NebraskaMATH

Family-School Partnerships: Promoting Family Participation in
K-3 Teacher Professional Development
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Background and Significance

▪U.S. competitiveness depends on improvements in the math and science education of K–12 students (e.g., National Commission on Mathematics and Science Teaching for the 21st Century, 2000).

▪ Improving mathematics education for young children (under age 8) may be critical to later outcomes, particularly for low-SES children (Ginsburg, Lee, & Boyd, 2008).

▪Parents and teachers show a sense of discomfort when working with each other on mathematics (Peressini, 1998; Remillard & Jackson 2006).

▪Teacher education institutions minimally address parent involvement (Hiatt-Michael, 2004).

Method

▪Primarily Math Program: Teachers participated in a NSF funded elementary mathematics specialist program.
- ▪ 6 courses (3 math/3 pedagogy-child development)

▪Participants: Two cohorts of K-3 teachers in the Primarily Math Program:
- ▪Cohort 1: 32 female teachers (started program Summer of 2009)
- ▪Cohort 2: 27 female and 1 male teacher (started program Summer of 2010)

▪Research Question: How do early elementary public school teachers participating in a program of graduate math education coursework connect with families and invite parents to become partners with teachers in math education?

▪Data Analysis: Qualitative analysis (Stake, 1995) of teachers' family projects papers.

▪Inventories of family project papers were analyzed to examine:
- ▪Types of family projects teachers undertook
- ▪Anticipated risks and benefits of doing such a project
- ▪The type or types of quality involvement the teachers wanted to achieve

Results

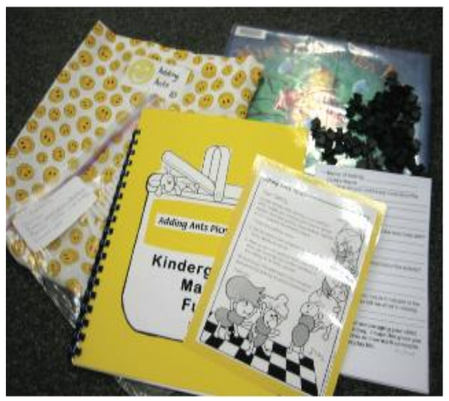
▪Teachers selected both home (e.g. games/activities sent home, math bags and backpacks, and parent-child assignments) and school-based strategies (e.g. family math nights, math and muffin mornings and child-parent-teacher conferences).

▪ Teachers took risks related to practical constraints:
- ▪ Resources
- ▪ Logistics
- ▪ Communication
- ▪ Parental strain issues
- ▪ Implementing new strategies

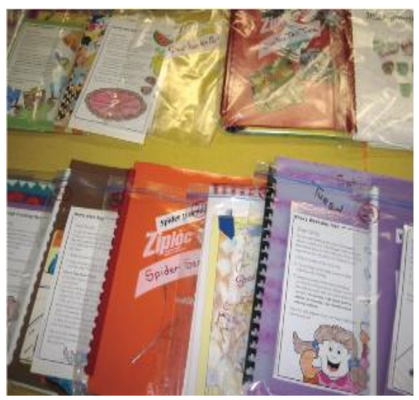
▪Teachers anticipated benefits of doing such a project were related to benefiting:
- ▪ Students
- ▪ Parents
- ▪ The home-school or parent-teacher connection
- ▪ The mathematical curriculum of the home

▪Teachers reported all four dimensions of quality parent-child interactions (Pomeranz, Morman, & Litwack, 2007) including:
- ▪ Process focused
- ▪ Autonomy-supporting
- ▪ Positive affect
- ▪ Positive beliefs

Examples of Family-School Partnership Projects



Materials included in a given math bag. Includes a math activity book with math-related games for parents to do with their children. Also includes a worksheet and materials to complete the activities.



Examples of different themed math bags. Some themes include a pizza topping activity, which allowed students to practice sorting, and a tooth fairy bag containing an activity in which students practiced charting.

Discussion/Implication to Practice

▪Findings suggest the feasibility of incorporating a focus on family-partnerships into a professional development program for elementary teachers.

▪This study suggests that an inquiry based approach is useful when creating such a project.

▪This type of project allows teachers:
- ▪ The opportunity to take risks
- ▪ Brainstorm with colleagues
- ▪ The understanding that working with parents is a skill that requires ongoing evaluation.

References

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