Family and Community Involvement: Achievement Effects

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NICHD Grant 1-R01-HD0471

Abstract

The No Child Left Behind Act (NCLBA) requires schools to help every student achieve a high level of proficiency in math, reading, and science by 2014. It also requires districts and schools to involve families in ways that will boost student achievement. Yet, most districts and schools are struggling with how to implement effective partnership programs and how to measure the “value added” effects of family and community involvement for student achievement in specific subjects.

This project is a five-year, multi-cohort, longitudinal study of the effects of the National Network of Partnership Schools (NNPS) intervention model to increase and improve family and community involvement to support student achievement in reading, math, and science. The project will “scale up” professional development tools, guidelines, and approaches for curriculum-linked involvement activities that have been developed, pilot tested, and shown to (a) produce systemic and sustained change in district and school knowledge, policies, and programs of school, family, and community partnerships, (b) effectively improve the involvement of parents and the community, and (c) increase student reading, math, and science achievement, and other indicators of student success.

Main Study

Dr. Joyce L. Epstein, Principal Investigator
Dr. Steven Sheldon and Dr. Claudia Galindo, Co-Investigators

The Main Study includes five cohorts of 10 school districts with 8 schools each for a total sample of 50 districts and 400 schools, including elementary, middle, and high schools in urban, suburban, and rural communities across the U.S. Using random-assignment and strictly-matched samples and conducting longitudinal hierarchical linear modeling (HLM) analyses, we will study the “nested” effects of district policies and leadership on the quality of school programs and practices of family and community involvement, and the contribution of school, family, and community partnerships to student achievement.

Special Focus Studies

Three Special Focus Studies also are being conducted:

(1) Longitudinal case and comparison districts and schools on the processes and results of district leadership, facilitation, and support for school programs of partnership.
   Dr. Mavis G. Sanders, Principal Investigator

(2) Longitudinal study of the effects of “interactive homework” on student achievement in math in the elementary grades and reading/language arts and science in the middle grades.
   Dr. Frances L. Van Voorhis, Principal Investigator

(3) Longitudinal study of the effects of the quality of partnership programs on the characteristics and influences of parent social networks on student attitudes and achievement in reading, math, and science.
   Dr. Steven B. Sheldon, Principal Investigator
Family and Community Involvement: Achievement Effects
Summary of Progress, June 2007

Grant 1 R01 HD0471

Now in its fourth year, the project, *Family and Community Involvement: Achievement Effects*, has progressed on schedule. The research and facilitation team also conducted many presentations and produced research and practical publications (see Table 1, attached).

**MAIN STUDY: Implementation and Effects of Family and Community Involvement on Student Achievement in Reading, Math, and Science.**

Dr. Joyce L. Epstein, Principal Investigator
Dr. Steven Sheldon and Dr. Claudia Galindo, Co-Investigators

The Main Study is a 5-year longitudinal study of at least 50 districts and at least 400 schools, designed to extend methods of research on school, family, and community partnerships. The intervention model is testing whether district leadership for partnerships independently affects the quality of schools’ partnership programs, results on student achievement, and other indicators of success in school.

This year, one component of the Main Study included analyses of data from 24 districts with 398 schools that are implementing the intervention as “nested systems.” These districts, with at least 6 schools, provided data on their partnership programs for the 05-06 school year. With this information, the research team conducted Hierarchical Linear Modeling (HLM) analyses to identify district and school effects on program quality.

These analyses confirmed and extended the project’s initial HLM explorations, conducted in 2006. Using more complex measures of district leadership, the new study showed that specific district leadership actions for family and community involvement independently affected the quality of schools’ partnership programs over and above the work of the school-based efforts. The analyses reveal that district leadership can help schools do more to set up their basic program structures and plans, and to conduct more outreach to involve all families, including those who are most often hard-to-reach. At the school level, principals’ support and schools’ recognition of assistance from their districts contribute to the quality of schools’ partnership programs (Epstein, Galindo, Sheldon, & Williams, 2007).

In addition, data from 65 school districts with program development data from three time points (i.e., baseline membership data, 2005 end-of-year surveys, and 2006 end-of-year surveys on their actions to implement the intervention model. On average, these district leaders increased their direct assistance to schools. They gave more help to schools’ action teams, collected annual plans, assisted schools to meet challenges to reach all families, and conduct end of year celebrations to share best practices. These analyses help explain the HLM results and show the importance of sustained work on partnerships at the district level for increasing the quality of schools’ programs. District leaders did more from year to year if they had strong collegial support, adequate funding, and invested time in evaluating the district and schools’ partnership programs.
**Next steps.** This project has met one part of its final “scaling up” goals. Over 50 school districts have agreed to implement the intervention model for effective partnership programs. Indeed, presently, over 140 districts are active members of NNPS, and over 40 of them have more than 6 schools that are “nested” within the district leadership structure. Many others have fewer schools, total, in the district. The former are included in this project’s HLM analyses; the latter are included in conventional cross-sectional and longitudinal analyses.

In the next school year, the project will (a) encourage these districts to increase the number of schools that the leaders are assist and evaluate so that the next HLM analyses will be based on a larger sample of districts and their schools; and (b) encourage the 05-06 sample of districts and schools to sustain their work so that there will be enough power to conduct HLM longitudinal analyses. Attention also will turn to the connections of partnership program quality with student achievement in reading, math, and science. (Note, too, subject-specific achievement results are addressed in detail in Special Study #2 below.)

**SPECIAL FOCUS STUDY #1: Understanding the Nature and Effects of District Leadership on School Programs of Partnerships.**

**Dr. Mavis G. Sanders, Principal Investigator**

During 2006-07, this study was extended to 4 school districts: suburban (District A), rural (District B), urban (District C), and Midwest suburban (District D). All four districts have high commitment to developing partnership programs and have identified specific leaders for partnerships. However, they vary in geographic location, size, and student demographics. They also vary from low to high in how much the district leaders guide individual schools to develop their school-based partnership programs. In addition, the districts vary in the continuity and change of district leaders, and in the speed and depth of program development. Special Focus Study #1 uses case study methodology and Coburn’s framework of “scaling up” to examine school, family, and community partnership program development in each of the case districts.

Data collections in each district follow the same protocol, including interviews with key district leaders for partnerships, observations of district level partnership activities, and the collection and review of supporting documents. Data from schools in each district include interviews with principals, partnership teams and parents, school visits and observations, and review of related documents.

In the first set of studies, Sanders found evidence of *depth*, *sustainability*, and *ownership* of the NNPS intervention model in the district and first set of schools, but slow *spread* to other schools due, in part, to lack of district-level personnel (Sanders, 2005). Five factors emerged that may explain districts’ progress in scaling up the NNPS intervention model: (1) the priority given to family and community involvement; (2) adequacy of funding for staff and programs; (3) active leadership and participation in networking activities; (4) the clarity of focus of district leaders’ responsibilities; and (5) the leaders’ level of passion for and commitment to new approaches to school, family, and community partnerships.

Two papers, presented at AERA in 2006, showed that (a) district leaders can use data to improve and sustain their work on partnerships (Sanders, in press a) and (b) district leaders use the NNPS framework and core principles to work collaboratively with community-based involvement organizations (CPIO) to increase community connections and bridge the power divide that relegates many families to the periphery of school, family, and community partnerships (Sanders, in press b).
New data were reported at the 2007 annual meeting of AERA. One paper identified four roles played by parent liaisons in District A that helped schools minimize the influence of social class and cultural differences on home-school relations (Sanders, 2007a). The liaisons provided: 1) direct services to families placed at risk; 2) support for teacher outreach; 3) support to the school-based partnership teams; and 4) data for program improvement. Because of the guidance and training from the district leader for partnerships, the liaisons were well prepared to carry out their work. The district leader was able to document their influence on the schools’ partnership program development. This district’s work may serve as a model to other districts that support parent liaison positions and that seek to improve family involvement and home-school relations in culturally diverse schools.

A second study explored the influence of district level leadership on partnership program implementation (Sanders, 2007b). The parent leaders are part of a district “Core Team” that promotes understanding of the NNPS intervention model, conducts team training, and facilitates networking among the 21 schools in the district. A parent and principal co-chair the Core Team to help prevent an “us against them” environment within the school system.

The data indicate that District D increased and maintained its level of parent leadership by emphasizing a partnership model and ethos consistent with the NNPS approach. The paper explains four factors that may explain the district’s success with shared leadership by educators and parents: 1) active superintendent and school board support; 2) district leadership and advocacy; 3) NNPS support; and 4) time.

**Next steps.** Data collection will continue all four districts to monitor the progress and change in partnership program development at the district and school levels. Final analyses will focus on factors that contribute to program scale-up as defined by Coburn. Papers will be ushered through the publication process to share new insights into partnership program development and leadership for students’ learning and school success.

**SPECIAL FOCUS STUDY #2: Experimental Study of the Effects of Teachers Involve Parents in Schoolwork (TIPS) Interactive Homework on Student Achievement in Math, Reading/Language Arts, and Science.**

Dr. Frances L. Van Voorhis, Principal Investigator

**TIPS Math.**

Overview: This study examines the impact of the TIPS Math intervention over time on student emotional and cognitive outcomes. The study includes measures of student and family attitudes and feelings about math, and of parental involvement in homework. Math report card grades and standardized test scores collected from the schools serve as the cognitive outcomes of the study.

Data collection for the two-year TIPS Math interactive homework study is complete. The study was conducted in 4 similar elementary schools in Hamilton County Schools, the public school system of Chattanooga, TN. Teachers were assigned at random to the TIPS and Control conditions. Over two years, four subgroups of students emerged: Control students (No TIPS), TIPS for 1 Year (either 3rd or 4th grade), and TIPS for 2 Years).

Some highlights of the study include:

1. **TIPS students completed TIPS, as designed and involved family members in the process.**
   TIPS students completed 78% or more of the TIPS assignments in each nine-week period over two years. The average accuracy of the students’ work on TIPS was above 75%, and family members signed 70% or more of the TIPS in each grading period.
2. **TIPS use was associated with more positive family feelings about math.**

TIPS families recorded significantly more positive feelings about working on math together than did control families. In grade 4, for example, about 57% of TIPS families reported positive (i.e., happy) attitudes toward math in grade 4, compared to 40% of control families [(F(1, 114)=3.92, p<.05)]. Only 13% of TIPS families stated that their 4th grade students felt frustrated while working on math with them, compared to 32% of control families [F(1, 114)=4.05, p<.05].

3. **Compared to TIPS families, significantly more control families indicated a need for more information from school to help in order to help their children with math in grades 3 and 4.**

4. **TIPS students and families reported higher levels of family involvement in math homework than control students and families.**

5. **TIPS students earned higher standardized math test scores than control students.**

Regression analyses were conducted to analyze the effects of various background variables and TIPS on grade 4 standardized math achievement scores. After controlling for student background variables of race and student ability level, and the prior year’s standardized test scores, students who had TIPS for 2 years earned significantly higher scores on standardized math tests than control students, who had no TIPS homework. The full model accounted for 60% of the variance in math achievement scores.

In summary, TIPS students in grades 3 and 4 returned the majority of TIPS assignments and included a family partner’s signature. Compared to control students and families, TIPS students’ and families’ attitudes and feelings about math homework tended to be more positive. TIPS and control students spent similar amounts of time on homework, but TIPS students and families reported significantly higher levels of family involvement in math homework. Finally, although TIPS students did not earn higher math report card grades, they did earn significantly higher standardized test scores in math than control students, over and above prior math test scores (Van Voorhis, 2007).

**TIPS Language Arts.**

The second and final year of the TIPS Language Arts study will end June 2007. The study follows students from grade 6 to grade 7 in three middle schools in Hamilton County Schools, the public school system of Chattanooga, TN. Two magnet middle schools were randomly assigned to the TIPS and Control conditions, and in one regular middle school, teachers were assigned at random to these treatments. In the 05-06 school year, 9 TIPS classes were taught by 4 teachers and 6 control classes were taught by 3 teachers across participating schools. In the 06-07 school year, students were followed into grade 7, with a total of 8 TIPS classes taught by 3 teachers and 7 control classes taught by 3 teachers for a total of 15 classes of 413 students. Preliminary results based on data from sixth grade students indicate:

- TIPS students and TIPS families reported significantly more occasions working with a parent on reading/language arts homework than did control students or their families

- Compared to TIPS students and families, control students and families were significantly more likely to agree that their parent needed more information to work with them on language arts homework. For example, about 54% of control families agreed that they needed more information from school to help their children with homework in language arts, compared to 40% of TIPS families.

- TIPS families reported significantly more positive emotions while working on language arts with their children than did control families. Fifty-nine percent (59%) of TIPS families checked that they were happy while working with their child on language arts homework while only 41% of Control families did so. More TIPS families than controls also reported that their children were more positive about their homework.
Next steps. Final data collection is in progress and the PI will collect standardized language arts test data from the district office when they become available in summer 2007. The author will code, clean, and analyze these data and prepare the next report in the next grant period.

TIPS Science.

The first year of a two-year TIPS Science investigation will end in June 2007. The study is being conducted in grades 7 and 8 in two similar, Title I middle schools in the Guilford County School System in Greensboro, NC. Teachers were assigned at random to TIPS and Control conditions. In the 06-07 school year, one teacher implemented TIPS science with grade 7 students and the other teacher used his/her standard science homework (control). In all there are 5 TIPS classes and 7 control classes, for a total of 304 students.

As in the Math and Language Arts studies, the PI collected data from teachers every nine weeks. The final data for the school year are presently being collected, along with end-of-year student and family science surveys. When these data are received, the PI will begin coding and analyzing the first-year data for the science study.

Next steps. Teachers are currently collecting the final nine-week data for the school year, benchmarks, and end-of-year student and family science surveys. When these data are received, the PI will begin coding and analyzing the first-year data for the science study.

SPECIAL FOCUS STUDY #3: Effects of the Quality of School Programs of Partnership on Parent Social Networks and their Impact on Student Achievement in Reading, Math, and Science.

Dr. Steven B. Sheldon, Principal Investigator

This longitudinal study is exploring whether the quality of elementary and middle schools’ programs of family and community involvement affects the formation of parents’ social networks, communications between home and school, interactions among parents, parent involvement beliefs and actions concerning students’ skills in reading, math, and science, and, ultimately, results for student achievement. By following elementary and middle grades students, families, and school programs for two years, the study will identify developmental patterns in parents’ social networks, parents’ communications with students about achievement, and results for students’ of parental support.

Saint Paul Public Schools, including 6 elementary and 3 middle schools, in collaboration with the districts’ director of partnerships and research and evaluation office are participating in the study. The schools, all intent on developing programs of school, family, and community partnerships, vary in the strength of their parent involvement programs. It is hypothesized that the quality of schools’ programs of partnership will affect the nature of parents’ social networks, parents’ confidence, attitudes, and influence on students.

Surveys and parent consent forms were written in English and translated into Spanish, Hmong, and Somali for parents who do not speak or read English. The surveys for parents included measures of their beliefs about parents’ responsibilities; efficacy; current involvement actions; social networks; frequency of conversations with other parents about students’ reading, math, and science schoolwork; contacts with schools; and demographics. The surveys for students included measures of student attitudes; interactions with parents on reading, math, and science; experiences at school; and demographics. Scales of survey items on these concepts showed high internal reliability (Cronbach’s Alpha). The questionnaires now are available for other researchers, graduate students, and practitioners to use, and have, already, been shared with others for their studies of school and family practices of involvement.
The first study used data from over 500 parents to explore the extent to which parental beliefs, social network size and conversations, interactions with the school, and background characteristics predicted parents’ involvement at school, monitoring schoolwork, parent involvement in reading, and parent involvement in math (Sheldon, 2006a). Results showed that after controlling for background characteristics, parents’ frequency of conversations with other parents about school, interactions with schools, and parental beliefs significantly predicted the frequency of all types of parent involvement activities. Further, the study added new information that with demographic characteristics, parents’ own beliefs, and schools’ outreach efforts statistically controlled, the social ties and relationships that parents maintain with other parents predicted the parents’ involvement at school, monitoring their children’s schoolwork, involvement with reading, and involvement with math. Parents’ social networks may produce social capital that parents use to more actively support their children’s education and to guide students’ education and achievement. These provocative patterns will be checked with longitudinal data for this study.

A second paper analyzed data from the schools and from Asian American, White, African American, and Hispanic parents and students. Only cases that matched parent with student data were analyzed (n=486). Almost 70% of the children received free- or reduced-price lunches and 44% of the students are identified as English Language Learners. The results indicate that middle/junior high schools with stronger programs of school, family, and community partnerships had parents who reported more outreach by their children’s schools to get them involved. Parents in these schools were more involved in their children’s education than were parents whose children attended schools with weaker partnership programs (Sheldon, 2006b).

Analyses also revealed that students with parents who were more involved at school and who more closely monitored their schoolwork at home felt more confident about their own ability to succeed in school. The results also suggested that school outreach helped increase parental involvement in the middle grades, and that parental involvement was associated with student motivation and attitudes toward the school.

The second wave of data collection for the 05-06 school year was completed in May and June of 2006. Students were followed from the 5th to 6th grade and from the 7th to 8th grade in the participating schools. In 2006, surveys were collected from 1061 students and 431 parents. Two years of true longitudinal data are available for longitudinal analyses for 685 students and 222 parents. The first paper analyzing these data explored whether student reports of parent involvement at home and at school predicted student motivation (i.e., self-competence and sense of belonging), controlling for prior levels of student motivation, student achievement, and other background covariates. Analyses indicated that students reporting more parent involvement at home also reported higher levels of self-competence. Students reporting more parent involvement at school tended to report a greater sense of belonging at the school. Further analyses showed that students’ self-competence predicted higher levels of achievement across subject matter, from one year to the next.

A second paper uses data from parents to study the connections of parents’ social networks, the production of social capital, actions of parent involvement, and results on student achievement. Preliminary analyses indicate that parents’ social networks and the frequency of conversations with other parents about school predicted greater parent involvement. Final analyses of these data are in progress for a paper to be presented at the 2007 annual meeting of the American Sociological Association (ASA).
Next steps. With all data collection completed, Special Focus Study #3 will concentrate on conducting analyses on the project’s original research questions. With three years of achievement data (from baseline, year 1, and year 2 of the study), we will explore whether growth modeling using Hierarchical Linear Modeling is appropriate. In this study, three years of achievement test scores are nested within students, who are nested within schools. However, because there are only nine schools in this study, there will be limitations on HLM methods. The resulting papers will increase understanding of the connections of school partnership programs, outreach, parents’ relationships, parental involvement actions, and results for students.
**Table 1**

**Selected Publications and Presentations**

**Family and Community Involvement: Achievement Effects**

**Grant 1 R01 HD047101**

2004—present

Johns Hopkins University

Center on School, Family, and Community Partnerships

This table summarizes selected publications for research and practical audiences from the start of this grant to improve knowledge on partnerships and to improve policy and practice. In addition to publications and presentations at professional meetings, the project team makes many presentations to educators in schools and school districts, and disseminates information by email, mail, and telephone to hundreds of professors, graduate students, and PK-12 educators and families every year. These actions help accomplish the “scaling up” features that are the focus of the grant. For more information, contact Dr. Joyce L. Epstein, 410-516-8807, jepstein@csos.jhu.edu or visit the web site of the National Network of Partnership Schools at www.partnershpschools.org.

### SELECTED PUBLICATIONS – RESEARCH AUDIENCES


Sheldon, S. B., Epstein, J. L., and Galindo, C. (under review). Not just numbers: Creating a partnership climate to improve levels of math proficiency.


Van Voorhis, F. L. (Forthcoming). Longitudinal effects of family involvement with students on math homework. (Paper was presented at 2007 annual meeting of AERA.)

**SELECTED PUBLICATIONS – POLICY AND PRACTICAL AUDIENCES**

To recruit districts and schools for the Main Study and to assist educators to use research-based approaches for developing programs of school, family, and community partnerships.


Sanders, M. G. (under review). Principal leadership and community involvement in schools. *Principal Leadership*.


SELECTED PRESENTATIONS TO RESEARCH AUDIENCES

2007 Annual Meeting of the American Educational Research Association (AERA)

Symposium: Research-Based Approaches to Family and Community Involvement: Results for Districts, Schools, and Students


Sheldon, S. B. (2007). Students’ Reports and Effects of Parental Involvement in Elementary and Middle School


Also at 2007 AERA:


Sheldon, S. B. Serving Youths with Special Needs

2006 Annual Meeting of the American Sociological Association, Montreal


Symposium: Linking Research and Practice to Improve District and School Programs of Family and Community Involvement for Student Success

Epstein, J. L., Galindo, C., Sheldon, S. B., and Williams, K. J. Levels of Leadership: Understanding District Influence on Schools’ Programs of Family and Community Involvement

Sanders, M. G. Using Data to Develop and Sustain School, Family, and Community Partnerships: A District Case Study,

Sheldon, S. B. Making the Connections: How School Outreach Contributes to Family and Student Outcomes

Also at 2006 AERA:


Sheldon, S. B. Parents’ Social Networks: Looking at Social Capital and Parental Involvement

Sheldon, S. B. Discussant: Bridging Home and School, Paper Session
13th International Roundtable on Research and Program Development  
Bi-Annual Activity of the International Network of Scholars on  
School, Family, and Community Partnerships (Johns Hopkins University)  

In April 2006, Dr. Epstein, Dr. Van Voorhis, and Mr. Williams organized the 13th International Roundtable on School, Family, and Community Partnerships, conducted for one full day at the time of AERA, April 7, in San Francisco, CA. Over 40 presentations by researchers from 15 nations were made on various topics of school, family, and community partnerships, including researchers from Australia, Brazil, Canada, China, Cyprus, England, Hong Kong, Israel, Italy, Netherlands, Norway, Portugal, Scotland, Sweden, and the United States. Over 140 research and program development colleagues attended. Drs. Epstein, Sheldon, Galindo, and Project Staff Hutchins, Greenfeld, and Williams participated at the Roundtable. The next INET Roundtable will be conducted in 2008 at AERA in New York City.

2005 Annual Meeting of the American Sociological Association, August, Philadelphia  

Epstein, J. L.  
Research meets policy and practice: How are school districts addressing NCLB requirements for family involvement? Sociology of Education Section No Child Left Behind Conference conducted at the ASA meetings.


Symposium: Policy Meets Practice: How Well Are Schools and Districts Dealing with NCLB Requirements for Parental Involvement?  

Sheldon, S. B.: Schools’ Enactments of NCLB Requirements for Family and Community Involvement in Students’ Learning: Tracking Progress and Identifying Predictors  
Sanders, M. G.: Helping Low-Performing Schools Leave No Child Behind: A Case Study in District Leadership for School, Family, and Community Partnerships  
Epstein, J. L., Williams, K. J., & Jansorn, N. R.: Using Data to Understand Districts’ Actions on NCLB Requirements for Family Involvement

Epstein, J. L.: Panelist: Research and Evaluation of Family Involvement in Education: What Lies Ahead?  
Epstein, J. L. Discussant: Family and School Connections: Asian American/Canadian Perspectives  
Sanders, M. G. Partnerships in an Urban High School: Meeting the Parent Involvement Requirements of No Child Left Behind.  
Sheldon, S. B. Discussant: The Parent Factor  
Van Voorhis, F. L. (2005). Experimental Study of the Effects of TIPS Interactive Homework on Student Achievement in Math, Reading/Language Arts, and Science. Presentation and training workshops in Chattanooga, TN.

2004 annual meeting of the American Sociological Association, August, San Francisco  

Epstein, J. L. Discussant, Paper Session: Parent Involvement.  
Epstein, J. L. Moderator, NCLB Mini-Conference: Parental Involvement Session  
Sheldon, S. B. Testing the Effects of School, Family, and Community Partnership Programs on Student Outcomes.

PROJECT WEBSITE: www.partnershipschools.org