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Parental involvement in middle school mathematics

Ligia Varela Hallstrom

Pepperdine University

Graduate School of Education and Psychology

PARENTAL INVOLVEMENT IN MIDDLE SCHOOL MATHEMATICS

A dissertation submitted in partial satisfaction

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Doctor of Educational Leadership, Administration and Policy

by

Ligia Varela Hallstrom

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Diana Hiatt-Michael, Ed.D.—Dissertation Chairperson

This dissertation, written by

Ligia Varela Hallstrom

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

Doctoral Committee:

Diana Hiatt-Michael, Ed.D., Chairperson

Robert Barner, Ed. D

Marty Bonsangue, Ph. D

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DEDICATION

This dissertation is dedicated to my grandmother, Bertha Lovo de Gutierrez,

whose earthly voice was silenced on November 5, 2002.

She was my role model and my constant inspiration.

Also, to my parents

Dr. Gustavo Varela and Ligia Gutierrez de Varela,

for their unselfish love, guidance and support and especially,

for always instilling upon me the value and power of education. Their sacrifices served me as the guide to live life with integrity and the yearn for learning to experience life to its fullest.

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Finally, to the Miramar Middle School staff for their undivided support and their constant concern to get me to the finish line. Without my office manager, Mary Grace, I would not have finished my study. She took charge on days when I needed to write my dissertation.

VITA

LIGIA VARELA HALLSTROM

EDUCATION

Pepperdine University Graduate School of Education
Doctorate in Educational Leadership, Administration, and Policy, May-2010

UNIVERSITY OF CALIFORNIA, IRVINE
Tier II Administrative Program 1998-1999

CALIFORNIA STATE UNIVERSITY, FULLERTON
Tier I Preliminary Administrative Credential 1994-1995
Master of Science in Counseling 1990-1992
Bachelor of Arts in Psychology 1987-1990

PROFESSIONAL EXPERIENCE

Middle School Principal *2004 – Present*
Los Alisos Middle School

- Work closely with district office to meet the needs of all special needs students
- Responsible for the facilitation, planning, and implementation of Curriculum and Instruction, articulation and assessment in all content areas, staff training, scheduling and planning of faculty, department, and leadership meetings.
- Coordinate and facilitate ELAC meetings
- Monitor school budget, including categorical budget (ELAP, EIA, SBCP)
- Monitor school plan development and implementation
- Responsible for establishing and maintaining communication to staff, district parents, students, and community
- Responsible for the evaluation of teachers and classified personnel

CONSULTING - COMMITTEE WORK

Language Arts District Action Team 2010-Present
District Leadership Team 2009-Present
Literacy Council 2005-2008
Physical Education Task Force 2006-2008
Gate Committee, NLMUSD 2006-Present

CONFERENCES - TRAINING

Literacy Training 2004-Present
English Language Development Training 2010-Present
Systematic ELD Training 2008-2010
Harvard Graduate School of Education Summer 2008
Universal Learning

Professional Learning Community Training (NLMUSD)	2005-2007
McRel Leadersip Training	2008-2009
Building Vocabulary –Kate Kinsella	Fall-2007
Columbia Writing Project	Summer-2006

PROFESSIONAL ORGANIZATIONS

Association of California School Administrators, ACSA
Association for Supervision and Curriculum Development, ASCD
Norwalk –La Mirada Administrator's Association
American Association of School Administrators, AASA

AWARDS

Middle School Principal of the Year Region XIV April 2010

ABSTRACT

This study evaluated the impact of the Teachers Involve Parents in Schoolwork (TIPS) program developed by the National Network of Partnership Schools. Data collection methods included session pre-and post-assessments of parents, structured parent journal questions, a parent focus group, and researcher field notes.

A purposeful sample of parents was selected from 105 students enrolled in pre-algebra at a lower-class primarily Hispanic middle school in Southern California. All of these parents—27 parents of 23 of these low-achieving students—were invited and agreed to participate after an initial recruitment and orientation meeting. Meetings days and time were selected based upon teacher and parent availability.

The findings from parents' reports after the 10 TIPS sessions indicated that having the parent participate in these structured workshops with their child was beneficial for several reasons: (a) changed their cultural norm of limited communication with their child's teacher, (b) increased support for their child's progress and how to respond to their child at home with homework, (c) increased interaction and communication with their child about school and homework, and (d) increased understanding of what their child was learning. Ninety-two percent indicated that they were more knowledgeable and confident on how to support their child with homework and that their degree of involvement changed after the workshops. Instead of using only the student agenda as their ways to communicate with the school, they reported that they attended teacher conferences and called the teacher. Ninety-two percent used other resources, 72% of the parents sat next to their child while doing homework and 60% read to their child even if

it was difficult for them to understand English. However, 92% also wanted additional work regarding homework and how to be more active in their child's education.

Initially, the researcher prepared and then parents volunteered meals, accepting responsibility for the program. Across the sessions, parents bonded as a group, changed their participation in school homework, and reported that the TIPS program provided communication tools that empowered them to step out of their own traditional cultural role and norm to advocate for their child's education.

Chapter 1: Problem and Purpose

Background of Problem

Many factors contribute to a child's ability to learn and succeed in middle school. Research has shown that children are more likely to have higher academic achievement levels and improved behavior when parents are involved in their education (Bryan, 2005; Henderson & Mapp, 2002; Walker, Hoover-Dempsey, Whetsel, & Green, 2004). Learning begins at home through interaction with one's family. Parental involvement in a child's education - along with environmental and economic factors - can affect child development in areas such as cognition, language, and social skills. Numerous studies in this area have demonstrated the importance of parent interaction and involvement in the years prior to entering school (Bergsten, 1998; Hill, 2001; Wynn, 2002). Research findings have also shown that continued parental involvement throughout a child's education can improve academic achievement (Driessen, Smit & Sleegers, 2005; Fan, 2001; Hong & Ho, 2005). In fact, numerous educators concur that parental involvement is desirable and has a positive impact on students' achievement and behavior in school.

In spite of this fact, parents in U.S. schools are not as actively involved as they could be (Epstein, 2008; Hiatt-Michael, 2008; Hoover-Dempsey et al., 2005; Swap, 1993). Unfortunately, research studies have shown that parent involvement is likely to decrease as students transition from elementary to middle schools (Carnegie Council on Adolescent Development, 1989; Epstein, Simon, & Salinas, 1997). According to additional research by Peña (2000), there is a positive relationship between parent involvement and children's learning and achievement. Research provided by Alldred and Edwards (as cited in Hawes & Plourde, 2005) finds that when there is more participation

among parents the end result is the child's ability to improve and succeed. According to Hawes and Plourde (2005), apart from socioeconomic status or race, studies demonstrate a positive correlation between parental involvement and a child's academic achievement (Baumrind, 1991; Walberg, 1984). Studies by Phillips (1992), Van den Broeck, Opdenakker and Van Damme (2005), and Yan and Lin (2005) found that parental involvement significantly contributes to increased achievement in mathematics.

Educators and policymakers alike acknowledge parental involvement in a child's education as essential. The United States Department of Education's Goals 2000 states, "Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children" (as cited in Mansfield, 2009, p. 2). In 2001 President George W. Bush implemented the No Child Left Behind Act (NCLB). The main goals of the NCLB Act were to make sure students enter school "ready to learn" and to hold teachers, schools, and students accountable for their education. One of the responsibilities outlined in NCLB is that schools need to work jointly with parents and communities to achieve an effective partnership policy (U.S. Department of Education, 2001). Education is not only the responsibility of teachers, but also of students, parents, and the community. Schools alone cannot adequately succeed in helping students overcome the obstacles they face on a daily basis. According to the Center for Comprehensive School Reform and Improvement (2009), students tend to be more successful in school when educators, parents, and community work to support learning (Barton, 2007; Ferguson, 2008). In fact, parent and community involvement have been connected to improved student achievement, higher attendance rates, better social skills, and higher rates of postsecondary education (Fan &

Chen 2001; Henderson & Mapp, 2002; Jordan, Orozco, & Averett, 2002; Kreider, Caspe, Kennedy, & Weiss, 2007).

Statement of the Problem

Much of the research has examined various aspects of parental involvement and their relationship to academic achievement. The results of these studies have yielded positive results in most instances (Henderson & Mapp, 2002). However, at the middle school grade (6-8) level, few studies on the subject of the effects of parent involvement on mathematic achievement have been conducted regarding the types of parental activities that affect mathematics learning. Recent research by Ramdeen-Robinson and Allexsaht-Snider (2009) suggest that success in mathematics among middle grade students could be increased by particular types of parent involvement. In addition, a majority of the research in this area has been conducted solely with elementary school students (Bailey, Silvern, Brabham, & Ross, 2004; Marjoribanks, 2005). The National Association of Elementary Principals (NAEP) showed that "nationally, 90 percent of fourth graders were in schools where a school official reported that more than half of parents participated in parent-teacher conferences. Among eighth graders, though, that proportion dropped to 57 percent" (NAEP, as cited in U.S. Department of Education, 2004, p. 1). Research by Epstein (2005), Jackson, Andrews, Holland, and Pardini (2001), Jackson and Davis (2000), and the National Middle School Association (NMSA, 2003a, 2006) all confirm that parent involvement generally declines when a child enters the middle grades.

Research findings show that the decline in parent involvement at the middle school level stems from the following reasons: parents feel incapable of helping with

middle level students' schoolwork, and that parents feel they need more leadership and guidance from teachers (Dauber & Epstein, 1989). Additionally, many parents reported that they felt intimidated by parent-teacher conferences with a team of five teachers, as noted by Berla (1991). Also, the structure of middle school is a discouraging factor that keeps parents away from getting involved in their children's education. According to researchers, if parents know the "how" of the strategies to support their child with homework, they would be more actively involved in and provide consistent support for their child's education (Pomerantz, Moorman & Litwack, 2007; Walker, Wilkins, Dallaire, Sandler & Hoover-Dempsey, 2008). According to the NNPS (Epstein, 2009), in order for parent involvement to increase, parental engagement must be meaningfully embedded into the school's program and community.

Norwalk-La Mirada Unified School District (NLMUSD) has one of the lowest math scores in the state. As a result of lack of math achievement across all grade levels (2-11), the Superintendent directed principals to examine current practices in their respective sites that may be responsible for the achievement gap in mathematics. Miramar Middle School was selected for this study because only 420 students of the 1000 students (38%) currently enrolled are proficient in math across all grade levels.

Purpose of the Study

The purpose of this study is to evaluate the impact of a well-designed program for parent involvement by Epstein, a worldwide well-known researcher. This study selected the TIPS program developed by the NNPS (Epstein et al., 2002a) as means to increase learning at home and communicating between the home and the school, particularly in engaging in math homework. Hence, the purpose of this study is to evaluate the impact of

Epstein's two types of parent involvement activities: communicating (type 2) and learning at home (type 4) using the TIPS prototype for math homework to increase parent involvement (Epstein, 2001).

The intended outcomes of the workshops are to empower parents to be actively involved in their children's mathematics education at the middle school level and to assess an implementation of TIPS program in one middle school through activities that will: develop a three-way partnership involving students, families, and teachers; help all families to become actively involved in their children's homework, not just the few parents who are familiar with math, science or other subjects; ensure that homework is the student's responsibility, and not the job of the parent to "teach" subjects or skills that they are not prepared to teach; and increase the number of opportunities for middle school students to communicate and enjoy their work, ideas, and improvement with their family.

The following research questions guided this study:

1. What benefits, if any, will participation in the TIPS math program have on involving parents in helping their children with math homework at home?
2. What benefits, if any, will participation in the TIPS math program have on building students' confidence in math?
3. What benefits, if any, will participation in the TIPS math program have on parents' awareness of their child's progress in mathematics?
4. Which part, if any, of the TIPS process was helpful in helping students understand the math concepts?

Significance of the Study

Practical significance. According to Zimmerman (2000), "Parent involvement is likely to promote the development of cognitive, affective, and behavioral strategies-including goal setting, planning, and the management of time, materials, attentiveness, and emotions-necessary to achieve academic goals" (p. 1043). However, as previously mentioned, many parents become less involved with their children's education once they enter middle school, believing that their children need less support at this educational level and because they are unsure about the most appropriate way to be involved and how to help their children (NMSA, 2006).

Today's teachers, parents, and legislators have voiced their concerns about the mathematics achievement of middle grades students because they find it difficult to reach the national and state performance standards set by legislators (U.S. Department of Education, as cited in Ramdeen-Robinson & Allexsaht-Snider, 2009). The Third International Mathematics and Science Study (TIMSS) and other studies demonstrate the need for parental involvement when it comes to mathematics achievement in the middle grades. In an effort to improve performance in mathematics, schools have implemented a variety of programs, initiatives, and strategies. These include parental assistance with mathematics homework, offerings of educational resources to support children's mathematics learning, and monitoring/checking children's mathematics homework for completion (Ramdeen-Robinson & Allexsaht-Snider, 2009). In their study, Ramdeen-Robinson and Alexsaht-Snider concluded that, in terms of mathematics homework, the most common involvement strategy is that parents take steps to make certain that children understand their mathematics. However, this study did not elicit the types of

activities or steps that parents need to undertake to ensure that they become more involved with mathematics homework. Hence, investigating the types of activities in this study, that would increase parent involvement, was a significant area for educators and for future research.

Parents, teachers, administrators, and policy makers, especially teachers and administrators, benefited from this study by being able to decide ways in which they can assist parents of middle school students in being more involved in their children's education.

1. Teachers and administrators will use results of this study to offer workshops for parents, with the possibility of extending the workshops to parents of students at other grade levels.
2. The study will augment research on parent involvement with middle school students, establishing a set of data for parents on the specific strategies that can potentially benefit and expand their current practices in their attempt to increase their communication and learning at home through homework.
3. Principals and teachers will benefit from the study in that they will learn a particular homework prototype that helps connect parents directly with the school curriculum.
4. Particularly in Norwalk-La Mirada United School District–where there currently exists a strong desire to increase parent involvement–this study will offer invaluable information about specific training for parents that will strengthen the communication and learning at home.

5. The study will enhance the likelihood of future parent involvement activities at Miramar Middle School, which can be expanded beyond mathematics.

This study added to the research on parent involvement at the middle school level. Specifically, this study examined two types of parental involvement activities that may increase parent involvement at middle school and improve mathematics performance. Using TIPS program in this study as the prototype to involve parents in homework completion can guide and strengthen home-school partnership, as well as increase positive communication between the parent and the child. Balli (1995) conducted a formal study of the TIPS math for sixth grade-students and their families in a suburban middle school. She compared the levels of family involvement and math achievement of students completing TIPS Math interactive assignment to students completing non-interactive math assignments. Her findings concluded that parents appreciated the student-led interactions, students and parents reported more positive conversations about math, and more students believed that the interactions helped them be more prepared and successful in math class.

Furthermore, using TIPS offered the participating teacher and site administrator the opportunity to examine their current homework practices and create new forms of homework activities that will encourage and guide families in establishing constructive homework interactions and communication with their children. The results of the study generated information for teachers, administrators, teacher educators, and policymakers regarding behaviors that school personnel could adopt to: (a) create an effective line of communication between teachers and parents regarding middle school homework, (b) increase parent involvement in middle schools beyond math homework, (c) improve

student completion of homework and higher achievement in mathematics, and (d) effectively utilize a model of parental involvement in homework (TIPS) that was developed for schools across enrollment size or community socio-economic composition in order to create a family-school partnership.

Theoretical significance. As children grow older, parental involvement declines at home and at school. Hill (2001) and Jeynes (2007) found that parents feel as though they have a greater impact on their younger children than on their older children. Some parents accept as true that involvement in their child's education is not as important after elementary school. Other parents assume that adolescents desire and need independence (Deplanty, Coulter-Kern, & Duchane, 2007). Due to this new independence, parents mistakenly become less involved in middle school, believing that children need less support at this level (NMSA, 2003b).

However, students in the middle grades need a large support system, which can help them to rise above or eliminate risk factors they come across during this period of significant change. Parents need to be involved at every level of their child's development and learning to ensure physical and mental well being and educational success. For this reason, schools must take the initiative to develop partnerships to strengthen the bond between the parents and the school. According to Epstein (2001),

> Educators need to understand the circumstances in which students live, work, and play. Without that knowledge, educators work single-handedly, not in partnership with other important people in students' lives. Without collaboration, educators segment students into the school child and the home child, ignoring the whole child. (p. 5)

This study was based on the following four theoretical frameworks: Epstein's six types of parent involvement model, the theory of Deficit-Thinking, the Goal-Setting theory and Kirkpatrick's program evaluation. These frames used in this study brought together an effective approach to achieving home-school partnership, particularly in increasing parent involvement in math homework at Miramar Middle School.

Epstein's Six Types of Parent Involvement

Epstein (2001) developed a framework of six types of parent involvement that schools can use a guide in their attempts to increase parent involvement and build up partnership programs. Epstein typologies have become extensively used in studies throughout the country and the world. The model is a well-researched example for developing additional educational research and practice. Although all six types are important, not every type of family or community involvement will address the need for greater student achievement in math and success in school. This study focused on two specific types of parental involvement as delineated by Epstein: communicating (type 2) and learning at home (type 4). Researchers Catsambis and Garland (1997) from the Center for Research on the Education of Students Placed At-Risk (CRESPAR) led a project to examine data from the parent component of the 1988 National Educational Longitudinal Study to study changes in family educational involvement between students' eighth and twelfth grades. Using Epstein's (1990, 1992; Epstein & Lee, 1995) six types of parent involvement, Catsambis and Garland describe these activities in this manner:

> Communication (type 2) refers to the fundamental obligations of schools to convey with families regarding school programs and student's progress (such as

> communication through memos, notices, report cards, and conferences with parents). Learning at Home (type 4) refers to student's learning at home, to parent-child-initiated requests for help, and to teachers' ideas about parents' involvement in home learning activities. (Catsambis & Garland, 1997, pp. 1-2)

Deficit-Thinking

The second frame, "deficit thinking," was used to eradicate the lasting belief that ethnicity and poverty are not barriers for the lack of parent involvement. This theory states a "mind-set molded by the blend of ideology and science that blames the victim, rather than holding oppressive and inadequate schooling arrangements culpable" (Valencia & Black, 2002, p. 81). In fact, Chrispeels and Rivero (2000) assert that when parents connect with their children in learning opportunities at home, offer the basic needs, and communicate with the school, their involvement can lessen the negative impact of poverty and preclude students from dropping out.

Goal Theory

Goal Theory grew as an expansion of attribution theory. It is believed that students follow goals and that each goal is connected with particular behaviors and beliefs. Student behaviors are a function of desires to achieve a particular goal (Irvin, 1997). The third frame, Goal Theory, served as the template for the teacher and parents to help students develop mastery goals. The hope of this study as it relates to this theory was twofold: (a) for the student to acquire positive emotions and to conquer negative emotions they may have about mathematics, and (b) for the parent to have a positive experience at home and in conversation with the his/her child when engaged in homework activity.

Kirkpatrick's Levels of Evaluation

Finally, Kirkpatrick's (1998) four *levels of evaluation* were used to provide a summative evaluation of all aspects of the study. The four levels of evaluation (reaction, learning, behavior, and results) designed by Kirkpatrick have been widely used, recognized and successful for program evaluation. The first level, reaction, in this study measured how the parents react to the math workshops. The second level, learning, measured the extent to which parents improved their skills and/or knowledge as a result of attending the math workshop sessions. The third level, behavior, in this study evaluated the degree to which parents changed in behavior happened because they attended the math workshop sessions. The last level, results, in this study was difficult to measure because communication is an intangible result.

Methodological Significance

The development of the series of workshops math activities using the TIPS prototype was significant to the school, teacher, parents and students involved because a format of this type was never done at Miramar Middle School to involve parents prior to the study. TIPS math format entailed having students explain the skill required for the homework to the parents or family partner, which encouraged parent-student communication as well as learning at home. The data collected in the journal responses, one pre-and post-assessment, and a focus group demonstrated the efficacy of parent communication and learning at home. Utilizing the fusion of the above methodologies effectively answered the posed research questions. Most importantly, using the journal as a response to focused questions described in detail what parents were learning after each

workshop session and described the effectiveness of the application at home with their child.

Definition of Terms

Throughout this study, the following terminology was used frequently:

- *Communication*: one-way and two-way oral, written, and face-to-face dialogue between persons and group of persons (Hiatt-Michael, 2010).
- *Community:* A group of interacting people living in a common location.
- *Homework:* Tasks assigned by the teacher intended for students to complete during non-school hours (Patall, Cooper, & Robinson, 2008).
- *Learning at Home*: Providing information and ideas to families about how to help students with homework and other curriculum-related materials (Sheldon & Epstein, 2005).
- *Middle school:* School that educates students between the ages of 10 and 14. For the purpose of this study, this middle school serves students in 6 – 8 grades.
- *Middle school students:* Student in grades six through eight who are attending the public school under study.
- *Parents:* Parents, adoptive and stepparents, and primary caregivers (e.g., grandmothers, aunts, or brothers; NMSA, 2006).
- *Parent involvement:* What parents or caretakers of middle grades students do to enhance children's academic learning during after school hours (Ramdeen-Robinson & Allexsaht-Snider, 2009).

- *Parent involvement in home-based activities*: Interactive activities that serve to connect the home experience to the school experience.
- *School Administrator*: A licensed administrator or principal who provides instructional leadership and manage the day-to-day activities in K-12 schools, including setting educational standards and goals and establishing policies and procedures to achieve them.
- *School, family, and community partnership*: The shared responsibility between parents, educators, and others in the community to ensure students' learning and development (Sheldon & Epstein, 2005).
- *Teacher:* A person who teaches, guides, instructs, trains or helps students in the process of learning knowledge, understanding, behavior or skills.
- *Teachers Involve Parents in Schoolwork (TIPS)*: An educational format and structure in which the student "teaches" the parent(s) what the student has learned in math followed by practice and new learning requiring the family partner to become engaged with the student (Epstein et al., 2002b).

Assumptions of the Study

The assumption of this study was that parents want their children to be educated so that their children will have a better chance at succeeding in life. In addition, this study assumed educators and administrators in the school under study were committed to creating appropriate conditions for learning in order to ensure that students reach their highest level of mastery in all subjects. Third, it was assumed that children from all socio-economic backgrounds come to school with curiosity and a desire to learn. Thus, the underachievement of middle school students in mathematics, based on California

State Testing (CST) and failing report card grades, did not stem from parents' lack of desire to support teachers by helping their children with homework, teachers' inability to educate or support students so they can complete their homework, or children's inability to learn.

This study assumed that middle school educators and principals did not have the necessary tools to address the lack of parent involvement in homework and in empowering parents to become partners in learning at home and communicating with their children.

Finally, this study was also structured around these assumptions:

1. Seventh grade students were willing to participate in the study.
2. Seventh grade students were willing to teach their parents the mathematical concepts learned by their teachers.
3. Parents of seventh grade students were willing volunteers in the study.
4. Parents of seventh grade students would attend the orientation session and will ask questions to ensure that they understand the expectations for this study.
5. Parents of seventh grade students would respond honestly to the pre- and post-assessments.
6. Seventh grade pre-algebra teacher would be highly qualified, committed and cooperative in following the expectations of the researcher.
7. Seventh grade pre-algebra teacher would be involved in designing the interactive activities for the mathematical concepts and would be knowledgeable in the subject matter and proficient in their pedagogy.

Limitations of the Study

This study was undertaken with the following basic limitations:

1. Because the unit of analysis in this case study was one middle school, findings could not be generalized to any other population.
2. This study was limited to 105 students and parents representing 325 students from the entire seventh grade student population at the site where this study will took place.
3. The fact that the researcher was the principal of the school could generate bias.
4. The principal (researcher) selected one pre-algebra teacher to participate in this study. Since no random selection of assignment was used, the results were generalized and confined to the selected school, parents, teacher, and students from this middle school.
5. It would not be appropriate to generalize the data to include other schools in the district or other districts unless the parents and the districts possess similar characteristics.

Timeline of the Study

This study started after researcher received Pepperdine IRB approval on December 23, 2009. Immediately thereafter, the researcher held introductory session to parents, dates, times, structure, and expectations for the study. The series of workshops began January 12, 2010 and ended March 16, 2010. Upon completion of the series of workshop sessions, the researcher started the process of data analysis to initiate writing chapter four and five of this study. Editing and revisions occurred with the chairperson's

assistance. The final review was completed in April 2010; the defense occurred in June 2010.

Chapter 2: Review of the Related Literature and Research

Introduction

There are many contributing factors that can determine an adolescent's ability to learn and succeed in middle school. Middle school students experience not only changes in their school environment, but also physical, cognitive, and social changes. During such perplexing and challenging transitional period in their lives, adolescents need support from their schools, communities, and especially their families. The major sections of this chapter begins with an overview of history of education in the United States and family, school, and community partnerships leading to an in-depth review of the literature review on parent involvement, with an emphasis in middle school focusing on the theoretical framework spheres of influence and types of parent involvement. Also included in this literature review is parent involvement in homework. Because TIPS is the frame for this study, research on this interactive homework prototype is discussed.

Family, School, and Community Partnership

When families, schools, and communities work as a team they can have a tremendous impact on student learning. Numerous studies show what educators have long known; families can and do have a positive influence on how well their children do in school. Families provide the social, cultural, and emotional supports that adolescents need to function well in school (Deplanty et al., 2007). For decades, researchers have researched the effects of parental involvement on academic achievement. Studies have shown that parental involvement in a child's education can improve academic achievement and predict future success in and out of school (Deplanty et al., 2007; Driessen et al., 2005; Fan & Chen, 2001). Studies also corroborate that communities can

also have a positive impact on school effectiveness (Iowa School Boards Foundation, 2007). Henderson and Mapp (2002) published a comprehensive literature review describing the influence of family and community engagement on student achievement. Their report titled "A New Wave of Evidence: The Impact of School, Family and Community Connections on Student Achievement" synthesized findings from 51 studies. One of the findings substantiated that:

> There is a positive and substantial relationship between family involvement and benefits for students, including improved academic achievement. This relationship holds across families of all economic, racial/ethnic, and educational backgrounds and for students of all ages. (Henderson & Mapp, 2002, p. 1)

The Need. Teachers and administrators in U.S. public schools all work with a common population: students from kindergarten to twelfth grade. They are held responsible for teaching students who: are from diverse cultural, language and socio-economic backgrounds; have various needs; or have difficulty succeeding in school. Furthermore, many students have different living arrangements. Some live with two parents, while others have only one parent at home; some parents are working, and some unemployed. Also, families differ in terms of proximity to the school; some families may live nearby, while others may have a considerable commute. Given these different geographical, economic and social characteristics, educators need to understand the context in which their students live. It is necessary for educators to think critically about the necessary communications, connections, and coordinated actions that they must uphold with families and community partners to help more students–indeed, all students–

achieve their full potential (Epstein & Sheldon, 2006). Epstein and Sheldon articulate this idea thusly:

> Well-documented problems with student achievement, motivation, attitudes about education, school behavior, and future plans are partly due to "old think" that separates school and students from home and community, leaving teachers to work in isolation from other influential people in children's lives. (p. 1)

The gap. All U.S. teachers have received instruction and preparation in how to teach reading and writing; most also are provided training in how to teach math, science and/or specialty subjects. All administrators in the U.S. receive specific training in all areas of school management. Yet, according to Epstein (2001), these educators are "presently unprepared to work positively and productively with one of the constants of life in school: their students' families" (p. 5). Chavkin and Williams (as cited in Epstein, 2001) state:

> A Southwest regional survey in 1980 found that only 4 to 15 percent of teacher educators taught a full course or part of a course on parent involvement, and only 37 percent of teacher educators surveyed included even one class period on the topic. Just about all the practicing teachers and administrators who were asked to participate in this survey agreed that better preparation was needed to know and work with families. Over 70 percent thought that there should be a required course on the topic in understanding education. (p. 5)

Colleges and universities have made considerable progress in conducting research and informing policy and practice to include the topic of school, family, and community partnership in school curricula. Equally significant is that more federal policies (such as

Head Start, Title I, Even Start, and Goals 2000) are beginning to emphasize connections with families, including mandates for school administrators and teachers to develop school-family partnership. Along these lines, Epstein (2001) states:

> …just as teachers are prepare to teach subject matter, and administrators are prepared to direct and manage schools and programs, educators must be prepared to draw upon all resources that will help them with their work, including families and communities…they need to understand and maintain school, family, and community partnerships. Without this information, we restrict the resources that teachers and administrators can call upon to help students do their best. (pp. 8-9)

Partnerships. Schools cannot teach children alone. According to the NMSA (2003b), school-initiated family and community partnerships are an essential factor of successful schools. School, family, and community partnerships aid in decreasing the achievement gap. One of the responsibilities outlined in the No Child Left Behind Act is that schools need to work jointly with families and communities to achieve an effective partnership policy (Bryan, 2005). According to research done by Bryan family-centered partnerships and extracurricular enrichment partnership programs are most beneficial in improving academic achievement and resiliency. Extra-curricular enrichment partnerships programs include: tutoring, mentoring, and after school programs . Family-centered partnerships include: family centers, parent education programs and family outreach. Teacher outreach to parents has also shown increases in student performances. Effective outreach programs included meeting face-to-face, sending materials home, and keeping in touch about progress (Henderson & Mapp, 2002). Parent education programs such as workshops for parents on helping their children at home were linked with higher

reading and math scores. Students and parents alike form ties to the community and feel more accepted, students have increased opportunities for participation in their schools and communities, and the child-parent interaction increases along with parents involvement in school (Bryan, 2005). By implementing programs into the school system and community that increase parental involvement, student's development and academic achievement can improve. Henderson and Mapp (2002) suggest the following action steps to establish effective family engagement programs:

1. Acknowledge that all parents, regardless of level of education, income, or ethnic background have a desire to be involved in their children's education and want their children to succeed in school;
2. Connect family and community engagement centered on student learning;
3. Create reforms that will encourage and support families to guide their children's learning from preschool to high school;
4. Build the capacity of school staff to work with families;
5. Focus efforts to create strong relations with families based on trust and respect;
6. Include a philosophy of partnership and be open to share authority with families. Hence, parents and school understand that the accountability for children's learning and development is a collaborative effort (para. 2)

Overlapping Spheres of Influence

Knowing that families have various family structures and the demands placed upon to educate the child both at home and at school, Epstein (2001) has developed a model that incorporates family, schools and community with the aim to build a strong

partnership among them. Epstein's model also accounts for the history, development, and changing experiences of parents, teachers, and students. This framework, known as the overlapping spheres of influence (see Figure 1) recognizes that there are three major contexts in which students learn and grow: the family, the school, and the community. According to this model, there are some practices that schools, families and communities conduct separately and some they conduct jointly in order to influence children's learning and development. Moreover, this model of overlapping spheres assumes that "there are mutual interactions and influences of families and schools that can be more or less successfully promoted by policies and programs of the organization and the actions and attitudes of the individuals in those organizations" (Epstein, 2001, p. 31). Further, the overlapping of school and family can produce "school-like families" and "family-like schools" (p. 32). According to Epstein, school-like families emphasize the importance of school, homework, and learning activities. Similarly, family-like schools welcome families and have an accepting, caring atmosphere. Although many differences clearly exist between schools and families, it is equally significant to recognize that both share similar goals and responsibilities, and that the mutual influence of these two major environments significantly impact children's learning and development. Epstein contends that the extent of overlap between the spheres varies along a continuum, and "maximum" overlap exists when schools, families, and communities work together in partnership measured by frequent cooperative efforts and close communication. This framework, therefore, recognizes that parents' involvement in their children's education, school, and communities is not static, but rather is a intricate phenomenon that is influenced by the nature of the participants' interrelationships.

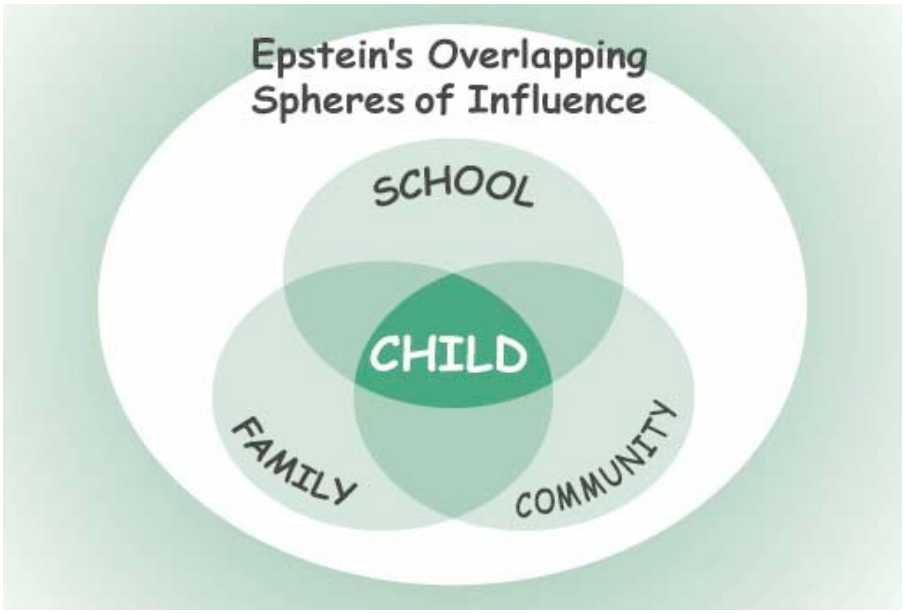

Figure 1. Epstein's overlapping spheres of influence. Adapted from "Joyce Epstein's six types of involvement," by the Parent Education Bridge for Student Achievement Foundation, n.d., retrieved from http://pebsaf.org/page47.html. Copyright 2010 by the authors. Reprinted with permission.

Epstein's Six Types of Involvement

To examine the value of Epstein's theory, Epstein (2001) and other researchers conducted surveys with parents, teachers, and students at all levels (elementary, middle and high school) to study the overlapping spheres of influence model. This research generated a framework of six major types of parent involvement along with hundreds of practices that schools can use to develop partnership programs that engage all families. Each of the six types of parent involvement includes many different practices of partnership and implementation. Out of the following six types of involvement, type 2 (communicating) and type 4 (learning at home) will be the focus of this study:

- Type 1 – *Parenting*. Assisting families with parenting and child-rearing skills, family support, understanding child and adolescent development, and setting home conditions to support learning at each and grade level.

- Type 2 – *Communicating*. Communicating with families about school programs and student progress with school-to-home and home-to-school communications.
- Type 3 – *Volunteering*. Improving recruitment, training, work, and schedule to involve families as volunteers and audiences at the school or in other locations to support students and school programs.
- Type 4 – *Learning at Home*. Involving families with their children in learning activities at home, including homework and other curriculum-linked activities and decisions.
- Type 5 – *Decision Making*. Including families as participants in school decisions, governance, and advocacy activities through PTA, committees, councils, and other parent organizations.
- Type 6 –*Collaborating with the Community*. Coordinating the work and resources of community businesses, agencies, colleges or universities, and other groups to strengthen school programs, family practices, and student learning and development (Epstein, 2001).

History of Education in the United States

After the American Revolution (1775-1783), the founders of the United States argued that education was critical for the progress and survival of the new nation. Thomas Jefferson was a pioneer to have public education. He suggested that Americans see education as a high priority to fight against ignorance. He did so by creating a system of free schools for all persons that would be publicly supported through taxes. Hiatt-Michael (2008) writes:

> His argument was that American's citizens needed certain fundamental skills in order to function in a democratic society. These skills included reading, writing, and rhetoric. Because most of American's European immigrants did not have such skills, and were, as a result, unable of properly educating their own children in them, Jefferson stated that Virginia should provide public schooling for every child. (p. 92)

Jefferson's stand for public education for all children was grounded in his belief that citizens required to be educated in order "to be free and to make rational decisions in the community and nation" (Hiatt-Michael, p. 92). Significant in the mid-1800s was the leadership of Horace Mann and Henry Bernard who influenced the educational reform across America who wanted to increase educational chances for all children by creating the common-school movement. In 1837, Horace Mann became secretary of the board of education in Massachusetts and supervised the establishment of a statewide common-school system. Henry Barnard led similar efforts in Connecticut where he became superintendent of common schools in 1849. Their reforms was founded on the idea that "all young children should be schooled, and on the notion that the content of education should be the same for everyone" (Public Education in the United States, 2009, para. 5). The common-school reformers positively argued that education not only could transform all youth into educated citizens, but also they would be better equipped to compete with other countries. In the end, they also advocated that free elementary education should be available to everyone, that it should be financed by public funds, and that it should be conducted in schools accountable not only to local boards, but also to state governments. Because of these educational reformers, free public education was created beginning at

the elementary level. In 1867, Congress established the National Bureau of Education. The purpose was:

> …to collect statistics and facts showing the condition and progress of education in the several states and territories, and diffuse such information respecting the organization and management of schools and school systems and methods of teaching as shall and the people of the United States. In the establishment and maintenance of efficient school systems, and otherwise promote the cause of education throughout the country. (Seeley, 1899, p. 314)

By the year 1918, all states in the United States passed laws making mandatory for elementary school age children to attend school. Mandatory school attendance along with truancy laws were enacted, which required the remaining parents who kept children out of school to relinquish their children's wages to attend school. These laws made it unlawful for parents to keep a child out of school without the authorization of school authorities. Violation of compulsory attendance resulted in severe fines (Hiatt-Michael, 2008). In the 1900s, the national organization of the Parent Teacher Association (PTA) was established to link the association between parents and teachers, therefore beginning the formalized importance of parent involvement. This choice to bridge the relationship between parents and teachers and recognizing its importance was significant in families and schools working together. Hiatt-Michael (2008) writes:

> Family members know of the individual child across many types of experience; teachers understand the child as a member of a group within the classroom and the school. The teacher offers to the situation professional knowledge of teaching

and learning; the family provides a lifelong communication to the child's well-being and deep caring. (p. 88)

The power of involving parents and children began with Head Start. From Head Start other programs grew. No Child Left Behind No Child Left Behind Act of 2001 (NCLB Act) reauthorized the Elementary and Secondary Education Act of 1965 (ESEA) and is based on four principles. The principles were established to create a framework where "families, educators, and communities can work together to improve teaching and learning" (U.S. Department of Education, 2004, p. 1). The principles are:

1. Accountability for results,
2. Local control and flexibility,
3. Expanded parental choice, and
4. Effective and successful programs that reflect scientifically based research.

The new NCLB legislation "ensures that parents have the information they need to make well-informed choices for their children, more effectively share responsibility with their children's schools, and help those schools develop effective and successful academic programs" (U.S. Department of Education, p. 1). As part of this legislation established both at the federal and state level, research has led to a regulation in Title 1 to the development of the parent compact. This compact describes how parents, students, and the school will share the responsibility for academic achievement. School districts are given the flexibility to design the parent compact. Even though the wording varies from district to district, what is critical in this compact is the manner in which each school will work towards achieving goals set by the state, district, and school. Indicative of the importance of this parent compact is that in most recent years, under NCLB, in order for

schools to receive Title I funds, Local Educational Agencies (LEAs) and schools must jointly create and provide to parents of Title I students a written version of the following:

1. Title I LEA-level parental involvement policy that is evaluated annually
2. Title I school-level parental involvement policy that is updated periodically
3. School-parent compact that is included in the school-level parental involvement policy (California Department of Education, n. d.).

Historical Background on Parental Involvement

Pre-school development. Parents are in essence a child's first teacher; this education begins from the time of birth. An infant is born with 100 billion nerve cells or neurons in his or her brain. Developmental psychologists believe that, few, if any, brain cells are produced for the remainder of the child's life. Development begins when a child's neurons connect and form "wiring patterns." These patterns ultimately become pathways for vision, hearing, language, emotions and movement. Neural connections are critical for a child's growth and development. Brain development has also been associated with attachment and security. An encouraging home environment can foster healthy development in children, and inadequate family interaction can cause behavioral problems and lacking social skills. Without certain connections children can have mental and behavioral problems as they enter school; these can continue for the remainder of their lives (Bergsten, 1998). These findings reveal the importance of family interaction and education participation in the years prior to entering school. Researchers have associated academic success to early literacy practices in the home (Hong & Ho, 2005). Research findings show that a continued parental involvement throughout the child's education can improve academic achievement. This is particularly true during the

adolescent years (Deplanty et al., 2007). Hill (2001) found that early school interaction could influence later school performance. The statistical analyses of Annunziata, Hogue, Faw, and Liddle (2006) propose that parental involvement in school is linked to school success as early as kindergarten. Because parents are a child's first and most important teachers, it is crucial that parents actively participate in their child's academic lives. The lack of learning important mental and behavioral skills can hinder a child's ability to be "school ready." In 2001, President George W. Bush implemented the No Child Left Behind Act, which established goals to make sure students enter school "ready to learn" (U.S. Department of Education, 2001). School readiness is hard to describe because of the differences in children entering school across culture, race, and socioeconomic status. School readiness involves children, families, home environments, schools, and communities. Researchers have defined school readiness as the stage of development in which a child can engage in, and benefit from, primary learning experiences (Reynolds, 1995). A young child is believed to be school ready when he or she has reached certain levels of physical well-being and motor development, acquired social and emotional capabilities, and language and comprehension skills (Wynn, 2002). President George W. Bush stated, that parents and the school have equal responsibility to educate the child, starting from home where parents teach the fundamentals (as cited in Lehr & Osborn, 2002). Children's skills and development are strongly affected by their families and through their interactions with other people and environments before entering school.

Early adolescence. An important factor of effective parent involvement in middle school students' education involves a careful understanding of the distinct cognitive development characteristics of their life cycle stage, early adolescence. Early adolescence

is a distinctive period of human growth and development that occurs between childhood and adolescence. During this stage of the life cycle, young adolescents (10 to 15 years old) go through a quick and significant developmental change. Moreover, recognizing and understanding the unique developmental characteristics of individuals in this stage, specifically intellectual characteristics and their relationship to the educational program (e.g. curriculum, instruction, assessment), are central to the achievement of middle school students (Caskey & Anfara Jr., 2007).

Adolescent Motivation

Few educators would disagree with the argument that motivation is an important influence on learning. Extensive research has shown a decline in motivation and performance for many children as they move from elementary into middle school. Often it has been assumed that this decline is largely due to physiological and psychological changes associated with puberty, and therefore, is somewhat inevitable. This assumption has been challenged, however, by research that demonstrates that the nature of motivational change on entry to middle school depends on characteristics of the learning environment in which students find themselves (Anderman & Midgley, 1997).

Conditions That Support Adolescent Learning

According to Beamon (1997), adolescents learn better when they:

- Come across learning that is suitable to their developmental level and is presented in various ways and in an agreeable and creative manner.
- Are academically intrigued by tasks that are real and perceived as challenging, original, and pertinent to their own lives.

- Are allowed to communicate and talk about ideas, and to collaborate on tasks, projects, and problems.
- Are provided multiple strategies to obtain, integrate and explain knowledge meaningfully, to show understanding, and to use knowledge to new situations.
- Are given opportunities to develop and use strategic thinking skills, such as reasoning and problem solving.
- Are given direction and advice about their work, yet are allowed to supervise personal progress and understanding.
- Are protected, caring environment where value is given to their own ideas and negative emotions, such as fear of penalty and humiliation, are minimized (p. 6).

According to Piaget's stage theory, children development through a sequence of developmental stages. He identified four main stages of cognitive development: sensorimotor, preoperational, concrete operational, and formal operational (Burns, Bodrova, & Leong, 2009). The concrete and formal operational stages are of specific importance for parents and educators of middle school students because they apply to the same age range.

Concrete operational stage (elementary school and early adolescence). This phase begins at the age of seven and continues approximately age eleven. During this developmental stage, children increase a better understanding of mental operations. Children begin to think critically about concrete events. However, they have a problem understanding abstract or hypothetical concepts. Piaget determined that children at this phase of development were fairly good at the use of inductive reasoning, which involves

progressing from the specific to a general principle. On the other hand, at this stage, children run into difficulty using deductive reasoning and progressing from general principles to determine the outcomes of specific events (Van Wagner, 2009a).

Formal operational stage (adolescence and adulthood). This stage begins at approximately age twelve to and lasts into adulthood. During this time, people increase the ability to think about abstract concepts. Skills such as logical thought, deductive reasoning, and logical planning also emerge during this stage. Piaget believed that deductive reasoning becomes significant at this stage of development. It requires the skill to use a general principle to determine a specific result. Moreover, this type of thinking entails theoretical situations and is often required in science and mathematics. During this phase of development, the ability for children to resolve a problem in a logic and methodical way materializes (Van Wagner, 2009b).

Adolescence and Secondary Mathematics

There is common agreement that adolescents are concerned with the development of identity, belonging, being listened, being independent, being supported, feeling powerful, understanding the world, and being able to debate in ways that make adults listen (Coleman & Hendry, 1990). Typical development of adolescents involves the growth of abilities to engage in formal-logical thinking, so that they are able to self-analyze, and analyze other situations (Karpov, 2003), including major curriculum areas such as mathematics. According to Watson (2007), this is of major significance because when examinations in math become high stakes, adolescents are expected to combine several concepts learned earlier with new concepts. Hence, there is less demand for concrete thinking and illustrative representations to abstract thinking by using learned

concepts and making and understanding generalizations. A study to improve math instruction at the middle school level shows that U.S. teachers frequently concentrate on having students engage in paper-and-pencil skills followed by repetition of practice (Ritenour, 2008). Hence, students are limited in having a conceptual understanding of why these concepts function the way they do. As a result, middle school students are relatively weak in understanding abstract math.

Having knowledge of both the concrete and formal operational stages is undoubtedly applicable to adolescent learning. Of particular significance for this study is learning in mathematics at both of stages of early and adolescence development. Thus, if teachers attempt to teach a math topic to a student who is far from being developmentally ready, the child is inclined to have little resource but to try to "get by" through memorizing and regurgitating facts. Only 35% of high school graduates in industrialized countries obtain formal operations (Kuhn, Langer, Kohlberg & Haan, 1977).

Piaget's research was primarily based on descriptive case studies. While some of his ideas have been supported through correlation and other experimental studies, some of his additional theories have not. Piaget believed that biological forces drive the movement from one stage to the next. Figure 2 shows that students' onset of formal operational stage begins at 11 years of age. Yet, it is not until 13 years of age that this stage begins to mature (Kuhn et al., 1977).

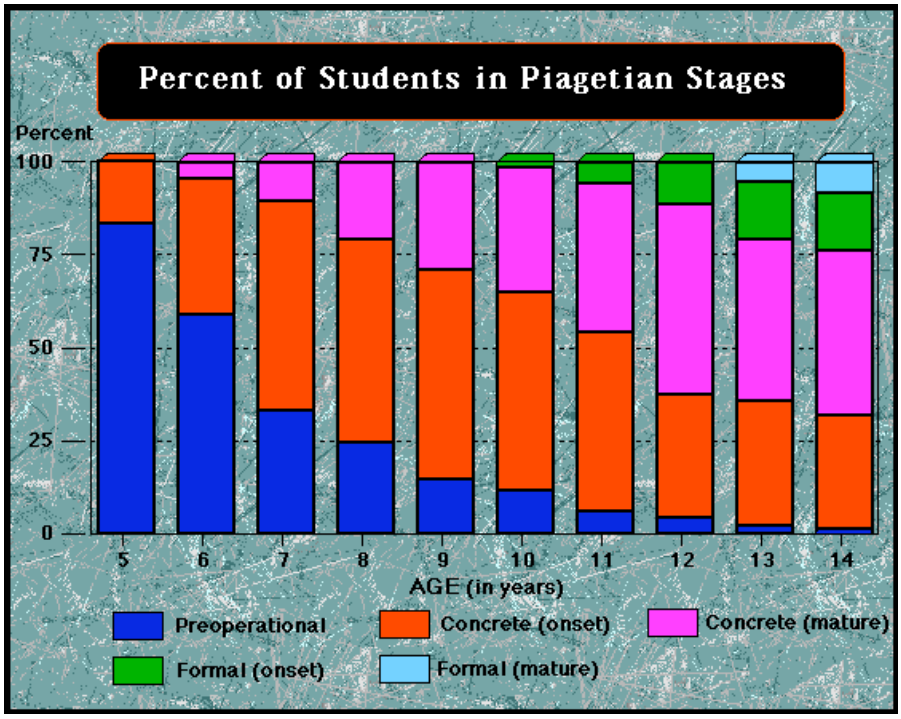

Figure 2. Percent of students in Piagetian stages. Adapted from "Piaget's Theory of Cognitive Development" by W. Huitt and J. Hummel, 2003, Retrieved from http://edpsycinteractive.org/topics/cogsys/piaget.html. Copyright 2003 by the authors. Reprinted with permission.

However, data from similar cross-sectional studies of adolescents does not hold up the assertion that all individuals will automatically move to the next cognitive stage as they biologically mature. In Figure 3, data from an adolescent population indicate that only 30-35% of high school seniors reach the formal operation cognitive development stage. For formal operations, it appears that maturation establishes the basis, but a special environment is necessary for most adolescents to attain this stage. Understanding the adolescent from the lens of the stages of development also means accepting what motivates adolescents to learn and under what conditions learning best occurs.

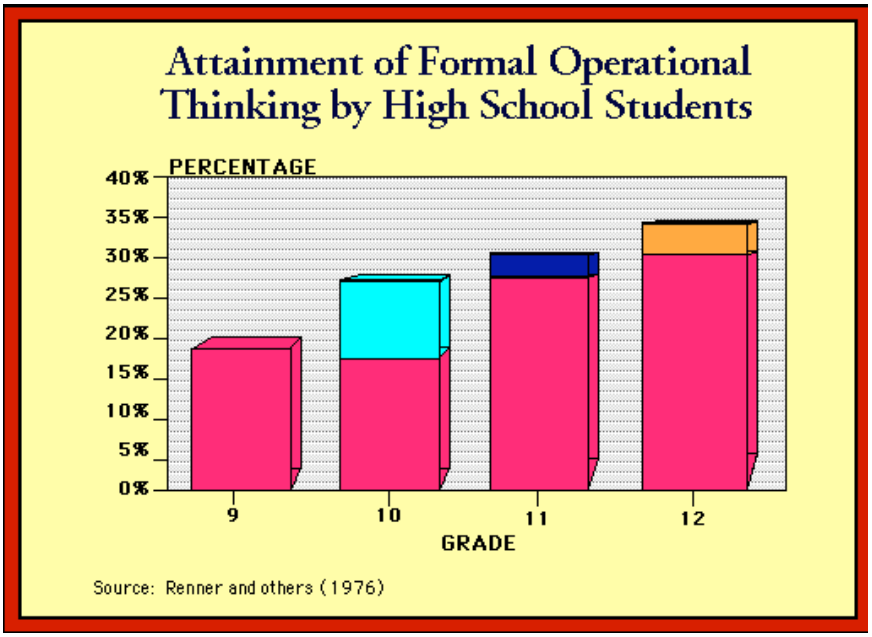

Figure 3. Attainment of formal operational thinking by high school students. Adapted from *Research, teaching, and learning with the Piaget model* by J. Renner, D. Stafford, A. Lawson, J. McKinnon, E. Friot, & D. Kellogg, 1976. Copyright 1976 by University of Oklahoma Press. Reprinted with permission.

Shifts of Mathematical Action

Watson (2007) states:

> The disagreements between intuitive, spontaneous, understandings and the scientific concepts of secondary mathematics can be the beginning of the end of mathematical engagement for adolescents. If they cannot understand the subject by *seeing* what it does and how it works, but instead have to believe some higher abstract authority that they do not understand, then the subject holds nothing for them. (p. 109)

Hence, mathematics, like the arts, can be a field in which the youthful mind can have some control, can validate its own thinking, and can appeal to a constructed personal experience. To make the content of mathematics more personalized and meaningful to the adolescent learner, Watsonwrites the following key intellectual shifts in the secondary

curriculum:

- From looking for relationships, such as through pattern seeking, to seeing properties as defined by relationships
- From perceptual, kinesthetic responses to mathematical objects to conceptual responses
- From intuitive to deductive reasoning.
- From focusing on procedures to reflecting on the methods and results of procedures.
- From discrete to continuous ways of seeing, defining, reasoning and reporting objects.
- From additive to multiplicative and exponential understandings of number.
- From assumptions of linearity to analyzing and expecting other forms of relationship
- From enumeration to non-linear measure and appreciating likelihood.
- From knowing specific aspects of mathematics towards relationships and
- Derivations between concepts (p. 110).

To shift the responsibility for making sense of math to the adolescent learner, Watson suggests the following tasks:

- Having the learner generate examples where they use concepts that they know and have learned
- Having students engage in activities to gain technical practice while choosing their own examples with the purpose of finding patterns and relationships
- Having the student give you examples of what they know well and then ask for

more and more until the learner is able to clearly offer new examples. According to Watson and Mason (2006) this latest task known as "another and another" (p. 111) recognizes learners' existing knowledge, and where they already draw distinctions, either because they have to make new examples in response to prompts, or because they hear each other's ideas. Self esteem comes at first from the number of new examples generated, then from being able to describe them as a generality, and finally from being able to split them into distinct classes.

Self-efficacy during adolescence. The supposition is that when young adults believe that they have the capability to succeed in their endeavors, these beliefs serve as fundamental forces in later success or failure (Pajares & Urdan, 2006). According to Pajares and Urdan, these self-efficacy beliefs provide the foundation for motivation, well being, and personal accomplishments in all areas of life. Furthermore, this is important because, unless young people believe that their actions can end up in what they desire, they have little incentive to act or to persist in the face of challenges that inevitably occur. Researchers have made noteworthy contributions to the understanding of self-efficacy and its relation to motivation and achievement. Bandura (as cited in Pajares & Urdan, 2006) proposed a theory of human functioning that noted the role of self-beliefs. According to this theory, humans are viewed as "self-organizing," practical and hands-on, "self-reflecting," and "self-regulating," rather than as organisms shaped by environmental forces (p. 340). He believes that both human thought and action are seen as the result of a "dynamic interplay" of personal, behavioral and environmental influences (p. 340). How individuals make sense of the results of their own actions both informs and changes their environments and their personal issues they possess. This fact,

in turn, informs and changes future actions. In school where teachers work to improve the capability and self-belief of the students in their charge, this theory is significant to practice, particularly in subjects where students struggle the most. According to Pajares and Urdan, teachers can improve their students' emotional states and correct students' faulty self-beliefs and ways of thinking (personal factors). Teachers can also improve students' academic abilities and academic habits (behavior). Further, teachers can effectively change those classroom procedures and structures that undermine students' success (environmental factors). Figure 4 shows the model to illustrate the interdependence between personal factors, behavior, and environmental factors.

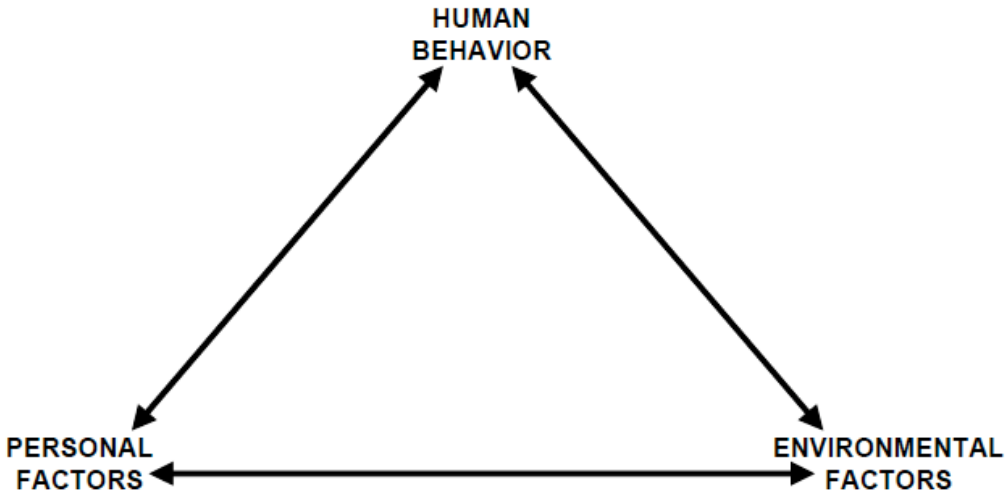

Figure 4. Model illustrating relations between determinants of self-efficacy beliefs. Adapted from "Self-efficacy beliefs of adolescents" by F. Pajares, 2006, in F. Pajares & T. Urdan (Eds.), *Self efficacy beliefs of adolescents* (pp. 339-367). Greenwich, CT: Information Age. Reprinted with permission.

Self-efficacy and academic achievement. Scientific evidence supports Bandura's (1986) assertion that self-efficacy beliefs impact almost every aspect of people's lives and whether individuals ultimately think optimistically or pessimistically. Also, self-efficacy is a vital factor of the life decisions people make and the courses of actions they pursue. This idea is consistent with the initial assumption that young

people's self-efficacy beliefs play a critical role in their successes and in subsequent successes and failures in their endeavors. Pajares and Urdan (2006) note:

> Confident students anticipate successful outcomes. Students confident in their social skills anticipate successful social encounters. Those confident in their academic skills expect high marks on exams and expect the quality of their work to reap academic benefits. The opposite is true of those who lack confidence. Young people who doubt their social skills often envision rejection or ridicule even before they establish social contacts. Those who lack self confidence in their academic skills envision a low grade before they even begin an exam or enroll in a course. (p. 342)

Research on self-efficacy has been particularly prominent in educational research, where researchers have reported that, in spite of previous accomplishment or capability, self-efficacious students work harder, endure longer, and persist in the face of challenges. When researchers tested the joint contribution of self-efficacy and intelligence to the prediction of achievement. They found that students' self-efficacy played a powerful and significant contribution to the prediction of their academic performance. According to Pajares and Urdan (2006), students who perform well on mathematics tests and earn high grades in mathematics classes develop a strong sense of confidence in their mathematics capabilities. As a result of this strong sense of efficacy, students enroll in subsequent mathematics related classes and approach mathematics tasks with greater ease. Significant to this study are the following implications that emanated from findings regarding the sources of self-efficacy beliefs in relation to motivation and achievement:

- Promote ability and self-confidence

- Confront lack of confidence
- Questions young people about their ability to execute and succeed
- Cultivate genuineness
- Make self-regulatory practices routine and regular
- Assist young people uphold adaptive sense of ability and execution that they can achieve
- Set attainable rather than unreachable goals
- Provide helpful rather than managerial help
- Create opportunities for sense of confidence beliefs to apply to school and other life situations
- Stress a mastery goal orientation
- Promote a proactive sense of personal care
- Establish that strong sense of confidence is contagious and demonstrate sense of confidence in ability and execution for students
- Increase the collective efficacy in the classroom or home
- Foster and model personal reflection
- Establish confidence as a part of the young adolescent's mind and cultivate these habits early
- View young people as capable and communicate this to them. (pp. 352-364)

According to Pajares and Urdan (2006), just as teachers' with strong self-efficacy affects their students' learning, similarly parents' self-efficacy in their own parenting capabilities influences the development of their children. Pajares and Urdan write:

> Parents with strong sense of confidence supervise, provide, protect, advice, encourage, and give time for their children, dispense needed discipline with emotional closeness, and keep open communication with them so that the disagreements do not rise into open conflict. (p. 326)

Middle School

Today there are 20 million rapidly changing 10 to 15 year-olds enrolled in our nation's middle schools. Educational sociologists consider that adolescence is the most complex social period in the life of an individual (Deplanty et al., 2007). Middle school students experience more rapid personal and contextual changes during this period than during any other time in their lives. Although growth during infancy is comparable, adolescents are cognizant witnesses to their development (NMSA, 2003b; Roeser, Eccles, & Sameroff, 2000). Because adolescents are not yet adults but are also no longer children, their unique needs must be met in order to assure their well being and school success (Hawes & Plourde, 2005). Adolescents experience developmental change on every level: cognitive, physical, social, emotional and moral (Akos & Martin, 2003; Roeser et al., 2000). These changes create important challenges for students during this transition. During the middle school years, adolescents are forming the attitudes, values, and habits that will largely direct their behavior as adults (NMSA, 2003b).

The transition from elementary school to middle school can be a stressful time for adolescents. Students are challenged with navigating a new building, learning new rules, managing new expectations from several teachers, as well as adjusting to greater academic responsibilities at school (Seyfried & Chung, 2002; Shoffner & Williamson, 2000). In elementary school students experience an environment that is very structured

and often self contained in one classroom. They build a solid connection with one teacher who directs the structure of the day. It is from this setting that young adolescents leave the safety and comfort of a familiar setting to make the move to middle school (Seyfried & Chung, 2002). The skills and experiences necessary to succeed academically and socially in middle school are acquired through many sources. A student's family and peers play critical roles in the transition to middle school. During this time, students are also adjusting to changes towards their family and their peer group. These students are starting to strive for more control over their lives and a sense of identity that is separate from their families (Zimmerman, Copeland, Shope, & Dielman, 1997). In fact, during this secondary level, middle school, friends take a very important role in the student's life. Both the importance and intimacy of peers increase as students begin to establish an identity outside of the family (Akos & Martin, 2003). Typically students at this age seek acceptance from their peers rather than from adults, and value friendship and belonging as the most important aspects of school (Annunziata et al., 2006; Zimmerman et al., 1997). With this increased social focus some young adolescents may abandon the academic importance of school. The transition from elementary to middle/junior high school has been found to be linked with a variety of negative effects on adolescents including declines in achievement, decreased motivation, lowered self-esteem, and increased psychological distress (Akos & Martin, 2003; Annunziata et al., 2006). As children grow older, parental involvement decreases at home and at school. Hill (2001) and Jeynes (2007) found that parents feel as though they have a greater influence on their younger children than on their older children. Some parents believe that involvement in their child's education is not as important after elementary school. While other parents

deduce that adolescents desire and need independence (Deplanty et al., 2007). Due to this new independence, parents mistakenly become less involved in middle school, believing that children need less support at this level (NMSA, 2003b). However, students in the middle level grades need a large support system, which can help them to rise above or eliminate risk factors they encounter during this period of significant change. Parents need to be involved at every level of their child's development and learning to ensure physical and mental well being and educational success.

Parental involvement. The first research in the area of parental involvement and academic achievement dates back to the early 1900s. In 1916, E.C. Brooks conducted the first known study of the effects of parental involvement on academic achievement (Cooper, Lindsay & Nye, 2000). After interviewing 268 fourth, fifth, and sixth grade students, Brooks concluded,

> Where parents are capable of guiding the child and are inclined to supervise the home study, their children succeed in school. But where the parents are illiterate or for other reasons are unable to supervise the home study, their children as a rule either make slow progress or are failures. (as cited in Cooper et al., 2000, p. 466)

Since 1916, schools and society have both changed dramatically, but the underlying findings of this study are consistent with contemporary research. Numerous studies have concluded that parental involvement in school is directly associated to academic achievement. Research has overwhelmingly demonstrated that children are more likely to have higher academic achievement levels and improved behavior when families are involved in the child's education (Bryan, 2005). Parental involvement includes a wide

variety of parental behavior patterns and practices, and cannot be defined by one specific feature. Parental involvement is defined by the U.S. Department of Education as the participation of parents in regular, two-way, and meaningful communication involving student academic learning and other school activities including; assisting in their child's learning and being actively involved in their child's education at school (U. S. Department of Education, 2001). Parental involvement in school is multidimensional and can include parental aspirations, expectations, interests, and attitudes and beliefs regarding education, as well as parental participation in school activities at school and at home (Fan, 2001; Fan & Chen, 2001; Hong & Ho, 2005). There are an abundance of definitions of parental involvement, but for the purposes of the current study Epstein's definition of learning at home and communicating will be used. Regardless of its form, parental involvement has consistently been shown to positively impact academic achievement (Marchant, Paulson, & Rothlisberg, 2001). Parental involvement has been shown to have a significant effect on test scores, higher school performance in reading, spelling and mathematics, fewer learning problems, lower rates of grade retention, and fewer learning related behavior disorders (Bakker, Denessen, & Brus-Laeven, 2007). Despite the known positive effects, parental involvement and family engagement greatly decrease as students move from elementary school to middle school (Constantino, 2007). Henderson and Berla (1994) stated that:

> The most accurate predictor of a students' achievement in school is not income, or social status, but the extent to which the student's family is able to: 1) create a home environment that promotes learning, 2) communicate high (but not unrealistic) expectations for their achievement at school and the future, and 3)

becomes engaged in their children's education at school and is actively involved in the community. (p. 268)

Parent involvement in middle school. As previously stated, the literature review has made it profusely clear that there is much higher incidence of parent involvement in preschools and elementary schools than in middle schools or at the middle and high school level. In recent years, however, more research has been conducted with middle school and secondary students and their families. According to the National Committee for Citizens in Education (2008), parents who are actively involved in the education of their children at the elementary school level become less involved when their children reach middle school. However, as previously mentioned, parent involvement in a child's education during the middle school years is just as important a factor in a child's academic success as it is in earlier years.

Research at the middle school and secondary students shows that parent involvement remains very favorable in promoting achievement and effective outcomes with older students. Recent research by Phillips (1992), Van den Broeck et al. (2005), and Yan and Lin (2005) found that parent involvement at the middle school level significantly contributed to mathematics achievement. According to the National Committee for Citizens in Education (2008), the most recent research illustrates that when parents of middle school students become involved, the students' grades and test results are higher; students' attitudes and behavior are more positive; academic programs are more successful; and the schools, as a whole, are more effective. In addition, the active participation of parents, including those with limited knowledge of English, has many positive consequences for the family, and especially for young adolescents:

- The family has the chance to understand the school system better;
- The teachers can understand students who come from other cultures more easily;
- The students receive support from adults in order to confront the problems of adolescence-particularly where these problems are accentuated by the conflicting cultures at home, friends, and school and;
- The school can become the natural extension of the home, aiding in the preservation of families' cultures and values. (para. 6)

Academic Achievement

School success has typically been measured by academic achievement operationalized as students' grades or GPA. During middle childhood students are in the middle of a period of development characterized by conflicting needs for intimacy, autonomy, cognitive challenge, and feelings of competence (Shoffner & Williamson, 2000). School success has been found to predict many positive outcomes including; higher education, better job possibilities, lower likelihood of future unemployment, less adult psychopathology, and more positive self concept/self-esteem (Annunziata et al., 2006; Driessen et al., 2005; Overstreet, Devine, Bevans, & Efreom, 2005). "Self esteem is generally regarded as the evaluation that a person makes about himself/herself that expresses a self-judgment of approval, disapproval, and personal worth" (Zimmerman et al., 1997, p.117). Self-esteem is often deemed a large factor in the prediction of actions and behaviors that a person will engage in. Gonzalez-Pienda et al. (2002) found that academic self-concept is positively affected by parental involvement, which in turn has a positive impact on academic achievement. A person is less likely to participate in

activities that are harmful or detrimental to his or her well-being if he or she has a positive sense of self-worth. In the same vein, research has found that school failure is associated with risk-behaviors and negative outcomes, such as, substance abuse, delinquency, emotional/behavioral problems, and early sexual activity (Attaway & Bry, 2004; Roeser et al., 2000). In a study on high school dropouts, Seyfried and Chung (2002) found that children who have parents that are not involved in their education are at risk for dropping out of school. Despite the overwhelming statistical data providing evidence that parental involvement is directly connected to academic achievement, there are still many parents who do not actively participate in their child's education. More evidence about the positive impact of parental involvement on academic achievement is provided by Moles (1982) who summarized research findings on the effectiveness of 28 urban home-school partnership programs aimed at poorly educated and low-income parents. These programs employed a variety of methods to involve parents including individual conferences, workshops, home visits, and telephone calls. Overall, results indicated that the programs were effective, generating a reported reduction in absenteeism, higher achievement scores, and improved school behavior. Walker et al. (2004) further recognized that parental involvement is aligned with student academic achievement and motivation in school. According to the California State Board of Education's (1994) Policy number 89:01: Parent involvement in education of their children,

> [S]chools that undertake and support comprehensive parental involvement efforts are more likely to produce students who perform better than identical schools that do not involve parents. Schools that have strong linkages respond better to the

needs of the communities they serve and have students who perform better than schools that do not. (p. 1)

From research conducted, this policy incorporated seven important factors in the area of parent involvement:

1. Families provide the primary educational environment.
2. Parent involvement in their children's education improves student achievement.
3. Parent involvement is most efficient when it is comprehensive, supportive, long-lasting and well-planned.
4. The benefits of parent involvement are not limited to early childhood or the elementary level; there are continuing positive effects throughout high school.
5. Involving parents in supporting their children's education at home is not sufficient. To guarantee the quality of schools as institutions serving the community, parents must be involved at all levels of the schools.
6. Children from low-income and culturally and racially diverse families have the most to gain when schools involve parents. The degree of parent involvement in a child's education is more important to student success than family income or education.
7. We cannot look at the school and the home in isolation form one another; families and schools need to collaborate to help children adjust to the world of school. This is particularly critical for children from families with different cultural and language backgrounds. (California State Board of Education, 1994, p. 1)

Schools must incorporate programs that can bridge the gap between home and school by including parents in every aspect of learning. Homework is a learning tool that can be used to increase parental involvement at school and at home.

Homework

The practice of assigning homework is not a new phenomenon. The history of homework has been marked by several eras. Holler and Lovelace (2001) define homework as any tasks that are assigned by teachers and meant to be carried out during non-school hours. Originally, homework was assigned as a reprimand to students and was based on recitation. In the 1950s,educators incorporated homework into the curriculum as a way of extending learning. But in the 1960s, educators decreased the amount of homework given to students in fear that too much homework would cause mental stress. The educational reform movement of the 1970s caused educators to revisit student learning, and it was established that increased homework results in improved student achievement. In schools today, homework is used to obtain three main goals: academic achievement, improved responsibility, and parental involvement.

The review of literature on homework has confounding results. Kohn (2006) believes that homework in its present application does more bad than good for students during elementary school, middle school and even high school. He disputes there is no evidence to support the assumption that homework increases academic achievement, improves study skills, time management skills, or critical thinking. In fact, homework has negative effects that cause stress, frustration, family conflict, loss of time for other activities, and a possible decrease of interest in learning. Although studies have shown a correlation between homework and academic achievement, there is evidence that higher

achievement is due to homework. Still many educators believe that homework will improve achievement, enhance students' organizational and study skills, encourages students to become independent learners and critical thinkers, and involve parents more directly in their child's education (Holler & Lovelace, 2001). Despite these high expectations for homework, Holler and Lovelace found that 51% of all homework assigned is unfinished class work. This demonstrates that the school's identified goals are not always reflected in the homework assigned to many students, and that homework in its present form does not facilitate student learning or achievement.

The effect of parental involvement in homework in relation to academic achievement acquiesce s similar confounding results. Researchers have found that the most significant predictors of academic achievement are rooted in the home, specifically parental involvement with homework and home learning activities (Carpenter, Ramirez, & Severn, 2006). Research has shown that parental interaction during the completion of homework is an important component for improving parental involvement. Parental involvement in homework is the leading factor for improving academic performance (Bailey et al., 2004; Marchant et al., 2001). By improving parental involvement the home-school connection improves and also student outcomes are improved (Bailey et al., 2004). Families vary in the number of positive resources, such as time, space and materials, as well as economic means (Cooper et al., 2000). Few parents of low academic achievers are involved in their children's homework. The effective design of homework may increase the involvement of both parents and children, which may affect student outcomes. Assigning homework that attracts the interest of parents may serve to facilitate the completion of homework, which in turn may enhance academic performance.

Effective homework includes opportunities for children to interact meaningfully with parents such that parents are interested in the work and their children construct their own knowledge within a social and physical environment. This definition aligns with the constructivist view of learning, that humans construct knowledge and meaning from their experiences. Homework should be created and assigned based on the understanding of the diverse parent and student population. Researchers found that regardless of socio-economic status, literacy can improve when parents were involved in homework. This was found to be true not only across SES but also across racial characteristics (Bailey et al.; Jeynes, 2007). In order for homework to be effective, teachers need to develop lessons that incorporate aspects of parental involvement that encourage parents to actively participate in their child's learning. Parental involvement in homework can be used to improve student achievement (Cooper et al., 2000). While parent involvement in homework can be used to speed up children's learning, in some instances involvement in homework has hindered with learning. Cooper et al. found that parental involvement may cause improved student learning under some conditions but may interfere with learning under other conditions. During the completion of homework, if parents were unable to take on the role of teacher (were undereducated or unfamiliar with topic) or if parents used different instructional techniques than the teacher, students' achievement decreased. Shumow and Miller (as cited in Hiatt-Michael, 2010) found in their research that when the material is difficult in comparison to elementary school there is a negative association between homework help and achievement observed with middle school students. Also, direct parental involvement in homework led to excessive pressure on children to complete assignments and do well, which created expectations inconsistent with their

abilities. Some overly-involved parents have even simply given correct answers or completed assignments for their children. Although parents who help their children normally have the best intentions, they must understand that by doing the work for their child they are not allowing their child to learn and grow. It is essential for student success that parents are involved in school, but there is a balance that parents, teachers and students must work together to achieve.

Although researchers agree that increased parental involvement in homework is necessary, the fact remains that it is difficult to engage parents in their children's homework. If parents fail to give emphasis to the importance of homework, the child's ability to successfully complete and learn from homework assignments is hampered (Bailey et al., 2004). Research found that parental involvement can be good for students, but can cause tension for parents, especially when parents take an active teaching role and the different resources available across families (Driessen et al., 2005). The three main problems parents face when helping their children with home work include: helping their child develop consistent study times, finding time to supervise and assist with homework due to work commitments, and helping their child develop independent study habits (Bailey et al., 2004). Communication between parents and schools is the key to overcoming obstacles that can have negative effects on student learning. Equally significant is to design a homework format that will involve parents in homework with the least amount of frustration.

Teachers Involve Parents in Schoolwork (TIPS)

TIPS interactive homework process grew from early research that showed that when elementary school teachers frequently involve families in reading activities at

home, more parents were involve in these activities at home. Consequently, more of these students improve their reading test scores from fall to spring of the school year. This same research revealed that although parents were asked to be involved with their children's in reading, teachers did not have effective strategies to guide parental involvement in math, science, or other subjects, therefore, teachers did not feel comfortable about requesting involvement in these subjects. As a result, Epstein (2001) and her colleagues worked with families and educators and students in multiple grades to design and study interactive homework and its effect. The TIPS prototype activities show teachers how to design interactive homework assignments in math, science/health, and language arts that required students to demonstrate their mastery of skills and other related skills, apply a skill to real life or work with family members in other ways. The structure of the interactive activities (TIPS) gives students the opportunity to teach their parents about the learning-taking place at school and how the homework needs to be done which can empower more parents to be involved at this developmental stage in school. Additionally, it encourages parents to communicate with teachers about their observations, comments, or questions regarding their children's math homework and progress in math.

TIPS Math

In studying the interactive math homework, Epstein (2001) found that parents have limited knowledge of how their children were being taught math and they were worried that this lack of knowledge might confuse their children when assisting them with homework. Parents reported that their children complained, cried, or argued, "you don't do it like my teacher does it" (Epstein, 2001, p. 512). In line with Epstein is a study

by Shumow and Miller, which found a negative relationship between homework help and achievement in middle school students because parents are not aligned with the teachers in how they assist (as cited in Hiatt-Michael, 2010). Additionally, teachers admitted that they could not teach all parents how to teach math to their children and that parents were not willing to be taught or teach math to their children. Thus, parent did not assist their children in math and many did not perceive math positively. Because of what both teachers and parents reported, TIPS math was designed to relieve parents, students, and teachers in their interactions about math at home.

The impact of TIPS prototype on math homework completion and parent involvement, have resulted in positive results. Several research studies of TIPS have yielded positive effects for families and students of different ages in varied subjects (Deslandes, 2009). One middle grades' study assessed the impact of TIPS on family involvement (Van Voorhis, 2001). All three studies consistently showed that TIPS interventions encouraged levels of family involvement in the TIPS subject area. As a result, students assigned to TIPS in science reported higher levels of involvement than students not assigned TIPS (Van Voorhis, 2003). For language arts, the study revealed that parent participation in TIPS significantly improved students' writing scores as the year progressed. Additionally, completion of more TIPS positively impacted student report card grades (Epstein et al., 1997). Learning at Home using TIPS gives parents information about how to help students at home with homework. Additionally, it is an effective and easily accessible form of school-to-home and home-to-school communication with parents who may not know the content. Balli (1995) conducted a study of the TIPS Math process with sixth-grade students and their families in a suburban

middle school. Her investigation entailed comparing the levels of family involvement and math achievement of students completing TIPS Math interactive assignments to students completing non-interactive assignments (i.e., no directions for the student to involve family member in the assignment). The findings of this investigation demonstrated that parents appreciated the student-led interactions, students and parents reported having more positive conversations about math, and most students believed that the interactions helped them with having more success and better preparation in math class. Furthermore, the study showed that on average the students who participated in the study improved their math achievement over time. Of significance, those students assigned the TIPS Math interactive homework had significantly more interaction with their parents and more positive attitude about math than the students who were assigned traditional math homework (Epstein, 2001).

Parent Involvement in Homework

The importance of getting parents involved in the education of their children has received a considerable amount of attention from educators, policy makers, parents, and the media. Educators have recommended that the impact of parent involvement on the effectiveness of homework could be either positive or negative. According to Cooper (2001), four possible explanations for the split among educators on this issue are as follows: one, educators say that parent involvement in home study could be used to speed up children's learning. However, involvement may also interfere with learning. This could happen when parents are uncomfortable or unable to take on the role of teachers when helping their children with homework and/or if parents use instructional strategies different from those being used at school. Two, educators suggest that parent

involvement in homework might improve communication between the school and the family. Three, direct parent involvement in homework may lead to excessive pressure placed upon their children to complete the homework and do it well. This parental stand impacts their children, particularly in situations when their expectations are inconsistent with their children's capabilities. Finally, educators emphasize that although monitoring and assisting with homework should reap beneficial gains for their children, overly involved parents may give extra assistance beyond tutoring by simply providing the correct answers or completing the assignments themselves. In spite of the split among educators on this issue, homework is a key connector between the home and the school. Consequently, designing interactive homework can strengthen the school-family connection to encourage more parents and students complete their assignment and talk about schoolwork at home with more ease.

Chapter 3: Methodology

This chapter describes the nature for the origination of this study from the eyes of the parents at Miramar Middle School, methods that were used to answer four research questions: the qualitative design, sample selection, demographic data, data sources and procedures.

Ethnographic Background for Workshop Sessions

The workshop series emerged from reports gathered at parent conferences and the voices of about 40 parents who consistently attended the monthly "Second Cup of Coffee" at Miramar Middle School for the 2008-09 school year. The pattern of concerns that was reported from parent initiated conferences ranged from inability of parents to assist in math homework to parents and children' frustration with math. Parents were given the opportunity to share their needs and make suggestions on how best to continue improving the educational opportunities for all students.

The following were areas of need and/or suggestions:

1. Improving the school-to-home communication and partnership. Parents shared that parents need to be educated on the structure of middle school, specifically on school matters such as grading, homework, and discipline policies, budget, testing and accountability in order for them to be more involved.
2. Training for teachers on how to communicate with parents so that teachers build a strong partnership with both the parent and the student. Most parents reported that teachers only want to report on the grades and behavioral issues, which alienates parents and creates a barrier between the teacher and the parent.

3. Initiating workshops for parents to learn how to assist their children with homework. Parents reported that they were having difficulty in assisting their children with the math problems because the math is different from when they attended school. Also, parents indicated that their children' class notes were mostly incomplete and/or difficult to understand for them to know what their children learned in school. As a result, when they attempted to assist their children, they experienced high levels of frustration. Their relationships with their children began to deteriorate as a result of arguments about not getting the right answer and/or getting the homework completed. In search of a solution, the parents recommended that the administration hold workshops both during the day and night to help parents become more educated and learn specific skills in order to become more involved their children's education, specifically homework. The parents mentioned that regardless of how little formal education they may have had in their native countries or what language they speak, if given training and support from the school, they could contribute in exponential ways to their children's learning. For example, one parent stated,

I think that my child's teacher thinks that I do not care about my son because he does not do his homework on a daily basis. I wish she could see both of us working at home in trying to get the math answer. Even with the notes that he takes, it is difficult and he cannot explain it to me how he did it in class with you. If the teacher can explain it to me, I will do everything to help my son. (L. Carillo, personal communication, January 13, 2009)

Another parent wrote:

> Senora directora, disculpe la molestia pero mi hijo necesita mucha ayuda en matematicas. Yo no puedo ayudarle pues mis matematicas so muy bajas. Si usted me puede ayudar pues yo quiero que mi hijo sea un professional y valla a la universidad. Que Dios me la bendiga. [Principal, please pardon me bothering, but my son needs a lot of help in mathematics. I cannot help him because my mathematics is low. If you could help me because I want my son to be a professional and attend university. God bless you.] (S. Delgadillo, personal communication, November 18, 2008)

Based on these informal conversations with parents, observations during parent conferences, and recommendations, it became evident that Miramar Middle School needed to increase its efforts to bridge the gap between the parents and the school.

As the baseline for the workshop, the researcher (principal of Miramar Middle School) took the following leadership actions to examine factors that may be contributing to half of the student population not proficient in mathematics: (a) examined data over the course of five years, (b) engaged in dialogue with teachers at all grade levels, (c) gathered information from Fall and Spring parent conferences and/or other type of parent-student-teacher conferences, (d) gathered a report of the distribution of grades in mathematics at each grade level, and (e) collected information from the monthly "Second Cup of Coffee" (optional monthly parent-principal discussion group) with parents.

Although the findings collected through these various sources of data are significant, for this study the researcher only reported on the findings gathered at parent conferences, progress reports and information shared by parents at the monthly "Second

Cup of Coffee." Parent conferences are held twice a year during the Fall and Spring. Parents invited to these conferences are those whose children are receiving a "D" or an "F" in any content area, particularly in language arts and mathematics. Based on the conferences that the researcher attended, the concern parents shared with teachers typically included mathematics; specifically, parents reported that their children were frustrated and discouraged about not being able to complete math homework at home. Furthermore, parents voiced that they were not able to help their children because the math was too difficult and that the explanatory notes accompanying their children's math work was not clear enough for them to assist their child. Besides these conferences, parents regularly requested meetings with the principal and teachers or counselor and teachers after the first progress reports were sent home. All requested parent conferences were focused mainly on lack of performance in math. During the monthly "Second Cup of Coffee," parents voiced their frustration about their lack of ability to assist their children with their math homework. Parents shared that even they were unable to do the math that their children were expected to do. Hence, they engaged in "arguments" with their children when they could not help. Consequently, their children became worried that their teacher would give them a grade of F and/or give them snack or lunch detention. As a result, the parents sought the understanding of the teachers and the help of the school to teach them how to help their children with math.

Qualitative Design

This researcher used a qualitative approach to research design in order to satisfy the purpose of this study. Qualitative analysis is "a relatively systematic process of coding, categorizing, and interpreting data to provide explanations of a single

phenomenon interest" (McMillan & Schumacher, 2006, p. 364). Denzin and Lincoln (1994) define qualitative research thusly:

> Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to the subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meaning people bring to them. (p. 14)

Research instruments used to collect data were one pre-and post-assessment, focused journal questions, and a focus group. The study comprised of two main parts. The first part involved evaluating how learning at home changed since completing the TIPS math program; specifically, the benefits the parents gained by having their child show, share, and talk about their work with a family partner. The second part involved ascertaining how communication between the parent and child increased since completing the TIPS math program.

Program Evaluation

As noted in the background of the study, this study assessed parent needs in mathematics at one school. Based on the needs assessment, a series of workshops occurred using the four-level model developed by Donald Kirkpatrick (Winfrey, 1999; see Figure 5). According to this model, evaluation moves sequentially through four successive levels of evaluation, each representing a different aspect of the effectiveness of the training program. At the first level, reaction, researchers collected information immediately after the workshops. This study incorporated this level of evaluation by having participants respond to specific questions and journaling their responses after each workshop. According to Kirkpatrick, every program should be evaluated at least at this

basic level. Furthermore, the participants' reactions to the evaluation of the program had important consequences for student learning (level two).

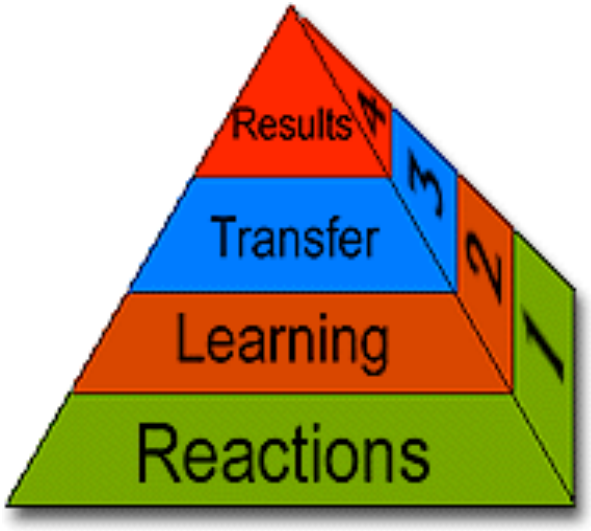

Figure 5. Kirkpatrick's four levels of evaluation. Adapted from "Kirkpatrick's four levels of evaluation," by E. C. Winfrey, 1999, Retrieved from http://coe.sdsu.edu/eet/Articles/k4levels/index.htm. Copyright 1999 by the author. Reprinted with permission.

Kirpatrick's level two, learning, assessed the extent to which the participants advanced in skills, knowledge, or attitude as a result of their participation in the series of workshops. For this study, assessment at this level involved determining whether and to what degree the participants' experience during the workshops increased communication and learning at home. Data for this level of assessment was gathered from the participants' journal and responses to post-assessment questions.

Kirpatrick's level three, behaviors, evaluated the level of transfer of skills, knowledge, or attitude that occurred in a learner's behavior due to the workshops. This study evaluated this level via focus group discussions and post-assessments.

Kirpatrick's level four, results, is more complex because it involves evaluating societal or benefit to the particular society. This level may be assessed in a design involving two separate groups: those who received training and those who did not. This

level of evaluation is useful for evaluating the so-called "bottom line," which in the educational field would be standardized test results. Because of a time limitation, this study did not incorporate any type of standardized measure. Hence, the scope of this study was limited by practical constraints. However, this assessment shall be recommended to the school.

Sample Selection

Purposeful sampling was the approach used for this qualitative study. These students were selected specifically from 105 students enrolled in Pre-Algebra at Miramar Middle School. These parents were invited to participate, and 27 parents of 23 of these low-achieving students agreed to participate after the recruitment and orientation meeting.

Demographics of the Population

The population sample in this study consisted of 27 parents of 23 seventh graders enrolled in one teacher's pre-algebra class at Miramar Middle School in the Norwalk-La Mirada Unified School District. The School Accountability Report Card (SARC) for this school states that 84% of the student population is Hispanic. The remaining 16% is comprised of African-American (4%), Asian American/Pacific Islander (5%) and White/European American/Other (7%). Sixty-seven percent of the students are socio-economically disadvantaged. The academic history of the parents in the community does not afford the best advantages to children; a high percentage of parents have not completed high school, a few have completed high school, and a limited number have college experience. Most of the parents in the community speak Spanish regularly, and only a small portion has Academic English language skills.

Description of Participants

The number of participants consisted of 27 parents, consisting of 7 males and 20 females. These participants were all parents of 7th grade students enrolled in four of seven Pre-Algebra classes at the site that the study took place. Although these data were not collected, the researcher observed that of 27 participants, 20 spoke fluent Spanish with limited English fluency and were apparently Hispanic.

Procedures

Selection of highly qualified teacher. The researcher selected the math teacher to participate in the study at the site. She is a highly qualified teacher who holds a masters degree in mathematics. This teacher has served as the team leader for the 7th grade math department over the course of four years. She is also a member of the leadership team and is a mentor teacher. In addition, this teacher is actively involved in extra curricular activities at the site, such as tutoring students before and after school, coordinator of the "Annual Math Family Night," and member of the district task force for the yearly revision of math curriculum pacing guides at the middle school level.

The teacher is highly regarded by researcher and colleagues. Her performance is exemplary; based on formal and informal evaluations, she is a committed, exceptional teacher with strong content knowledge.

Meeting with teacher. The researcher met with the teacher prior to the beginning of the workshops and at the end of every workshop session. The focus of these conversations included the following: logistics of the session, content of the session, and/or other issues related to the study. The content of the meeting the researcher held with the teacher prior to the first workshop involved discussion on the following study

related issues: (a) format of the agenda, (b) TIPS template, and (c) roles and expectations (materials/supplies, attendance, food, sitting arrangement).

Recruitment of participants. In order to make an informed decision about whether or not parents wanted to participate in the series of workshops, the researcher sent a letter of information about the study (see Appendix A) to parents of the students enrolled in teacher's 7th grade Pre-Algebra classes. The content of the letter included the focus of the study, the rationale for the study and the benefits of participation.

Orientation meeting. At the beginning of the orientation, the researcher asked parents if they had any questions about the letter of information that was sent to them to invite them for their participation in this study. Since there were no questions, the researcher asked the assistant to the study to distribute the participant consent form (see Appendix B) for parents to sign. Parents were give time to read the form and ask questions or share their concerns prior to the continuation of the meeting. Of 70 parents who attended the orientation meeting, 27 agreed to participate in this study.

The orientation meeting was presented both in English and Spanish. The researcher presented information regarding the need for this study and briefly shared the literature regarding the importance of parent involvement at the middle school and its benefits for student achievement. Furthermore, the researcher clearly communicated the expectations for the study; these were, specifically, the role of the researcher and the teacher, and included the sources of data collection. Participants were provided with the following documents necessary for the study:

- A recruitment letter (see Appendix A)
- A participant Consent Form (see Appendix B)

- A copy of a sample TIPS prototype (see Appendix C)
- A completed math activity using the TIPS prototype (see Appendix D)

The researcher showed a sample of a TIPS prototype and explained how the TIPS process and its implementation work. Parents were given time at this meeting to ask questions to ensure that they fully understand their role when their children bring this homework activity home. The following document was distributed during this orientation: a participant consent form (see Appendix B) was used to determine the number of participants for this study. Those parents who consented to participate were part of the convenient sample for this study. The mathematics concepts on which the homework were focused used and followed the TIPS prototype for the 10 weeks selected from the state and district-adopted curriculum-pacing guide for this grade level.

Data Sources

This study used four qualitative methods to collect data: parent journals, a focus group, participant surveys (one pre-and post-assessment), and researcher field notes.

Parent journals. Parent journals included focused questions concerning the parent's impressions of working with their child(ren) at the workshops. Specifically, parents described how the communication between them and their and child(ren) increased after completing each math workshop. Each session lasted an hour. Parent journal responses were analyzed in order to answer the research questions (see Appendix E).

Focus group. The researcher facilitated a focus group for parents after the completion of the 10-week series of workshop to (a) gather additional information, and

(b) to allow parents the opportunity to share their experiences. The researcher randomly selected this group.

Participant survey. This study utilized one pre-and post-assessment survey (see Appendices F and G). The pre-assessment survey assessed the baseline of communication and learning at home, whereas the post-assessment determined how the communication and learning at home changed after the series of workshops.

Protection of Human Subjects

This study was conducted in accordance with regulations and guidelines established by Pepperdine University's Institutional Review Board (IRB). The study presented minimal risk to participants. Participants gave their signed consent to participate in this study (see Appendix B). The consent form contained important information about the study, including security measures regarding keeping the pre- and post-assessments, journal responses, and notes from a focus group in a locked cabinet to ensure confidentiality. Additionally, participants were informed that all documentation generated by this study would be shredded after five years from the date the research is published.

When this proposal was approved by IRB, the researcher began the study and then collected data and led the coding process using IRB-certificated Pepperdine doctoral students. Initial codes were generated by the coders, which then formed categories. Patterns that emerged from the categories were diagrammed for easier analysis of data as well as to ensure accuracy and validity.

Chapter 4: Data Analysis and Findings

Introduction

This study explored parent involvement in middle school mathematics. To achieve the purpose of this study, data was collected from one pre and post assessment, focused journal questions, field notes, and a focus group. This chapter presents the study's analysis and findings in four sections: (a) the data analysis process, (b) description of the themes that emerged from the study, (c) an analysis of the pre and post assessments and field notes recorded by the researcher for each workshop, and (d) a summary of findings organized by the research questions of this study.

Data Analysis

Process. The researcher focused on interpreting the data collected using McMillan and Schumacher's (2006) process of inductive analysis, which allowed the researcher to follow a sequential pattern to collect the best results significant for achieving validity and reliability. Each research question was aligned and answered using the inductive analysis process. The researcher developed a process to collect data following a sequential pattern in order to gather and report the best results and findings. Phase I involved collecting and recording data from all sources. Phase II involved identifying and developing themes from the data collected. Lastly, phase III entailed translating the themes and concepts into narrative structures. Figure 6 and Table 1 illustrate the process of inductive analysis.

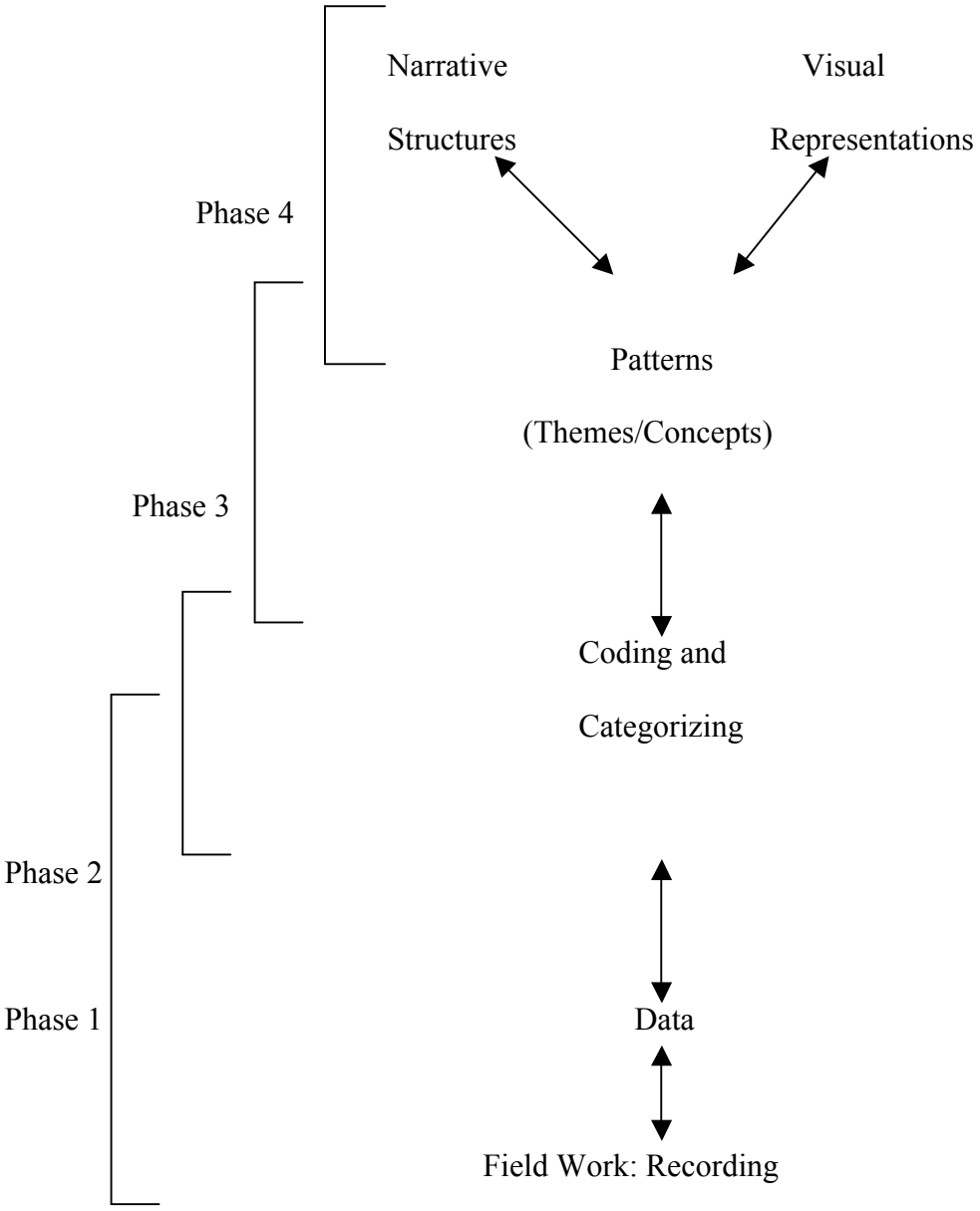

Figure 6. General processes of inductive analysis. Adapted from Research in education: Evidence-based inquiry (6th ed.), by J. H. McMillan, and S. Schumacher, 2006, Boston, MA: Pearson. Copyright 2006 by Pearson. Adapted with permission.

Table 1

Inductive Data Collection and Analysis Procedures

Data Source	Data Analysis
Parent journal focused questions (Appendix E) 1. Tell me how this session with your child helped you in getting involved with your child's homework? 2. How did you feel about working with your child on the math idea for this particular session? 3. Other comments related to your experience for this session.	Collected and recorded data Identified and developed themes Translated themes and concepts into narrative structures
Parent Surveys - Pre-assessment questions (Appendix F) 1. Tell me what you know about your child's ability to do math? 2. What do you do at home to be involved on your child's homework? 3. At home, do you provide support for your child in homework? What type of support do you provide? Describe how.	Collected and recorded data Identified and developed themes Translated themes and concepts into narrative structures
Parent surveys - Post-assessment (Appendix G) 1. Tell me what you know about your child's ability to do math? 2. What do you do at home to be involved on your child's homework? 3. At home, do you provide support for your child in homework? What type of support do you provide? Describe how. 4. Which sessions were helpful in getting involved with your child's math? 5. After attending these sessions, how will you help your child with math assignments now and in the future? 6. What additional information/support might you need from the school and/or teacher in order to help your child with homework?	Collected and recorded data Identified and developed themes Translated themes and concepts into narrative structures

Qualitative data was collected from one pre-and-post assessments, focused journal questions after each workshop session, field notes, and a focus group at the end of the study. In addition, the researcher, who is bilingual, translated Spanish responses into English. The relevant quotes are presented in Spanish as well as in the English translation. In order to minimize personal bias, the researcher retained the services of four doctoral students to do the thematic coding.

Trained coders. Four doctoral students from Pepperdine University Graduate School of Education and Psychology were trained in coding procedures under the guidance of the researcher. These professionals are credential teachers and administrators. Two of the four coders and the researcher are fluent in English and Spanish.

Coding. The researcher and the four experienced, trained, and unbiased coders began the coding process. The researcher provided each coder with 27 participants responses for the pre-assessment and 25 for the post-assessment. Additionally, each coder was assigned to read focus journal responses from participants for two workshop sessions and one participant response for the focus group. The researcher read focused journal responses from participants for the last two workshops and six participant responses for the focus group as well as analyzing field notes from each session.

The researcher asked each coder to (a) read the participants responses and highlight commonly used words or phrases or statements, and (b) search and identify for patterns of behaviors used by each participant. This process identified the experience of working with their middle school child.

The training and coding process was completed within one day at the same time with everyone sitting together. The coders and researcher used highlighters to first identify main ideas and then to place them on a spreadsheet to categorize the data. Each coder worked independently. Then, the researcher facilitated a discussion among the coders to encourage higher reflective thoughts to encompass specifics into broad categories. The researcher recorded the results of the analysis of data into Microsoft Word tables. The final step was for the researcher to represent the description and themes in the qualitative narrative.

Themes

Through the detailed analysis of data, ten major themes emerged. The coders and researcher narrowed down common themes and agreed on ten themes as evidenced by the data analysis. These major themes include: (a) degree of parent involvement, (b) helplessness, (c) parent-child interaction, (d) parent-child communication, (e) child confidence, (f) parent-teacher communication, (g) teacher-child communication, (h) learning about the math, (i) content and format of the workshops, and (j) parent empowerment and gratitude.

Degree of parent involvement. The first theme is degree of parent involvement. Common phrases that participants reported in the pre-assessment indicated that parents were passive in their involvement prior to the workshops. For example, "I just check his/her agenda; I attend conferences when the teacher calls me; e-mail is easier if I can do it; I sign my child's report card when I get it." The following quotes were obtained during the pre-assessment on January 9, 2010. One parent indicated:

> Porque no hablo ingles, lo unico que puedo hacer es chequear la agenda de mi hijo(a). Tambien si yo puedo pedir un dia libre de mi trabajo, yo voy a las conferencias cuando la maestra me llama. Yo se que debo de hacer mas pero como yo no termine mi escuela yo no se que hacer. Oh! Yo le digo a mi hijo(a) que se siente para hacer la tarea. Yo apago la television y le quito el cellular. [Because I do not speak English, all I can do is to check my child's agenda. Also, if I can take the day off, I attend conferences when the teacher calls me. I know that I should do more, but I do not know what else to do when I didn't finish school. Oh! I also tell my child to sit and do homework. So, I turn the TV off and take away the cell phone.]

Another parent indicated, "My job is to make sure my child sits down when he gets from school and finishes the homework. Then, I check his agenda and sign it like the teacher wants me to do." Common words indicating passive involvement among participants prior to the workshop reported were agenda, e-mail, and reports.

Recurring words, phrases and comments after each workshop changed the extent of parent involvement; participants had become much more actively involved in their children's education. One parent indicated:

> Me siento tan contenta de que yo le puedo ayudar a mi hijo(a) mas de lo que creia que podia hacer por el. Por ejemplo, en vez de solo decirle que se siente, ahora yo lo llevo a la biblioteca para usar el Internet, o le escribo a la maestra o la llamo pues ella me conoce major. Mi hijo(a) ha notado que yo he cambiado y el me ve mas activa en su educacion. [I feel so happy that I can help my child because I did not believe I could do it. For example, instead of telling him to sit, now I take him

to the library to use the Internet or I write to the teacher or I call her because she knows me better. My child has noticed that I have changed and he sees me more involved in his education.]

Another parent also reported:

I learned by coming to these workshops why my son did not think that I cared about his education. Simply, I was not paying attention to him. All I was doing was telling him to sit down and do his homework. Now, I am not lazy. I listen to him or I read the problems with him or I ask him to explain it to me like the workshops. What a difference!

In addition to the evidence collected from the pre and post assessment, participants' comments in the focused journal questions showed the change in the level of their involvement with their children as the workshops progressed. Two parents indicated:

- Mi hija se sonrie pues el se siente contento que yo me siento con ella los martes en la noche durante el taller. Ella sabe que yo me voy temprano al trabajo pero me recuerda de las clases. Gracias por esta oportunidad de estar involucrado. [My daughter smiles because he feels happy that I sit down with her every Tuesday night for the workshop. She knows that I leave work early and she reminds me of the classes. Thank you for giving me the opportunity to be involved.]
- My son told my mom that I care more about him because I help him more with his homework. I was sad to hear him say that but I guess that is the way he feels.

Helplessness. The second theme is helplessness. This theme arose out of frequent reports of parents' inability to help their children with homework due to combining factors like limited English fluency, lack of education, and/or limited time. This theme is connected to the degree of parent involvement indicated in the pre-assessment, when several parents indicated:

- I can't help my child because I do not understand the math.
- What am I supposed to do, call the teacher for help? I know that my child struggles with math and hates math. I do too. I can't help him. The school should help my son because I did not finish high school.
- Yo no le puedo ayudar a mi hijo pues las matematicas so tan dificiles y yo no tengo ningun medio para apoyar pues yo no se ingles. [I cannot help my child in mathematics because it is so difficult and I do not have any resources to support him because I do not speak English.]
- Como yo no hablo ingles yo no puedo comunicarme con la maestra. Es por eso que yo no puedo ayudarle a mi hija. [Because I do not speak English I cannot communicate with the teacher. This is why I cannot help my daughter.]

Recurring words and/or phrases collected in the pre-assessment that represent this theme included: "my child dislikes math, my child struggles, my child doesn't understand math, I can't help him, and I am frustrated that I cannot teach the math." These sentiments support the participants' lack of trust that they are capable of helping their child. The data collected in the post-assessment indicates that after the workshops the parents felt more capable of helping their children because they learned about many resources available to help them assist their children with homework. These resources included the Internet,

library, and mentors, as well as increasing their communication with teachers beyond the agenda and random conferences, instead using e-mail and personal communication. One parent reported in the post-assessment (conducted on March 23, 2010):

> Yo apoyo a mi hijo aunque no sea hablar ingles llevandolo a la biblioteca, el Internet o buscando ayuda de mi vecino que entiene las matematicas. Tambien yo llamo a la maestra pues ella me conoce major. Me siento mas capaz y involucrada. [I support my child even though I do not speak English by taking him to the library, or Internet or by finding help from my neighbor who understands math. Also, I call the teacher who knows me better. I feel more capable and more involved]

Parent-child interaction. Degree of parent involvement is also connected to the third theme, parent-child interaction. The parents participating in the workshops had the opportunity for greater interaction with their children. Prior to the beginning of each session, the parents and their children were provided with dinner made by the researcher or volunteer parents. Having this social time prior to the workshops provided time for both parents and children to unwind after a busy day that may not happened otherwise at home. Parents and children engaged in light conversation about their day. As part of the beginning of each session, the teacher would ask the parent and the child to share how the workshop was helping them, if any felt that their interactions around math homework had improved. For the most part, the child would be the one to raise his/her hand to share one positive interaction he/she had with his/her parent when doing homework at home. After a parent and a child would share, the rest of the parents would clap as a symbolic gesture

of acknowledgment and sense of pride. During a session held on January 26, 2010, one parent shared:

> Estoy feliz de que yo me estoy llevando bien con mi hijo. No peleamos cuando el hace last areas no solo de matematicas pero tambien de lenguaje. Gracias directora y maestra. [I am so happy that I am getting along with my son. We do not fight when he does his homework not only in mathematics, but also in English. Thank you principal and teacher.]

During a session on February 16, 2010, another parent reported:

> Gracias directora y maestra por ayudarnos a tener tiempo con mi hija. Les agradesco esta idea de este taller. Me da mucho gusto tener una hora con mi hija todos los martes sin interrupciones. [Thank you principal and teacher for helping me to have time with my daughter. I appreciate the idea of the workshops. I am so grateful to have one hour with my daughter uninterrupted.]

Parent-child communication. The fourth theme that emerged was parent-child communication. Parent responses indicated an increased level of communication as a result of working side by side with their child, whereby the child explained to the parent the concepts being learned at each step of the workshop following the TIPS prototype. As a result of the opportunities provided throughout the ten workshops for the child to share and talk about his/her learning, this behavior transferred to other subject matters at home. The skill of listening rather than the parent immediately asking questions about the problem and/or why the child is not able to understand the concept under study lessened the frustration and amount of tension between the child and the parent and even other siblings at home. Parents revealed that children were less inhibited about sharing their

work with them even in instances when the child was not 100% confident about how to work the math problems. Parents indicated because of the consistent and direct communication that occurred and that they experienced with their child during the workshops they experienced an increase in communication with their child. The workshop activities provided a neutral ground for parent and child to practice communication because there were opportunities to engage in conversations in different segments of each workshop session. Several parents reported in the focused journal questions:

- Even though this is the second workshop of the series, I noticed that my son and I talk more and we smile rather than avoid each other.
- I cannot believe that my son was telling me tonight during dinner about a problem he had with a teacher. The last time I remember him telling me was when he was in third grade. I cried so much.
- Mi hijo y yo platicamos and me dice sin yo iniciar lo que el aprendio en la escuela. El esta cambiando. [My son and I talk and he tells me what he learned in school without me asking first. He is changing.]
- Que interesante como mi hijo y yo hemos cambiado. Platicamos mas y esto me agrada muchisimo. Gracias otra vez maestra. [It is interesting that my son and I have changed. We talk more and this makes me very glad. Thank you again teacher.]

Child confidence. The degree of parent involvement and parent-child interaction led to the fifth theme, since part of the TIPS format involves giving the child the opportunity to talk to his/her parent about the math concepts. Students practiced the work

and became actively involved in the learning process. Parents actively listened to their children and asked questions when necessary. Having this reciprocal interaction boosted the children's confidence in math, which became very noticeable as the workshops progressed throughout the study.

Recurring words and phrases and comments in parents' responses to the focused journal questions, post-assessments, and focus group showed that they observed their children demonstrating a higher level of confidence when sharing the math during the workshops, doing their homework at home with very little and/or no frustration, and in their accounts of their school days. Several parents reported:

- When my daughter comes home from school, she goes quickly to do her math homework instead of waiting because she is afraid of doing. She feels confident, I think!
- He is confident that he can multiply and divide fractions and solve the angles too. I am so proud of him. He knows it because I tell him.
- Mi hijo me dijo que se saco una B en su examen de matematica. Tenia una sonrisa tan grande. Que gusto me dio saber que esto le esta ayudando a tener mas confianza en si mismo. [My son showed me his test that he got a B in math. He had such a big smile. I felt so good to know that this is helping me increase his confidence.]
- Cuando usted nos invito a la primera reunion yo nunca me imagine lo que estos talleres iban a hacer para el auto-estima de mi hija. Directora, ella camina recta sin miedo y con orgullo. Que Dios la bendiga. [When you invited us the for the first meeting, I never imagined what these workshops

would do to my daughter's self-esteem. Principal, now she walks straight and with pride. May God bless you.]

- My son is not the same as he was before the workshops. He is so sure of himself rather than saying how "stupid" he was for not knowing how to do simple math like fractions.

Parent-teacher communication. The degree of parent involvement in the workshop series led to sixth theme, parent-teacher communication. As the series of workshops continued, the communication between the parents and teacher increased; this trend was observed by the researcher (as described in the field notes) and reported by parents in the focused journal question, post-assessment, and focus group. The interactions between the parents and the teacher extended from a simple greeting to having conversations before, during, and after each workshop. The researcher recorded in her field notes the following statement during a conversation between the parent and the teacher on January 26, 2010, "Miss Lee, are you getting ready for the big day? My family is so happy for you. Also, thank you very much for dedicating this time to my child and the rest of the students." A parent indicated in the post-assessment:

> Yo tenia mucho miedo de hablar con la maestra pues mi ingles es muy poco. Ahora que ya la conosco, me siento con confianza de comunicarme con ella. [I was afraid to speak to the teacher because my English is little. Now that I know her, I feel more confident to communicate with her.]

Two parents reported in the focus group:

- The only time that I communicated with the teacher was for parent conferences or when she would call me. Now, I call her if I need to or I come

to the classroom or I send her e-mails or notes. I am glad that I am able to communicate with her. She is so nice and she cares about my son so much.

- Que bueno que ya me comunico con la maestra no solo por la agenda o cuando tengo conferencias sino que cuando yo la llamo y me traducen en la oficina sin miedo. [It is good that I can communicate with the teacher not only with the agenda o when I have a conference, but also when I call and someone translates for me in the office.]

Teacher-child communication. The seventh theme is teacher-child communication. As the communication between the teacher and parents changed over the course of the workshops, parents reported a similar trend occurring between the teacher and their children. Three parent responses in the focused journal stated the following:

- I noticed that my son is comfortable speaking to Miss Lee and asking her questions. Before, he used to ask me to write her a note why he did not do his homework. Also, he comes before and after school for help and sometimes stays on Tuesday for tutorial.
- My daughter is not scared as much as she used to be to ask questions. During the workshops, I noticed that she is raising her hand. This is an improvement to see.
- Cada martes mi hijo se levanta temprano para ir a recibir ayuda de Miss Lee en matematicas. En vez de yo recordarle, el me recuerda. Gracias a Dios que esta motivado a preguntarle a su maestra sin ningun miedo. [Every Tuesday, my child wakes up early to get help from Miss Lee in math. Instead of me

reminding him, he remembers. Thank God that he is motivated to ask questions of the teacher with no fear.]

Learning about the math. The eighth theme that emerged was learning about the math. Attending the 10 workshop sessions was valuable for parents not only in increasing their level of awareness of the math their children were doing, but also in learning about the math themselves. Several parents indicated in their journal responses:

- I work in construction and having knowledge of the lesson on Square Roots was very helpful to for my job. Memorizing the common square roots is so important.
- I see how important is for my daughter to know the multiplication facts. Even for me, I am not so fast multiplying by nine. I need to learn it along with her.
- Yo no me se todas las tablas de multiplicar. Ya me di cuenta que si mi hijo no se sabe las tablas el no va poder multiplicar o dividir. Yo tengo que aprendermelas tambien si quiero que mi hijo se las aprenda. [I do not know all the multiplication tables. I just realized that if my son does not know them, he could not multiply or divide. I need to learn them as well if I want him to learn it.]

Two parents reported in the focus group:

- I am so glad that I decided to participate in these workshops. I learned more about the math that my son is doing. It was not as easy as I thought. It helped me reviewed what I learned so long ago.
- Yo tenia mucho tiempo de no hacer fracciones. Estos talleres me ayudaron un poco a recordar lo que aprendi en Mexico. [It had been a long time since I

solved fractions. These workshops had helped me remember what I learned in Mexico.]

Content and format of the workshops. Content and format of the workshops is the ninth theme. Participants valued the format of the workshops as well as the step-by-step explanation of the problems presented for each workshop following the format of TIPS developed by the NNPS at John Hopkins University (Epstein et al., 2002a). Parents reported that this structured homework format both helped them learn about the math their child was doing and enabled them to help their children if they needed assistance. The researcher observed parents talking to each other about the value of this homework format (see field notes for further discussion). One parent reported:

- Miss Lee, I have never seen this type of homework sheet. It is great! Thank you.
- Wow! I see what you have to do just by looking at the example that Miss Lee did herself in this sheet. Isn't easy for you to understand it son?
- Cuanto trabajo tuvo que hacer la maestra Lee para poder ayudarnos que aprendamos la matematicas. [It is a lot of work that the teacher Lee did to help us in helping you understand the math.]

In the focus groups, parents indicated their belief that this tool should be used to communicate what their children are learning in all of their classes – not only math. Common words and phrases that were reported by parents were: "excellent, great, amazing, this is easy to follow, great communication tool." The following additional comments were also made:

- I can see what my child is doing in Miss Lee's class. I do not have to guess it. Who came up with this great idea!
- Mrs. Hallstrom, this is the way to increase parent involvement even more next year so that teachers know that we care.
- Directora, espero que sigamos usando esta forma para poder saber lo que mi hija esta aprediendo. Le pido que nos ayude con esto. [Principal, I hope that we continue using this form so that I can better help my child what she is learning. I ask that you help us.]

Parent empowerment and gratitude. Parent-teacher involvement, parent-child interaction, and child confidence led to the tenth theme. A strong and recurring theme that was reported by participants and observed by researchers was how parents gained the ability to access resources to assist their children with homework. In doing so they gained the confidence to communicate with both their children and the teacher. The sense of helplessness that was a recurring theme in the pre-assessment changed to empowerment. This is significant in that the parents' responses indeed eliminate the theory of "deficit-thinking," which blames the victim (in this case the parents) for their inadequate schooling. Chrispeels and Rivero (2000) note that when parents connect with their children in learning opportunities at home, provide food and shelter, and communicate with the school, their involvement can lessen the negative impact of poverty and prevent students from dropping out. Equally significant is that parents in this study experienced positive communication with their children when engaged in homework. Parent reports and researcher observations indicated not only positive communication between parent

and child, but also that children acquired positive emotions from the experience, namely confidence. In the post-assessments parents reported:

- I know how to support my child with his homework when I cannot do it. For example, I can take him to the library, or call the teacher, or google it in the Internet. There is so much I can do.
- Before I used to feel as though I could not help my child, now I feel strong and grateful that Miss Lee and the principal taught everyone how to help your child.
- Hay maestros que piensan que no queremos ayudar a nuestros hijos. Yo pienso que ellos no comprenden que aveces no tenemos los recursos. Es pore so que la escuela nos tiene que ayudar. Una vez que sabemos nosotros somos intelligente y capaz de hacerlo. Gracias. [There are teachers that believe that we do not want to help our children. I think that they do not understand that we do not have the resources. This is why the school needs to help us. Once we know how, we are intelligent and capable of helping.]

Analysis of the Pre-Assessment

The pre-assessment included five questions asking parents to assess the areas of need in getting more actively involved in their child's education, their child's ability to do math, and what they know about their child's progress in school including the type of support parents give their children with homework and concerns parents have about helping their child with math. These questions were used to provide the researcher with information on what parents need from the school to help their children at home with homework and increasing communication between the home and school.

Question one stated, "Which areas are of need for you in getting involved in your child's education?" From the data collected (see Table 2), 88% (24) of parents indicated that they want to have more understanding of their child's homework, 81% (22) want to get in involved in completion of homework, 41% (11) desire greater involvement in their child's education, 26% (7) want to interact with their child's teacher, and 33% (9) want their child's teacher to interact with them about their child's education.

Table 2

Pre-Assessment: Areas of Need for Parents Getting Involved in Their Child's Education

Areas of need	No. of parent responses
Parental understanding of the homework	24
Child's completing of homework	22
Parent-child interaction	11
Parent interaction with teacher	7
Teacher's interaction with parent	9

N=27

Question two stated, "Tell me what you know about your child's ability to do math." From the data collected (see Table 3), 93% (25) of parents indicated that their child experiences difficulty in doing math, 95% (25) reported that their child needed improvement in completing math homework, 4% (1) indicated that his/her child did not have problems with math homework and 4% (1) reported his/her child did not like math.

Table 3

Pre-Assessment: Parents' Perceptions of Child's Ability to Do Math

Types of Perceptions	No. of parent responses
Child has difficulty in doing math	25
Child needs to improve in finishing homework	25
Child does not have problem with math homework	1
Child does not like math	1

N=27

Question three asked, "How do you communicate about your child's progress with the school?" According to the data (see Table 4), 74% (20) of parents indicated that they utilized the agenda. The student agenda is an organizational tool provided by the school in which students write their classwork and homework. This tool communicates to parents the activities that the child is learning for each subject. Fifteen percent (4) communicated by phone with teachers, 4% (1) via electronic mail, 15% (4) only during parent conferences in December and March, and 4% (1) using the report card. Fifteen percent (4) did not communicate with the school at all.

Table 4

Pre-Assessment: Types of Communication About Child's Progress With the School

Types of communication	No. of parent responses
Student agenda (student organizational tool)	20
Phone call	4
E-mail	1
Parent conferences (Fall & Spring)	4
Weekly visitation to the teacher	0
Progress report/report card	1
No communication with teacher	4

N=27

Question four asked, "At home, do you provide your child help with homework? What type of support do you provide in homework?" The data (see Table 5) indicated that parents had different strategies to support their children. Eleven percent (3) reported that they read the math problems aloud to their child; 41% (11) reported that they monitored and supervised their child in completing the homework; 30% (8) indicated that they used other resources such as siblings, uncles, the Internet, and neighbors to assist their child with homework; 7% (2) made sure that there were no distractions in the home while their child did homework (e.g. turning off TV, cell phones, and music) and 19% (5) did not help their child with homework because they lacked the knowledge and/or could not read.

Table 5

Pre-Assessment: Type of Support Parents Use to Help Child With Homework

Parent Support	No. of parent responses
Making sure there are no distractions during homework	15
Monitoring/supervising homework completion	11
I do not help with homework	10
Provide resources to help with homework	8
Reading aloud the Homework (math problems)	3

N=27

Question five asked, "What concerns do you have about helping your child in math?" According to the data (see Table 6), the majority of parents indicated that their limited knowledge in the grade level math concepts played a significant impact in helping their child with homework. Eighty-nine percent (24) indicated that they lacked the necessary knowledge in math. Hence, it was very difficult to assist their children with the homework, particularly homework that required higher-level knowledge of the grade

level concepts (as noted in the field notes); 63% (17) reported that they were not able to communicate effectively with their child when they assisted them with homework, especially when they could explain the math adequately; 44% (12) mentioned that they did not know how to keep their child focused without constant reminders to be on task; 56% (15) had little time to help after coming from work; and 7% (2) did not have any concerns.

Table 6

Pre-Assessment: Parents' Concerns About Helping Child With Math Homework

Parent Concerns	No. of parent responses
Limited knowledge of math concepts	24
Limited communication skills to assist child	17
Limited knowledge of strategies to keep child focused	12
Having time after work to help my child	15
No concerns	2

N=27

Analysis of the Post-Assessment

The post-assessment had the same four questions as the pre-assessment, plus four additional questions. These additional questions were used to determine the extent to which the intended outcomes were attained; namely parents' strategies and skills about how to help the child with homework, how to increase the communication between the home and school, and the type of support parents need from the school in order to feel empowered to help their child with homework.

Question one stated, "Which areas are of need for you in getting involved in your child's education?" From the data collected (see Table 7), 92% (23) of parents indicated that they wanted to have more understanding of their child's homework, 80% (20)

wanted to get involved in homework completion, 100% (25) desired to improve their interaction with their child, 72% (18) wanted to interact with their child's teacher and 56% (14) wished for their child's teacher to interact with them about their child's education.

Table 7

Post-Assessment: Areas of Need for Parents Getting Involved in Their Child's Education

Parent needs	No. of parent responses
Parental understanding of the homework	23
Child's completing of homework	20
Parent-child interaction	25
Parent interaction with teacher	18
Teacher's interaction with parent	14

N=25

Question two stated, "Tell me what you know about your child's ability to do math." From the data collected (see Table 8), 78% (21) of parents indicated that after the workshop sessions they noticed their child was able to complete math homework at home with less difficulty. Seventy-four percent (20) of parents reported that even after the workshops, their child needed to continue improving in finishing other homework assignments. Sixty-eight percent (17) of parents reported that their child did not have problems with the math that they learned at the workshops. Consequently, they were completing the homework with high levels of confidence. Seven percent (2) of parents reported that their child did not like math.

Question three asked, "How do you communicate about your child's progress with the school?" Seventy-two percent (20) of parents indicated the agenda, 72% (18) parents reported phone calls, and 12% (3) parents mentioned e-mails. Ninety-two percent

(23) of parents indicated that they attended conferences and 16% (4) had weekly meetings with the teacher. Forty-eight percent (12) of parents reported progress report/report card and 92% (23) mentioned they communicated with the teacher in person (see Table 9).

Table 8

Post-Assessment: Parent Perceptions of Child's Ability to Do Math

Types of parents perceptions	No. of parent responses
Child has less difficulty in doing math	21
Child needs to improve in finishing homework	20
Child does not have problem with math homework	17
Child does not like math	2

N=25

Table 9

Post-Assessment: Types of Parent Communication About Child's Progress With the School

Types of Parent communication with school	No. of parent responses
Student agenda	20
Phone call	18
E-mail	3
Parent conferences (Fall & Spring)	23
Weekly visitation to the teacher	4
Progress report/report card	12
Communication with teacher in person	23

N=25

Question four asked, "At home, do you provide your child help with homework? What type of support do you provide in homework?" From the data collected (see Table 10), 92% (23) reported that they used additional resources such as the Internet, library, and tutors to support their child with homework at home. In addition to providing

resources, 76% (19) made certain there were no distractions at home, 72% (18) called the teacher, 60% (15) of parents read aloud to their child even though they were not able to accurately pronounce the words in English, and 72% (18) sat next to their child just like they did at the workshops.

Table 10

Post-Assessment: Type of Support Parents Use to Help Child With Homework

Parent support	No. of parent responses
Additional resources (Internet, library, tutors)	23
No distractions while doing homework	19
Call the teacher	18
Reading aloud the Homework (math problems)	15
Sit next to my child	18

N=25

Question five asked, "Which sessions were helpful in getting involved with your child's math?" From the data collected (see Table 11), 96% (24) of parents reported that all the sessions were helpful because they helped parents review and better understand the math concepts that they studied at home. Hence, they felt more comfortable helping their child and siblings with math. One (4%) parent indicated that the session on Square Roots was the most valuable to him because it was the one that he understood best and that he would use in his line of work.

Question six stated, "After attending these sessions, how do you help your child with math assignments?" From the data collected (see Table 12), 92% (23) of parents stated that they provided resources to their child after attending the sessions. In addition to providing support, 72% (18) of parents sat down with their child and had the child explain the math to them following the steps they learned during the workshops and 64%

(16) of these parents praised their child as a method of encouragement rather than blaming the child for not understanding when they struggled.

Table 11

Most Relevant TIPS Workshop Sessions as Experienced by Parents

Session number	No. of parent responses
One: Square Roots	1
Two: The Pythagorean Theorem	24
Three: Fractions	24
Four: Ratio and Rates	24
Five: Solving Proportions	24
Six: Similar Polygons	24
Seven: Ratios and Percents	24
Eight: Percent Proportions	24
Nine: Review of Square Roots, The Pythagorean Theorem, Fractions, Ratios and Rates	24
Ten: Review of Solving Proportions, Similar Polygons, Ratios and Percents and Percent Proportions	24
All sessions	24

N=25

Table 12

Strategies and Type of Help Parents Will Use After Attending the Sessions

Parent strategies to support their child	No. of parent responses
Provide resources to assist him with math (Internet, tutor, library)	23
Sit down next to him	18
I have my child explain it to me	18
Give my child words of encouragement	16

N=25

Question seven asked, "After attending these sessions, what have you noticed about your child's sense of confidence in math and in other subjects?" From the data collected (see Table 13), 88% (22) of parents reported that they had observed that their child appeared highly confident about and capable of doing the math homework. Thirty

two percent (8) of parents indicated that their child did not show fear when doing the math work as compared to before the workshops. Seventy-six percent (19) of parents revealed that their child was more focused, 80% (20) noticed that their child's grades improved and 88% (22) of parents mentioned that their child both improved in behavior as well as grades in other subjects.

Table 13

Parent Observations About Child's Confidence in Math

Child's behavior	No. of parent responses
High levels of confidence in math	22
Less fear of math	8
More focused at home during homework	19
Improved grades in other subjects	20
Improved behavior	22

N=25

Question eight asked, "What additional information/support might you need from the school and/or teacher in order to help your child with homework?" From the data collected (see Table 14), 100% (25) of parents indicated implementing a similar format for homework as TIPS both in English and Spanish, 92% (23) of parents reported the need to provide classes in the morning on basic math, 96% (24) expressed a need for the school to provide information on resources available for children in the school, and 48% (12) mentioned having tutorials in different subjects besides math.

Workshop Results

The role of the researcher was to support the teacher in making sure that parents and students were focused on each step of the lesson and followed up on the teacher's direction when she asked students to share and talk about their learning with their

parents. Additionally, at the beginning of each workshop session the researcher reminded both parents and students of all the different sections of the TIPS template and their role at each segment of the lesson. The researcher provided parents with an extra copy of the homework that students completed during the session in case parents wanted to review it at home and/or use it as tool to reference in the future. During the workshop sessions both the teacher and researcher used specific vocabulary for the concept and reinforced these terms. The teacher also made certain that parents were aware of the importance of their children knowing prerequisite skills, including the multiplication tables, and pointed out previous knowledge learned and how these prerequisite skills helped in both understanding and solving the problems.

Table 14

Additional Information/Support Needed by Parents with Homework

Additional information/support needed	No. of parent responses
Implement a similar homework template like TIPS	25
Provide morning and evening classes for parents on basic math	23
Inform parents of the resources available in school	24
Tutorials in specific subjects	12

N=25

Field notes from workshop one. Workshop one, held on January 12, 2010, began with enthusiasm from the parents. Before the session started, parents and students were served dinner that the researcher cooked. The energy in the classroom was positive, particularly from the parents. However, some students seemed hesitant about the nature and outcome of the evening evidenced by their non-verbal communication and asking the researcher questions such as: "what are we going to do with our parents; am I supposed to tell my parents about what I am learning; and what if I do not know how to explain it?"

To lower the level of concern among the students and to acknowledge the parents' enthusiasm, the researcher began by welcoming all of the participants and reiterating once more time the purpose and rationale of the study. The researcher provided each participant with an agenda and the TIPS worksheet. Once participants had the materials needed for the session, the teacher welcomed the parents and thanked them for their commitment to attend these sessions. She expressed her confidence in the students and reminded them to be patient with their parents during these ten workshop sessions. To begin the session, the teacher reviewed each part of the TIPS worksheet and communicated her expectations of what students and parents needed to do. Both parents and students were focused, listening attentively and taking notes. After reviewing each section of the TIPS template, the teacher provided the opportunity for parents to ask any questions about the template and expectations as well. After reviewing each step, the teacher asked the students to explain step by step to their parents. The level of noise was loud as the students almost in unison explained each step to their parents. Parents were nodding and smiling. The teacher walked through to listen and monitor the students. One parent shared:

> Directora, gracias por su tiempo despues de las horas de escuela. Muchisimas gracias a usted y a la maestra. Usted no sabe lo mucho que esto significa para mi y mi hijo pues tener este tiempo especial solamente con el es muy importante. Principal, thank you for you time after school hours. [Thank you so very much to you and the teacher. You do not know how much this means to my son and I because this is a very special time with him, which is so important.]

Another participant mentioned:

> Why haven't the school and the district thought about this before? This is what parents need from the school so that we can help the teachers. My child had a teacher last year who believed that I did not care about my child's education because I could not help him with math and writing.

At the end of the session, parents were asked to turn in the last page of the TIPS worksheet for the researcher and the teacher to assess the parents' reaction to their child's work on this specific activity. The data indicated that based on their child's work on this activity, 15 of the 27 parents felt their child understood the skill; 10 parents reported that although their child seemed to understand, they wanted the teacher to check the child's; and two parents reported that their child needed help and extra instruction in this skill (see Table 15). Three parents added the following comments:

- I need to take notes myself so that I can understand and don't forget what I did. So I could explain to my son.
- My son seems to know his multiplication very well.
- He seems to fear fractions and automatically assumes he will get it wrong.

Table 15

Parent Responses to TIPS Four Categories Following the Workshop: Square Roots

TIPS Response Category	n
Ok. My child seems to understand this skill	15
PLEASE CHECK. My child needed some help on this, but seems to understand	10
PLEASE HELP. My child still needs instruction on this skill	2
PLEASE NOTE. (other comments)	3

N=27

Field notes from workshop two. Parents began arriving at 5:15pm on January 19, 2010 for the second TIPS workshop. Upon parents' request, three parents volunteered to provide dinner. The room was buzzing with parents and students making comments about the delicious enchiladas and nachos and the opportunity to have one more night with their child doing math. Prior to the session, one parent approached me and shared, "Principal, the materials that you gave my son for the first session was useful for my 9th grade student. I showed it to his teacher at the conference I had with him and my son last week." Prior to the session, a student mentioned to the teacher, "Teacher, last week was easy the way that you explained it. I think that I did good in my test."

This workshop session began promptly at 5:45p.m. All parents and students were on time and ready to start. The teacher began the session by allowing parents and students to share how they felt about their child following the first session. The researcher took field notes and the conversation in the room was filled with parents feeling positive and excited that they were attending school with their child, learning and working together, and getting to know their child's teacher. Once parents and students had time to share about the first TIPS workshop, the teacher reviewed the session one concept, square roots, before introducing the next concept, The Pythagorean Theorem. The teacher asked students questions to check their baseline level of understanding. All students, including most parents, understood the concept of square roots and knew the most common square roots already. Because all students showed understanding on square roots, the teacher proceeded to start the new concept by asking students questions to assess prior knowledge on this particular mathematical concept. Half of the students present in the session (12 out of 24) showed knowledge of the formula for The Pythagorean Theorem,

which created a level of concern from the parents whose children did not know. The teacher became aware of these parents' distress, informing them not to worry and that by the end the session they would understand.

The teacher followed each step of the TIPS session and allowed time at each step for students to share and talk with their parents and practice before they were released to do it independently. Both the teacher and the researcher walked around to observe the interactions between the children and parents. The level of engagement was high and parents were very attentive listening to their children. One parent commented to her child, "You know how to use the formula. This is very good because the teacher told us you had to memorize it. We can practice more problems at home. Let's ask her to give you more practice."

Before the teacher ended the session, she asked parents and students to share their experience with this session and to make sure that they answer the focused journal questions and turn them in to the researcher. One parent reported:

> Wow! I feel like I am going back to school again. I did not realize how hard is math. Now, I need to be more understanding of my child before I scold him for not doing his math work. Thank you teacher.

The teacher asked parents to practice the square roots and multiplication tables at home with their child. Parents were very receptive about the suggestions that the teacher gave them and also grateful for her dedication. Several parents mentioned to her before they left:

- Maestra, gracias for quedarse tarde para ayudarnos. Disculpe que no tengo dinero para pagarle. Dios le va a pagar for todo lo que esta haciendo por

nosotros. [Teacher, thank you so much for staying late to help us. I am sorry that I do not have money to pay you. God will pay you back for all of us.]

- Este es mi dia favorito de la semana. Cuando yo voy al trabajo, you me aseguro que hago todas mis responsabilidades para irme temprano. Mi jefe sabe lo importante que es esta noche de la semana para mi y mi hijo. [This is my favorite day of the week. When I am at work, I am making sure that I do all my chores so that I can leave on time. My boss knows that this is an important evening for me and my son.]

The data showed that parents were increasingly realizing that learning the multiplication facts and frequent practice could improve their child's understanding of grade-level math concepts. Eighteen of 25 parents reported that their children understood the concepts. Six parents indicated the need for their child to obtain some help from the teacher. One parent reported that the child needed instruction from the teacher and five made comments about their experiences during this workshop (see Table 16).

Table 16

Parent Responses to TIPS Four Categories Following the Workshop: The Pythagorean Theorem

TIPS Response Category	n
Ok. My child seems to understand this skill	18
PLEASE CHECK. My child needed some help on this, but seems to understand	6
PLEASE HELP. My child still needs instruction on this skill	1
PLEASE NOTE. (other comments)	5

N=25

Comments by parents included the following:

- I think that my child understands, she only needs to practice so she can master it.
- My child seems to rush things and doesn't like to re-check his work. Not really patient.
- Ella entiende pare necesita practicar mas. [She seems to understand but could use a little more practice].
- We will work on memorizing square roots and practice more.
- Muy dificil para el. El necesita studiar mas y la formula. [Very complex for him. Needs to study square roots and formulas.]

Field notes from workshop three. The researcher provided pizza for all participants for workshop three, held on January 26, 2010. While the participants were eating, the teacher visited with parents and students. For this workshop, parents brought additional family members, which made the classroom overcrowded. However, parents were very helpful and flexible to accommodate guests and participants. The parents and students were very lively. The room was filled with positive energy and a higher level of conversation among parents than the two previous workshop sessions. They were sharing with each other how helpful it had been to attend the sessions even though they had to rush from work. The researcher took field notes prior to and during the workshop and rewrote the notes in typed format at the completion of the workshop in order to use as data to answer the research questions.

Of the participant experiences that were shared before beginning the third workshop, the following one was the most impressive:

> Por que compartimos la casa con cuatro familias, mis hijos no pueden concentrarse cuando hacen la tarea. Tambien, no hay nadie que le pueda ayudar a mi hijo pues yo solo termine la escuela primaria. Yo le agradesco grandemente por darnos este noche sin interrupciones. Me gusta mucho el hecho que la maestra y la directora estan involucrados y estan ayudando a los niños a mejorar la matematicas. [Because we share a house among four families, my child in high school and in middle school cannot concentrate to do their homework because of the noise. Also, there is nobody that can help my children because the adults in this house, including myself did not finish elementary school. I am so grateful that I have once a week uninterrupted time with my child. I cherish this time even if I am tired. I love the fact that the teacher and the principal are reaching out to us to help us in getting our kids ready to be better at math. In fact, coming to this workshop gives me more energy.]

This description added strength to the study because it supports the finding that parents do want to be involved and that there is a need for teachers to reach out to parents. Many researchers and scholars continue to promote the importance of teachers reaching out to parents as a way to communicate and develop relationship with them (Hiatt-Michael, 2009).

After everyone had settled into his or her seats, the teacher introduced the concept of fractions with a demonstration using a pizza. She cut the pizza in half and stated, "My pizza had ten slices. I then cut this pizza in half. Now, I have five slices, which is ½." She proceeded by asking, " Who can tell me why I have written ½ in this form?" Many hands were raised including those of parents. One parent shared, "The ½ means that you have

cut a whole in two parts." The teacher confirmed the parent's thinking and the entire class clapped for him. She proceeded to explain the rules of addition, subtraction, multiplication, and division of fractions. As she explained each rule, the teacher provided time for each student to explain it to his/her parent. The researcher took notes about different conversations that were taking place in the room during this time. Most of the students felt very comfortable and had no difficulty explaining the concept to the parents. However, there were two students who were struggling in sharing thelr learning to their parents. Because the teacher was monitoring the students, she approached those students to support them. Then she said the following to the entire group:

> Students, I want to remind you that this workshop is intended to help you increase the communication between you and your parents and for your parent to give me feedback on the ability for you to do the homework. Thus, I would like for you to be patient.

As she was speaking to the students, many parents nodded and smiled. One parent stated, "Teacher, thank you so much for reminding our kids to be patient with us and accepting that we do not have the answer to all of these math problems."

During the segments of the session when students were asked to share and explain the concept to their parents, the teacher walked around. A parent described to the teacher, "I remember in elementary and secondary learning about fractions. I could add and multiply fractions, but I had so much difficulty with division. The teacher really explained it well, better than my teacher long time ago."

Before the session ended, the teacher reminded parents and students to practice the multiplication facts and common square roots, and asked parents to make sure that

their children remember the formula for The Pythagorean Theorem. Also, participants completed the focused journal questions. As the researcher was saying good-bye and thanking the parents and the students for their participation, a parent made the following comment:

> Directora, muchas gracias por ayudarme a aprender las matematicas que mi hijo esta estudiando pues asi yo lo puedo apoyar. Mi hijo se siente tan feliz que yo puedo hablarle de las matematicas sin tener peleas y frustraciones cuando hace las tareas. [Principal, thank you very much for helping me to learn the mathematics that my son is learning so that I can now support him. My son feels very happy that I can speak to him about the mathematics without having arguments and frustrations when he does his homework.]

The data indicated that most of the students did not have difficulty with the concept and explaining it to their parents. Of 23 participants, 16 reported that they understood the concept of fractions and the child was able to explain it to his/her parents with any difficulty; five indicated that although their child understood fractions, they felt he/she needed extra support either during class and/or after school; and two parents reported that their child needed more instruction on this concept (see Table 17). The parents who reported that their child needed more instruction made the following comments:

- She gets stuck a lot so if you can please help thank you.
- I kinda get it but it's still hard.

Field notes from workshop four. The researcher and teacher were concerned that rain and the coldness of the night would keep many families from attending this

evening workshop, held on Februrary 3, 2010. As the start time was getting close with only eight families in attendance, it became apparent that the turnout would be smaller given the weather conditions. Parents and students were treated to chili soup made by the researcher to keep everyone warm.

Table 17

Parent Responses to TIPS Four Categories Following the Workshop: Fractions

TIPS Response Category	n
Ok. My child seems to understand this skill	16
PLEASE CHECK. My child needed some help on this, but seems to understand	5
PLEASE HELP. My child still needs instruction on this skill	2
PLEASE NOTE. (other comments)	2

N=23

The teacher started the session by acknowledging the efforts of the families present in spite of the heavy rains. She introduced the concepts of ratio and rates for students to be able to understand the comparing of two numbers (values) of the same and different units. The teacher provided input on the definition of ratio, rate, and unit rate. She modeled examples of each and asked questions to check for understanding. Then, she asked students to explain to their parents the definition of ratio, rate, and unit rate. In spite of the low attendance, the level of engagement was high and very positive. Following this activity, the teacher showed the students how to write the ratio in its simplest form. Next, the teacher had students had students solve and explain two problems to their parent. As students were sharing the work, the teacher walked around to monitor the conversations between parents and students. While the teacher was walking around the room, a parent called on the researcher. The parent mentioned:

> Principal, why did the school wait so long to offer this type of help for us? This is what parents need from the school to keep us connected with our kids. We want to help our child. But, we do not know how because the math is so difficult. Do you understand how parents feel when they cannot help their child?

This is significant because research shows that the impact of TIPS on parent involvement have resulted in positive outcomes (Deslandes, 2009).

The subsequent activity involved the teacher modeling how to express each rate as a unit rate followed by students trying and explaining the work to their parents. Both the teacher and researcher walked around to monitor conversations. The students demonstrated a strong understanding of these two concepts, ratio and rates. Parents were pleased, evident in their smiles and giving hugs to their children. The teacher ended the session by sharing her observations about the students' high levels of understanding. She complimented the students on their level of care to make sure that their parents understood what they were sharing. One very significant and emotionally moving event of this evening occurred when one parent stood and clapped and the rest of the parents accompanied him. One father said, "Hijo, estoy muy orgulloso de usted. [Son, I am proud of you.]"

The data indicated that most of the students did not have difficulty with the concept and explaining it to their parents. Of the 10 participants, eight reported that they understood the concept of ratio and rates and the child was able to explain it to his/her parents, one indicated that the child needed more instruction, and one expressed his gratitude for this workshop (see Table 18).

Table 18

Parent Responses to TIPS Four Categories Following the Workshop: Rates and Ratios

TIPS Response Category	n
Ok. My child seems to understand this skill	8
PLEASE CHECK. My child needed some help on this, but seems to understand	0
PLEASE HELP. My child still needs instruction on this skill	1
PLEASE NOTE. (other comments)	1

N=10

Field notes from workshop five. Parents began to arrive at 5:15pm on February 9, 2010, carrying food and sweets to share. As each parent and student arrived, the researcher welcomed them, reminding them to sign and distributed the agenda and TIPS worksheet for the evening. The ambience was very familial. Parents, students, the teacher, and the researcher interacted well, showing positive regard and respect for each other. One parent was hugging and kissing her son, visibly excited to be coming to the workshop. She stated:

> A mi me facina venir todos los martes en la noche. My jefe sabe que yo solo puedo trabajar horas extras cuatro dias de la semana pero no los martes. Mi hijo me recuerda los lunes en la noche de estos talleres y de no trabajar extra los martes. Yo nunco habia oido esto de mi hijo hasta que empeze a venir a estos tallers. [I love coming every Tuesday night. My boss knows that I would work extra hours any time during the week except for Tuesday. My son reminds me on Monday night not to stay extra hours. I had never heard that from my son until I began to attend the workshops with him. This is great!]

The teacher joined different conversations to find out how the students were doing with practicing the multiplication facts, the most commonly used square roots, and the Pythagorean Theorem. One mother mentioned to the teacher:

> Teacher, I went to the store to buy a book so that my daughter can review the multiplication facts. I could not find anything on the square roots. But, we went to the library where we found this book. I am so excited that I was able to find a book and I knew how this would help my daughter. Thank you for caring for my daughter. She is more confident and not as afraid as she was before these classes.

The workshop began as usual promptly at 5:45pm All participants were seated and ready to start another evening with their child. The teacher began the session by asking questions about previously learned concepts to check for understanding. The participation among both parents and students in responding to questions posed by teacher showed not only that the students understood the concept, but also that some parents had learned from the preceding sessions. The teacher acknowledged the parents who shared their learning and encouraged other parents to do so as well.

The concept for this session was solving proportions. The teacher shared that the purpose of using proportions was to compare and contrast fractions. She modeled two examples on how one determines whether the pair of ratios forms a proportion. The teacher allowed for questions from the students and reviewed the steps to solve and check the proportions before asking students to try and show the work to the family member. The students were highly engaged in doing and explaining the work. The teacher walked around all the tables and listened to the students' explanations to their parents. She complimented each student, which positively impacted them. The researcher joined one

student whose parents had joined him together for the first time. The father shared his pride:

> Directora, vine directamente de mi trabajo porque mi hijo me ha estado pidiendo que lo venga a ver a hacer las matematicas. Mi esposa me cuenta la experiencia que ella y nuestro hijo tiene. Nunca me imagine lo bonito que es estar aqui y por primera vez en dos año sentarme con mi hijo. [Principal, I came directly from my job because my son has been asking me to come and see him do his math. My wife always tells me how much fun she has with him. However, I never imagined how wonderful is to be here because for the first time in two years, I am sitting with my son.]

The data indicated that most of the students did not have difficulty with the concept and explaining it to their parents. Of 16 participants, 12 reported that they understood the concept of solving proportions and the child was able to explain it to his/her parents; three parents indicated that their child needed more help with this concept; one needed more instruction; and one parent reported and offered a comment that his/her child needed more instruction in this concept (see Table 19).

Table 19

Parent Responses to TIPS Four Categories Following the Workshop: Solving Proportions

TIPS Response Category	n
Ok. My child seems to understand this skill	12
PLEASE CHECK. My child needed some help on this, but seems to understand	3
PLEASE HELP. My child still needs instruction on this skill	1
PLEASE NOTE. (other comments)	1

N=16

Field notes from workshop six. In spite of the cold and rainy evening, 16 parents and students attended this session. This workshop was different than others because two extra participants attended, an 8th and an 11th grader. When the researcher welcomed them to the workshop and handed them the agenda for the night along with the TIPS worksheet, the high school student mentioned:

> Principal, do you remember me still? I used to come here two years ago. I came tonight because my mom told me that this workshop would help me with my math. I am having a hard time with my teacher who does not explain it well. The work that my brother gets from Ms. Lee is helping so much. Could I stay?

The 8th grade student stated, "Mrs. Hallstrom, this workshop will help me in Ms. Kong's class. I saw what my cousin is learning. We are reviewing it, but not in the same way. This is better for me to understand."

The teacher began the sixth workshop by sharing that she has noticed that the students attending the workshops have not only improved in their grades, but also their self-confidence. The teacher noticed this during class because students were asking more questions and participating more with less fear about doing the math. She acknowledged the parents' commitment and encouraged them to continue working at home with their child. Upon hearing this acknowledgement, a parent raised her hand to share:

> Nosotros somos muy suerteros de que usted quiere a nuestros hijos. Usted es una maestra buena. Gracias por su dedicacion cada martes en la noche con nosotros. [We are very fortunate that you care about our kids. You are a great teacher. Thank you for dedication every Tuesday night to us.]

The topic for this workshop session was Similar Polygons. The teacher shared that the objective for the evening was for students to use proportion with similar polygons. She reminded students of past learning on solving proportions, which she quickly reviewed and checked for understanding. Also, she reviewed the cross product method. Students seemed confident on their understanding of proportions and the cross product method by showing "thumbs up" as a signal to the teacher that they understood these two concepts.

The teacher introduced polygons by providing them with the rationale for why a particular geometric figure was considered a polygon. Next, she modeled the process for determining whether two triangles were similar and explained her reasoning. Most of the students nodded to indicate their understanding of the process; students implemented the reasoning for determining the value of the missing measure by calculating a proportion and then explaining their work to their parents. The room was buzzing with so much energy from the students as they comfortably and confidently shared and explained their work. The teacher walked around to visit with each group. For the few students who seemed to struggle, she supported them while they worked individually and then again them each explained the concept to their parents. Because she knew that she needed to support one more student, the teacher directed the rest of the students to continue working on other problems.

After teacher had supported those students in need of extra instruction, she proceeded to have students volunteer to come to the board and explain to the class the process for arriving to the answer and his/her reasoning. This teaching strategy was not used before in previous workshops. However, she believed that students were ready to be more public about their learning. Of the 16 students present for this workshop, 14 raised

their hands to participate. Parents encouraged their children to participate, which motivated students to go to the board and showcase their learning to their peers and parents as well. Seven students participated and each earned a rousing round of applause for his/her efforts. The teacher beamed with pride. In taking field notes, the researcher overheard a conversation between a parent and a child after he solved a problem on the board. The parent stated, "Hijo, estoy muy orgulloso de usted. [Son, I am so proud of you.]" The boy responded by hugging and kissing the parent with tears in his eyes.

The session was completed 15 minutes earlier than previous workshops. Before parents were dismissed, the researcher asked each participant to fill out the focused journal responses. For the first time, a group of parents stayed after the workshop to talk. The researcher joined the conversation and took notes. The main focus of their group conversation was about the value of spending time with their children and how they have noticed their relationship improve over the course of the workshops.

The data collected revealed that of 16 participants, 14 parents mentioned that their child understood the concept; two of the parents reported their child needed instruction, and six parents provided comments (see Table 20).

Table 20

Parent Responses to TIPS Four Categories Following the Workshop: Similar Polygons

TIPS Response Category	n
Ok. My child seems to understand this skill	14
PLEASE CHECK. My child needed some help on this, But seems to understand	0
PLEASE HELP. My child still needs instruction on this skill	2
PLEASE NOTE. (other comments)	6

N=16

Of the six parents who provided a comment, three are significant to the study and important to report:

- A mi me gusta como la maestra explica la matematicas, se hace mas facil de entender la forma que nos da. [I really like the way the teacher explains the math, it makes it easier to understand the form that she gives us every time.]
- The form that we are using for the workshops should be used for homework so that I know what my child is studying.
- Me siento mas cerca de mi hijo pues los dos estudiamos juntos sin ninguna pelea. [I feel closer to my son because the two of us study together without fighting.]

The other comments expressed gratitude for the workshops in both English and Spanish.

Field notes from workshop seven. The type of interaction among parents at this workshop was slightly different from the first six workshops. The researcher noticed that rather than parents coming in and taking their seats to start the workshop, some of them would engage in conversation with other parents and children. The ambience of the room seemed like a small community beginning to connect for a common purpose. The researcher joined the conversations and heard from several parents how valuable these workshops have been not only to connect with their child, but also to get to know the parents of their child's peers.

Promptly at 5:45pm on February 22, 2010, all parents and students were seated and ready to begin. Once again, both the researcher and the teacher welcomed the participants and expressed their gratitude for their commitment to participate in the study. The teacher started by introducing the focus for the workshop: learning how to convert

ratios (fractions) into percents and percents into ratios. Students were reminded of the following concepts that they need to keep in mind when converting ratios to percents: the value of percent, using the Identity Property, understanding the place value in decimals, and equivalent fractions. The teacher quickly reviewed these concepts and checked for understanding before beginning this new mathematical concept. Most of the students participated with confidence, evidenced by their careful explanations and reasoning. Similarly, parents nodded indicating their comprehension of these concepts. Subsequently, the teacher modeled how to convert ratios to percents and percents to ratios. As she was doing this, she modeled how to think her reasoning aloud so that the students could hear how the pre-requisite skills were critical in the conversions. After she modeled this skill, she checked for understanding and asked if anyone was struggling. Most students understood and seemed ready to try the concept and share it with their parents. The teacher directed students to do four problems on their own. Immediately after students were released to do engage in the work, she helped two students who raised their hands for assistance. The researcher joined these two conversations and took the following notes on their dialogue:

Teacher: How can I help you?

Student: I do not understand what you mean by the value of 100 for percent.

Teacher: Okay, let me ask you. What does percent mean?

Parent: It means 100.

Student: Oh - 100! I think that I can do it.

Teacher: Let me see you do the work and share your thinking. Very good! You got it!

Once the teacher had checked that students had completed their assigned problems and explained them to their parents, she asked for volunteers to do the problems on the board. Parents raised their hands along with their children. The teacher acknowledged one parent and gave him the opportunity to share his new learning from his seat. Then, his child went to the board to share his work with all the participants. The students showed tremendous confidence; even one student who had habitually been quiet volunteered to come to the board. Although she struggled, the community gave her unconditional support. One student said, "It is okay. You can do it!" Parents together said, "Si puede mija. [You can do it, my child.]"

After all the volunteers had participated, the teacher asked students to do more practice work. Both the researcher and teacher walked around to listen to the conversations taking place between the children and their parents. The room was loud with positive energy coming from all the participants. Non-verbal gestures such smiles, patting on the shoulder, hugs, and kisses were shared between child and parent.

The teacher ended the workshop by highlighting the students' progress and offering support during the week for students in need of more help. The researcher thanked all of the participants and reminded parents to turn in their focused journal responses.

The data collected revealed that of 16 participants, 14 parents mentioned that their child understood the concept, one of the parents reported their child needed instruction, and one parent provided a comment (see Table 21).

Table 21

Parent Responses to TIPS Four Categories Following the Workshop: Ratios and Percents

TIPS Response Category	n
Ok. My child seems to understand this skill	14
PLEASE CHECK. My child needed some help on this, but seems to understand	
PLEASE HELP. My child still needs instruction on this skill	1
PLEASE NOTE. (other comments)	1

N=16

Field notes from workshop eight. The rainy weather did not prevent parents from attending the eighth workshop session. Parents and students seemed quieter than usual, but were ready to begin class promptly at 5:45pm on March 9, 2010. The focus for the workshop session was on proportions using percents. The teacher began by reviewing the following concepts for students to keep in mind when using the concept of percent proportion: the value of percent, equivalent fractions, "is" represents the part, and "of" represents the whole. She modeled two examples and shared her thinking for students to see how these concepts are interrelated and critical for them to know when finding the missing value. Afterward, she checked for understanding and clarified students' questions. Next, she had students try two problems and show their work to their parents. The teacher walked around and provided assistance as necessary. Since most students were done with the first task, she asked students to practice four more problems, show their work, and then explain it to their parents. Although the teacher was available for all participants, students needed limited assistance.

The data revealed that of 18 participants, 14 parents stated that their child understood the concept, two parents reported that their child needed further instruction,

and two asked for help as they noticed that their child did not understand the concept presented that evening (see Table 22). Three parents provided written comments:

- I have noticed that my child is having more confidence in solving math problems with little assistance. I believe that the practice and the use of the worksheets have helped tremendously.
- Mi hijo tiene mas confianza en el mismo cuando el me explica y hace los problemas de matematicas. [My son has more confidence in himself when he explains to me the math and he does the problems.]
- Mi hija tiene mucha dificultad. Yo creo que a lo major ella tiene problema de aprendizaje. [My daughter has so much difficulty. Maybe she has a learning problem.]

Table 22

Parent Responses to TIPS Four Categories Following the Workshop: Percent Proportions

TIPS Response Category	n
Ok. My child seems to understand this skill	14
PLEASE CHECK. My child needed some help on this, but seems to understand	2
PLEASE HELP. My child still needs instruction on this skill	2
PLEASE NOTE. (other comments)	3

N=18

Field notes from workshop nine. Parents and students arrived on time on March 16, 2010 with mixed feelings of joy and concern that the workshops were coming to an end. One parent reported the following to the researcher:

Directora, no hay posibilidad que sigamos estas clases hasta el final del año? Esta es una experiencia que usted y la maestra no se imagina lo que hecho para mi

> relacion y comunicacion entre mi hijo y yo. Me da tanta lastima. Por favor, lo que usted pueda hacer se lo agradecemos. [Principal, is there a possibility that these workshops will continue all the way to the end of the year? This is an experience that you and the teacher do not know what has done for my relationship and communication with my son. I am so sorry. Please, anything you can do, we would appreciate it.]

A student indicated to the teacher, "Teacher, thank you so much for all your help in school and on Tuesday night. I rock now in math!"

The teacher started the workshop by welcoming parents and students and communicating the focus of the workshop, followed by a review of concepts learned in the first four workshops (Square Roots, The Pythagorean Theorem, Fractions, and Rates and Ratios). She reviewed each concept one at a time and checked for understanding. If students demonstrated understanding of the concepts, she asked students to share and talk to their parents. The teacher walked around to each student and provided positive feedback and/or assisted the student. This same format was used for each of the concepts under review. The researcher walked around and took field notes about the conversations taking place between the parents and the students. Several comments from parents included:

- Son, this is great that you still remember all the other concepts that you learned long time ago. I am so proud that you can understand the problems with no difficulty.

- Que bueno hija, usted le entiende mucho. Me siento tan orgullosa de usted. [This is good daughter that you understand the problems. I feel so proud of you.]
- Hija, preguntele a la maestra si no le entiende tan bien. Si quiere yo le puedo preguntar por usted para apoyarla. [Daughter, ask the teacher if you do not understand well. Or, I can do it for you so that I can support you.]

The evening ended earlier than usual because the students demonstrated a strong understanding of the concepts reviewed. The teacher once again acknowledged the students' improvement. She then offered to provide extra support after the workshops for those students who had difficulty with any of the concepts. The researcher reminded parents to make sure that they filled out and signed the focused journal questions.

The data revealed that of 17 participants, 15 parents felt that their child understood the concept, one felt his/her child needed more help on some of the concepts, and one parent reported his/her child needed further instruction (see Table 23).

Table 23

Parent Responses to TIPS Four Categories Following the Workshop: Review of Sessions One to Four (Square Roots, Pythagorean Theorem, Fractions, and Rates and Ratios)

TIPS Response Category	n
Ok. My child seems to understand this skill	15
PLEASE CHECK. My child needed some help on this, but seems to understand	1
PLEASE HELP. My child still needs instruction on this skill	1
PLEASE NOTE. (other comments)	0

N=17

Field notes from workshop ten. The researcher and the teacher had mixed emotions about ending this series of workshop sessions. Both had established strong relationships with parents and students; indeed, the workshop participants and facilitators had become like a family. A surprise to both the researcher and the teacher, parents began to come in an hour earlier than usual with decorations, food, and flowers. Once the room was prepared and nicely decorated, parents presented the researcher and teacher with flowers followed by words of gratitude for their commitment and dedication. Everyone enjoyed the homemade food before starting the last session and began to settle into their seats. The teacher began the session, held on March 23, 2010, with the following comment:

> Dear parents and students, this has been a great experience I had in my years of teaching. I learned so much about how I can involve my parents and support my students using this TIPS format and having the time with all of you. Prior to the workshop, I was skeptical about whether parents wanted to be involved in helping their child with homework. I know that you do! I think that the school needs to do a better job of supporting parents and making them feel welcome and providing classes. I know that the principal will take care of this for next year. Thank you so so so much!

The parents were tearful and reported their appreciation for the teacher, standing and applauding her efforts. Comments from parents included the following:

- Teacher, thank you so much for teaching me that I can help my child. Last time I sat down with my son was in fourth grade. Once he came to middle

school, I have not taken the time to chat with him about school. No wonder our adolescents go down the wrong path. They miss the attention of us.

- Maestra y directora, estoy muy triste pues hoy va a hacer el ultimo dia de los talleres. Yo le prometo que cada martes voy a tener este tiempo con mi hijo. Gracias por su ayuda. [Teacher and principal, I am so sad that tonight would be the last workshop. I promise you that every Tuesday I will have time with my son. Thank you for your help.]
- I am so glad that my son and I decided to come to these workshops. If it were not for my son that he pushed me to come, I would have slacked a bit. It was all worth it son. Thank you son for getting me here when I home from work. I know that you and I have a better relationship and we talk more than ever.

One student raised her hand to report:

> Teacher, thank you because you are so good to us. You do not get mad with us because we do not understand the math. I think that I will get a better grade because you have helped me and you made my mom come on Tuesday night.

The teacher started the workshop by welcoming parents and students and communicating the focus of the workshop, followed by a review of concepts learned during the last four workshops (Solving Proportions, Similar Polygons, Ratios and Percents, and Percent Proportions). She reviewed each concept one at a time and checked for understanding. If students demonstrated understanding of the concepts, the teacher asked students to share and talk to their parents. The teacher walked among the students and provided positive feedback to and/or assisted each one. This same format was used for each of the concepts being reviewed. The researcher walked around and took field

notes about the conversations taking place between the parents and the students. Two salient comments from parents captured by the researcher included:

- This is great! I understand the concept of ratios and proportions.
- Hijo, que bueno que usted me puede explicar. [Son, it's good that you can explain it to me.]

The data revealed that of 18 participants, 15 parents mentioned that their child understood the concept, two of the parents reported their child needed additional help, and one reported that her child needed much more instruction on these concepts, particularly Similar Polygons (see Table 24).

Table 24

Parent Responses to TIPS Four Categories Following the Workshop: Review of Sessions Five to Nine (Solving proportions, Similar Polygons, Ratios and Percents and Percent Proportions)

TIPS Response Category	n
Ok. My child seems to understand this skill	15
PLEASE CHECK. My child needed some help on this, but seems to understand	2
PLEASE HELP. My child still needs instruction on this skill	1
PLEASE NOTE. (other comments)	0

N=18

Field notes from meeting with the teacher prior to the workshop sessions. The researcher met with the teacher a total of four times. These meetings were held prior to the workshops.

January 12, 2010 – Meeting #1 with the teacher. The content of this meeting was to review the agenda and the TIPS worksheets, including roles and expectations. The teacher shared that she was nervous about working with parents since this was the first

time that she had this type of experience. However, she was also excited to see how her students would change in the classroom and with their self-confidence by having the parents interact with her on a weekly basis in this type of format. The researcher reassured her that she would not only see its benefits, but also she would develop strong relationships with her students' parents. The researcher made sure that all documents were copied and ready for the first workshop.

February 3, 2010 – Meeting #2 with the teacher. Prior to the start of the workshop, the researcher met with the teacher in her classroom to debrief on how the previous workshops were going and whether the teacher needed any extra support from the researcher. The teacher shared that she was not only impressed by the parents' level of commitment, but also the students' increased level of confidence. She mentioned that the students attending the workshop were raising their hands more often during class with less hesitation and that they were coming for help either before school, during snack, and/or after school. As a result, their scores on teacher-created tests were better than before the workshops. The teacher was very hopeful and excited that the TIPS template could be her answer to getting more parents involved in her students' homework. The researcher encouraged the teacher to work on creating homework assignments using the TIPS format during the summer. The teacher was assured that funding would be available to compensate her for this work.

February 22, 2010 – Meeting #3 with teacher. Per the teacher's request, the researcher and teacher had a meeting to discuss the observed progress that students were making in math measured by teacher-created unit assessments. Based on the reporting period after the first seven workshops, the teacher reported that she had noticed an

increased level of confidence in at least 20 students whose parents had participated in at least five of the seven sessions. As a result, the grades for these students increased from Ds to Cs, Bs, and As. Additionally, the teacher reported that she had taken the initiative to speak to both the students and the parents about these outcomes in person, on the phone, or during Spring conferences. The conversations were productive and the teacher offered support for all students, particularly those who had not yet improved in their understanding of the math concepts and were not turning in homework assignments. The information gained from these seven workshops was valuable to the teacher because it helped her eradicate her belief that parents do not want to be involved. The teacher mentioned to the researcher that not only was she learning more about her students, but also these workshops had helped her learn how to address parents and develop relationships with them as well. However, both the researcher and teacher agreed that more training in working with adults would be valuable to teachers in general.

March 9, 2010 – Meeting # 4 with the teacher. The researcher and teacher discussed the increased level of parent engagement that has emerged as a result of the seven workshops that had already taken place. The teacher reported that she was encouraged by the impact of these workshops on her relationships with parents and her renewed understanding of their needs and interests. As a result, the teacher stated that she would like to share her experience with her colleagues so that next year Miramar Middle School can enlist more parents in helping their children at home. The researcher concluded the meeting by tentatively setting up a time immediately after the workshops to discuss future plans to form a partnership between the home and the school, most importantly between the teacher and the parent using TIPS.

Personal Insight as Principal

The need for this study came to light based on the recurring need voiced by parents at the monthly "Second Cup of Coffee" for the 2008-2009 school year. The parents shared that they felt both powerless and frustrated in not being able to support their children with schoolwork. Furthermore, they indicated that the class notes that their children brought home were not easily accessible for them to help their children and/or did not clearly show them what their children had learned in school. This concern was also echoed during fall and spring parent conferences by parents whose children were not making adequate progress. At most of the conferences, parents' needs centered around mathematics. They indicated that the homework that their children brought home was difficult to understand because of their limited knowledge of the subject and lack of English fluency, as well as the lack of clarity and order in the notes their children took in class. As a result, assisting their children at home in homework usually turned into an argument, which led to a lot of tension between them and their children. To address the issue of helping their child at home with homework, the parents recommended that the principal to find ways for teachers to better communicate with the home about what their children were learning. In response to the parents' needs, the researcher decided to conduct this study at Miramar Middle School.

After the study concluded, the researcher was inspired by the outcomes. The findings of the study support the need for middle schools to provide opportunities for parent involvement, specifically developing programs to build a partnership between the home and the school. As a result, the researcher will take the following actions:

1. Present the study to the staff along with the teacher involved in the study. The researcher will have both students and parents who participated in the program share about their experiences;
2. Present the findings of the study to the superintendent; and
3. Select a group of teacher leaders who will meet during the summer to develop a plan to increase parent involvement in other subject areas. The researcher will provide background information to this team to make certain that they are educated on this topic. As a result, they will see the urgency for Miramar Middle School to develop a comprehensive action plan for parent involvement.

Summary of Findings

The following is a detailed description of the qualitative analysis. This report about the comprehensive analysis will be broken down by research question.

Research question one. What benefits, if any, will participation in the TIPS math program have on involving parents in helping their children with math homework at home? An analysis of the journal questions, field notes, focus group and post-assessment sessions determined that all parents found their participation a valuable experience in helping their children with homework. The post-assessment showed that 96% (24) of the parents reported that all the sessions were valuable because it helped them become more involved in assisting their child with math homework. These parents lauded the benefits of reviewing math concepts during the sessions because it increased their knowledge of the concepts their children were learning. Additionally, it helped them review concepts they previously learned when they attended school and had not used for many years. As a

result, they were able to assist their child with less difficulty than before attending the TIPS sessions. Several participants reported the following benefits:

- I appreciate so much having the way Miss Lee explained to us fractions. It makes sense more to me now than it did when I had to memorize the steps to solve fractions. My son and I argued about a month ago over how to solve the fractions because I never learned it the way that he did. I was so frustrated that I was not able to help him. Now, I understand it and I can explain it to him. Thank you so much.
- I am so glad that I agreed to participate in these workshops that the principal and teacher offered for my child. I cannot tell you how much I am now involved not only with my child's homework at the middle school but my daughter in second grade. Even my little girl giggles when I sit down with her and help her with math. When I cannot help her, my son also helps. This did not happened before. I am going to try hard to keep this up.
- Al principio, yo me sentia muy mal que yo no entendia las matematicas. Pero despues del cinco taller me siento super major. Yo ahora me siento al lado con mi hija para apoyarla cuando ella hace la tarea. Hay veces que yo no se. No discutimos. En vez, yo le mando una nota a la maestra para que ella sepa que tratamos el problema. [At first, I felt bad that I did not understand the math. But after the fifth workshop I felt super better. Now, I sit next to my daughter to give her support when she does her homework. There are times that I do not know how. But we do not argue. Instead, I send a note to the teacher to let her know that we tried the problem.]

- All I can say is that more principals and teachers need to offer these TIPS workshops because it has helped me help my son. I hope that next year parents get this help even if we pay for the classes.

As stated in the previous quote, this participant benefited from the workshops because the participant now provides guidance as opposed to telling her child what to do. Another participant who also felt she benefited from the workshops stated:

> No puedo creer lo que venir una vez a la semana ha beneficiado la ayuda que yo le proveo a mi hijo. Cuando el llega de la escuela yo le pregunto de la tarea. El me la trae a la mesa y yo lo guio. Aunque sea mi apoyo, a el le gusta que yo lo estoy viendo. Yo no le digo a el lo que tiene que hacer. Pero si el sabe que a mi me interesa ayudarle. [I cannot believe the benefits of attending once a week to help my child. When my child comes from school, I ask him about the work. He brings it to the table to show it to me. I guide him to start the homework and he likes that I am supporting him. I do not tell him what to do. But he knows that I am interested in helping him.]

Figure 7 shows the degree of parent involvement and interaction with the child before and after the workshops.

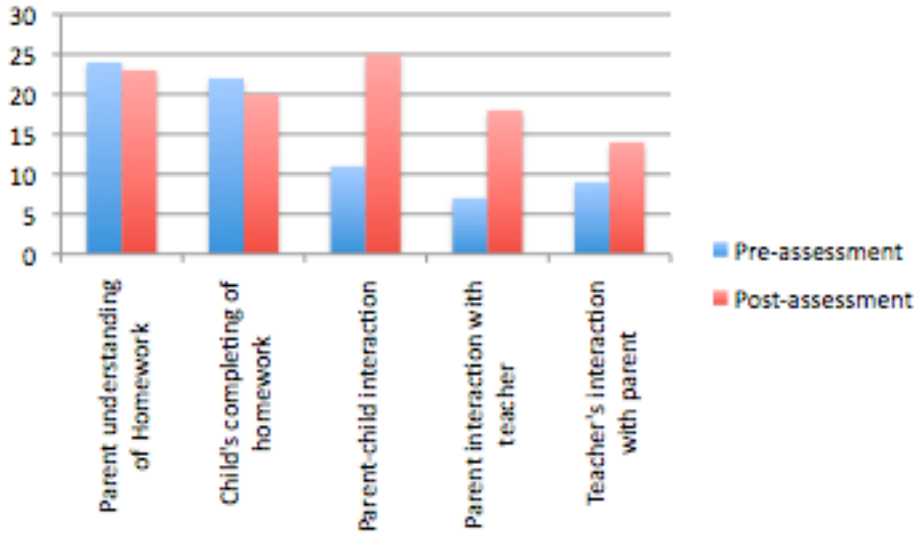

Figure 7. Degree of parent involvement in communication.

Research question two. What benefits, if any, will participation in the TIPS math program have on building students' confidence in math? The data collected in the post-assessment indicated that 96% (24 out of 25) of the participants believed that the TIPS math increased the level of their child's confidence in math. One hundred percent (10) of the participants in the focus group reported that they saw increased levels of confidence in their children not only in math, but also in their children's social life. These parents were both surprised and pleased that a once-a-week, one-hour workshop could make such a great difference in their children's level of self-confidence. The following are two significant examples of this sentiment:

- If I weren't part of this group, my son would not have improved so much like he has even in having more friends. I am so glad that I talked to my boss about leaving early every Tuesday night so that I can be with my son. This means so much to see my son calling friends and asking for help over the phone in other classes and also having friends over our house. Before this, my son felt and

told me many times how "dumb" he was. Now, he is smiling and confident on what to do if he does not understand it.

- Casi cuatro meses antes de venir a estos talleres llame a la directora para pedirle ayuda para mi hijo. El cambio tanto cuando vino a la escuela secundaria pues la matematicas son tan dificiles. El lloraba casi todas las noches porque no podia hacer su tarea y yo no le podia ayudar. La directora me ayudo y me dijo de estos talleres. Yo le prometi a la directora y a mi hijo que ibamos a venir. Pues lo hicimos y nuestra vida ha cambiado. Mi hijo es una differente persona. El se sonrie y tiene tanta estima del mismo. No se golpea en la cabeza diciendose que tonto que es porque no puede hacer la tarea. Ahora, el trata y si no puede me pide ayuda. Si yo no puedo, buscamos ayuda a su companero o el Internet or la maestra. Gracias por este regalo tan grande. [Four months before these workshops were offered, I called the principal to ask for help for my son. He changed so much when he entered middle school because math is so difficult. He used to cry almost every night because he could not do this homework and I could not help him. The principal told me that of these workshops. I told her that we would attend. Since these workshops, our lives have changed. He is a different person. He has confidence in himself. He does not hit his head on the table and calling himself "stupid." He smiles.]

One participant was brought to tears during the focus group. The participant stated the following:

> When I was a child in Mexico, my parents did not have too much money. We worked in the farm and we did not go to school every day. I wished my life were different then so that today I could be more helpful to my child. I am paying the price for not having an education. If I had an education, I could not be afraid to help my child or come to school to ask for help. My husband told me that what counts is that I am supporting our son in his education by coming every Tuesday night and that I learned to speak English. My son is a happy kid. After each class, we walked home and we are laughing and he is telling me how he is going to be a better grade in math with his teacher. I have never heard him say that he is going to do good. Thank you for helping my child feel better about himself in math.

In addition to these workshops making a difference in the confidence level of the participants' children, the workshops generated many emotions among the participants, who frequently acknowledged the gratitude they felt for the principal and the teacher. One hundred percent of the participants in both the post-assessment and focus group reported their gratitude for having the opportunity to work with their children and see them become more confident and happier. Several parents reported:

- Principal, thank you so much for giving me the opportunity to learn about math with my child. I cannot tell you how good I feel about myself as a parent and how much my relationship has changed with him. I remember having more time with my child when he was in elementary. Now, I feel that I can still help him even though he is growing up.
- Directora y maestra. Les quiero darles las gracias por su generosidad y ayuda que nos dieron para mi hijo. Ustedes no se imaginan como me han ayudado a

sentirme capaz de ayudar a mi hijo. Yo puedo proveer los recursos en caso de que yo no puedo. [Principal and teacher. I want to thank you for your generosity in helping me and my son. Yo cannot imagine how this has helped me in feeling capable to help my son. I can provide resources in case I cannot help.]

- Directora, gracias por esta oportunidad. Estos tres tallers han sido fantastico. Yo me siento capaz de ayudar. [Principal, thank you for this opportunity. These three workshops have been fantastic. I feel capable of helping.]
- Wow! I did not know that I was going to learn something from the workshops. I thought that it was only to help my child with homework. No. I was wrong. I learned about ratios and proportions.

Research question three. What benefits, if any, will participation in the TIPS math program have on parents' awareness of their child's progress in mathematics? Data collected in the focused journal questions after each workshop, post-assessments, and focus group indicated a significant increase in the level of parents' awareness of their children's progress in math. According to the post-assessment, 92% (23) of the parents reported an increased level of awareness through using various types of communication tools besides the school adopted students agenda. Additionally, 96% (24) of the parents found their participation in the TIPS math workshops valuable in knowing what their child was doing in class. Two parents reported the following:

- I used to only write a note to the teacher in the agenda to see how my son was doing in school. Now, I call the teacher, send her an e-mail or ask for a conference.

- Antes, yo me comunicaba con la maestra del todo hasta que vinieran las conferencia. Ahora, es muy different. Le mando una nota a la maestra, la llamo, o cuando vengo a recoger a mi hija voy a la clase. [Before, I never communicated with the teacher until the conferences. Now, is different. I send a note, or call her or I come to class when I pick up my daughter.]

Two parents stated the following during the focus group:

- I never knew the purpose of the agenda. Now, I know and I use it. Also, Miss Lee is okay when I call her. I am not afraid of her or coming to the school. My friend who has a kid told me that the principal and the teachers are nice. I know that this is true because Miss Lee is so nice.
- Que barbaridad que yo no me comunicaba con los maestros de mi hijo. Despues de estos talleres me he dado cuenta las diferente maneras de comunicarme acerca del mejoramiento de mi hijo. La maestra es tan buena. Ahora, le mando notas o dejo un mensaje en la oficina para conferencias con los maestros de mi hijo. [I cannot believe that I did not communicate with my child's teachers. After these workshops, I have found out that there are different ways to communicate my child's progress. The teacher is good. Now, I send notes or I leave a message at the office for conferences.]

Figure 8 shows the impact of the workshops in parents' shift in use of other type of communication aside from the student agenda used prior to the workshops.

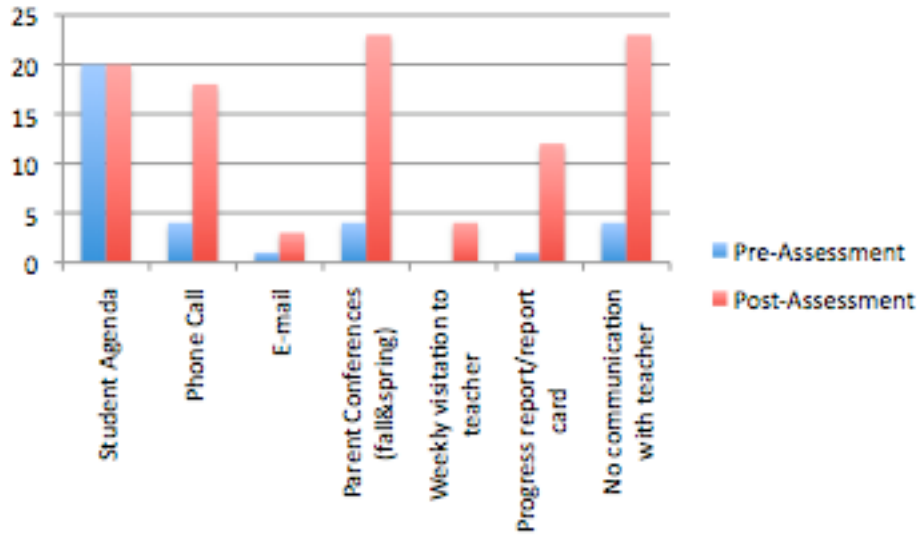

Figure 8. Type of parent support in child's homework.

Research question four. Which part, if any, of the TIPS process was helpful in helping students understand the math concepts? The data collected after each workshop session, post-assessment, and focus group indicated that the participants found that when children explained and shared their knowledge with their parents, this part of the TIPS process seemed to help the children understand the concepts better. Overall, 92% of the parents indicated in their focused journal responses after each workshop that when their children explained the example to them, their children's understanding of the concepts increased. The results of the post-assessment showed that 96% (24) of the parents found the process valuable in assisting their child with math, especially given that they were able to understand what their child was learning. Several parents reported:

- I notice that when my son has the opportunity to explain the math problem out loud, it helps him learn more.
- I am so glad that my child has the opportunity to explain the problem to me. I notice that it helps him learn and understand more about fractions.

- Me dan un placer oir a mi hijo explicarme la matematicas. El le entiende mas cuando tiene la oportunidad de enseñarla. [It gives me a pleasure to listen to my child explain the math. I notice that when he explains it it gives him the opportunity to teach it.]
- Mi hija me ha dicho que a ella le gusta explicarme la matematicas pues le ayuda a aprender y repasar mas lo que ella esta aprendiendo. [My daughter has told me that she likes explaining the math to me because it helps her learn and review what she has learned.]

Based on the post-assessment data, 96% (24) of the parents reported that their children's knowledge of math improved when they practiced and explained it to the parents. One parent indicated, "I am so glad to know that my child understands the problem because when he explains it and I ask question, he answers them. I know that he understood the math because he got the problem correct." Another parent reported:

> Mi hijo le entiende a las matematicas pues el me la explica no solo a mi pero tambien a su papa cuando llegamos de los talleres. Mi esposo le hace preguntas. Nuestro hijo las contesta todas las preguntas sin dificultad. [My son understands the mathematics because he explains not only to me but also to his father when we get home from the workshops. My husband asks him questions, our son answered with little difficulty.]

According to the responses from the focus group, 90% (9) of the parents reported that when their child explained the example to them, they noticed that their children understood the concept even more than they expected. One parent indicated, "I believe

that when my child shared out loud the problem, it helped him understand it more." Another parent reported:

> It is so interesting to hear my son explain the math problem to me. I believe that Miss Lee asked him to explain to me, he found out that he needed more help. Once, he got the help, he understood the math problem.

Figure 9 shows that parents found the workshops very valuable because it provided them with information on additional resources they were able to use to support their child with homework, particularly when parents were not able to understand the math. Prior to the workshops, parents indicated that they were not able to help their child because they did not have knowledge of resources. As the workshops progressed, the parents found out from parents and teacher of additional resources (Internet, library, mentors/tutors). Also, figure 9 indicates that reading aloud at home was integrated by the parents as another type of support after reported in the post-assessment.

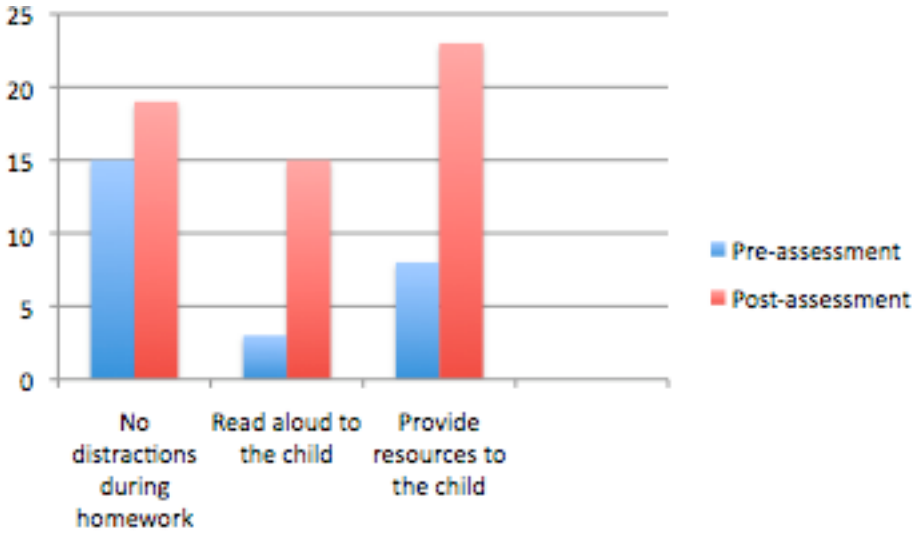

Figure 9. Areas of parent need in getting involved in child's education.

Chapter 5: Summary, Conclusions, and Recommendations

Introduction

Chapter five presents the problem and the purpose of the study together with a summary of the findings. The chapter also presents conclusions, implications, and recommendations for further research.

Summary

Statement of the problem. Educators and policymakers alike acknowledge parental involvement in a child's education as essential. However, parent involvement declines as the child ages, notably by the middle school level . Research by Epstein (2005), Jackson et al. (2001), Jackson and Davis (2000), and the National Middle School Association (NMSA, 2003a, 2006) all confirm that parent involvement generally declines when a child enters the middle grades. It is significant to note that parent involvement with homework typically has a negative association with student achievement in middle school. The decline in parent involvement at the middle school level stems from the following reasons: parents feel incapable of helping with middle level students' schoolwork, and that parents feel they need more leadership and guidance from teachers (Dauber & Epstein, 1989).

According to Shumow and Miller (as cited in Hiatt-Michael, 2010) there are three possible reasons for this negative outcome: first, parents experience difficulty in assisting their child with middle school class work. The second reason is related to the complexity of the middle school structure and organization. Third, communication between parents and teachers is more difficult in middle school.

According to the NNPS, in order for parent involvement to increase, parental engagement must be meaningfully embedded into the school's program and community. Hence, schools need to develop a comprehensive plan to build a partnership between the home and the school (Epstein, 2009).

Statement of purpose. The purpose of this study was to evaluate the impact of a well-designed program for parent involvement at Miramar Middle School in the Norwalk-La Mirada Unified School District. This study selected the TIPS program developed by the NNPS (Epstein et al., 2002a). Through this study, the researcher utilized the TIPS prototype as means to increase learning at home and communication between the home and the school, particularly in engaging parents in their children's math homework. The study focused on 7th grade students enrolled in a Pre-Algebra class with a highly qualified math teacher.

Research methodology. A qualitative approach was used in this study. The researcher developed a 10-week series of mathematics workshops based on a previously researched TIPS prototype developed at the NNPS at John Hopkins University. The intended outcome of the study was to evaluate how the TIPS prototype impacted learning at home and communication between the home and the school. Based upon a review of the literature as noted in chapter 2, Epstein's (2001) six types of parent involvement, Goal Theory, Deficit-Thinking theory, and Kirkpatrick's (1998) levels of evaluation were selected as a theoretical framework for data collection and analysis. Please refer to Appendix P for a detailed description of the theoretical framework and its relationship to the findings.

The research methodology was designed to determine the extent to which parents benefited from participating in the TIPS workshops, specifically its impact on parent involvement with homework at home and communication with the school. In addition, the study attempted to determine to what extent these workshops increased parental awareness of their child's progress, students' self-confidence, and students' understanding of the math concepts.

The population in this study was a purposeful sample of 27 parents, 20 female and 7 male, who self-selected to participate from a total parent population of 105 students enrolled in a 7th grade Pre-Algebra class at Miramar Middle School. Information collected from the participants was obtained using focused journal questions, pre and post-assessments, field notes, and a focus group. Data from these instruments were collected and analyzed and used to answer the research questions.

Summary of Findings

The findings from this study demonstrated that parents were eagered to support their child in school evidenced by the high level of attendance throughout the ten workshops. On an average 19 parents attended. Parents reported that attending these workshops was beneficial for several reasons: (a) it changed their cultural norms of limited communication with their child's teacher, (b) it increased support for their child's progress and how to respond to their child at home with homework, (c) it increased interaction and communication with their child about school and homework, and (d) it increased understanding of what their child was learning.

Through the qualitative analysis of this study, ten themes emerged: (a) degree of parent involvement, (b) helplessness, (c) parent-child interaction, (d) parent-child communication, (e) child confidence, (f) parent-teacher communication, (g) teacher-child

communication, (h) learning about the math, (i) content and format of the workshops, and (j) parent empowerment and gratitude.

Degree of parent involvement. The degree of parent involvement changed from parents being passive to becoming more actively involved in their children's homework. The results of the pre-and-post assessment support this finding. Prior to the workshops, 74% (20) of parents reported that the agenda was the only communication tool that parents predominantly used to be involved in what their child was learning; 15% (4) parents of indicated that they attended parent conferences; 15% (4) called the teacher; none reported that they did not visit the teacher, and 15% (4) communicated with teacher in person. At the end of the ten-weeks workshops, 80% (20) of parents reported that they continued to use the agenda. However, 92% (23) parents reported attending conferences; 72% (18) called the teacher; 16% (4) visited the teacher, and 92% (23) communicated with the teacher in person. Additionally, previous to their participation in the workshops, 11% (3) of parents indicated reading aloud the homework to their child, 56% (15) monitored that there were not distractions, and 30% (8) provided resources to help with homework. The findings based on ther post-assessments indicated that 60% (15) of parents reported reading aloud the homework to their child; 76% (19) ensured that there no distractions while doing homework, and 92% (23) provided resources to their child to help with homework.

Helplessness and empowerment. The feeling of helplessness that parents reported prior to the workshops originated from their limited knowledge of their child's knowledge of the math content and the resources available for parents to support their children at home. Prior to the workshops, 89% (24) of parents reported that because they

did not have understanding of the homework and/or the math, they saw themselves as unable to support their child with the homework, 81% (22) of parents indicated that they were not able to support their child with homework. The post-assessment reported that even though 81% (23) of parents indicated that they had a need to understand the homework, 80% (20) parents supported their child in completing their homework. Parents reported feeling more empowered by these workshops because they learned of resources to assist their child at home. Thirty percent (8) of parents indicated prior to the workshops that they did not provide their child with resources to help with homework. The post-assessment indicated that 92% (23) of parents reported using a variety of resources, including Internet, library, and tutors to support their child with homework.

Parent-child interaction and communication. Parents reported that because they attended the workshops, they noticed that the level of communication and interaction with their child increased and improved by the end of the workshops**.** Additionally, parents indicated that they believe that the sharing and talking during the workshops was very valuable because their child transferred these two strategies when parents worked with their child at home. Prior to the workshops, 41% (11) of parents reported that they interacted in their child's education; 11% (3) of parents reported reading aloud the homework to their child, and 60% (15) made time after work to help their child. The findings after the workshops indicated that 100% (25) interacted with their child at home, 60% (15) read aloud the homework to their child and 18 sat next to their child when doing homework.

Child confidence. Prior to the workshops, the students who participated were performing at low levels based on their grades. Ninety-three percent (25) of parents

reported that they perceived that their child's lack of performance in mathematics was rooted in their child's difficulty to do the mathematics. Ninety-three (25) of parents indicated that because their child did not feel confident about doing the math due to lack of knowledge, they were not able to complete their homework. As a result, they observed that their child lack the confidence in been able to perform better and/or understand the math. As the workshops progressed parents noticed high levels of confidence in their child even when they share and talk about the mathematics homework. Sixty-eight (17) of parents reported that their child did not have problem with math homework, 88% (22) of parents reported they observed high levels of confidence in math and 80% (20) of parents reported that their child's grade improved.

Parent-teacher communication. Although prior to the workshops 26% (7) of parents saw a need to interact with the teacher, the post-assesssment results indicated that 72% (18) of parents revealed this as one need to get involved in their child's education. Fifteen percent (4) of parents reported having communication with teachers about their child's progress. At the end of the workshops, 92% (23) of parents used communication with the teacher in person and attending conferences as two ways to know about their child's progress.

Content of the format of workshops and learning about the math. The focused journal responses, focus group and post-assessment showed that parents became aware on the complexity of their child's mathematics. Ninety-six percent (24) of parents reported that the TIPS sessions not only helped them learn about what their child was learning, but 92% (24) of parents reported that the format of the TIPS workshops showed them what their child was learning. Hence, they felt more comfortable helping their child

with the math simply by looking at the examples provided in the TIPS worksheet. Additionally, 100% (10) of parents in the focus group reported that the TIPS worksheet design gave them more information about what their child was learning rather than relying solely in their child's note. Additionally, having time for their child share and talk about what they are learning was powerful in increasing the communication and level of interaction between the parent and the child.

These findings were in support with the second theoretical frame, "deficit thinking," which is a "mind-set molded by the blend of ideology and science that blames the victim, rather than holding oppressive and inadequate schooling arrangements culpable" (Valencia & Black, 2002, p. 81). It also supports Chrispeels and Rivero's (2000) assertion that when parents connect with their children in learning opportunities at home, offer the basic needs, and communicate with the school, their involvement can lessen the negative impact of poverty and preclude students from dropping out. Communicating and learning at home are two of Epstein's (2001) six types of parent involvement that were evident in this study. Because of the workshops parents attended, they reported that their communication and interaction with their child increased. Parents reported that the sharing and talking that was incorporated into the TIPS workshops was very valuable because their child transferred it into the home when they talked about homework in other subjects. Table 26 shows the connection between the findings and the theoretical frames of this study.

Conclusions

Based on the findings of this study, the researcher drew the following six conclusions. The conclusions are related to the increase in parent involvement,

awareness, parents' desire to continue providing support at home, the need for the school to provide support, and the need for parents to assist their children. In addition, the conclusions strongly support findings of previous studies.

Conclusion one. Parents demonstrated a change in the degree of their involvement as a result of their participation in the workshops. The overarching theme that led to this conclusion was the sense of helplessness that parents reported prior to the workshops, which changed progressively after each workshop. Based on the pre-assessment, 75% (20) of the parents reported that checking the student agenda was one way to be involved in their child's education followed by low levels of communication with the teacher either in person or via phone calls. Fifteen percent (4) of parents reported having communication with the teacher in person, attending conferences, or making a phone call. Thirty seven percent (10) of parents reported not helping their child with homework and 63% (17) reported having limited communication skills to assist their child with homework.

Two parents reported in the pre-assessment:

- I better not ask Jacob anything about homework when he gets home because it always ends up in fighting. He tells me that I do not know how to help him or get help for him. All I do is to ask him about his agenda, which does not say too much because he does not write everything. I am unable to help him and I do not know what to do. I feel that I cannot do anything to help my child.
- La unica manera de ayudarle a mi hija es que me demuestre la agenda. Pero como yo no entiendo en Ingles yo no le puedo ayudar. No me siento capaz pues no termine la primaria. Talvez estos talleres me ayudan a tener mas

> conocimiento para poder platicar con mi hija acerca de la escuela. [The only way that I can help my daughter is to have her show me the agenda. Since I do not understand English, I can't help her. I do not feel capable because I did not finish elementary. Maybe these workshops will help me have more knowledge of how I can speak to my daughter about school.]

After the series of ten workshops, parents overwhelmingly reported in the post-assessment, focused journal responses, and focus group a greater sense of confidence, empowerment, and gratitude, which was evident in the theme, parent empowerment and gratitude. Ninety-two percent (23) of parents reported in the post assessment that they supported their child with homework when they could help them at home by using the Internet, library and tutors, 72% (18) called the teacher, and 72% (18) sat next to their child. Additionally, 92% (23) of parents indicated that they attended scheduled conferences and spoke to the teacher in person, 72% (20) checked the agenda, and 92% (23) communicated in person with the teacher. One parent reported in the post-assessment:

> I am so glad that I attended most of the workshops because I am more able to assist my child. For example, before I used to quickly check the agenda and then turn on the TV. Now, I sit with him and ask him to explain what he learned in class. I think that when I speak to him, he feels that I care. I am not sure if this is true but we have gotten better at talking. Thank you so much Miss Lee.

Two parents shared in the focus group:

- I want to say that Jacob is a different kid and I am a different mom. Also, my husband changed a little. My son smiles more than before. I think that having

my husband and I come together most of the nights made Jacob feel better. He has told me that, but I can see it in his face. I now can speak to the teacher or find help for him in the library or the Internet. I am so thankful to Miramar Middle School for this opportunity. I think that Jacob knows now and I hope that we continue improving even after the workshops. I am scared but I will call Miss Lee to help me with Jacob. He loves and respects her.

- Me da mucho pesar que los talleres se han terminado pues este era mi lugar de refugio para ayudarle a mi hija. Pero si aprendi que la biblioteca le puede ayudar o el Internet o la maestra. No me siento incapaz como antes de estos talleres. Le agradesco mucho a la directora y la maestra por darnos esta oportunidad. [I am so sad that these workshops have ended because it was my refuge where I helped my daughter. I learned that the library or the Internet or the teacher can help her. I do not feel incapable as I did before the workshops.]

Significantly, the teacher indicated that as the workshops progressed the communication between the teacher and the parents changed from confrontational to asking questions or seeking support. The teacher reported:

> Prior to the workshops, I will get phone calls from parents upset that their child received a failing grade. Their usual response to the grades was questioning the lack of support I provided for their child rather than finding out the reason(s) for their child failing. For those parents who attended the workshops, it was incredible to see how they grew in their communication. For example, each of their children improved in their grades, from Ds to Cs or

Bs. These parents would call me to get a better understanding of their grades and seeking support for their child to improve.

Conclusion two. Parents perceived TIPS as an effective approach to appropriately involve them in their child's academic work in mathematics. This conclusion was supported by the findings from research question four indicating that parents found the TIPS process and format valuable. After the workshops, 96% (24) of parents indicated in the post assessment that TIPS was a valuable tool to increase the communication between the school and the parent. Additionally, 100% (25) of the parents indicated in the post-assessment that implementing a similar homework template like TIPS would be a valuable tool for parents to support their child with homework to increase parental involvement. Of the 10 parents who participated in the focus group, 100% reported that the TIPS format was a great tool for them to communicate with their child with no arguments or frustration for parent or child. Two parents parents shared in the focus group:

- The TIPS forms are excellent. It needs to beused for next year. I know that it is a lot of work for Miss Lee. But, the school can help her do more of these for our son who is coming to 7th grade next year.
- Yo estoy tan contento con el TIPS. Yo veo lo que mi hijo estudia [I am happy with the TIPS. I see what my child studies.]

The following is an example of a parent jounal response:

A nosotros nos gusta mucho esta forma que esta usando usted y Miss Lee para el trabajo de matematicas pues nos dice especificamente lo que mi

hijo aprendio y nosotros le podemos entender mucho mas que las notas de el. [We like very much this form that Miss Lee and the principal are using because it explains explicitly what my son learned and we can understand it better than his notes.]

The TIPS prototype has yielded positive results in the areas of math homework completion and parent involvement. Several research studies of TIPS have also demonstrated positive effects for families and students of different ages in various academic subjects (Deslandes, 2009). TIPS gives parents information about how to help students at home with homework. Additionally, it is an effective and easily accessible form of school-to-home and home-to-school communication with parents who may not know the content. Balli (1995) conducted a study of the TIPS Math process with sixth-grade students and their families in a suburban middle school. Her investigation entailed comparing the levels of family involvement and math achievement of students completing TIPS Math interactive assignments to students completing non-interactive assignments (i.e., no directions for the student to involve a family member in the assignment). The findings of this investigation demonstrated that parents appreciated the student-led interactions, students and parents reported having more positive conversations about math, and most students believed that the interactions helped them achieve greater success and better preparation in math class (Epstein, 2001).

Conclusion three. The TIPS workshop series promoted increased communication and positive parent-child interaction. According to the pre-assessment, 63% (17) of the parents indicated that they had limited communication skills to assist their child with homework, 88% (24) of parents reported having limited knowledge and 37% (15) of

parents reported not having enough time after work to help their child. Additionally, in the pre-assessment, 43% (11) of parents did not see interaction with their child as a need to get involved in their child's education. The post-assessment indicated that 100% (25) of parents indicated that parent-child interaction increased and parents reported it was a need for parents getting involved int their child's education, 18 parents were involved in their child's homework and 18 sat next to the child while doing homework.

Field notes and responses from the parents after each workshop indicate that as the workshops progressed, so did the level of parent-child interaction. The researcher observed particularly during the first three workshops that parents were very quiet and did not seem to know how to interact with their child. However, as the workshops progressed, interaction increased to the point where the parents were initiating the conversation. A significant conversation that the researcher recorded between a parent and a child at the sixth workshop strongly supports this conclusion:

Son: Hi mom.

Mother: Hola hijo. [Hello son.]

Son: You are a little bit late to class.

Mother: Yo se. Disculpe. La persona que me tenia que cubrir vino tarde. Estaba tan enojada pues no queria perderme este taller con usted. [I know. I am sorry. The person who was going to take my shift came late. I was so upset because I did not want to miss the workshop.]

Son: Mom, I am glad that you are here. Are you hungry?

The researcher then noticed that the child went to get food for his mother, who started to cry. The researcher asked her why and she mentioned that he had never done this for her,

nor had she ever talked about her job with him. Two parents mentioned in two different workshops:

- Que bueno que tengo la oportunidad de hablar con mi hijo de matematicas sin pelear y hablando dulcemente. Mi communicacion ha mejorado y tambien nuestra relacion. [It is so good that I have the opportunity to speak with my child about mathematics without fighting, but speaking nicely. My communication has improved and also our relationship.]
- Estoy feliz pues por cinco talleres y en la casa mi hija y yo hemos pasado bien cuando hablamos. Yo creo que estos talleres me esta ensenando lo importante que es comunicarse con mi hija. [I am so happy that after the fifth workshop my daughter and I have been getting along well. I believe that these workshops have taught me how important is to communicate with my daughter.]

One hundred percent (10) of the parents in the focus group indicated that these sessions restored their relationship with their children. One parent reported in the focus group:

> I cannot believe what 60 minutes uninterrupted can do to improve my relationship with my son. For six months, my son and I would not speak more than five minutes because we would get into big arguments about his bad grades, lack of attention in class, and phone calls from staff. I am so glad that we did this even though I missed a couple of workshops because I had to work late Tuesday night. Now, I take him to school and we talk about the Dodgers and what he did in

science or math or in PE. Thank you so much. I have promised my son that I would pay more attention so that we can talk more in a positive way.

Another parent response for the focused journal stated, "Senora directora, Bartolo y you hablamos major sin gritarle y nuestra relaction ha mejorado despues del tercer taller. [Principal, Bartolo and I talk without yelling and our relationship has improved after the third workshop.]"

This conclusion supports the third theoretical frame, Goal Theory, in that both the students and the parents were able to have positive experiences at home as a result of the constructive conversations that they had during the workshops. In turn, the students were able to acquire positive feelings about mathematics and some of them were able to conquer negative emotions about mathematics. The newly acquired reaction, learning, and behaviors experienced by the parents are in line with Kirkpatrick's (1998) levels of evaluation as well.

Conclusion four. The workshops provided a structured opportunity for parents to acquire insight into their child's academic challenges and barriers to understanding math concepts. Learning about the math and content and format of the workshops were two themes that supported this conclusion. The pre-assessment revealed that 89% (24) of the parents saw the need to understand the homework, 93% (25) reported that their child had difficulty in math and needed to improve in finishing their homework, and 89% (24) mentioned that they had limited knowledge of the concept. The post-assessment indicated that 92% (23) of parents desire to better understand their child's homework, 84 % (27) of parents reported that their child had less difficulty in doing the math, and 68% (17) mentioned that their child did not have problems with math homework. The findings

from the pre and post-assessments correspond with the conclusion that as the parents became aware of the level of difficulty of the math, they demonstrated greater confidence in indicating whether their child had greater understanding of and less difficulty with the math. Additionally, prior to the workshops, parents reported that their limited knowledge of the mathematics and limited communication skills to assist their child were concerns they indicated in helping their child. After the workshops, their concern of having limited knowledge in mathematics was reflected when parents indicated in the post assessement that they had the need to understand the mathematics in order to support their child in completing the homework and continue supporting their child at home in learning. The comments by parents in the focused journal questions disclosed a similar trend. Several parents made the following comments:

- Ya comprendo porque mi hijo aveces se frustra en la casa cuando hace las matematicas pues es bien dificil para el. Y no solo es dificil para el pero para mi tambien y para otros companeros. Yo siempre le decia que la rason por la cual no entendia es porque no ponia atencion y estaba distraido. Estos talleres me han ayudado a tener mas comprension y entendimiento de lo complejo que es la matematicas. [I understand why my son got frustrated at home when he was doing the math. Not only was he the only having difficulty, but also I was having difficulty and his other peers. I always told him that the reason why he was having difficulty was because he was not paying attention. However, these workshops helped me understand him better and realize that this math is very complex.]

- Que barbaridad que tan dificil es esta matematica. Es por eso que mi pobre hijo no entiende. Le vamos a dar ganas para entenderles. La escuela nos debe proveer mas ayuda. [I cannot believe how difficult this math is. This is why my poor child does not understand it. We will give it all to understand it. The school should provide more help.]
- Because I have limited knowledge of the math that my child is learning and I do not have all the strategies to help him and keep him focused while doing his homework, I need for the school to help me understand the math so that I can help my child and have a better interaction with him.

The researcher observed on many occasions during each of the workshops parents acknowledging the difficulty of the math to their child and that they were so surprised what their child was learning. As a result, parents offered more encouragement and seemed more patient instead of simply blaming their child for not understanding the math and getting into arguments. The parents who participated in the focus group also expressed how difficult the math is in seventh grade and that their children need support when they do the homework at home. One parent comment in the focus group supported this conclusion:

> If it were not for these workshops, I would have continued blaming my kids for the fact that they do not complete their homework. But, not a 100% anymore because what they are learning is difficult and the notes and the homework they bring for us to help does not even tell us what they are learning. This is partially why we used to get in arguments with our son. Now, it has changed. But even with my daughter in high school is horrible.

Cooper (2001) indicates that parent involvement can also interfere with learning. This can happen when parents are uncomfortable or unable to take on the role of teachers when helping their children with homework and/or if parents use instructional strategies different from those being used at school. Additionally, direct parent involvement in homework may lead to excessive pressure placed upon their children to complete the homework and do it well. This parental belief impacts their children, particularly in situations when their expectations are inconsistent with their children's capabilities. Hence, the content and the format of the TIPS workshops served as an opportunity for parents to know what their child was learning in school and to give parents a better understanding of the challenges their children faced.

Conclusion five. The series of workshops increased the quality and quantity of communication between the teacher and the parents. Parents reported prior to the workshop that they had limited communication with the teacher. In fact, 93% (25) of the parents indicated that they used the agenda as a means to communicate with the teacher, 15% (4) reported using phone calls, 4% (1) reported using e-mail, 15% (4) attended parent conferences, and 15% (4) had no communication with teacher. By the end of the series of workshops, 92% (23) of parents indicated that they had conferences with the teacher, 92% (23) had communicated with the teacher in person, and 72% (19) had called the teacher and left a message with the office. The following parent journal response supports this finding:

> Me ha dado mucho placer tener la oportunidad de conocer mas a cerca a la maestra de mi hijo pues el me habla mucho de ella [It is a pleasure to have the opportunity to know the teacher because my son has spoken so much about her.]

These findings support that the need for educators to think critically about the necessary communications, connections, and coordinated actions that they must uphold with families and community partners to help more students – indeed, all students – achieve their full potential (Epstein & Sheldon, 2006). Epstein and Sheldon articulate this idea thusly:

> Well–documented problems with student achievement, motivation, attitudes about education, school behavior, and future plans are partly due to "old think" that separates school and students from home and community, leaving teachers to work in isolation from other influential people in children's lives. (p. 1)

Furthermore, in the focus group 50% (5) of parents reported that they noticed the teacher was more open to speaking to them as the workshop progressed even though she did not speak Spanish and they did not speak English. One hundred percent (10) of the parents mentioned that it was so great to get to know their child's teacher because their children spoke so highly of her on a regular basis. Teacher outreach to parents has also been shown to lead to increases in student performance. According to Henderson and Mapp (2002), effective outreach programs include meeting face-to-face, sending materials home, and keeping in touch about progres.

Conclusion six. Teachers need to have the appropriate skills to effectively communicate when working with adults. This conclusion supports the theme of parent-teacher communication. The results of the pre-assessment revealed that most parents did not see the need to interact with their child's teacher. Twenty-six percent (7) of parents reported the need to interact with the teacher in their child's education, and 33% (8) indicated the need for the teacher to interact with them in their child's education. The

post-assessment indicated a shift in thinking from parents as it relates to parent interaction with teacher and teacher interaction with parent. Seventy-two percent (18) of parents reported that interacting with the teacher was a need in their child's education, and 56% (14) of parents mentioned that the teacher needed to interact with them in their child's education. The focused journal responses after the workshops progressively indicated that parents appreciated when the teacher interacted with them during and after the workshops. However, they indicated that the teacher focused mainly on the content. They reported that maybe the teacher was afraid to speak to them because they did not speak English well. However, two parents made the following comments after two different workshops:

- Me gustaria conocer mas a la maestra pues ella se ve tan buena. Ella se comunica bien cuando da clases pero no dice nada de ella. [I would like to get to know the teacher more because she seems so nice. She only communicates when she is teaching and she does not share too much of herself.]
- Yo creo que la maestra le da pena comunicarse con nosotros que no hablamos Ingles. A mi me gustaria tener un poquito de tiempo al principio de cada taller de saber algo de las personas en nuestra clase. Bueno asi es. [I believe that Miss Lee is shy to communicate with us because we do not speak English. I would like to have a little bit of time at the beginning of each workshop to know about more about the people in the class.]

The data collected from the focus group also indicated that parents saw the need for the teacher to interact with them as a way to get to know her better and for the teacher to get to know her children' parents. Two parents mentioned:

- La maestra es muy seria. Ella se comunica bien cuando da clases. Pero dice poco antes y despues de los talleres. Yo crei que no le parecia yo. Pero mi hijo me dijo que ella es muy comica durant la clase de matematica. [Miss Lee is very serious. She communicates well when she is teaching. But, she says very little before and after the workshops. I thought that she did not like me. But my son told me that she is funny during class.]
- At first, I thought that Miss Lee did not like me because she did not say too much. Or, that she was in a hurry because she started on time and started teaching. However, I think that she needs for the principal to teach not only her but other teachers how to interact with parents. I have a friend who became a teacher and she told me that at the university they don't give you classes on how to speak to parents.

Epstein (2001) states:

> Just as teachers are prepared to teach subject matter, and administrators are prepared to direct and manage schools and programs, educators must be prepared to draw upon all resources that will help them with their work, including families and communities…they need to understand and maintain school, family, and community partnerships. Without this information, we restrict the resources that teachers and administrators can call upon to help students do their best. (pp. 8-9)

Hence, administrators and teachers need to expand their knowledge and training on how to develop strong partnerships with parents if the ultimate goal is to strengthen parent involvement at the middle school level.

Recommendations

The recommendations made in this study are significant because they have the potential to increase parent involvement at the middle school level. It is this researcher's opinion that the results of this study can be applied with modifications to the elementary and high school level as well. The following recommendations are based upon the conclusions emerging from the research.

Recommendation one. It is recommended that TIPS workshops be offered throughout the year for parents. This recommendation is supported by the findings in research question four, which evolved into conclusion two: parents perceived TIPS as an effective approach to appropriately involve them in their child's academic work in mathematics. Ninety-two percent of the parents reported that when their child explained the concepts they were learning to them, their child's understanding of the concepts increased. In addition, the parents became even more involved because they were able to see what their child was learning instead of looking at notes that they could not understand. Of the ten parents who participated in the focus group, 100% reported that the TIPS format was a great tool for them to communicate with their child with no arguments and or frustration for either of them. In fact, all of the parents mentioned that if Miramar Middle School adopted this format for all homework, the number of parents involved in learning at home and communicating would increase exponentially. Parents reported that the format of TIPS not only showed them what their children were learning, but also it taught them how to use some of the concepts with less difficulty. At the most recent "Second Cup of Coffee" in March 2010, a parent who participated in the study shared with about 40 parents present at the meeting and the researcher how helpful she

found the TIPS interactive teacher-created worksheets. She requested that Miramar's teachers use this as a template for every subject area. Additionally, the parents voiced that if Miramar did not implement this format for homework, the principal should at least offer workshops for parents using the same structure and the format of the workshops conducted for this study. The parent that participated reported the following to the principal:

> Directora, usted sabe que nosotros queremos involucrarnos en la educación de nuestro hijo pero como usted se dió cuenta durante el estudio, nosotros no tenemos mucha educación. Estos talleres hasta pueden ser diseñados para unas matematicas y inglés mas simple para ayudarnos a los padres. Yo se que ustedes reciben dinero del estado para educar a los padres. Porque no usa ese dinero? [Principal, you know how much we want to be involved in our child's education. But you found out during the study that we do not have enough education. These workshops could be designed for more simple mathematics and English to help parents. I know that you receive money from the state to educate parents. Why not use this money for this?]

For those parents who did not participate in the study but who attended the first orientation, the researcher called them to find out why they decided not to participate in the study. Of the 36 parents who were called, 97% reported that due to extra-curricular activities (sports, church, etc.) they were not able to commit to attending the workshop even though they thought it would be valuable. However, they recommended that these workshops be offered during the day with strong advertisement and plenty of notification to the parents. Although parents did not recommend that the TIPS format be translated

into Spanish, the researcher advises that schools implementing TIPS should also provide in the materials Spanish, particularly in schools where there is a high number of students whose primary language is Spanish. This recommendation is supported by the researcher's observations during the workshops; the researcher noticed many parents asking their child to translate the form, particularly in the first section of TIPS (see Appendix I) where the parent and child were asked to look over the problem and then have the child explain it to the parent.

Recommendation two. Teachers should receive specialized training for communicating with adults. The need for teachers to have the appropriate skills to effectively communicate when working with adults (as stated in conclusion six) goes hand in hand with this recommendation. Also, recommendation two is supported by the theme of parent-teacher communication. The pre-assessment revealed that parents did not see the need for parent interaction with teacher and teacher interaction with parent prior to the workshops. Twenty six percent (7) of parents reported the need for parent interaction with teacher in their child's education and 33% (8) indicated the need for the teacher to interact with them in their child's education. However, the results of the post-assessment indicated a shift in parents' thinking about parent interaction with teacher and teacher interaction with parent. Seventy-two percent (18) of parents reported that interacting with the teacher was a need in their child's education, and 56% (14) of parents mentioned that the teacher needed to interact with them in their child's education. Post-workshop journal responses indicated that parents progressively began to see the need to communicate with the teacher as a way to connect and to find out more about their child's progress. Parents indicated that it was difficult for them to connect with teacher

because she was so focused on getting their child to understand the concepts. A parent made the following significant comment that supports this recommendation:

> I think that the principal needs to train her teachers to speak to parents not because they are not nice. It is because they are so shy to speak to us and get to know us. This will be ideal.

The data collected from the focus group also indicated that parents saw the need for the teacher to interact with them as a way to get to know her better and for the teacher to get to know her students' parents. Additionally, the researcher recorded in the field notes that the structure of the workshops did not allow for activities for parents to get to know each other and build a sense of family-like relationship. However, the researcher observed parents having conversations with each other around the food and sharing recipes and ideas prior to the beginning of each workshop.

This need for teacher training is supported by results collected from the pre and post-assessments. For the pre-assessment 15% (4) of parents had communication with teacher. After the series of workshops, 92% (23) of parents indicated having in-person communication with the teacher. The results demonstrate not only that parents want to communicate with their child's teacher, but also that the schools need to be more active in providing opportunities for teacher-parent communication. Hence, one way to promote increased levels of communication between the teacher and parents is to provide training for teachers on how best communicate with adults in spite of language barriers.

Recommendation three. Teachers need to develop a daily communication tool in each class to share with parents to inform of the activity of the day, including assigned homework. This recommendation is supported by conclusion four: workshops provided a

structured opportunity for parents to acquire insight in their child's academic challenges to understand math concepts. This conclusion was related to the following themes: learning about the math and content and format of the workshops. To support this recommendation, the pre assessment revealed that 89% (24) of the parents indicated that they saw the need to understand the homework, 93% (25) reported that their child had difficulty in math and needed to improve in finishing their homework, and 89% (24) mentioned that they had limited knowledge of the homework concepts. The post-assessment indicated that 92% (23) of parents desire to have more understanding of their child's homework, 84 % (21) of parents reported that their child had less difficulty doing the math, and 68% (17) mentioned that their child did not have problems with math homework. Based on the results of the pre and post-assessments, the findings indicate that having the TIPS format were valuable because parents became aware of what their children were learning as well as the level of difficulty of the math. In addition to the workshops, 100% (25) of the parents found the TIPS format helpful in knowing what their children were studying rather than guessing based on the notes that their children brought home.

Offering further support for this recommendation, parents reported that the school, including teachers, needs to communicate with parents more efficiently on a daily basis as a means to increase parent involvement and build a strong partnership between the home and the school. According to the pre-assessment, 74% (19) of parents reported that the student agenda was the main tool they used to communicate about their child's learning in school. Additionally, 15% (4) of the parents reported that they had communication with the teacher prior to the workshops. However, after the workshops,

92% (23) of the parents reported continuing to use the student agenda as well as personally communicating with the teacher. For this reason, the TIPS format is a tool that can increase school wide parent involvement. Research has shown that parental interaction during homework completion is an important component for improving parental involvement. Parental involvement in homework is also the leading factor for improving academic performance (Bailey et al., 2004; Marchant et al., 2001). The researcher recorded in the field notes several conversations between parents in support of this recommendation. Two parents indicated:

- Esta forma es tan buena pues me dice lo que mi hija esta estudiando. [This form is good because it tells me what my daughter is studying.]
- Ayer mi hijo me trajo una notificacion de un projecto de ciencia que tiene que hacar para la proxima semana. Imaginese si todas las maestras usan la misma forma que Miss Lee esta usando para estos talleres yo le podria ayudar mas a mi hijo. [Yesterday, my son brought me a note about a science project he has to do for next week. Imagine if all the teachers use the same form that Miss Lee is using for these workshops, I could help my son.]

Two parents mentioned during the focus group:

- Principal, if this format that we are using helped our kids, why not you make it happen so that every teacher does it. This is what we need. My child does not write well on his notebooks. I can't understand what he writes. But, if we get the information like this, life would be easier and teachers would see more homework completed. Who do I need to go to the district so that they can support you with this idea?

- This is the best I have ever seen to communicate with my child's teachers in the future. I showed it to the high school principal. She told me that it was great. I think that at Miramar every teacher needs to do it if we are going to keep improving.

Recommendation four. Middle schools needs to develop an online communication tool or e-mail to all parents to inform them of assignments and future projects and provide links to resources they can use when helping their child with homework and/or projects. This recommendation is supported by the findings that led to conclusion one, which stated that parents demonstrated a change in the degree of parent involvement as a result of the TIPS workshops. The theme that led to this conclusion was the sense of helplessness that parents reported prior to the workshops, which decreased progressively after each workshop. Based on the pre-assessment, 75% (20) of the parents reported that checking the student agenda was one way to be involved in their child's education. Fifteen percent (4) of parents reported having communication with the teacher in person, attending conferences, making a phone call, and 4% (1) reported using e-mail. After the series of ten workshops, parents overwhelmingly reported in the post-assessment, focused journal responses, and focus group a greater sense of confidence, empowerment and gratitude. This emerged in the theme "parent empowerment and gratitude." The results of the post-assessment strongly demonstrate a shift in the degree of parent involvement from passive to active involvement. Ninety-two percent (23) of parents indicated that they attended scheduled conferences and spoke to the teacher in person. Additionally, 72% (18) checked the agenda and called teachers and 12% (3) reported an increase in the use of e-mail to communicate with teachers. The findings

clearly demonstrated that if parents were given a range of tools to communicate with the school, they would use it; it is critical to have the appropriate kind of communication technology readily available for parents.

The researcher recommends using Title I funds to offer workshops that teach parents how to use various forms of technology, including Internet resources and e-mail, to assist their children and communicate with teachers. The findings of this study clearly demonstrated that if parents were given the appropriate training, they would be more involved. It is equally important for teachers to be given the training and tools to communicate with parents through technology. Title I funds could also be used to train teachers and upgrade technology to ensure that they also communicate with parents using technology, The researcher suggests that administrators and teachers create a technology plan that includes parent-school communication. This plan must explicitly delineate different tiers for implementation, accountability, and assessment of outcomes to measure its impact on parent involvement. Of 35 teachers at Miramar Middle School, only 15% have their homework, classwork, and other resources posted on the school website and/or other teacher-created website. These data show that technology is currently servicing the needs of some students, but not all. Based on the parents who participated in the study, two of them reported in the focus group that last year their child's teacher had a great website where the parent was able to access homework, classwork, and activities. As a result, she knew "exactly" what her daughter was learning. The parent indicated that this year it has been very difficult to keep track of what her daughter is learning because there is nothing available online. This report in itself demonstrates that parents would benefit from having a web-based communication system where parents can download homework

assignments and calendar of activities that will keep them current on what is happening in their child's classroom. Hence, this may raise the parents' awareness of what their child is learning. As a result, parent involvement will increase.

Recommendation five. Miramar Middle School needs to develop a Parent Involvement Action Plan to increase parent involvement. The purpose of this study was to evaluate the impact of TIPS interactive workshops on two of Epstein's (2001) six types of parent involvement: Communicating (type 2) and Learning at home (type 4). The findings from the pre and post-assessments, responses from focused journal questions, and focus group demonstrated that parents want to be more involved in their children's education. However, Miramar Middle School needs to create and develop a comprehensive parental involvement plan to focus on family-school partnership to include all six types of parent involvement in order to reach out and to involve parents in their children's education. Conclusions two, four, and six, drawn from the findings, support this recommendation.

Conclusion two states that parents perceived TIPS to be an effective approach to appropriately involve them in their child's academic work in mathematics. Ninety-two percent of parents reported that when their child explained to them the concepts they were learning, their child's understanding of the concepts increased. In addition, the parents became even more involved because they were able to see what their child was learning instead of relying on notes that they could not understand. Of the 10 parents who participated in the focus group, 100% reported that the TIPS format was a great tool for them to communicate with their child with no arguments and or frustration for either of them. In fact, all of the parents mentioned that if Miramar Middle School adopted this

format for all homework, the number of parents involved would exponentially increase. Parents reported that the format of TIPS not only showed them what their children were learning, but also it taught them how to use some of the concepts with less difficulty.

Conclusion four stated that the workshops provided a structured opportunity for parents to acquire insight in their child's academic challenges and barriers to understanding math concepts. According to the pre-assessment, 89% of the parents indicated that they saw the need to understand the homework, 93% reported that their child had difficulty in math and needed to improve in finishing their homework, and 89% mentioned that they had limited knowledge of the math concepts their child was learning. The post-assessment indicated that 92% of parents desire to have more understanding of their child's homework, 84% parents reported that their child had less difficulty in doing the math, and 68% mentioned that their child did not have problem with math homework. Based on the results of the pre and post-assessments, the findings correspond with the conclusion that as the parents became more aware of the level of difficulty of the math, they demonstrated more confidence in indicating whether their child had more understanding of the math and less difficulty completing homework as well.

Conclusion six, which addressed the need for teachers to have the appropriate skills to effectively communicate when working with adults, goes hand in hand with this recommendation. The pre-assessment revealed that parents did not see the need to interact with the teacher or for the teacher to interact with them. Twenty-six percent of parents reported the need for parent interaction with the teacher in their child's education and 33% indicated the need for the teacher to interact with them in their child's education. The post-assessment indicated a shift in parents' thinking about parent

interaction with teacher and teacher interaction with parent. Seventy-two percent of parents reported that interacting with the teacher was a need in their child's education and 56% of parents mentioned that the teacher needed to interact with them in their child's education. The responses from the journals after the workshops progressively indicated that parents appreciated when the teacher interacted with them during and after the workshops. However, they indicated that the teacher focused mainly on the math content in this communication.

Based on these conclusions and the strong support for each based on the data and results, a plan for parent involvement will be developed for Miramar Middle School. The development of this plan will involve teachers, support staff, students, parents, and community using research-based resources from Epstein (2001, 2009), Epstein et al. (2002b), and Hiatt-Michael (2010) as resources to incorporate in the plan. A draft of this plan will be presented to the teachers, the Parent Teacher Association (PTA), the Shared Decision Making Council (SDMC)/School Site Council (SSC), and the English Language Advisory Committee (ELAC). After including their recommendations, the researcher will present the final draft of this plan for final approval by the Norwalk-La Mirada Unified School District Board of Education in June 2010.

Recommendation six. Future research should include analyzing test scores at the end of the school year to evaluate the program's level of impact on overall student achievement. This study focused on qualitatively evaluating the impact of TIPS on increasing communication and learning at home. The findings of this study are promising for future research where the methodology would be collected through quantitative sources such as state testing and/or district-created benchmark assessments. Based on

past research the TIPS format has proven to be a tool that increases student achievement not only in mathematics, but other content areas such as language arts and science. Several research studies of TIPS have yielded positive effects for families and students of different ages in varied subjects (Deslandes, 2009). One middle grades study assessed the impact of TIPS on family involvement (Van Voorhis, 2001). These studies consistently showed that TIPS interventions encouraged higher levels of family involvement in the TIPS subject area. As a result, parents of students assigned to TIPS in science reported higher levels of involvement than students not assigned TIPS. For language arts, the study revealed that parent participation in TIPS significantly improved students' writing scores as the year progressed. Additionally, participation in more TIPS programs positively impacted student report card grades (Epstein et al., 1997). Using TIPS gives parents information about how to help students at home with homework. Additionally, it is an effective and easily accessible form of school-to-home and home-to-school communication with parents who may not know the content. As previously mentioned, Balli found that using TIPS parents appreciated the student-led interactions, students and parents reported having more positive conversations about math, and most students believed that the interactions helped them achieve greater success and better preparation in math class.

The researcher believes that for Title I schools, which are required to create a Plan for Parent Involvement interactive TIPS workshops would be an effective program that could both address parent involvement and student achievement. The researcher recommends that preliminary preparations to effectively implement this program must begin in July 2010 because this is when schools receive and can begin using this funding

for the fiscal school year. This preparation must include a series of steps. First, the principal must read about TIPS and become familiar with the research tied to this program, including becoming familiar with the prototype and even contacting John Hopkins University and the work of Epstein and Sheldon (2006) and Hiatt-Michael (2010). Based on the information gathered, the principal needs to tailor the workshops based upon the needs of the school:

1. Identify teachers at each grade level that are strong in content knowledge and pedagogy in the subject selected for the interactive TIPS workshops and willing to commit to the planning and the instruction;
2. Provide training and time for teachers to create lessons using the TIPS format;
3. Survey parents on the times that would be best for them to attend these workshops (this survey could be done at the end of the school year using online sources and/or Open House, Back-To-School Night, and/or other school related committees such as the PTA, SDMC/SSC, and ELAC);
4. Based on the results of the survey, one could select a group of students from each grade level or start with one grade level to participate in the workshops, introducing the program on a smaller scale;
5. Although the parents did not make mention of the duration of the workshops, this researcher recommends that the workshops be five weeks long due to teachers' work responsibilities. The teacher who participated in the study strongly supports this recommendation that the workshop be five weeks rather than ten weeks;
6. Arrange for child care;

7. Once the TIPS workshop lessons have been designed and completed, hold an orientation meeting and replicate the process used by the researcher;
8. For those parents who choose to participate, phone calls need to be made as a reminder prior to the meetings. If the school has a community liaison, this individual could be designated this responsibility. Otherwise, the principal or other designated staff needs to make the calls; and
9. The teacher facilitating the workshops must record the students' grades and assessments scores (state and district) prior to the workshops in order to compare the impact of these workshops on student achievement.

Recommendation seven. To evaluate the impact of TIPS on the parent sustained involvement in communicating (type 2) and learning at home (type 4), a complete follow-up study needs to be done on the following: parent sustained support of student homework, student change in classroom behavior, attitude toward homework, Grade Point Average (GPA) in math, attendance in school, and satisfaction with mathematics and school. This follow up study would also research for evidence for whom this program did not work in order to provide schools with this relevant information when planning further workshops for parents.

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APPENDIX A

Letter of Information About the Study

Dear Parent of 7th grade Student,

I am a doctoral student at Pepperdine University. Currently, I am working on a study about parent involvement at the middle school, particularly in the area of homework. This study will focus on developing your involvement as a parent while also providing you with skills and strategies to work and communicate with your child while doing homework at home.

In these ten sessions you will be exposed to a specific approach to get you and your child involve in his/her homework specifically in a subject that may be difficult to both parents and the students. By providing you with these skills and strategies, you will be able to recognize and support your child during his/her homework and be able to transfer this learning in other academic areas. You will have a journal to respond to focus questions in writing following each session.

I look forward to working with you. Participation in this study will provide opportunities for you and your child to work together in an environment that will be effective to their growth as a student.

If you would like to participate in this study, please come to a meeting in the Multi-Purpose Room at _____ on _____ at 5:30 p.m. If you are unable to attend the meeting and would like to participate, please contact me at _____

Sincerely,

Ligia Hallstrom
Educational Leadership, Administration and Policy Doctoral Candidate
Graduate School of Education and Psychology
Pepperdine University

APPENDIX B

Letter of Participant Consent Form

I authorize Ligia Hallstrom, a doctoral student under the supervision of Dr. Diana Hiatt-Michael from the Educational Leadership, Administration and Policy doctoral program at Pepperdine University, Graduate School of Education and Psychology, to include me in the research project entitled "Middle School Parental Involvement in Homework: Teachers Involve Parents in SchoolWork (TIPS)." I understand my participation in this study is strictly voluntary.

I further understand that I have been asked to participate in a research study, which is designed to examine results from participating in a series of 10 week math sessions. The study will require ten evening meetings of approximately one hour each.

I acknowledge that I have been asked to participate in this study because I am a parent of a 7th grade student at the school site.

I understand I will be asked to attend an introductory session, followed by ten sessions, which will be one hour in length. In addition, I will also answer focused questions in a journal and orally to the researcher that will involve evaluating how has learning at home changed since completing the TIPS math program, specifically, the benefits the parents may have gained by having their child show, share, and talk about their work with a family partner. The second part involves ascertaining how communication between the parent and child has increased since completing the TIPS math program.

I understand that if I decide to participate in this study, my participation will be held in confidence. Any references to my child or me will have a code number. Any documentation used in this study will be stored in a locked file cabinet and documents will be shredded within five years.

The potential risks of participating in this study are minimal to none. In the event, I do experience fatigue or need to take a short break, one will be granted to me.

I understand that any direct benefit from participation in this study is beneficial to the field of education and myself as a parent. These may include: (1) recognizing the benefits of being actively involved with my child during his/her schooling years; (2) further knowledge of how to support your child in the learning at home; (3) further knowledge about skills and strategies that I can use to support my child when engage in homework and/or any other school related activities; and (4) further explore my beliefs and how to prepare my child to be academically prepared.

I understand that there will be no medical treatments given in this study.

I understand that I have the right to refuse to participate in, or to withdraw from the study at any time without prejudice to my current or future standing as a parent of a student in the school. I also have the right to refuse to answer any question I choose not to answer. I also understand that there might be times that the researcher may find it necessary to end my study participation.

I understand that no information gathered from my participation in the study will be released to others without my permission, unless law requires such a disclosure. I understand that under California law, the privilege of confidentiality does not extend to information about the abuse of a child, an elderly, or any dependent adult. Likewise, if a person indicates she or he wishes to do serious harm to self, others, or property, the investigator will report any such information mentioned to the authorities. The obligation to report includes alleged or probable abuse as well as known abuse.

If the findings of the study are published, presented to a professional audience, or used for future studies and collaboration with other investigators, no personal identifying information will be released. Only the information gathered would be made available to other investigators with whom the investigator collaborates in future research. Again, the data will be stored in a secure manner and only the investigator will have access. The data and any supporting documents will be destroyed within five years of after the completion of the study.

I understand that if I have any questions regarding the study procedures, I can contact Ligia Hallstrom at _____to get answers to my questions. If I have further questions, I may contact Dr. Diana Hiatt-Michael at _____. If I have further questions, I may contact Dr. Doug Leigh, Chairperson of GSEP Institutional Review Board at Pepperdine University, 6100 Center Drive, Los Angeles, CA 90045.

I understand the information in the consent form regarding my participation in the research project. All of my questions have been answered to my satisfaction. I have received a copy of this informed consent, which I have read and understand. I hereby consent to participate in the research study described above.

_____ _____

Participant's Signature Date

_____ _____

Principal Investigator Date

APPENDIX C

Template of TIPS Prototype Format

YOUR FORM FOR TIPS MATH-MIDDLE GRADES

Student's Name:_____ **Date:**_____

TIPS: (TITLE)

Dear Family Partner:
In math, we are _____. I hope you enjoy this activity with me. This assignment is due _____.

Sincerely,

_____
Student's signature

I. LOOK THIS OVER: Explain this example to your family partner.

II. NOW, TRY THIS: Show your family partner how you do this example.

III. PRACTICE SECTION: Complete these examples on your own. Show your work. Explain one example to your family partner.

******CONTINUE YOUR WORK ON THE BACK OF THIS PAGE******

MORE PRACTICE

LET'S FIND OUT or IN THE REAL WORLD...

(Relate this math skill to its use in practical activities that the student can discuss with a family partner. See TIPS prototype activities.)

ANSWER TO "NOW, TRY THIS":

IV. HOME-TO-SCHOOL COMMUNICATION

Dear Parent,

Please give me your reactions to your child's work on this activity. Write YES or NO for each statement.

_____ 1. My child understood the homework and was able to complete it.
_____ 2. My child and I enjoyed the activity.
_____ 3. This assignment helped me know what my child is learning in math.

Any other comments _____

Parent signature _____

Epstein, J.L., Salinas, K.C., & Van Voorhis, F.E. (2000, revised). Teachers Involve Parents in Schoolwork (TIPS) Interactive Homework for the Middle Grades. Baltimore: Center on School, Family, and Community Partnerships, Johns Hopkins University.

APPENDIX D

Math Activity using TIPS prototype template

Student's Name _____ Date _____

TIPS: SIMILAR (LIKE) FRACTIONS

Dear Family Partner:
In math, we are adding and subtracting fractions that are alike (meaning with the same denominator).
I hope you enjoy this activity with me. This assignment is due_____.
Sincerely,

_____
Student's signature

LOOK THIS OVER: Explain this example to your family partner.

Remember: When adding or subtracting like fractions:
1. perform the operation on the numerator only (the top value).
2. pay attention to the positive and negative values.
   a. The negative sign can be moved to the numerator or the denominator, if it is written in front of the entire fraction.
3. keep the same denominator (the bottom value).

Find and write in simplest form: $\frac{3}{10}+\left(-\frac{5}{10}\right)$

$=\frac{3+(-5)}{10}$

$=\frac{-2}{10}\left(\frac{+2}{+2}\right)$

Answer → $=\frac{-1}{5}$ or $-\frac{1}{5}$

Find and write in simplest form: $\left(-\frac{7}{10}\right)-\frac{9}{10}$

$=\frac{-7-9}{10}$

$=\frac{-7+(-9)}{10}$

Answer → $=\frac{-16}{10}$ or $-1\frac{6}{10}$

or $-1\frac{6}{10}\left(\frac{+2}{+2}\right)=-1\frac{3}{5}$

NOW, TRY THIS: Show your family member how you do this example.

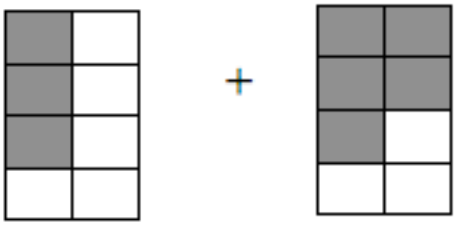
Find and write in simplest form: $\frac{2}{11}+\left(-\frac{8}{11}\right)$

PRACTICE SECTION: Complete these examples on your own. Show your work. Explain one example to your family partner.

1. $\left(-\frac{5}{8}\right)+\left(-\frac{1}{8}\right)$
2. $\frac{3}{9}+\frac{8}{9}$
3. $\left(-\frac{15}{16}\right)+\frac{3}{16}$
4. $\frac{3}{9}-\frac{8}{9}$
5. $-\frac{5}{6}-\frac{3}{6}$

MORE PRACTICE: Write an expression using the figure given. Then write in simplest form.

6.  Answer:

7.  Answer:

DISCUSSION:

1. With a family partner, look over the examples you finished and tell why it is possible to just perform the operation given for the numerators when solving like fractions.
2. Ask a family partner: When do you use adding or subtracting fractions at home?

ANSWER TO NOW TRY THIS:

$$\frac{2}{11}+\left(-\frac{8}{11}\right)$$

$$\frac{2+(-8)}{11}$$

1. Since the denominators are the same, set-up the addition of the numerators.

Answer → $\frac{-6}{11}$

2. Since there are more negatives being added to the positives, the numerator will have negatives left over.

HOME-TO-SCHOOL COMMUNCATION:

Dear Parent,

Please let me know your reactions to your child's work on this activity.

_____ OK. My child seems to understand this skill

_____ PLEASE CHECK. My child needed some help on this, but seems to understand.

_____ PLEASE HELP. My child still needs instruction on this skill.

_____ PLEASE NOTE. (other comments) _____

_____

Parent's signature: _____ Date _____

Adopted from : Epstein, J.L., Salinas, K.C., & Van Voorhis, F.E. (2000, revised). Teachers Involve Parents in Schoolwork (TIPS) Interactive Homework for the Middle Grades. Baltimore: Center on School, Family, and Community Partnerships, Johns Hopkins University.
Created by: Linda Lee, Seventh Grade Math Teacher, November 2009

APPENDIX E

Focused Journal Questions

Please use the journal to write down your comments about this activity.

I. Tell me how this session helped you in getting involved with your child's homework?

_____

_____

_____

_____

_____

II. How did you feel about working with your child on the math idea for this particular session?

_____

_____

_____

_____

_____

III. Please use this area to make any comments related to your experience in working with your child for this session.

_____

_____

_____

APPENDIX F

Pre-Assessment

I. Which areas are of need for you in getting involved in your child' s education

- Parental understanding of the homework
- Child's completion of homework
- Parent-child interaction
- Parent interaction with teacher
- Teacher's interaction with parent

II. Tell me what you know about your child's ability to do math.

_____

_____

_____

III. How do you communicate about your child's progress with the school?

_____

_____

_____

IV. At home, how do you provide support for your child at home in homework?

What type of support do you provide in homework? _____

_____:_____

_____

Describe:_____

_____

_____

V. What concerns do you have about helping your child in math?_____

_____

_____

_____

APPENDIX G

Post-Assessment

I. Which areas areas of need for you in getting involved in your child' s education

- Parental understanding of the homework
- Child's completion of homework
- Parent-child interaction
- Parent interaction with teacher
- Teacher's interaction with parent

II. Tell me what you know about your child's ability to do math.

_____

_____

_____

III. How do you communicate about your child's progress with the school?

_____

_____

_____

IV. At home, how do you provide support for your child at home in homework?

What type of support do you provide in homework? _____

_____:_____

_____

Describe:_____

_____

_____

V. Which sessions were helpful in getting involved with your child's math?

_____

_____

VI. After attending these sessions, how do you help your child with math assignments?

_____

_____

VII. After attending these sessions, what have you noticed about your child's sense of confidence in math and in other subjects? _____

_____

_____

VIII. What additional information/support might you need from the school and/or teacher in order to help your child with homework? _____

_____

_____

APPENDIX H

Table H1.

Connections Between Theorists and Findings

Six types of parent involvement	Deficit-Thinking	Goal Theory	Kirpatrick's levels of evaluation
Parenting- parent working with child in TIPS workshops. Communication- parent feeling positive about communication experienced with their child. Volunteering Learning at Home- the workshops allowed parents the opportunity to work with their child. In return, this practice transferred at home. Decision-Making Collaborating with the community	Parents showed high levels of desire and care for their children as they became aware of what they were learning and they were able to connect with them in learning opportunities. The responses in the focused journal questions, pre and post assessments and focused group showed that parents desire to be involved in their children' education	Students' positive emotions- students demonstrated increased self-confidence in their ability to the math Parent positive experience-during the workshops the parents interacted and held conversations in a positive and constructive ways with their children in spite of the level of difficulty of math concepts. As a result, their emotions transferred into the home.	Level 1-Reaction- parents reported having high levels of confidence and empowerment to assist their child at home and communicating Level 2-Learning increased in knowledge. Level 3-Parents transferred the skill of listening and the behavior of sitting next to their child as demonstrated all data sources Level 4-Results – Unable to measure

APPENDIX I

Middle School Parent Involvement: Sessions

MIDDLE SCHOOL PARENTAL INVOLVEMENT IN HOMEWORK: TEACHERS INVOLVE PARENTS IN SCHOOLWORK (TIPS)

Introductory Session

AGENDA

January 5, 2010

I. Welcome

II. Rationale for the Study

III. Background information on Parent Involvement literature

II. Expectations

III. Outcomes

IV. Session Dates and Times

V. Responsibility of keeping accurate journal

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session One

AGENDA

January 12, 2010

Focus: Square Roots

I. Discuss the conceptual meaning of Square Roots (To find the square roots of perfect squares)

a. Look Over This Problem

This problem will be reviewed together.

i. What are Perfect Squares
   1. Create a list of perfect squares
   2. Show conceptual understanding of why it's called perfect squares

ii. Inverse relationship
   1. Perfect Squares to Square Roots
   2. Radical Sign

b. Now Try This
The parent and student will try a similar problem as the example.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of addition and subtraction problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Two

AGENDA

January 19, 2010

Focus: The Pythagorean Theorem

II. Review Session One concept – Square Roots
III. Discuss the conceptual meaning of the Pythagorean Theorem → $a^2 + b^2 = c^2$
    a. Look Over This Problem $4^2 + 3^2 = c^2$ This problem will be reviewed together.
        i. The vocabulary and formula for the Pythagorean Theorem
            1. $a^2 + b^2 = c^2$
            2. a and b represents the legs of the triangle
                a. Legs = the sides of the triangle that create the right (90 degree) angle
            3. c represents the hypotenuse of the triangle
                a. Hypotenuse = the longest side of the triangle, the side that is created by connecting the endpoints of the two legs and also the side that is on the opposite end of the right angle of the triangle.
        ii. Rules to remember from prior knowledge
            1. Equality Properties – Addition, Subtraction
            2. Perfect Squares – Repeated Multiplication (to the power of 2)
            3. Square roots
            4. Inverse operations for Addition → Subtraction and Perfect Square → Square root
        iii. Conceptual Understanding of how the Pythagorean Theorem Looks Like
            1. Use a diagram to help understand the construction of a triangle and the connection to the Pythagorean Theorem.

    b. Now Try This
    The parent and student will try a similar problem as the example.

    c. Practice Section
    Then the student will try more problems.

    d. More Practice

These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Three

AGENDA

January 26, 2010

Focus: Adding, Subtracting, Multiplying and Dividing Positive and Negative Fractions

I. Review Session Two concept – The Pythagorean Theorem

II. Discuss the conceptual meaning of fractions

a. Look Over This Problem $\frac{3}{16}+\left(-\frac{15}{16}\right)$

This problem will be reviewed together.

i. Types of Fractions
   1. Regular fractions
   2. Improper fractions
   3. Mixed numbers
   4. Positive fractions
   5. Negative fractions

ii. Rules and Reasons for being able to Multiply and Divide Fractions
   1. Multiplicative Inverse
   2. Multiply numerator with numerator
   3. Multiply denominator with denominator

iii. Rules and Reasons for being able to Add and Subtract Fractions
   1. Like fractions
   2. Unlike fractions
   3. Greatest Common Factors
   4. Least Common Denominators
   5.

b. Now Try This
The parent and student will try a similar problem as the example.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Four

AGENDA

February 3, 2010

Focus: Ratio and Rates

I. Review Session Three concept – Adding, Subtracting, Multiplying and Dividing Fractions

II. Discuss the conceptual meaning of ratios and rates

a. Look Over This Problem
Express 12 blue marbles out of 18 marbles in simplest form.

This problem will be reviewed together.

i. Ratio and its definition
ii. Rates and Unit rates

b. Now Try This
The parent and student will try a similar problem as the example.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Five

AGENDA

February 9, 2010

Focus: Solving Proportions

I. Review Session Four concept – Ratios and Rates

II. Discuss the conceptual meaning of proportions

a. Look Over These Two Problems

1. Determine whether the pair of Ratios $\frac{20}{24}$ and $\frac{12}{18}$ forms a Proportion.

Then explain.

2. Solve and check the proportion. $\frac{12}{30} = \frac{k}{70}$

This problem will be reviewed together and will be using the following previous concepts:

i. Ratios
ii. Equivalent fractions
iii. Multiplying integers
iv. Division Property of Equality
v. Evaluating and Checking

b. Now Try This
The parent and student will try a similar problem as the example.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Six

AGENDA

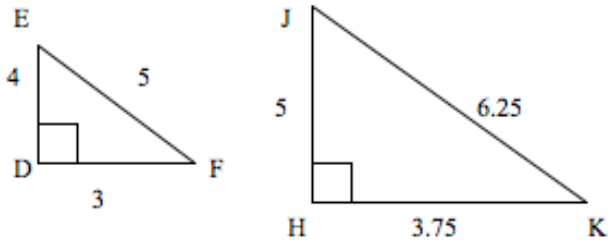
February 16, 2010

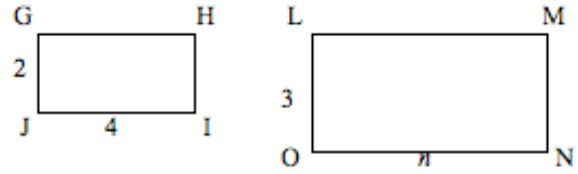
Focus: Similar Polygons

I. Review Session Five concept – Solving Proportions

II. Discuss the characteristics and connections of Similar Polygons

a. Look Over These Two Problems





This problem will be reviewed together and will be using the following previous concepts:

i. Ratios and Proportions
ii. Equivalent fractions
iii. Multiplying integers
iv. Division Property of Equality
v. Evaluating and Checking
vi. Corresponding Sides and Angles

b. Now Try This
The parent and student will try a similar problem as the example.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Seven

AGENDA

February 23, 2010

Focus: Ratios and Percents

I. Discuss the characteristics and connections of Similar Polygons

a. Look Over These Two Problems

This problem will be reviewed together and will be using the following previous concepts:

i. Ratios and Proportions
ii. Equivalent fractions
iii. Multiplying integers
iv. Division Property of Equality
v. Evaluating and Checking
vi. Corresponding Sides and Angles

b. Now Try This
The parent and student will try a similar problem as the example.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Eight

AGENDA

March 9, 2010

Focus: Percent Proportion

I. Discuss the conceptual meaning of percent proportion

a. Look Over This Problem

What number is 70% of 600?

This problem will be reviewed together.

i. Percent
ii. Proportion
iii. Percent Proportion: $\frac{is}{of} = \frac{\%}{100}$

b. Now Try This
The parent and student will try a similar problem as the example.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication

This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Nine

AGENDA

March 16, 2010

Focus: Review Session One

I. Review Session One to Four

II. Discuss the concepts from Session 1 to 4

1. Square Roots
2. Pythagorean Theorem
3. Fractions
4. Rates and Ratios

a. Look problems over

b. Now Try This
The parent and student will try a similar problem as the examples.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

PARENTAL INVOLVEMENT:

STRATEGIES AND SKILLS TO ASSIST CHILDREN AND PARENT PERCEPTIONS

ON THEIR EXPERIENCE IN MIDDLE SCHOOL MATHEMATICS

Session Ten

AGENDA

March 23, 2010

Focus: Review Session Two

I. Review Session Five to Eight

II. Discuss the concepts from Session 5 to 8

5. Solving Proportions

6. Similar Polygons

7. Ratios and Percents

8. Percent Proportions

a. Look problems over

b. Now Try This
The parent and student will try a similar problem as the examples.

c. Practice Section
Then the student will try more problems.

d. More Practice
These problems are set up as picture representations of multiplying problems.

e. Answer to Now Try This
This section is where the parent and student can check the answer from the Now Try This section.

f. Home-to-School Communication
This section is where the parent can communicate with the teacher on how their child did with the problems.

APPENDIX J

Permission to Use the School Site

NORWALK - LA MIRADA UNIFIED SCHOOL DISTRICT

COMMITMENT TO STUDENTS THROUGH EXCELLENCE IN EDUCATION

12820 PIONEER BOULEVARD, NORWALK, CALIFORNIA 90650-2894
PHONE (562) 868-0431 • FAX (562) 868-7077

October 29, 2009

Dear Mrs. [redacted],

I had the opportunity to speak with you about your future study on parent involvement at [redacted] Middle School. After our conversation and clarifications I obtained from you, I am granting you my permission and support to include [redacted] Middle School in a study in the area of middle school parent involvement. I believe that your study strongly supports our new superintendent's agenda in addressing parent involvement in the [redacted] Unified School District. Hence, your findings will be beneficial to our district, particularly at the middle school level.

I look forward to hearing the findings of your study and its implication for sites and teachers. Please let me know how I can assist and support you in making your study a success. I appreciate your time and dedication in addressing such a relevant and much needed focus as part of your dissertation. I appreciate your hard work.

Respectfully,

Chris Forehan
Assistant Superintendent, Educational Support Services
Curriculum and Instruction

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APPENDIX K

Carta de Consentimiento del Participante

Yo autorizo que Ligia Hallstrom, una estudiante del doctorado bajo la supervisión de la Doctora Diana Hiatt-Michael en la Escuela de Graduados de Liderazgo, Administracion y Politica en la Universidad de Pepperdine, para incluyarme en el proyecto de investigación titulado, "Involucramiento de Padres en la escuela intermedia en tarea: Maestros involucran Padres en trabajo de escuela (TIPS)." Yo entiendo que mi participación en este estudio es estrictamente voluntario.

Yo también entiendo que me han preguntado para participar en este investigación de estudio, que esta desginado para examinar los resultados de participación en las sesiones sobre el desarrollo de niveles de escritura. El estudio require diez juntas de matematicas de aproximadamente una hora.

Reconosco que he sido invitado/a a participar en este estudio porque soy padre de un alumno/a de septimo grado de la escuela.

Entiendo que despues de la junta hoy, he sido invitado/a para participar en diez sesiones, que seran una hora cada una. En adición, yo contestaré preguntas focales en un diario que proveera más información sobre trabajando con el desarrollo de niveles de escritura. También tomaré un avaluación antes y despues de las sesiones. Yo entiendo que es en mi major interes que conteste estas preguntas pero si decido no contestar, no estorbará ni sere eliminado/a de participación en el estudio.

Entiendo que si decido participar en el estudio, mi participación será grabada en video y la información que se usará para el estudio será documentado y transcrito. Los videos y documentación será usado para la investigación del estudio solamente y cuando el estudio este completo, la información será guardado en un cabinete con seguro. Las grabaciones seran destruidas y los documentos serán trizadas dentre cinco años de publicación de los resultados del estudio.

Entiendo que no hay riesgos obvios de la participación en este estudio. En el evento que tenga experiencia de cansancio o necesito tomar un breve descancio, tendre la oportunidad.

Entiendo que no hay un beneficio directo de mi participación en este estudio; pero reconosco los beneficios a la profesión y a mi como padre que puede incluyir: (1) reconociendo los beneficios de ser involucrado con mi hijo/a durante sus años escolares; (2) más conocimiento de los niveles de escritura y características de escritura; (3) más conocimiento sobre habilidades y estrategias que podre usar para apoyar mi hijo/a mientras el/ella desarrolla su escritura; y (4) explorar mis creencias y como preparar para que mi hijo/a tenga éxito en su escritura.

Entiendo que no habra tratamientos medicos en este estudio. Entiendo que tengo el derecho de rechazar mi participación en este estudio, o retirarme del estudio a cualquier momento sin prejucio como padre de un alumno/a de la escuela. También tengo el derecho de negarme a cpmtestar cualquier pregunta. También entiendo que podra ver momentos que el investigador podra mirar la necesidad que termine mi participación del estudio.

Entiendo que ningún información de mi participación en este estudio será publicada sin mi permiso, solamente si la ley lo pide. Entiendo que bajo la ley de California, el investigador esta obligado a reportar a las autoridades toda sospecha de abuso a un menor, anciano, adulto dependiente o a uno mismo, otros o propiedad. Igual, sí una persona indica que el o ella quiere causar daño a si mismo, otros o propiedad, el investigador reportará la información a las autoridades. La obligación del reporte incluye alejaciones o probabilidades de abuso igual que abuso conocido.

Sí los resultados del estudio son publicados, presentados a una audiencia o usados para otros estudios en el futuro o colaboración con otros invesigadores, ningún información personal será publicá. Solamente la información reunida será usada con otros investigadores que tendra colaboración con este investigador para estudios del futuro. De nuevo, la información de los resultados serán guardados en una manera segura y solamente el investigador tendrá aceso. La información y cualquier documentos que apoye el estudio serán destruidas despues de cinco años de completamiento del estudio.

Entiendo que sí tengo preguntas acerca de los procedimientos del estudio, puedo ponerme en contacto con Ligia Hallstrom al _____ para recibir respuestas sobre mis preguntas. Sí tengo más preguntas, puedo contactar a Dra. Diana Hiatt-Michale al _____. Sí tengo más preguntas, puedo contactar al Dr. Doug Leigh, Jefe del Consejo Institucional de Revisión de la Escuela de Graduados y Profesionales de la Universidad de Pepperdine, 6100 Center Drive, Los Angeles, CA. 90045.

Entiendo la información sobre este consentiemiento sobre mi participación en este proyecto de investigación. Todas mis preguntas han sido contestadas a mi satisfacción. He recibido una copia de este consentimiento informativo que he leído y comprendido completamente. Doy mi consentimiento para participar en la investigación descripta.

_____ _____

Firma del Participante Fecha

_____ _____

Firma del Investigador Fecha

APPENDIX L

Involucramiento de Padres en el Nivel Intermedio: Seciones

INVOLUCRAMIENTO DE PADRES EN TAREA EN LA ESCUELA INTERMEDIA:

MAESTROS INVOLUCRAN A PADRES EL TRABAJO DE ESCUELA (TIPS)

SECION INTRODUCTORIA

AGENDA

I. Bienvenidos

II. Propósito del estudio

III. Información de fondos sobre el estudio

II. Expectativas

III. Resultados

IV. Fechas de seción

V. Responsabilidades de mantener la información exacta con los diarios

APPENDIX M

Preguntas de Enfoque del Diario

Por favor utilice el diario para anotar sus comentarios sobre esta actividad.

I. Comparta como esta seción le fué útil en involucrarse con la tarea de su hijo(a)?

_____

_____

_____

_____

II. Como se siente usted en trabajar con su hijo(a) en el tema de matemáticas por esta seción particular?

_____

_____

_____

_____

III. Por favor utilice este espacio para hacer cualquier comentarios relacionados con su experiencia en trabajar con su hijo(a) en esta seción.

_____

_____

_____

_____

APPENDIX N

Pre-Evaluación

I. Que areas de necesidad tiene usted para involucrarse en la educacion de su hijo(a)?

- Entendimiento de la tarea
- Completamiento de la tarea
- Relacion entre el padre y el hijo(a)
- Relacion con la maestra
- Relacion entre la maestra y el padres

II. Comparta conmigo lo que usted sabe sobre su hijo(a) en su abilidad de

_____

_____

_____

III. Que manera usted emplea para comunicar el progreso académico de su hijo(a) con la escuela?_____

_____

_____

IV. Que tipo de ayuda usted le provee a su hijo(a) con la tarea en la casa?

_____:_____

_____

Describa: _____

_____

V. Que preocupaciones usted tiene cuando le ayuda a su hijo en la tarea de matemáticas?_____

_____

_____

APPENDIX O

Post-Evaluación

I. Que areas de necesidad tiene usted para involucrarse en la educacion de su hijo(a)?

- Entendimiento de la tarea
- Completamiento de la tarea
- Relacion entre el padre y el hijo(a)
- Relacion con la maestra
- Relacion entre la maestra y el padres

II. Comparta conmigo lo que usted sabe sobre su hijo(a) en su abilidad de hacer matematicas?_____

_____

_____

III. Que manera usted emplea para comunicar el progreso academico de su hijo(a) con la escuela?_____

_____

_____

IV. Que tipo de ayuda usted le provee a su hijo(a) con la tarea en la casa?

_____:_____

_____

Describa: _____

_____

_____

V. Que seción fue de mejor provecho para ayudarle a involucrarse mas en hacer las tareas de matemáticas con su hijo(a)?

_____

_____

_____

V. Despues de participar en esta seción, de que manera usted ayuda a su hijo(a) con last areas de matemáticas?_____

_____

_____

VI. Despues de participar en esta seción, ha notado un mejoramiento ó confianza en la abilidad de su hijo(a) en matemáticas y otras materias? _____

_____

_____

VIII. Que información adicional/ayuda usted necesita de parte de la escuela y el maestro para que usted ayude a su hijo(a) con la tarea? _____

_____

_____

APPENDIX P

Correspondencia de Informacion del Estudio

Estimados padres de estudiantes del Septimo grado,

Yo soy una estudiante de doctorado en la Universidad de Pepperdine. En orden para completar los requisitos de la disertación necesito conducir una investigación. Estoy trabajando en un estudio de involucramiento de padres y el desarrollo de los niveles de escritura. Quiero invitarle para que sea parte de este estudio. Este estudio se enfocará en desarrollando su envolucramiento como padre mientras también proveerle habilidades y estrategias para trabajar con su hijo/a en casa mientras el/ella desarrolla sus habilidades de poder completar las tareas con menos dificultad. En estas sesiones usted va estar exponible a los pasos necesarios para que su hijo(a) tenga mas entendimiento en las ideas de matematicas sin necesitar conocimiento de los conceptos de matematicas. Proporcionándole habilidades y estrategias, usted podra reconocer y apoyar a su hijo/a durante cada etapa de sus tareas de matematicas y otras areas academicas. En cada seción, cada padre tendrá un diario para responder a preguntas focales después de cada seción.

Estoy muy contenta para tener la oportunidad de trabajar con usted. Su participación en este estudio proporcionará oportunidades para usted y su hijo/a para trabajar juntos en un ambiente que será beneficioso al crecimiento de su hijo/a como un estudiante.

Sí usted quiere participar en este estudio, por favor asista a la primera junta en al auditorio de la escuela de Los Alisos _____el día (**proyectado por aprobación del Consejo Institucióonal de Revisión de la Escuela de Graduados y Profesionales de la Universidad de Pepperdine el diá _____**) a las cinco de la tarde. Sí usted no puede asistir la junta pero quiere participar, por favor comuniquese conmigo en la escuela _____

Sinceramente,

Ligia Hallstrom
Candidato Doctoral en Líderazgo, Addministracion y Politica
Escuela de Graduados de Educación y Sicología
Universidad de Pepperdine