, Greenville, Mt. Olive, Triad, Mascoutah, Gillespie, Belleville West, Carlinville, O'Fallon, Staunton, Civic Memorial, Waterloo, Lebanon, Livingston, Collinsville, New Athens, Freeburg, Divernon, BCCU #2, Jersey, Milberry Grove, Bond County, Coolidge, Daminsville, Grantfork, High Mont, Highland, Hillsboro, Irvington, Liberty, Lincoln, Pocahontas, Pontiac, Ramsey, Smithon, West, and Bunker Hill

Core Academic Area(s): Science

Grade Level(s): 6-12

Grant Amount: \$299,000

Project Director: Dr. Sadegh Khazaeli
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Project Synopsis: The objective of this project is to provide hands-on professional development for high school chemistry, high school physics, high school biology, and middle school science teachers with an emphasis on science subject matter related to the Illinois State Board of Education's Illinois Learning Standards (Science) and Illinois Professional Education Standards (Science Core). We plan to work with regional school teachers to help them improve their science knowledge, gain insight into applications of science, become aware of available high quality science educational resources, and participate in a sustained science teacher network. These tools and knowledge should assist teachers in preparing their students to meet the standards expected in high school and middle school science courses. It is anticipated that these activities will eventually lead to improved student learning and students who are better prepared for high school and college science courses.

During Spring 2010, we will have seven sessions (one day a week) of classroom-format discussion and demonstrations for 35 high school chemistry teachers on selected chemistry and environmental science topics. During Summer 2010, 35 high school chemistry teachers will participate in hands-on activities and laboratory experiments on the topics covered in Spring 2010. Similarly, during Fall 2010, we will have seven sessions of classroom-format discussion and demonstrations for 15 high school physics teachers and during Summer 2010, 15 high school physics teachers will participate in hands-on activities and laboratory experiments on the topics that were covered in Fall 2009. During Summer 2010, 60 middle school teachers will have 10 days of classroom-format discussion (mornings) and laboratory/demonstration sessions (afternoons) on topics in biology,

chemistry, environmental science, earth science, and physics. In Summer 2010, we will start a pilot workshop for high school biology teachers. We also plan to introduce the philosophy of science to all participating teachers. During each chemistry and physics workshop, we will dedicate one day to the mathematical skills needed for successful student learning. Time will be built into the schedule for teachers to share their experiences, expertise, and pedagogy. The plan is to include all educators in active learning in each meeting, rather than having a traditional lecture. Special effort will be made to encourage teachers from high need districts, newly hired teachers, teachers who teach outside of their field of study, special education science teachers, teachers from schools with high minority populations, and pre-service teachers to participate in the program. The IBHE funds will not be used for pre-service teachers. Cross networking between middle school teachers and high school science teachers will be encouraged by inviting select high school teachers to provide content during the middle school workshop under supervision of the PI's. During the workshops, the participating teachers will be trained in the use of modern assessment techniques. Throughout the year, networking among teachers will be facilitated by the Program Board. This program has been developed in collaboration with the SIUE School of Education, the SIUE College of Arts and Sciences, and high school and middle school educators in our region, and they are active partners in shaping activities and maintaining sustainability of the ongoing program.

Lead Institution: St. Xavier University

Project Title: Developing 21st Century Critical Thinking Skills

High Need School District: Chicago Public Schools, Area 2

Partnership members: International Renewal Institute, Inc. and Center for Elementary Mathematics and Science, University of Chicago

Core Academic Area(s): Math & Science

Grade Level(s): K-3

Grant Amount: \$297,942

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Project Synopsis: The Developing 21st Century Critical Thinking Skills project utilizes sustained, collaborative professional development to enable teachers and school leaders to make fundamental changes in how they perceive and approach teaching and learning with the youngest members of their school communities. The project's collaborative design is a partnership among Saint Xavier University; Chicago Public Schools, Area 2; and the International Renewal Institute, Inc. All partners were involved in the planning of the project design and will continue to collaborate throughout the project's implementation. Five elementary school principals, 30 teachers, approximately 840 Kindergarten – Grade 2 students, and Chicago Public Schools, Area 2, district leadership will be served by the project.

The project utilizes Feuerstein's Instrumental Enrichment, Basic as a tool to prevent early learning problems. This program consists of active-learning tasks that help Kindergarten – Grade 2 teachers facilitate the development of children's cognitive skills. The project targets the content areas of mathematics (Year 1), literacy (Year 2), and science (Year 3). Teachers will study the content concepts identified in the Illinois Learning Standards, the milestones in their development, and the cognitive challenges they involve. They also will analyze instructional units in the curriculum and reflect upon critical questions related to each of the targeted content areas. Intensive workshops, together with bi-monthly classroom observations and mentoring will support teachers as they integrate their new knowledge into their teaching and assessment practices.

The project's goals for all students are to support critical thinking skills, improve academic achievement, and provide the best possible opportunity for them to become skilled 21st Century learners. The project's goals for the participating schools are to establish a school culture of leadership development and collegiality, to enable teachers and school leaders to make fundamental changes in their approach to teaching and learning, and to sustain systemic change.

Lead Institution: University of Chicago

Project Title: Teacher Leadership for Elementary Mathematics and Science

High Need School District: Chicago Public School District 299

Partnership members: Donoghue, North Kenwood Oakland

Core Academic Area(s): Math & Science

Grade Level(s): K-8

Grant Amount: \$298,994

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Project Synopsis: This project brings together the University of Chicago’s Urban Education Institute (UEI), Center for Elementary Mathematics and Science Education (CEMSE), Seminars for Elementary Specialists and Mathematics Educators (SESAME) program, and the Chicago Public Schools (CPS) to improve instruction, leadership, and achievement in mathematics and science for teachers and leaders in Chicago and across Illinois. The primary audiences served by this project include teacher leaders in CPS, teachers and leaders in the University of Chicago’s elementary charter schools and its USI Network, and graduates and Clinical Instructors from the University’s Urban Teacher Education Program (UTEP). Teachers across Chicago and Illinois also will benefit from the project’s “Virtual PD School.”

This project builds on and extends the work and learning from a previous collaborative project between these partners. This project has four intersecting and overlapping strands:

- 1) Continued support of the University’s elementary charter schools, with a particular focus on developing math and science leadership in these schools.
- 2) Math- and science-focused support for UTEP graduates and Clinical Instructors, including induction coaching and workshops.
- 3) Development of a Teacher Leadership Institute (TLI) that will be open to CPS teacher leaders, with priority going to teachers in schools with whom CEMSE has an existing relationship, thereby helping us build on previous work and ensure that participants are in a supportive leadership context. The TLI also will be open to UTEP alumni with at least one year of teaching experience, UTEP Clinical Instructors, and teacher leaders in the USI Network and the UC charter schools. We will partner with one CPS Area to offer spaces in the TLI, thereby allowing us to support the Area-level leadership in tandem.
- 4) Development of a “Virtual PD School,” an interactive website that draws on all of these strands and allows teachers and schools from across the state (and beyond) to learn from the instruction and leadership practices of the UC charter schools and the other supports offered by the project.