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School -to -home communication in high school: Effects on task engagement and homework completion

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SCHOOL-TO-HOME COMMUNICATION IN HIGH SCHOOL: EFFECTS ON TASK ENGAGEMENT AND HOMEWORK COMPLETION

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ABSTRACT

This quasi-experimental study examined the effects of consistent school-to-home communication on homework completion, project completion, grades, attendance, student engagement, student behavior, and student attitude toward homework. Three high school English composition teachers reported data from a sample of 121 sophomores, who completed a pre- and post-survey, the Student Survey of Homework Practices. Each teacher taught a control and treatment class in which communication with the home was increased through phone calls home and weekly notes sent home with students. The post-test analyses by group found that students in the treatment group significantly decreased the amount of homework planning they did. Post-test analyses by teacher found that students in two of the control groups reported significantly more problems with forgetting materials for homework and procrastination. Post-test analyses by teacher also revealed some of the possible detrimental effects that negative behavior can have on academic-related measures. In addition, the teachers' fidelity of implementation during this study proved to be an obstacle that future researchers will have to address.

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Chapter One

The Evolution of Parent Involvement

Parent involvement in education has evolved from its earliest beginnings. With the earliest of the English public schools starting around the 14th century, education of the elite youth was transformed from within the homes of the wealthy to elite boarding schools. These financially restrictive boarding schools were called "public", but were only for those wealthy enough to command a formal education. Many other wealthy youths of the day were educated by private tutors who came to homes or lived with families. However, the majority of children, excluding the elite, were educated in homes where they were taught skills and practices, which would allow them to move directly into a vocation once certain levels of proficiency were achieved (Coleman, 1987).

Over the course of several centuries, education followed societal and familial economic demands. Education for many children depended upon whether the family needed them for an additional source of income or as a laborer within the family. However, following the Industrial Revolution, fathers no longer passed on their trade to children. Education soon was transferred en mass from the home to the organized public school system. This major transformation in the deliverance of education from within the family to outside institutions has now gone from one extreme to the other. Education of society's youth increasingly has been transferred to a responsibility of government (Coleman, 1987). The result of this transformation has been that many schools now operate independent of familial influences.

According to Steinberg (1991) one aspect of current adolescent life that has changed is the family. The present-day circumstances surrounding maternal

employment, parental divorce, and non-marital childbearing have resulted in many adolescents growing up without the advantage of parental guidance and supervision. In addition, "a number of studies have found that in middle-class and upper-middle-class homes, full-time maternal employment during the high school years is associated with lowered school performance among boys, but not among girls"(Steinberg, 1995, p.147). According to Tell (2000), when asked, "what do students want most from their teachers," the most frequent response is "human connection"(p.12). These contemporary societal changes make it even more important for schools to become institutions that reach out to young people and their families. Schools can become the vehicle that reunites the student, the parents, and the school community in efforts that benefit students' academic success.

The relationship of families and the formal educational system has continued to change throughout the centuries. A process that used to be initiated entirely by the family has either been usurped or thrust upon the schools almost in isolation of the other. However, this has not proven to be the most beneficial environment for the child. In an attempt to improve the educational opportunities of all children, parents and teachers must learn to communicate with each other in order to work together for the benefit of children.

In addition, according to Thorkildsen and Stein (1998) the majority of research completed in the field of parental involvement and student achievement has been correlational by design. Research must move beyond establishing associative relationships between the multitudes of variables and work to demonstrate causal

relationships between the school and the home environments of children in order for the research to be utilized by educational practitioners.

The present study will examine the effects of consistent school-home communication on grades, attendance, homework completion rates, student engagement, student behavior, student attitude toward homework, and parent involvement in the home. Three high school English teachers who each teach two sections of English Composition will have each of their classes randomly assigned to either a treatment or control group. The parents in the treatment group will each have a parent involvement packet mailed home to them at the beginning of the six-week period explaining how they can help their child with their English homework. Each teacher will also contact the parents of students in the treatment group by phone to discuss the project and strategies that they can use to assist students at home. In addition, each week the teachers will have students in the treatment group bring home a homework checklist detailing their individual progress on homework assignments. These checklists will be signed by parents and will be returned to the teachers. Finally, every two weeks during the intervention, each teacher will make an additional contact with the parents of students in the treatment group who are experiencing problems in the class. During this contact teachers will discuss students' progress on assignments and offer parents additional assistance. The main purpose of this study is to examine the effects of consistent school-home communication on high school English students' performance in school. The results should help teachers design better methods of involving parents in the daily educational lives of their children.

Chapter Two

Review of Literature

"Major studies over the past 20 years have indicated that parents are significant educators of their children and that not even the best school can do the job alone" (Rich, 1988, p. 90)). According to Coleman (1987), "the outputs of education result from the interaction of qualities the child brings from home...with the qualities of the school" (p. 38). However, the qualities that children bring from home can be as diverse as individual children. Many studies have been conducted on the direct and indirect influences that family structure and parental involvement have on children's educational well-being. Because a majority of research in parent involvement to this date has been completed in the lower grades, this literature review will examine research in both elementary and secondary situations in order to collect all pertinent information.

Family Structure

The support system that a child has at home has far reaching effects on educational success. Dornbusch et al. (1985) examined a nationally representative sample of 6,710 adolescents ages 12-17 to determine the effects of family structure on the behavior of adolescents. Interviewers gathered information from parents and students and found that in all comparisons between mother-only and two parent households, adolescents in mother-only households demonstrated a greater probability for deviant behavior and were more likely to make decisions on their own. However, for males, an extended mother-only household, having an additional adult in the house, was associated with lower rates of adolescent deviance and with more parental control. Multiple regression analyses by the authors revealed that family structure and early youth-alone

decision-making made statistically significant contributions to adolescent deviance. For males, family structure, early youth decision-making, and parental education were significant predictors of adolescent deviance. However, for females, early youth autonomy was the strongest predictor of deviance (p. 338-339). As a result, adolescents exhibit less problem behaviors when they enjoy the benefits of having more than one parent at home.

Supporting this conclusion in part, Steinberg (1987) analyzed questionnaire data collected in classroom-sized groups from 865 adolescents enrolled in fifth, sixth, eighth, and ninth grades in a Midwestern school district. The author found that students living with both biological parents were less affected by negative peer pressure to participate in deviant behavior than students in other family structures. However, students living in stepfamilies and students living in single-parent homes were equally susceptible to negative peer pressure. Examining the relationship between parental permissiveness and susceptibility to peer pressure, it was found that family structure exerted an impact on adolescents' susceptibility to peer pressure toward deviant behavior, even after controlling for sex, SES, maternal employment, grade level, and parental permissiveness (p. 273). In addition, the author found no support for the single parent and the "additional adult" in the household hypothesis when examining the sample as a whole.

In contrast, Astone and McLanahan (1991) conducted a longitudinal investigation of high school sophomore students who participated in the High School and Beyond study. Results of this study indicated that students who lived with both biological parents received more encouragement for school and more help with schoolwork from their parents than did students who lived in single parent households. In addition, Astone and

McLanahan stated that, "parental involvement [had] positive effects on children's school achievement" (p. 309). Interestingly, however, "children of single parents were more likely than other children to spend time talking to their parents"(p. 316). As evidence of the benefits of student-parent communication, mothers who monitored children's academic progress were more likely to have children who had better grades, attendance, consistent enrollment, and graduation rates. Fathers who monitored their children's progress were related to grades, educational aspirations, attendance, attitude toward school, and consistent enrollment. The authors also found that marital disruption decreased the amount of time parents spent supervising their children, monitoring school work, and talking with their child and this was associated with increased truancy and more negative attitudes toward school.

Zimiles and Lee (1991), analyzed data of sophomore students whose mothers had at least a high school education and who lived with at least one biological parent (N = 13,532). The authors found that mean achievement test scores were slightly higher for youth from intact families and for males. Females reported significantly higher grades than males in all family structures, and females from intact families reported the highest grades. Furthermore, students from step-families and single-parent families were more likely to drop out of school as compared to youth from intact families (7% vs. 20%). However, students from single parent families were less likely to drop out of school when living with a same sex parent although this finding did not hold in stepfamilies.

As demonstrated by these studies, one of the multitude of variables that children bring with them to school and that all teachers must deal with is the effect of marital disruption or the lack of both biological parents being present in the home. These studies

have shown that when students didn't have the opportunity to benefit from having both biological parents in the home students became involved in more deviant behavior, tended to make decisions at an earlier age on their own, were more susceptible to negative peer pressures, received less encouragement and help with their homework, spent less time talking with their parent, experienced more problems with truancy and dropping out, and had lower mean achievement scores (Astone & McLanahan, 1991; Dornbusch et al., 1985; Steinberg, 1987; & Zimiles & Lee, 1991).

In addition to these findings, another researcher examined the effects of family structure on educational interactions between teachers and parents. J. L. Epstein (1990) surveyed 3,700 teachers, principals, parents, and first, third, and fifth grade students in 16 school districts. The researcher found that single parents, regardless of their educational level, reported more requests from teachers than did married parents to be involved in learning activities at home. In addition, parents reported that teachers who were confirmed leaders in parental involvement by their principal made more equal requests of all parents, regardless of educational or marital status, whereas other, non-leader teachers asked more of single and low-educated parents. In addition, teachers rated married parents significantly higher in helpfulness and follow-through on learning activities at home, and better educated single and married parents higher on helpfulness than their respective counterparts. However, teacher leaders rated single, higher and lesser-educated parents significantly higher on helpfulness and follow-through at home (p. 104). The researchers also found that parents' marital status and level of education affected teachers' ratings of the quality of students' homework, but exerting more influence was in-class work and in-class behavior. This article also stressed that "studies of school and

family connections must go beyond simple structural labels such as marital status and education and include measures of the practices and attitudes of parents, teachers, and students" (p. 116).

Family Composition

Coinciding with studies on family structure are several studies of other family related factors affecting student outcomes. Downey (1995) analyzed data from the National Education Longitudinal Study (NELS: 88) to examine the effects of family composition on educational attainment and parental resources. The author found that for each additional sibling there was a relatively similar negative effect on parental resources, but for economic resources the negative effect reached a particular point at two siblings and dramatically increased. Parental resources including frequency of talk, educational expectations, money saved for college, educational objects in the home mediated the negative affect that larger families had on educational performance. However, "even when children in large families have the same level of these parental resources available, they accrue less benefit from them than their counterparts in smaller families" (p. 758).

In another study, Sanders and Herting (2000) studied a total of 828 eighth-grade students (females -443, males - 378, missing - 7) attending 8 out of 19 middle schools in an urban school district in the southeastern United States. Following the questionnaire, school counselors and teachers recommended 40 students to be selected for private, in-depth, semi-structured interviews. The authors found that family and school together affected academic achievement by also affecting students' academic self-concept and school behavior, regardless of student background.

Weisner and Garnier (1992) utilized a sample from The Family Lifestyles Project (FLS), to examine family influences. Of the total sample, 146 non-conventional families and a comparison group of 43 conventional, (two-parent) families were studied in a 12-year longitudinal study. Non-conventional families included families who were influenced by the 1960's and 1970's counterculture and that held values in "nonmaterialism, sex egalitarianism, environmentalism, or alternative achievement goals, among others" (p. 606). Information was collected from school records (grades 1,2, and 6), interviews, phone calls, and three home visits between birth and age 6. The authors found that most children in non-conventional families do as well as or better, than children in conventional families, however, only the combined influence of instability and low commitment to the non-conventional life-style led to differences in school grades. The authors add that non-conventional/higher commitment two-parent families reported more frequent communication with the school than their conventional family counterparts. In addition, children in high commitment non-conventional families have more positive social and behavioral ratings from teachers at all three grade levels than did children in lower commitment non-conventional families.

Therefore, in addition to the factors related to the presence or absence of both biological parents in the home, children also bring with them the influences of the number of people or siblings in the home and the culture that is practiced by their parental guardian(s). The amount of parental and economic resources available to a student at home is clearly affected by the number of siblings in the home (Downey, 1995). In addition, the type of lifestyle that the child's family maintains in the home has been shown to influence the child's academic success, frequency of parental

communication with the school, and their social and behavioral ratings from teachers (Weisner & Garnier, 1992). These factors are still but a few of the multitudes of variables that children bring to the doorstep of schools everyday.

Parenting Style

Further examining the measures of the practices and attitudes of parents, Dornbusch et al. (1987) examined questionnaire data from a sample of 7,836 adolescents and their parents from six high schools in the San Francisco area. Measures of parenting style followed Baumrind's three pattern typology, and included authoritarian, permissive, and authoritative. The authors found that families with higher parental education were lower in authoritarian and permissiveness, and higher in authoritative parenting. Compared with two natural parents, single parents were more permissive, and stepfamilies were more authoritarian and more permissive. Across both genders and most ethnic groups, authoritarian and permissive parenting styles were negatively associated with grades, while authoritative parenting practices were positively associated with grades.

Extending the research on Baumrind's typology, Lamborn, Mounts, Steinberg, and Dornbusch (1991) analyzed data from two self-report questionnaires from 4,081 ninth through twelfth graders. Based on students' responses to questionnaires, parents were assigned to one of four groups: (a) authoritative, (b) authoritarian, (c) indulgent, and (d) neglectful. The authors found that adolescents who classified their parents as authoritative scored significantly higher than the other three groups on academic competence and psychosocial development and exhibited the fewest problem behaviors. Youth living in neglectful style homes scored lowest on all measures. Adolescents from

authoritarian parents scored high on obedience and conformity measures, but lower on self-conception measures than other students. While indulgently reared children had strong self-concepts, they reported higher rates of substance abuse and misconduct at school and were less engaged in school related activities.

Grolnick and Ryan (1989) analyzed data on a sample of 66 third through sixth grade children and 114 biologically intact parents. Parents were questioned using a one hour structured interview. Self-reported questionnaires, teacher ratings, standardized test scores and classroom grades in math and reading measured students' self-regulation and competence. Ratings on three parenting dimensions: (a) autonomy support (values autonomy, autonomy-oriented techniques, and nondirectiveness), (b) structure (information and consistency), and (c) involvement (parental knowledge, time spent, and enjoyment) revealed that for autonomy-support, both mothers and fathers were significantly more supportive with females than they were of males. Punitiveness and deprivation of privileges were negatively associated with autonomy-support. In terms of outcomes, maternal involvement was positively associated with grades, standardized achievement, and teacher-rated competence, and negatively associated with teacher-rated acting out and learning problems. Regression analysis indicated that parental autonomy support was positively associated with children's self-reported autonomous self-regulation, teacher-rated classroom competence and acting out behavior, and achievement and grades.

Another factor influencing the varied characteristics that children bring to school is how each child's parents rear their individual children. The research completed on parenting styles has shown authoritative parenting to be the most beneficial to the child's

academic success and development of a socially well-adjusted individual. However, children reared by permissive or indulgent/neglectful parents showed a strong tendency toward lower grades, higher rates of substance abuse and misconduct at school, and were less engaged in school activities (Dornbusch et al., 1987; & Lamborn, Mounts, Steinberg, & Dornbusch, 1991).

As demonstrated by the literature, children bring many outside variables to school with them that have far reaching effects on their scholastic success: the presence or absence of their biological parents, the varied interaction between teachers and parents based on this home environment, the number of siblings present in the home and their affect on parental and economic resources, the established culture in the home, and the parenting style used to rear the child. However, in addition to these factors, the literature also has shown that the practice of parents getting involved in their children's education provides academic and social benefits to a child's education (Astone & McLanahan, 1991; Grolnick & Ryan, 1989).

Parent Involvement

One of the experts in the field of parent involvement is Epstein (1995). She is responsible for developing a framework of specific parental involvement methods. Epstein's categories include (a) Parenting, (b) Communicating, (c) Volunteering, (d) Learning at Home, (e) Decision Making, and (f) Collaborating with the Community. Utilizing this framework, Sanders, Epstein, and Connors-Tadros (1999) analyzed data from 423 parent surveys from six high schools (two rural, two suburban, two urban). The researchers found that parents' attitudes toward schools were affected by student performance and the school's parent involvement program. Parental involvement at

home was strongly affected by school programs that facilitated parenting skills and encouraged interactions between children and their parents at home. In addition, parental involvement at school was strongly affected by school programs that encouraged parental involvement in volunteering and school decision-making. Communication between the school and home was significantly and positively associated with all school practices to involve parents.

In a further examination of Epstein's framework, Catsambis and Garland (1997) utilized a longitudinal design that included survey results from 13,580 parents whose children remained in school through the twelfth grade. The authors compared parental involvement survey data from the students' eighth-grade year in 1988 to parent data in their twelfth-grade year. Even though most parents maintained some rules for maintaining student GPA between the two time points, a significant number of parents dropped rules about homework (92%-79%), particularly Asian parents (89%-78%) and White parents (91%-77%), and overall, many stopped daily discussions about school activities (82%-62%). However, African American and Latino parents tended to have the highest levels of supervision of teens' daily activities at both points, while White and Asian parents most often reduced daily supervision over time. Concerning school-initiated contacts with parents from eighth to twelfth grade, fewer parents were contacted about academic performance (68%-52%) and behavior (26%-19%), with the largest decreases coming from African American parents, but a higher percentage were contacted concerning academic programs (37%-44%) and volunteer work (34%-56%), especially White parents whose school-initiated volunteer contacts increased by 23%. Parent-initiated contacts were higher in twelfth compared to eighth grade concerning

academic programs (35%-46%) and volunteering (22%-41%), especially for White volunteers who increased by 19%. However, "Asian Americans reported the greatest drop between grades in parent-initiated contacts concerning the school's academic program" (76%-40%) (Type 2 Communication) (p. 14). "Parents seem to be a little less satisfied with schools' priority on learning (36%-31%), school standards (20%-19%), and parental involvement in school policy (12%-10%) in the twelfth grade than the eighth grade"(p. 11). As shown in this study, over the course of a child's education from eighth grade to high school graduation, parents tended to decrease their involvement pertaining to supervision and educational discussions with their child. This trend also was true concerning communication initiated by the school or the home pertaining to academic performance and behavior, but communication actually increased over time concerning curricular offerings and volunteering opportunities.

In order to avoid this gradual decrease in parental involvement over the course of a child's education, schools and parents need to consistently work together to create an environment that fosters its growth. Sanders and Epstein (1998) examined two middle and two high schools and interviewed twenty-two participants during May and June of 1997. Participants included administrators, teachers, students, parents, and volunteers who completed one-hour, taped, semi-structured interviews. The two middle schools in this study had been participating in a home-school-community involvement program for three years. This program included: (a) parent volunteers making home visits and phone calls dealing with attendance, (b) the school having computer classes for parents, (c) a parent information hotline, (d) parent teas, (e) parent patrols for the hallways, (f) a homework hotline for assignments, (g) parent membership on the Action Team and in

PTO/PTA groups, (h) a corporate sponsored parent room in the school, (i) additional counseling services and plans for a health center, (j) high school students tutoring middle school students, and (k) closer relations with a nearby church. As a result of the interviews, the researchers found that even though the middle schools accomplished many activities, both schools reported that they wanted to improve their internal communications. The two high schools had been involved in the home-school-community program for only one year. The high schools implemented a number of home-school-community involvement activities including: (a) an informational parents night, (b) a carnival to foster interaction among groups, and (c) a discipline committee for ninth graders. In addition, the participants reported several obstacles including a possible parent phobia of the school based on their individual pasts, family and teacher negative attitudes concerning parent involvement in the school, lack of time for both groups, and limited experience with parent involvement. The authors concluded that in order to implement a home-school-community involvement program, schools need an annual action plan and regular evaluations of the plan.

In addition, research showed that different actions taken by parents would yield different results. Framing parent involvement in a slightly different way, Hickman, Greenwood, and Miller (1995) examined a random sample of 47 parents of 9th-12th grade students. The sample of parents participated in a structured interview known as the Parent Participation Interview (PPI), which generated data related to the amount and types of parent involvement. These researchers found that the total PPI score was related to achievement, but only the home-based activities type of parent involvement (i.e., helping with homework) was related positively with GPA. Parent-as-learner (i.e.,

contacting professionals concerning development or behavioral problems) and parent-as-supporter of activities (i.e., providing transportation for the child) were related to higher SES. Female students' parents reported significant positive relationships with home-based forms of parent involvement, parent as communicator (i.e., talking with a representative from the school), and parent as advocate (i.e., attending school board meetings) types of involvement.

As has been shown, parent involvement has far reaching implications for adolescent education. In addition to the variety of scholastic effects, parent involvement affects postsecondary factors as well. Hossler and Stage (1992), analyzed the relationship between family demographic characteristics, students' experience in high school, and postsecondary plans to attend school. Respondents included 2,497 ninth-graders and their parents. These researchers found that parents' educational expectations for children had the strongest influence on plans for postsecondary education. In addition, the level of student participation in school-related activities, student achievement, student gender, and parents' education had strong influences on plans for postsecondary education.

Conklin and Dailey (1981) analyzed survey data from a four-wave longitudinal study of 1,686 high school students in the Northeast to examine the effects of parental educational encouragement on high school students' postsecondary matriculation. The authors collected data in the ninth, tenth, and twelfth grades as well as six months after school. Findings indicated that the consistency of parental encouragement was related to college entry and with decisions to attend four-year colleges and universities.

School programs in parental involvement can positively affect parents getting involved in their children's education (Epstein, 1995). Although research has shown that parent involvement decreases over time, a consistent effort from parents and schools can positively impact cooperation (Catsambis & Garland, 1997; Sanders & Epstein, 1998). As a result, this cooperation between parents and schools can encourage a child's continuing education even after high school (Conklin & Dailey, 1981; Hossler & Stage, 1992).

Factors Influencing Parent Involvement

As the research has shown, parent involvement programs need consistent effort from parents and schools in order to remain productive throughout a child's education. However, just as there are many factors that influence what characteristics a child brings to school, there are many factors that influence whether parents and teachers cooperate with each other. Dolan and Haxby (1995) utilized focus groups, phone interviews with parents, and open-ended questionnaires to examine barriers to parental involvement. The study provided parental instruction of the school reading curriculum, implementation and evaluation of an eight-week intervention including interactive activities and a program to improve parenting skills. The researchers found that out of the total number of parents invited, childcare, transportation, and no time/other responsibilities were barriers to participation, but the most common factors were program efficacy, perceived lack of program quality, and personal issues. Dropout parents were interviewed by phone and reported time commitments/other responsibilities and personal problems as the most common reasons.

Sanders (1998) interviewed administrators, teachers, parents, and students to determine barriers to improving their schools through parent involvement. Both schools involved had made prior commitments to improving their school-family-community partnerships by developing a school-within-a-school approach to improve student attendance and achievement, by becoming members of the National Network of Partnership-2000 schools. Administrators, teachers, parents, and students reported a desire for improved communication between families and schools, increased volunteering, and greater parental involvement in decision-making. However, according to these same people, barriers to the partnership success were misguided attitudes of parents and educators, lack of time, and limited experience working with each other.

Epstein (1986) administered questionnaires through the mail to the parents of 1,269 students in 82 first, third, and fifth-grade classrooms to determine the parents' perspectives on teachers' practices of parental involvement. The author found that

> about 58% of the parents rarely or never received requests from the teacher to become involved in learning activities at home. Fewer than 30% of the parents reported that teachers gave them many ideas of how to help their child in reading ...Over 80% of the parents said they could spend more time helping their children at home if they were shown how to do specific learning activities. (p. 280)

Concerning school-to-home communication, 16.4% of parents never received a memo from the teacher, 20.7% never talked to the teacher before or after school, 36.4% never had a parent-teacher conference, 36.5% never received a handwritten note from the teacher, 59% never attended a workshop at school, 59.5% never received a phone call, and 96.3% reported they were never visited at home by the teacher (p. 281). After all

other variables were accounted for, the simple act of routine communication from school to home explained 9% of the variance (p. 285).

However, when teachers frequently asked parents to help, more parents believed they should help, and parents increased their understanding about the school's educational program (p. 288). Teachers who were leaders in parent involvement had more positive attitudes concerning all parents' abilities to help their children at home, and as a result, parents with children in these classrooms reported almost equally frequent requests to help at home (p. 283). "Over 85% of the parents spent 15 minutes or more helping their children on homework activities when asked to do so by the teacher" (p. 291). However, as elementary children grow older, their parents, even after taking parent education into account, feel significantly less able to help their children.

Another study examined survey data from private schools to investigate any differences in parent involvement from public schools. Bauch (1988) surveyed 1,070 parents from five Catholic secondary schools in Los Angeles, New York City, St. Louis, Philadelphia, and the District of Columbia. Data were collected from each site through formal and informal interviews, participant observations, and school records. The survey results showed that 30% of parents helped with school related activities, 12% served on the school advisory board, grievance board, or parent board, and 14% helped in classrooms. While 79% of parents in this study made sure that their child's homework was completed, 18% of parents did not talk with their child's teachers during the entire year and 51% of parents reported their advice was never requested by the school. However, in this study, parents in primarily African American populated schools tended to communicate with the schools more often than parents in the interracially populated

schools, but this did not seem to be closely related to the opportunities that the school provided. According to Bauch, this parent involvement was more the product of what the parents expected and what the school expected and provided. The author continued by stating, "focusing parent involvement on student progress may be the most effective form of parent participation" (p. 82).

Other school factors that influence parent involvement are the activities that teachers either practice or dismiss as non-effective. Epstein and Dauber (1991) analyzed data from 171 teachers in five elementary and three middle schools in Baltimore to examine the association among parent involvement programs at school, teachers' attitudes, and teachers' practices. Teachers from the eight schools were paid to help construct 10-question, parent-teacher surveys. Open-ended comments about parent involvement practices were also obtained from teachers. Positive teacher attitudes positively correlated with greater success involving hard-to-reach parents and increased use of involvement activities. Elementary teachers reported significantly stronger parent involvement programs than middle school teachers in all types but communication with the home. Multiple regression analysis showed that communication with the home was not strongly influenced by school level, years of teaching experience, or percentage of students below average ability, but the strength of the school's program was influenced by teachers' attitudes and practices of communication with families. School programs in learning activities at home were influenced by school level and by teachers' practices (variance explained by communication =7% and learning activities =16%).

In addition, the authors found that teacher subject areas were related to teacher practices of parental involvement. Teachers of reading stressed parents listening to their

child read aloud and having parents volunteer in classrooms. Teachers of English/language arts stressed helping parents become involved in learning activities at home and conferencing with all parents. Math teachers reported little value in attending evening meetings or activities, while science teachers did not support informing parents of the skills required to pass their subject at each grade level. Social studies teachers reported aversion toward participation in student-parent-teacher clubs and activities. When teachers differed culturally and educationally from their students, or taught in departmentalized systems, teachers knew fewer of their students' parents and were more likely to consider them disinterested or uninvolved. As a result, if teachers believed that parents were disinterested in their children's schooling, teachers made fewer efforts to communicate or involve them. In addition, the more diverse teachers and administrators within the same school were the weaker the school's parent involvement program, and the fewer teacher communication practices, especially with hard-to-reach parents.

In another study, Epstein (1991), used longitudinal data from 293 third- and fifth-grade students to examine the effects of teachers' practices of parental involvement on student achievement. Surveys of teacher practices, parent reactions, and student achievement were linked in order to analyze the data. Multiple regression analysis indicated that students with lower initial scores improved more than students with higher initial scores. Teacher leaders in parent involvement, positively and significantly effected reading achievement, parents with more education and those who had learned more about the school's program through teacher involvement positively effected reading achievement. Finally, students with completed homework gained more in reading than students who had not completed homework.

In an additional study about teachers' own beliefs of their parent involvement practices, Becker and Epstein (1982) surveyed 3,698 first, third, and fifth-grade teachers and over 600 elementary principals in 16 school districts in Maryland. The authors found that over 95% of teachers reported talking with children's parents, sending notices home, and interacting with parents on open-school nights. About 90% of teachers asked parents to check and sign students' homework, 65% of the teachers reported that they discussed 'with each parent' what they can do at home with their children, and 35 % discussed this topic as needed. Nearly 80% of respondents reported conducting more than three parent conferences per year. The researchers also gathered data on teaching techniques that encouraged parent-child interaction including reading books, parent-child discussions, informal home activities, and parent tutoring. Parent-child reading was one of the most frequently used methods but it was primarily used with younger children. Parent-child discussions included family discussions related to daily school activities and homework assignments that required children to interview parents. Informal activities included parents becoming tutors and parents as role models for learning. However, 30% of teachers rejected these techniques due to lack of parent cooperation or felt the parents were not knowledgeable enough, 40% supported these in theory but not in practice, 30% used these in their practice, and 10% chose these techniques as their most useful.

As demonstrated by the literature, the factors influencing parental involvement in schools are as numerous and diverse as the children we deal with on a daily basis. The literature supports the idea that when nothing is being done in schools concerning parent involvement, fault is usually assigned to the other side of the parent-teacher equation. Teachers and administrators believed that the lack of parental involvement in schools was

due to the size of the school, whether it was a departmentalized system, misguided attitudes of parents, lack of time, limited experience working with each other, lack of parental cooperation, and lack of parental knowledge in order to help (Bauch, 1988; Becker and Epstein, 1982; Epstein & Dauber, 1991; Sanders, 1998). However, according to Epstein (1986) over 80% of parents believed that they could help more if teachers properly advised them. Parents reported that teachers rarely requested their help at home or asked for the parents' advice, sent a note home, contacted parents before or after school, held parent-teacher conferences, invited parents to a workshop, or visited the parent's home (Bauch, 1988; Epstein, 1986). Based on the reaction from both sides to assign blame, the school must become proactive in involving parents since its changes in policy would affect all families. Much of what determines the success of a parent involvement program comes from the efforts of the individuals and institutions involved in the process. However, the one true barometer of any program is the educational benefit it provides the children.

Parent Involvement in Homework

One of the ways that schools can reach out to involve parents is through homework. According to Hoover-Dempsey and Sandler (1997) in their review of psychological theory and research, their definition of parental involvement includes:

> home-based activities related to children's learning in school—for example, reviewing the child's work and monitoring child progress, helping with homework, discussing school events or course issues with the child, providing enrichment activities pertinent to school success, and talking by phone with the teacher. (p. 6)

Having already detailed in this literature review many factors that can influence a child's performance at school, Cooper (1989), concluded that, "homework probably involves the complex interaction of more influences than any other instructional device" (p. 89). As a result, several studies have been conducted to examine the influences and interactions that homework can have on students' success.

The study completed by Keith (1982) analyzed data from 20,364 seniors from the total High School and Beyond longitudinal study. The researcher found that time spent on homework was positively correlated with students' grades in high school. In fact, the strongest predictors of high school grades were ability, homework time, and field of study (vocational or college prep). Interesting relationships were found that indicate that within background and ability levels, blacks were somewhat more likely than whites to choose an academic program of study, and that within background, ability, and field of study, blacks spent slightly more time on homework than did whites.

In a second correlational study, Keith and Page (1985) analyzed data from the High School and Beyond longitudinal study to examine the effects of homework on achievement (i.e., grades and achievement test scores). The researchers found that ability, time spent on homework, and academic track (i.e., academic or vocational) had the strongest influence on grades. According to the authors, the relation of field of study with grades suggested, students in an academic track took harder courses, and performed better in those courses. In addition, the relation of ability to homework suggested that lower academic students could partially compensate for their lack of ability through increased study. Ability, family background, and homework were predictors of achievement scores.

In a third correlational study, Keith et al. (1986) analyzed data from 28, 051 high school seniors included in the High School and Beyond longitudinal study. The authors found that low SES and low ability students watched more TV, which had a small negative effect on achievement, while high ability students did more homework, which increased achievement. Non-white students spent more time than whites on homework. Wealthier non-white parents were more involved with their children, and in general, parents were involved more with their daughters than their sons. It also appeared that high-ability seniors were more adversely affected by increased TV viewing than were middle- and low-ability youth. However, the completion of homework had powerful effects on achievement.

Through these correlational analyses of the same longitudinal data set, the authors have shown that children and parents approach homework differently based on many factors. The students' ability, the amount of time that students spent on homework, parental support, and the academic track that students choose all have an impact on the power that homework has for the individual student. Most importantly, the authors showed that lower academic students could partially compensate for their lack of ability through increased study (Keith, 1982; Keith & Page, 1985, Keith et al., 1986).

As an example of the possible benefits that parental involvement in homework can have on students, Rosenberg (1989) randomly assigned students to a direct instruction only group (DI) or a direct instruction with supplemental homework group (DI & HW). The results of this experiment revealed that homework was most effective when the rate of homework completion equaled or exceeded 70%, when the percentage correct on homework assignments averaged 70% or above, and when a student

demonstrated some acquisition of the material during checks of performance. In a second experiment with four elementary students, the author changed the DI small group part of the first study to a one-to-one DI and used spelling words as the instructional unit. In order to improve the return rate of correct homework assignments, the author requested the direct cooperation of parents through an oral test at home, a parent's signature on all written homework, and the establishment of a reward system in class. Students' respective homework return rates using this system were 94% to 97% with only one student falling below 75%. The percentage correct for all four students ranged from 83% to 99%. The author found that spelling words assigned to the homework condition were acquired faster and in greater number than words in the no-homework condition. In addition, the successful completion of homework assignments was contingent upon an atmosphere where the doing of homework assignments was expected, valued, and rewarded. Second, the results of his second investigation demonstrated the importance of involving parents in the homework process based on the improved homework return rates and accuracy rates.

Teachers' Perspectives on Homework

According to a quantitative review of literature on the effects of homework conducted by Walberg, Paschal, and Weinstein (1985),

> the amount , quality, and usefulness of homework is jointly determined by teachers, parents, and students. If one of the three legs of the homework stool is unsupportive, little may be accomplished academically in the large amount of time students spend outside school. (p. 79)

In addition to this review of literature, two studies completed by Polloway et al. (1994) and Salend and Schliff (1989) showed that teachers use homework for a variety of reasons including preparation for tests, practice of skills already taught, enrichment of activities, and preparation for future work. As a result of the multiple applications of homework, teachers utilized many practices in order to motivate students to do their homework. These practices included talking to students about assignment completion, assisting students in completing assignments, giving verbal praise or physical rewards for assignment completion, giving corrective feedback in class, recording performance or grades in the grade book, sending home an assignment sheet, requiring parent signatures on assignments, scheduling a parent-teacher conference, taking away privileges, and lowering a student's grade. In other words, teachers can motivate their students to do their homework by giving specific, immediate feedback, reviewing homework during class, grading homework, and using these grades to determine the students' overall grades.

Parents' Perspectives on Homework

According to Cooper (1989), "because homework goes home, we have to consider variations in out-of-school environments when we think about what might determine the value of an assignment (p. 89). Kay, Fitzgerald, Paradee, and Mellencamp (1994) collected data through individual interviews, focus groups, and parent action research logs concerning homework from the parents' perspective of fourth and eighth-grade rural students with disabilities. Eleven parents were hired as parent liaisons to submit bi-weekly research logs throughout the school year, recruit other parents for the focus groups, and set up interviews in parents' homes. Fourteen parents of students with

disabilities were interviewed. The authors found that parents were not sure how to help their children with their homework because of curricular changes since they last attended school and the belief that they needed special training to help their specific child. In addition, parents wanted to know what the teacher expected from them as parents in helping with homework, parents wanted appropriate individualized assignments, especially, hands-on projects that they could get involved with their child, and parents wanted extensive two-way communication with the school concerning their child. Concerning communication between the home and the school, parents wanted telephone calls, written communications such as notebooks or homework checklists, and meetings in addition to homework assignments brought home.

In an additional study, Anesko, Schoiock, Ramirez, and Levine (1987), attempted to create an instrument, the Homework Problem Checklist, to measure students' difficulties with homework. The HPC was distributed by teachers and consisted of a twenty-item questionnaire that gathered data from the parents of 319 second through fourth graders from one suburban Long Island district. The HPC total scores could range from 0 to 60, but actual scores for the sample ranged from 0 to 43 with an average of 10.50, standard deviation of 8.03, and a total internal consistency of .91, meaning the survey could discriminate among individuals at a specific point in time. The survey indicated frequently reported problems as including the student was easily distracted while doing homework, and many parents had to remind their child to start their homework because the student procrastinated. In addition, boys seemed to have significantly more homework problems than girls at all grade levels, and lower achieving students had more problems than higher achieving students.

A third study examined data from all "three legs of the homework stool" (Walberg, Paschal, & Weinstein, 1985. p. 79). Connors and Epstein (1994) surveyed ninth-grade students, families, and teachers from six high schools in Maryland. In total, about 420 families, including over 1300 students and about 150 teachers were surveyed. Results concerning attitudes about the school revealed that the more removed a participant was from the school the better their attitude was toward the school (parents-78%, students-62%, teachers-49%)(p. 8). A majority of both parents (80%) and students (50%) expressed a desire for more parent involvement at their school, but just 32% of teachers felt it was their responsibility to involve parents. Almost 50% of students and about 25% of parents reported that they didn't have enough time in the day to talk to the other about school, and 66% of teachers indicated that they needed more training to learn how to connect with their students' families. Concerning homework,

> teachers reported that about 30% of their students completed 'all of their homework on time' and over half of the parents felt their teens should get more homework. Many students (67%) reported that they do about one hour or less of homework each night but almost 15% were not doing any homework, either because it was never assigned or they did not do the assigned homework. (p. 9)

Students, parents, and teachers agreed upon various practices that should be added to their individual schools, each within one of six of Epstein's parent involvement categories, including student involvement in parent-teacher conferences, school development of homework monitoring system for parents, and information on how to help their child with homework. Nearly 70% of students reported that the school needed

to start or improve many practices that give their parents more information about their classes, and greater participation in their education.

As the literature demonstrates, students, parents, and teachers alike desire the development of a homework monitoring system for parents and information on how they can help their children with homework. Parents have also stated through the literature that they wanted telephone calls and written communication such as homework checklist in addition to homework assignments coming home (Connors & Epstein, 1994; Kay, Fitzgerald, Paradee, & Mellencamp, 1994). The present study has been created based on these demands from students, parents, and teachers brought out in the literature review.

Interventions for School and Home

Since there was evidence to suggest that there were differences among students, their home environments, and what the school was providing, studies have been conducted to investigate what possible solutions can be created to improve the quality of education that students receive. The study completed by Rodick and Henggeler (1980) randomly assigned 47 of the lowest achieving seventh graders in a predominantly black, lower-income, inner-city junior high school to one of four groups, in order to measure the effectiveness of the PUSH program, the SMART program, and a standard reading class. Achievement was measured by students' performance on the reading test of the Metropolitan Achievement Test (MAT). The SMART group used trained tutors and met for one-hour sessions on Monday through Thursday dealing with vocabulary, and oral and silent reading with group discussions. Progressing at individual rates, students who came close to their goals each week had an informal group session on Friday, but if they didn't, the student had the normal daily program in another room. The PUSH program

had supervisors do home visits to discuss and encourage parents to help their kids at home. Parents agreed to help their child for one hour a weeknight while limiting distractions. Their progress was monitored with weekly phone contacts and biweekly home visits by supervisors. A qualified reading teacher taught the Standard Reading program with a 1:25 teacher-student ratio in the normal school classroom for one hour a day. The nonintervention group spent their one-hour session in a science class with no special reading instruction. The authors found that from pretest to posttest and from pretest to 6-month follow-up the SMART group had significant increases in vocabulary, reading recognition, reading comprehension, and need for achievement scores; however, from posttest to follow-up it showed significant decreases in vocabulary, reading recognition, and reading comprehension. The PUSH group from pretest to posttest had significant increases in vocabulary and need for achievement scores, from pretest to follow-up PUSH had significant increases in vocabulary, reading recognition, reading comprehension, and need for achievement scores, and from posttest to follow-up PUSH had significant increases in vocabulary, reading recognition, and reading comprehension scores. The nonintervention group from pretest to posttest had significant decreases in vocabulary scores, but from posttest to follow-up it showed significant increases in reading comprehension scores. From pretest to follow-up and posttest to follow-up, the Standard Reading group showed significant decreases in vocabulary scores. At the pretest there were no differences between the groups on any of the dependent measures. However, at the posttest the SMART group scored significantly higher on reading recognition, reading comprehension, and need for achievement than either the Standard

Reading group or the Nonintervention group. In addition, at follow-up, the PUSH group scored significantly higher in vocabulary than the Standard Reading group.

In a second study, O'Melia and Rosenberg (1994) analyzed the effects of a homework model, Cooperative Homework Teams (CHT), on 171 middle school students with either learning disabilities or emotional disturbances. Ten special education teachers each taught two classes during the 10-week experiment (2-week pre-intervention; 8-week intervention), one treatment group (CHT) and one control group. The CHT students were pre-tested and assigned to three or four member, heterogeneous, homework groups. Homework was assigned Monday through Thursday of each week and included eight computation and two story problems which took 15-20 minutes to complete. The next day, CHT members took ten minutes to have one student grade the team's papers, report the grades to the teacher, return the papers, and work together to correct everyone's paper. At the end of each week, totals were figured for assignment completion and percentage correct for each team and awards were given for meeting pre-selected criteria. A third dependent variable included measuring achievement on math subscales of the California Achievement Test (CAT). The authors found comparing pre- and post-intervention data that the CHT group significantly improved their homework completion rate from 61.6% to 74.1%, while the control group improved their completion rate from 54.4% to 55.3%. Also, CHT students significantly improved their percentage correct rate on homework from 53% to 63.4%, while the control group improved from 45.6% to 48.9%. On the CAT, both groups improved, but neither reached significance. Post-hoc analysis showed that the 7th and 8th grade CHT groups completed significantly more

homework and had significantly higher percentage correct than their respective control groups.

In a third study, Fantuzzo, Davis, and Ginsburg (1995) analyzed 72 low-income, African-American, at-risk, fourth and fifth-grade students from a large urban city over a ten-week period. Students were randomly assigned to one of three conditions including a practice control group (PC), a parent involvement group (PI), and a parent involvement plus reciprocal peer-tutoring group (PI + RPT). The PC group followed an individual routine of a five-minute multiplication table drill, twenty minutes on flashcards, and a timed 16-problem math sheet that could be corrected. The PI group followed the same routine as the PC group, but also involved parents helping at home, parents rewarding student effort, and home-school communication. The PI + RPT group had the same PI component, but also followed a routine of five minutes of multiplication table drills, twenty minutes of working together in peer groups in which they were trained to alternate roles as teacher and student after ten minutes while working on flashcards, and then completed a 16-problem math sheet that could be corrected. If the peer group achieved their pre-determined group goal on this sheet three times, they were rewarded with the pre-selected group reward. The authors found through post hoc comparisons that the PI + RPT and the PI groups had significantly higher ratings in Scholastic Competence in math and Behavioral Conduct than the PC group. The PI + RPT had significantly higher ratings in Social Acceptance and significantly higher average rates of accurate curriculum-based computations than the PI or the PC groups, in addition to having significantly higher standardized computation scores than the PC group.

These studies have demonstrated that when educators get others involved in the homework process that students' success is increased. Even though these studies have incorporated different interventions with different populations of students, the researchers have demonstrated that when parents and educators stop assigning blame for problems and work together toward solutions, students benefit from the power of working together.

School-to-Home-to-School Communication

One way of increasing that cooperation between parents and educators is through communication between the home and the school. According to Prescott, Pelton, and Dornbusch (1986):

> communication patterns that exist between parents and teachers are part of the larger world of family and school relations. Research on family structures and processes and their impact has indicated the processes that include communication with teachers and school officials may very well affect student performance. (p. 69)

The study conducted by Prescott, Pelton, and Dornbusch analyzed survey data from 247 high school honors and non-honors teachers about their perceived communication patterns with parents. Parent-initiating data showed a slight tendency for honors-parents to contact teachers more frequently than parents of the average students. However, teacher-initiated contact was significantly greater among non-honors teachers. Honors-teachers reported a higher correlation of parent-initiated contact from parents of students who were excelling. At differing levels, both teacher groups reported being contacted by parents who had already demonstrated an interest in helping their child, and both reported moderate amounts of parent-initiated contact from average students. Unlike honors

teachers, non-honors teachers perceived a moderately strong association between parent-initiated contact and contact by parents of students with discipline problems, students who made little effort, and students who had difficulty learning. Examining teacher-initiated contact, both teacher groups initially contacted parents of students who made little effort and students with discipline problems, while non-honors teachers also contacted parents of students who had difficulty learning. According to the authors, non-honors teachers used parent contact to discuss problems, talk to parents of average students and parents who have demonstrated their concern. Even though non-honors teachers reported contacting parents who showed they were interested, they only tended to discuss disciplinary problems and student's strengths and weaknesses, not matters of how parents could help their children at home. However, honors-teachers showed a strong tendency, when they contacted parents of students making little effort, having learning problems, discipline problems, and parents who are active in school activities, to explain specifically what assistance parents could provide at home in regard to schoolwork.

With this difference in the communication styles among honors and non-honors teachers, researchers have continued to examine the possibilities and procedures that can bring about successful school-home communication. In a longitudinal study done by Ames, Khoju, and Watkins (1993), the authors analyzed first-year data gathered from a paid intervention group of 10 second-grade and 7 fourth-grade teachers and a non-paid control group of 8 second-grade and 7 fourth-grade teachers from three Midwestern school districts. Intervention teachers were given materials outlining three areas of school-to-home communications, including

> (1) provide parents with information about classroom learning activities, goals, plans, curriculum, and materials; (2) provide parents with information about their own child's progress, accomplishments, improvement and effort at school; and (3) provide parents with information, structure, and direction that will enable them to help or work with their child on learning activities at home. (p. 4)

The intervention group was instructed to communicate with the parent(s) of every child in their class at least once a week using one of the three areas outlined and all three areas at least once during the semester. Weekly records were kept and collected monthly (p. 5). At the end of the year, both groups of teachers completed surveys asking them to rate their sense of teaching efficacy and frequency of communication practices, including

> (1) classroom newsletters about students' learning, (2) information about classroom activities and instructional plans, (3) reports or notes on children's progress, (4) ideas for parents to help children learn, (5) notes about accomplishments and improvements, (6) folders of classwork with comments, (7) activities for parent and child to do together, and (8) invitations to participate in classroom activities. (p. 5)

At the end of the year, children brought surveys home for their mothers or primary caregiver to complete and returned them in sealed envelopes. Children were surveyed about their motivation to learn including their interest in learning and academic self-competence. The authors found that teachers in the intervention group reported significantly more communications involving sending newsletters home and providing information about classroom activities, but parents reported no significant difference between either group for any of the communication practices, interaction effects, or grade

level effect. However, when the data was aggregated to the classroom level for the entire sample (n=32), there were positive and significant correlations between teachers' reported use of classroom newsletters, information about classroom activities, and progress reports and parents' reports of receiving them. Teachers who were self-reported high users of communication differed significantly on each practice, reported higher teaching efficacy, and had significantly more parents who were aware of these communications. In fact, teachers' communications were associated with parents' reported involvement in their child's learning. Parents with children in highly-rated teachers' classes reported receiving more communications, evaluated teachers as more effective, had stronger beliefs about their ability to influence their child, viewed their child as more motivated, and reported more involvement. In addition, children rated themselves as more competent and motivated when they perceived their parents as being involved in their education. Using the individual parent as the unit of analysis, the indirect effect of communication practices on parent involvement showed that:

> when parents believe their child is interested and believe they (the parent) can make a difference, they may become more involved. This interpretation has important implications because, quite often, communications from the teacher that attempt to solicit parent involvement convey negative information to the parent. Teachers often contact parents to tell them that their child is having trouble or is not motivated, expecting parents to volunteer assistance. Our findings suggest that such communications may not have the intended effect and may only discourage parents and make them feel less comfortable with the school and with their role as a helper. It is not that the schools need to convince parents that their

child is bright and doing well; instead, communications may need to focus parents on their child's progress and suggest to them that their child can learn and wants to learn. Parents' perceptions of their child as a motivated learner may then elicit a willingness to become involved. (p. 15)

In a related study done by Ames, de Stefano, Watkins, and Sheldon (1995), the authors analyzed second-year data gathered from a paid intervention group of 30 teachers and a non-paid control group of 34 teachers from 2nd, 3rd, 4th, and 5th grades from four Midwestern school districts in small cities and rural areas. The methodology and many of the findings of this study were the same as the previous study with the addition of the following. The authors found that the frequency of teacher-parent communication was significantly related to the teacher's beliefs about the importance of parent involvement and the effectiveness of these communications. They also found that teachers were significantly less confident about their parent involvement abilities than their teaching abilities. Teachers' uses of all types of communication strategies were negatively related to parents with less education. Overall comparisons between parent and child perceptions of parent involvement showed that "parents reported that they asked their child about school, talked to their child about schoolwork, and attended school events more often than was reported by their child. These differences were more prevalent among those families with more education" (p. 12). In addition, parents reported feeling more comfortable with the school and more involved with their child's learning when the teacher communicated frequently and effectively, but the parents' perceptions in their ability to influence their child decreased as the level of parental education increased to where it was not significant when parents completed college. Parents with a high school

or less education seem to be helped the most by frequent and effective school-to-home communication.

Summary

As the research shows, many factors influence children's success in school. The number of qualities that students bring to school is as varied as individual children. However, when consistent communication is maintained among all those involved, people begin to understand themselves, each other, and their interrelated roles in bringing about the educational success of the children we share. Much of what determines this success are the efforts of the individuals and institutions involved in the process.

Experimental Objective

There is a need to better understand the effects that consistent school-home communication has on involving parents in aiding their high school student to be successful. Many factors covered in this review of the current literature have demonstrated the importance of a variety of out-of school as well as in-school variables and resources that affect the success of all children. This study will focus on the need to develop an effective school-home communication system in order to better involve the parents of all children.

The objective of conducting this experiment is to collect data on the effects that consistent school-home communication has on homework completion, project completion, grades, attendance, student engagement, student behavior, and student attitudes toward homework for second year high school English students.

Research Questions

The present study will examine the effects of consistent school-home communication on homework completion, project completion, grades, attendance, student engagement, student behavior, and student attitude toward homework. This study will explore the following questions:

1. Does consistent (weekly) school-home communication positively influence homework completion rates?
2. Does consistent school-home communication positively influence project completion rates in school?
3. Does consistent school-home communication positively influence grades?
4. Does consistent school-home communication positively influence attendance?
5. Does consistent school-home communication positively influence student engagement?
6. Does consistent school-home communication positively influence student behavior?
7. Does consistent school-home communication positively influence student attitude toward homework?

Methodology

Setting and Participants

This study will take place in a medium-sized, public high school located in a rural community in the Midwest. This single-building, high school district has an enrollment

of approximately 1570 students in grades 9-12. Student demographics include approximately 95% Caucasian, 3% Hispanic, and 1% African-American; and 6.4% low-income.

The participants for this study will be approximately 150 second-year English students enrolled in one of six sections of English Composition taught by one of three teachers of varying experience and continuing education. Two of the teachers are male and one is a female.

Intervention and Design

The study will utilize a quasi-experimental design with each teacher having one of his or her two classes randomly assigned to a treatment group or a control group. All students will be assigned a research paper, which will require approximately six weeks of consistent homework to complete. Students in the control groups will be taught in the same manner as students in the treatment groups including deadlines for completion of certain elements of the process and the final project. This multi-component intervention includes: (a) a parent involvement packet being mailed home, (b) an initial phone call explaining the research paper process and asking for parental help, (c) follow-up phone calls to parents of students experiencing problems, and (d) a weekly missing homework checklist for parents to sign and return.

Students in the treatment groups will have a parent involvement packet mailed home to them at the beginning of the six-week period explaining how they can help their child with their English Composition homework. This parent involvement packet will be a questioning system for parents to ask their children based on "The Big Six Approach to Information Problem-Solving" developed by Eisenberg and Berkowitz (1996). In

addition, each teacher will also contact, by phone, the parents of the students in the treatment group to discuss the project and strategies that can assist the students in completing the assignment. This initial phone contact will be followed by follow-up contacts made every two weeks to parents of students in the treatment group who are missing assignments or who are having other problems in the class. Each of these phone contacts will be recorded in a phone log. In addition, each week the teachers will have the treatment groups bring home a homework assignment sheet detailing their individual progress on the homework assignments. The assignment sheet will be signed by the parent and returned to the teacher.

Measures

Homework Completion Grades

Teachers will assign anonymous Homework Completion Grades to each student each week. These grades will be coded as A=5, B=4, C=3, D=2, and F=1. Each student will have a total of six grades (one for each week) and these will be averaged for a total homework completion grade. A sample of this measure is contained in Appendix A.

Completion of Final Project, Attendance, and Grades

Project completion will be measured by the student either completing the project or not completing the project. Teachers will check a Yes for completion or a No if the project is not completed. Responses will be coded as Yes = 2 or No = 1.

Attendance will be measured from teacher ratings of the number of absences over the course of the six-week period. Total number of absences for each student will be recorded.

Lastly, grades for the quarter will be collected from teachers. Teachers will enter final grades for the six week period for each student and will be coded A=5, B=4, C=3, D=2, and F=1. A sample of this measure is contained in Appendix B.

Student Engagement

Student engagement will be measured using a teacher rating scale related to student engagement. Teachers will complete this scale for each student following the six-week period. A sample of this measure is contained in Appendix C.

Student Behavior

Behavior will be measured at the classroom level using a teacher rating scale related to student behavior in class. Teachers will complete this scale for each student at the end of each week. A sample of this measure is contained in Appendix D.

Student Attitude and Practices Toward Homework

This will be measured at pre- and post-intervention by students with the use of "The Student Survey of Homework Practices" (SSHP), which "consists of 27 statements designed to examine students' attitudes and practices with regard to completion of homework assignments" (Gajria & Salend, 1995). The SSHP has been utilized or referenced in several articles concerning student homework practices and has been found to be reliable and valid (Gajria, & Salend, 1995; Epstein, Polloway, Foley, & Patton, 1993; Polloway, Foley, & Epstein, 1992). A sample of this measure is contained in Appendix E.

Threats to Validity and Reliability

A pre-existing survey instrument was selected in order to avoid threats to validity and reliability. The Student Survey of Homework Practices (SSHP), has been utilized or

referenced in several articles concerning student homework practices and has been found to be reliable and valid (Gajria, & Salend, 1995; Epstein, Polloway, Foley, & Patton, 1993; Polloway, Foley, & Epstein, 1992).

In this study, there may be threats to validity and reliability. Factors related to using self-reports and questionnaires may affect the results of the study. In addition, teacher ratings may be influenced by same source rater bias because teachers are the ones implementing the intervention and recording the effects. However, since this investigation is concerned with demonstrating the effectiveness of the intervention through the comparison of an intervention and control group, many of these threats are minimized.

Procedures

In this quasi-experimental design six English Composition classes will be randomly assigned to a control or treatment group. The control groups will be taught by the same teachers and in the same manner as the students in the treatment groups, including deadlines for homework throughout the research paper process. In addition, the treatment groups will have a parent involvement packet mailed home to them and an initial phone contact explaining the research paper process at the outset of the intervention. After this initial contact, parents of students who are experiencing problems in the class will receive follow-up phone calls every two weeks offering assistance and information (missing assignments, behavior, etc.). Also, all parents of students in the treatment groups will receive a weekly homework assignment sheet detailing the students' progress on assignments.

At pre- and post-intervention, students in both groups will complete the "Student Survey of Homework Practices" survey measuring student attitudes and practices toward homework. During the research paper process, teachers will record homework completion grades and student behavior on a weekly basis for students in both groups. At post-intervention, teachers will record completion rates of the final project, grades, attendance, and student engagement for all students. In order to ensure student anonymity, teachers will report student information designated only by class period and whether the student belongs to the control or treatment groups. Therefore, the researcher will never be able to attach names with data collected. Furthermore, all data will be aggregated at the classroom level so that all final comparisons will involve group comparisons, and as a result, not only will the researcher never know student names but also all comparisons will involve groups. This data will be analyzed using the SPSS computer program, including multivariate and univariate analysis for inter-group comparisons.

Data Analysis

The main analyses will be a between groups (intervention vs. control) multivariate analysis of variance (MANOVA). This procedure allows for comparisons of multiple dependent variables in one test. In this study, differences between the intervention and control groups on the following variables: homework completion over the six week study, completion of the final project, final grades, attendance, engagement, behavior, and student attitude toward homework (SSHP). Follow-up univariate analysis will be used to determine specific effects for each dependent variable. Fidelity of implementation will be analyzed by correlating levels of implementation with outcomes

in each classroom. Zero order correlation will be used to determine the relationships between implementation levels and outcomes.

Possible Limitations

There are possible limitations in this study. Using a sample size of approximately 150 students from one school will hinder the ability to generalize the results to a large population. Closely related to this is the demographic characteristics of the school being mostly White and contained all in one school building. Having already busy teachers call home and send assignment sheets home may prove to be too much for the teachers' resources of time and energy. Some families not having a phone in the house will limit the ability of the teacher to contact the parent initially and any necessary follow-up calls.

Chapter Three

The Design of the Study

The purpose of this quasi-experimental study was to investigate the effects of consistent school-home communication on high school English students' performance in school. In addition, observations of the teachers involved in the study and their roles in the process were recorded. The results of this study should help administrators, teachers, parents, and students to design better methods of working together in order to better support the educational lives of the children they share. This chapter discusses the design of this study and the methods and procedures that were followed during the course of the study and analysis of the data.

The Context

The School

This study took place at a medium-sized school district approximately 70 miles southwest of Chicago, Illinois. The district was a one building, high school district with a total student population of 1570. The student population was comprised of approximately 95 percent Caucasian, 3 percent Hispanic, and 2 percent African-American, Asian/Pacific Islander, and Native American. Standardized achievement scores were consistently at or slightly below state averages. The percentage of students categorized as low-income was 7.4 percent, far below the state average, while the dropout rate (4.9%) and chronic truancy rate (2.1%) for the district was approximately the same as the state averages. Students' attendance rate for the 2001-2002 school year was approximately 92 percent, which was below the state average of 94 percent.

Following several detailed discussions with the principal and the district superintendent, formal permission was granted for the implementation of the study. After receiving district approval, the necessary steps to obtain consent from the DePaul University Institutional Review Board were followed. Upon completing their review of the study, the board granted approval for the project via expedited review.

The researcher had been a teacher and administrator for the last five years in the building used in this study. His teaching experience in the building was outside of the chosen English department used in this study. Being at the school site allowed the researcher the opportunity to provide immediate feedback to the participating teachers. In addition, valuable informal information was gathered concerning procedures of the study from being able to interact with the teachers on a daily and weekly basis.

Participating Teachers

Out of the four English II teachers in the high school, three teachers met the requirements for the study of teaching two sections of English II. Involving three teachers who each taught two sections of the same class afforded the study the opportunity to limit the number of teacher variables affecting the study by assigning one class to the treatment group and one class to the control group. The researcher met with the three teachers individually to explain the study and their level of involvement; all three teachers agreed to participate. The two male and one female teacher had teaching experience ranging from their second year, ninth year, and twenty-sixth year.

Method

The major goal of this study was to identify specific practices that would benefit students. Based on the research reviewed in Chapter Two, communication with the home

environment of students is beneficial to student achievement in school. In an attempt to test this theory, a quasi-experimental design was chosen to determine if specific practices could be developed and implemented involving increased teacher-initiated communication with students and their primary caregiver and then whether these practices could be measured to show their effect on student-oriented factors. This research design was used to examine whether a cause and effect relationship could be determined involving such practices on high school students, parents, and teachers. This quasi-experimental study utilized treatment and control groups to limit variables that could affect the study in order to establish a cause and effect relationship.

Another possible component of a quasi-experimental design that was used in this study was randomization of subjects. Instead of randomly assigning individual students to a certain group, whole classes or sections were assigned to either the treatment or control group. This was done in order to limit the intrusive nature of a research study and to maintain the individual organization of each classroom. In addition, randomization helps to ensure that all of the classes had an equal chance of being assigned to a group, and that any differences among the groups after the study was a result of the intervention. Since each teacher taught two sections of the same English II class, one section was randomly assigned to the treatment group and the other section was assigned to the control group.

An additional aspect of a quasi-experimental design used in this study was the pretest-posttest control group design. As a result of randomly assigning classes to either the control or treatment group, both groups should be similar in the beginning of the study, and then any differences noted at the conclusion of the study can be attributed to

the intervention. In this study, both control and treatment groups were measured at the beginning of the study by a pretest survey and at the conclusion of the study by a posttest survey. However, the treatment group received an increased regular effort by the teacher to communicate with the home environment of each student. The control group received the same level of communication from each teacher that they had always provided their classes in the past.

Treatment

The intervention in this study was based on the previously reviewed research that reflects that parent involvement through communication between the school and the home is beneficial to student success in school. Students in the treatment group had a parent involvement packet mailed home to them at the beginning of the six-week period explaining how they could help their child with an English Composition research paper. This parent involvement packet was a questioning system for parents to ask their children based on "The Big Six Approach to Information Problem-Solving" developed by Eisenberg and Berkowitz (1996). In addition, Teacher Two and Teacher Three mailed home a syllabus with the parent involvement packet. This syllabus contained assignments and due dates for the entire project. Each teacher then contacted the parents of the students in the treatment group via telephone to discuss the project and strategies that could assist the students in completing the assignments. This initial phone contact was to be followed by follow-up contacts made every two weeks to parents of students in the treatment group who were missing assignments or who were having other problems in class. Each of these phone contacts was recorded in a phone log.

Students in the control group were given the research paper assignment and were taught by the same teachers and in the same manner as their counterparts in the treatment group with the exception of the intervention.

Subjects

The six English II Composition classes that participated in the study included 146 students. All of the students in each of the classes were informed of the study by the researcher and then were given the opportunity to read the child assent form (see Appendix A) and ask any questions. Of the students who returned their child assent forms and agreed to participate in the study, those students were then asked to take home a parental/guardian permission form (see Appendix B), have it signed by their parent or guardian, and return it to the teacher. Of the students who returned permission forms, 143 students and their parents agreed to participate in the study. Out of the 143 students who agreed to participate, 57 were males and 86 were females. However, during the study, complete data was gathered on a total of 121 students. Since the data in this study were collected anonymously, a gender breakdown is not possible for the 121 students with complete data.

Measures

The Student Survey of Homework Practices

The SSHP questionnaire (see Appendix C) used as the pretest and posttest was developed by Gajria and Salend (1995), and was based on the "Homework Problem Checklist" developed by Anesko, Schoiock, Ramirez, and Levine (1987). The SSHP has been utilized or referenced in several articles concerning student homework practices and

has been found to be reliable and valid (Gajria, & Salend, 1995; Epstein, Polloway, Foley, & Patton, 1993; Polloway, Foley, & Epstein, 1992). The SSHP questionnaire consists of 27 statements developed to analyze students' attitudes and practices concerning completion of homework assignments. Some examples of items include "I find it very difficult to stick to my homework schedule," "I start my homework before making a list of homework assignments," and "Being with friends is more important to me than doing my homework." Students in the current investigation (n = 121) were asked to respond anonymously to statements using a Likert-type scale (1 = never, 2 = at times, 3 = often, and 4 = very often). Students' responses were averaged for the pretest survey (X = 2.23, SD = .59). In addition, students' responses were averaged for the posttest survey (X = 2.19, SD = .56).

Completion of Final Project

This teacher-reported measure examined whether or not the students completed the research paper project. Teachers were asked to check "yes" or "no" on the form if students handed-in a finished project. These data were then coded accordingly (2 = yes, and 1 = no). Mean student completion rates for this measure were then calculated (X = 1.87, SD = .34) (see Appendix D).

Attendance

Attendance data were reported by teachers and were based on the number of days that students were absent, whether excused or unexcused, from a specific class period over the six-week period. The minimum number of absences was zero and the maximum possible was 30 class periods. Each teacher reported the number of absences per student

in each class (n =121) anonymously and total absences were averaged ($X = 2.35$, $SD = 3.20$) (see Appendix D).

Grades

At the end of the study, teachers anonymously reported students' grades on the research paper project per class. Grades (see Appendix D) were scored on a scale ranging from 5 to 1 (5 = A, 4 = B, 3 = C, 2 = D, and 1 = F). Grades for students (n = 121) were averaged ($X = 3.31$, $SD = 1.40$).

Homework Completion Grades

This measure (see Appendix E) asked teachers to rate students on their level of weekly homework completion. Teachers were asked to assign letter grades according to the number of homework assignments that each student completed (A = everything turned in, B = missing one assignment, C = missing two assignments, D = missing three assignments, and F = missing four or more assignments). The instrument was scored similar to overall grades on the project (5 = A, 4 = B, 3 = C, 2 = D, and 1 = F).

However, there was a problem with the collection of data from the teachers for this variable. Out of the entire six-week project, Teacher One reported six weeks of complete data, Teacher Two reported five weeks of data, and Teacher Three reported only four weeks of data. In addition, it is unclear if all of the teachers understood that this variable was to be cumulative throughout the project. At least one teacher (Teacher Two) reported data on a weekly basis, which would be affected by how many assignments the class had each week, instead of how many the students had not turned in all together. Because of these problems the "homework completion grade" data has been rendered unusable for this study.

Student Engagement

This measure (see Appendix F) asked teachers to rate students' level of engagement over the course of the six-week project by answering three questions. These questions included "In my class this student seems very tuned in," "This student comes to class unprepared," and "This student does more than required." The two positively phrased questions were scored (3 = very true, 2 = true, and 1 = not true), while the second question was reverse scored (1 = very true, 2 = true, and 3 = not true). The mean and standard deviation scores for the students' engagement were $X = 5.97$ and $SD = 1.92$.

Student Behavior

This instrument (see Appendix G) asked teachers to rate students' behavior on a weekly basis. Teachers were asked to answer three questions including "In my class this student misbehaved this week," " This student's behavior distracts others," and "This student required disciplinary action this week." These questions were scored 3 = very true, 2 = true, and 1 = not true. However, as data were collected, it was evident that all three teachers were not differentiating scores among students in the manner the researcher expected. Teacher One reported that there were not any misbehaviors in any of the classes for the entire six-week period, except for two students in week three. Teacher Two differentiated scores between students only in the treatment group. Teacher Three reported no disciplinary problems from any students during the entire six-week period.

As reported by the teachers, there were multiple reasons for this instrument yielding the amount and type of data that it did. Teacher One reported it was because of the strong disciplinary policies of the school and in the classroom, as well as, the high

completion rate on the research paper. Supporting these specific reasons, Teacher One stated:

> I am a good disciplinarian—perhaps legendary in this school; this school provides all teachers, whether preemptive as I am or not, with fine support and redress for misbehaving students; and so, I either get civility from students, or they are gone. Additionally, I had an extremely high success rate on term paper completions in contrast to other years, so most students were 'on task' and 'doing the student thing' appropriately. A class mostly on task discourages rare, exceptional misbehavior.

Teacher Three agreed with Teacher One that engaged students caused less disciplinary problems and added that the time of the year which the study took place affected the amount of problems in the classroom. Teacher Three stated that "discipline issues were mostly settled by the time we worked on the research reports and students were kept fairly active and thus did not have the time to get in trouble." Essentially demonstrating what these two teachers believed, Teacher Two reported the impact that negative behavior and lack of student engagement can have on two classes taught by the same teacher when stating:

> The control group was a great group of students. They were very focused on the assignment and had little difficulty staying on task in class. The treatment group was more of a discipline problem. I had a few students who just refused to do the assignment and were behavior problems. As a group, they were less focused and disruptive behavior was common.

Procedures

Before the teachers began collecting data, the researcher met with each teacher individually to explain in greater detail each instrument to be used in the study and to outline the chronological sequence of implementation and data collection. Since all of the data that would be collected would be anonymously gathered from the students, each form had an "A" or "B" on the top right-hand corner of the form and a line to fill in the class period. The teachers were told to circle the letter that represented the class: "A" represented the treatment group and "B" represented the control group and fill in the specific class period. The teachers were told to lay each anonymous form next to the list of names in their grade book in order to be sure that they were recording information for every student in their classes. Teacher One was able to begin the study two weeks before Teacher Two and Three. In addition, Teacher One created a script of questions to discuss with each parent, which may have been shared with the other two teachers.

Following this meeting with the individual teachers, parent involvement packets were mailed home to participating parents of students in the treatment group. These packets contained an introductory letter, a parent involvement questioning system, and Teacher Two and Teacher Three included a syllabus for the research paper. The parent involvement questioning system was actually "The Big Six Skills and Assignments – Key Questions," and "The Big Six Homework Consultation" method created by Eisenberg and Berkowitz (1996).

When the respective teacher was ready to begin the research paper project in their classes, the researcher delivered the pretest surveys to the teacher, had the participating students fill them out, and the teachers returned them to the researcher. Students who

were absent on that day filled out the survey when they returned to class. In addition, during the first week or as soon as possible, teachers made initial phone contacts with parents of students in the treatment groups. The teachers made these phone calls on their own time and were not given any free time during the school day to complete the calls. During these phone calls, teachers notified parents that the research paper project was beginning, described the process, answered any questions, and told the parents that they should expect a weekly missing assignment sheet coming home at the end of each week with their son or daughter. The parents were asked to please look at the sheet in order to read any comments or missing assignment information from the teacher, sign it, and have their son or daughter return it to the teacher the following day. The teachers collected and returned the sheets to the researcher. The total number of phone contact attempts is recorded because some of the phone calls reached a sibling, a grandparent, or an answering machine, which would have had some opportunity in reaching the parents of the student. In addition, each teacher was to assign a grade to each student in the control and treatment groups on the "Teacher Rating of Homework Completion Grades" sheet, and answer the three questions concerning behavior for students in both groups on the "Teacher Rating of Student Behavior" sheet.

At the end of the second week and every other week thereafter, the teachers were to make their follow-up calls to parents of the students in the treatment group who were experiencing problems in class, whether those problems were academic or behavioral. These phone contacts were recorded in the teachers' phone logs.

At the end of the project, the teachers were to complete the above-mentioned forms and procedures along with answering the three questions on the "Teacher Rating of

Engagement" form and supplying the necessary data on the "List of Student Grades, Attendance, and Project Completion" form for every student in both groups. In addition, once the students completed and turned in their research paper projects, the researcher delivered the posttest surveys to the teachers. The teachers had the students in both classes complete the survey in class; return it to the teacher, and the teacher returned the surveys to the researcher.

Chapter Four

Results

In this chapter, the analyses of the complete data that were collected will be presented. The analyses begin with an examination of the means and standard deviations of the individual questions from the Student Survey of Homework Practices (SSHP) pre- and post-intervention and the academic-related variables broken down by control and treatment groups. Based on these findings, the SSHP and the academic-related variables will be analyzed further by teacher. Following these analyses, differences in means of individual questions from the SSHP between the pre- and post-intervention are examined. These results will then be further broken down by teacher. The final analyses will examine teachers' fidelity of implementing the prescribed intervention.

Pre- and Post-Intervention Analyses of SSHP by Control and Treatment Group

Means and standard deviations on all of the items on the SSHP both pre- and post-intervention were compared to determine if there were differences between the control and treatment groups on individual questions (see Table 1). None of these items were statistically significant at the $p < .05$ level. However, the analyses on the post-test items yielded two questions that reached significance at the $p < .05$ level, (see Table 2). Question 21, $p < .01$, and question 22, $p < .03$, revealed a significant difference between groups following the intervention in the area of homework planning. Contrary to expectations, students in the treatment group reported a significant decrease in the amount of homework planning they did as suggested by their more negative responses about starting their homework without first making a list of homework assignments, $M =$

Table 1
Descriptive Statistics of Pre-test for Control and Treatment Groups of Student Survey of Homework Practices

#	Survey Question	Control Pre-test Mean	Control Pre-test SD	Treatment Pre-test Mean	Treatment Pre-test SD	F	*p*
1.	After working for 30 minutes on my homework, I lose interest and quit or take a long break.	2.48	.73	2.57	.89	.36	.55
2.	I get easily distracted when I am doing my homework.	2.72	.90	2.87	.85	.98	.33
3.	It takes me a long time to begin my homework.	2.48	.91	2.54	.93	.12	.74
4.	I feel unsure about which homework assignment to do first.	1.80	.90	1.81	.80	.00	.95
5.	It takes me a very long time to do my homework, so I get tired and cannot finish my work.	2.02	.91	2.10	.88	.24	.63
6.	I find it very difficult to stick to my homework schedule.	2.50	1.1	2.56	.98	.09	.76
7.	I must be reminded to start my homework.	1.65	.90	1.73	1.0	.21	.65
8.	I need someone to do my homework with me.	1.42	.62	1.30	.64	1.0	.31
9.	I feel teachers are unfair and give too much homework.	2.40	.96	2.63	1.1	1.6	.20
10.	I feel homework is not important because you do not get graded on it.	1.77	.81	2.08	.97	3.7	.06
11.	I hate doing homework and put off doing it until the last minute.	2.50	.87	2.76	.95	2.5	.11
12.	I go to school without completing my homework.	2.23	.91	2.43	.93	1.4	.24
13.	I complain about homework.	2.30	.87	2.48	1.0	1.0	.31
14.	I forget what homework was assigned.	2.00	.82	2.14	1.1	.67	.42
15.	I make excuses for not doing my homework.	1.67	.80	2.00	1.1	3.8	.05
16.	Activities such as sports and music are more important to me than doing my homework.	2.50	1.0	2.29	1.1	1.2	.28
17.	Being with friends is more important to me than doing my homework.	2.67	1.1	2.65	1.1	.01	.93
18.	I misunderstand the assignments and due dates.	1.82	.73	1.83	.83	.00	.95
19.	I forget to take home materials I need to complete my homework.	2.35	.76	2.41	.96	.16	.69
20.	I forget to bring my homework assignments back to class.	1.75	.73	1.78	.85	.04	.85
21.	I start my homework before making a list of homework assignments.	2.45	1.1	2.62	1.1	.73	.40
22.	I start my homework without spending a few minutes to plan my study time.	3.02	1.0	3.08	.92	.13	.72
23.	I have problems completing extra long assignments such as projects and lab reports because I do not divide the work into smaller parts and work on it a little at a time.	2.52	1.0	2.71	1.0	1.2	.29
24.	When I do not understand an assignment or find it too hard, I stop working on it.	2.47	.95	2.57	.96	.37	.54
25.	I start my homework with the subjects I like and then find no time or feel too tired to complete the assignment in other subjects.	2.15	.95	2.40	1.1	1.8	.18
26.	I have difficulty estimating the time needed to complete my homework, so my homework is incomplete.	1.85	.82	2.00	.93	.89	.35
27.	After I finish my homework, I do not check to see that I have completed all my assignments.	2.17	.99	2.37	1.0	1.2	.28

Table 2
Descriptive Statistics of Post-test for Control and Treatment Groups of Student Survey of Homework Practices

#	Survey Question	Control Post-test Mean	SD	Treatment Post-test Mean	SD	F	*p*
1.	After working for 30 minutes on my homework, I lose interest and quit or take a long break.	2.48	.85	2.47	.84	.01	.92
2.	I get easily distracted when I am doing my homework.	2.85	.84	2.69	.79	1.2	.27
3.	It takes me a long time to begin my homework.	2.47	.81	2.42	.91	.08	.77
4.	I feel unsure about which homework assignment to do first.	1.90	.92	1.72	.79	1.4	.24
5.	It takes me a very long time to do my homework, so I get tired and cannot finish my work.	2.18	.83	2.02	.95	1.1	.30
6.	I find it very difficult to stick to my homework schedule.	2.45	1.1	2.42	.85	.03	.87
7.	I must be reminded to start my homework.	1.53	.81	1.75	.96	1.8	.18
8.	I need someone to do my homework with me.	1.43	.67	1.47	.87	.06	.80
9.	I feel teachers are unfair and give too much homework.	2.47	.87	2.41	.90	.14	.71
10.	I feel homework is not important because you do not get graded on it.	1.97	.92	2.02	.88	.09	.76
11.	I hate doing homework and put off doing it until the last minute.	2.62	.90	2.66	.95	.06	.81
12.	I go to school without completing my homework.	2.37	.80	2.30	.87	.22	.64
13.	I complain about homework.	2.45	.87	2.37	.92	.22	.64
14.	I forget what homework was assigned.	2.03	.78	1.98	.88	.11	.75
15.	I make excuses for not doing my homework.	1.78	.74	1.86	.96	.24	.62
16.	Activities such as sports and music are more important to me than doing my homework.	2.40	.96	2.34	1.1	.09	.76
17.	Being with friends is more important to me than doing my homework.	2.58	1.0	2.59	1.0	.00	.96
18.	I misunderstand the assignments and due dates.	1.82	.68	1.80	.88	.02	.89
19.	I forget to take home materials I need to complete my homework.	2.23	.70	2.22	.98	.01	.93
20.	I forget to bring my homework assignments back to class.	1.68	.77	1.84	.86	1.2	.28
21.	I start my homework before making a list of homework assignments.	2.63	1.1	3.11	1.0	6.4	.01
22.	I start my homework without spending a few minutes to plan my study time.	2.98	1.0	3.34	.82	4.7	.03
23.	I have problems completing extra long assignments such as projects and lab reports because I do not divide the work into smaller parts and work on it a little at a time.	2.40	1.0	2.38	1.0	.02	.89
24.	When I do not understand an assignment or find it too hard, I stop working on it.	2.55	.83	2.48	.94	.17	.68
25.	I start my homework with the subjects I like and then find no time or feel too tired to complete the assignment in other subjects.	2.30	.94	2.27	.98	.04	.84
26.	I have difficulty estimating the time needed to complete my homework, so my homework is incomplete.	2.05	.93	2.03	.91	.01	.91
27.	After I finish my homework, I do not check to see that I have completed all my assignments.	2.10	1.1	2.33	1.0	1.4	.23

3.11, $p < .01$, and without spending a few minutes planning their study time, $M = 3.34$, $p < .03$.

Academic-Related Variable Analyses by Control and Treatment Group

Separate ANOVA's were conducted to determine whether or not there were differences between students in the treatment and control groups on each academic-related variable. The comparison for final grades on the project was not significant $F = .27$ (1, 119) ns. The comparison for project completion was not significant $F = 1.4$ (1, 119) ns. The comparison for total number of days absent was not significant $F = .43$ (1, 119) ns. The comparison for teacher-rated engagement was not significant $F = .72$ (1, 119) ns. The comparison for teacher-rated student behavior was not performed because of lack of variance. Table 3 contains means and standard deviations for all of the academic measures.

Table 3
Descriptive Statistics of Academic-Related Variables

	Control		Treatment			
	Mean	SD	Mean	SD	F	*p*
Final Grade on Project	3.2	1.4	3.4	1.4	.27	.60
Project Completion	1.8	.38	1.9	.30	1.4	.24
Total Days Absent	2.5	3.2	2.2	3.2	.43	.51
Teacher Rated Engagement	6.1	1.8	5.8	2.0	.72	.40
Teacher Rated Student Behavior	1.0	---	1.1	---	---	---

ns = not significant
* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Pre- and Post-Intervention Analyses of SSHP by Control and Treatment and by Teacher

Because differences may exist by teacher, a second analysis was performed on each question for the pre-test of the SSHP. Means and standard deviations were broken down by individual teacher in order to determine if there were differences between the control and treatment groups taught by the same teacher (see Table 4). On the pre-test for Teacher One, two questions were significant (Question 10 and 11). The treatment group for Teacher One felt stronger about homework not being important because it is not graded than the control group $F = 4.5$ (1, 37) $p < .04$. In addition, analysis of Question 11 on the pre-test revealed that students in the treatment group reported more procrastination while doing homework than students in the control group $F = 5.5$ (1, 37) $p < .02$. All other comparisons for the individual teachers on the pre-test were not significant.

Similar analyses were performed on the post-test data and are shown in Table 5. For Teacher One, students in the control group reported having significantly more trouble forgetting to take home materials to do their homework than did students in the treatment group following the intervention $F = 4.1$ (1, 35) $p < .05$. For Teacher Two, students in the control group reported significantly more procrastination while doing their homework than did students in the treatment group following the intervention $F = 4.3$ (1, 44) $p < .05$. However, for Teacher Three, students in the treatment group reported complaining about homework significantly more often following the intervention than students in the control group $F = 4.2$ (1, 39) $p < .05$. All other comparisons concerning the SSHP were not significant.

Table 4
Descriptive Statistics of Pre-Test for Control and Treatment Groups of Student Survey of Homework Practices by Teacher

	Teacher One			Teacher Two			Teacher Three		
	Cntrl	Treat		Cntrl	Treat		Cntrl	Treat	
# Survey Question	M (SD)	M (SD)	F	M (SD)	M (SD)	F	M (SD)	M (SD)	F
1. Work 30 minutes, lose interest, and quit	2.28 (.67)	2.43 (.93)	ns	2.60 (.65)	2.70 (.80)	ns	2.53 (.87)	2.59 (.96)	ns
2. Easily distracted when doing homework	2.56 (.78)	2.71 (.90)	ns	2.84 (.94)	2.65 (.75)	ns	2.71 (.99)	3.23 (.81)	ns
3. It takes me a long time to begin my homework	2.17 (.86)	2.33 (.86)	ns	2.56 (.96)	2.60 (.82)	ns	2.71 (.85)	2.68 (1.1)	ns
4. Unsure about homework assignment to do first	1.78 (.81)	1.95 (.92)	ns	1.72 (.89)	1.75 (.79)	ns	1.94 (1.0)	1.73 (.70)	ns
5. Takes long time to do homework, get tired and quit	1.94 (.94)	1.95 (.92)	ns	1.88 (.73)	2.00 (.80)	ns	2.29 (1.1)	2.32 (.89)	ns
6. Find it difficult to stick to homework schedule	2.39 (.92)	2.62 (.81)	ns	2.64 (1.1)	2.50 (.89)	ns	2.41 (1.1)	2.55 (1.2)	ns
7. I must be reminded to start my homework	1.67 (.91)	1.67 (1.1)	ns	1.64 (.70)	2.00 (1.1)	ns	1.65 (1.2)	1.55 (.86)	ns
8. I need someone to do my homework with me	1.33 (.49)	1.29 (.64)	ns	1.44 (.51)	1.30 (.73)	ns	1.47 (.87)	1.32 (.57)	ns
9. I feel teachers are unfair and give too much homework	2.06 (.73)	2.43 (1.2)	ns	2.40 (1.0)	2.50 (1.1)	ns	2.76 (1.0)	2.95 (.95)	ns
10. Homework is not important because it is not graded	1.50 (.62)	2.14 (1.2)	4.5*	1.96 (.79)	2.30 (.87)	ns	1.76 (.97)	1.82 (.85)	ns
11. I hate doing homework and put off doing it	2.11 (.76)	2.76 (.94)	5.5*	2.64 (.86)	2.75 (.85)	ns	2.71 (.92)	2.77 (1.1)	ns
12. I go to school without completing my homework	2.22 (1.0)	2.33 (.73)	ns	2.12 (.73)	2.50 (1.1)	ns	2.41 (1.1)	2.45 (.96)	ns
13. I complain about homework	2.11 (.68)	2.19 (.93)	ns	2.32 (1.0)	2.35 (1.1)	ns	2.47 (.80)	2.86 (.99)	ns
14. I forget what homework was assigned	1.89 (.90)	2.00 (1.1)	ns	2.16 (.80)	2.35 (.93)	ns	1.88 (.78)	2.09 (1.2)	ns
15. I make excuses for not doing my homework	1.50 (.51)	1.95 (.92)	ns	1.68 (.80)	2.20 (1.3)	ns	1.82 (1.0)	1.86 (.94)	ns

Table 4 cont'd
Descriptive Statistics of Pre-Test for Control and Treatment Groups of Student Survey of Homework Practices by Teacher

# Survey Question	Teacher One Cntrl M (SD)	Teacher One Treat M (SD)	F	Teacher Two Cntrl M (SD)	Teacher Two Treat M (SD)	F	Teacher Three Cntrl M (SD)	Teacher Three Treat M (SD)	F
16. Sports and music are more important than homework	2.22 (1.0)	1.86 (.96)	ns	2.56 (1.0)	2.55 (1.4)	ns	2.71 (1.0)	2.45 (1.0)	ns
17. Friends are more important than doing homework	2.11 (1.0)	2.05 (.92)	ns	2.88 (1.1)	3.00 (1.0)	ns	2.94 (1.0)	2.91 (.97)	ns
18. I misunderstand the assignments and due dates	1.72 (.58)	1.81 (.81)	ns	1.68 (.63)	1.85 (.81)	ns	2.12 (.93)	1.82 (.91)	ns
19. I forget to take home materials to do homework	2.33 (.84)	2.19 (.87)	ns	2.24 (.60)	2.55 (.95)	ns	2.53 (.87)	2.50 (1.1)	ns
20. I forget to bring assignments back to class	1.78 (.88)	1.62 (.81)	ns	1.76 (.52)	1.90 (.72)	ns	1.71 (.85)	1.82 (1.0)	ns
21. I start my homework before making a list	1.83 (.99)	2.33 (1.1)	ns	2.72 (.94)	2.50 (1.1)	ns	2.71 (1.1)	3.00 (1.1)	ns
22. I start my homework without planning study time	2.56 (1.0)	3.05 (.81)	ns	3.24 (1.0)	3.05 (1.0)	ns	3.18 (.95)	3.14 (.99)	ns
23. I have problems completing extra long assignments	2.22 (.81)	2.48 (.87)	ns	2.76 (1.1)	2.75 (1.2)	ns	2.47 (1.0)	2.91 (1.0)	ns
24. When I don't understand an assignment, I stop working	2.06 (.94)	2.38 (.97)	ns	2.72 (.84)	2.70 (.92)	ns	2.53 (1.0)	2.64 (1.0)	ns
25. I start with subjects I like, but don't complete others	2.17 (.86)	2.14 (.85)	ns	2.16 (1.0)	2.35 (1.1)	ns	2.12 (.99)	2.68 (1.2)	ns
26. Difficulty estimating time for homework, so incomplete	1.89 (.83)	1.86 (.79)	ns	1.80 (.65)	2.20 (1.0)	ns	1.88 (1.1)	1.95 (1.0)	ns
27. I do not check the completion of all assignments	2.22 (1.0)	2.38 (.97)	ns	2.16 (.90)	2.40 (1.0)	ns	2.12 (1.2)	2.32 (1.1)	ns

ns = not significant
* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Table 5
Descriptive Statistics of Post-Test for Control and Treatment Groups of Student Survey of Homework Practices by Teacher

	Teacher One			Teacher Two			Teacher Three		
	Cntrl	Treat		Cntrl	Treat		Cntrl	Treat	
# Survey Question	M (SD)	M (SD)	F	M (SD)	M (SD)	F	M (SD)	M (SD)	F
1. Work 30 minutes, lose interest, and quit	2.41 (1.0)	2.25 (.72)	ns	2.54 (.71)	2.35 (.75)	ns	2.47 (.94)	2.75 (.94)	ns
2. Easily distracted when doing homework	2.71 (.85)	2.50 (.69)	ns	3.00 (.80)	2.55 (.76)	ns	2.76 (.90)	2.96 (.86)	ns
3. It takes me a long time to begin my homework	2.47 (.87)	2.25 (1.0)	ns	2.38 (.80)	2.40 (.75)	ns	2.59 (.80)	2.58 (.93)	ns
4. Unsure about homework assignment to do first	1.88 (.78)	1.60 (.75)	ns	1.85 (.93)	1.60 (.75)	ns	2.00 (1.1)	1.92 (.83)	ns
5. Takes long time to do homework, get tired and quit	2.00 (.87)	1.75 (.85)	ns	2.27 (.83)	1.90 (.97)	ns	2.24 (.83)	2.33 (.96)	ns
6. Find it difficult to stick to homework schedule	2.41 (1.1)	2.55 (.89)	ns	2.62 (1.1)	2.35 (.93)	ns	2.24 (1.0)	2.38 (.77)	ns
7. I must be reminded to start my homework	1.65 (.86)	1.55 (.89)	ns	1.50 (.76)	1.75 (1.0)	ns	1.47 (.87)	1.92 (.97)	ns
8. I need someone to do my homework with me	1.41 (.51)	1.45 (.95)	ns	1.38 (.50)	1.65 (1.0)	ns	1.53 (1.0)	1.33 (.64)	ns
9. I feel teachers are unfair and give too much homework	2.18 (.73)	2.30 (.98)	ns	2.50 (.99)	2.15 (.81)	ns	2.71 (.77)	2.71 (.86)	ns
10. Homework is not important because it is not graded	1.82 (.73)	2.05 (.83)	ns	2.15 (1.0)	1.85 (.88)	ns	1.82 (.88)	2.13 (.95)	ns
11. I hate doing homework and put off doing it	2.35 (.79)	2.60 (1.0)	ns	2.92 (.98)	2.35 (.88)	4.3*	2.41 (.80)	2.96 (.91)	ns
12. I go to school without completing my homework	2.41 (.87)	2.30 (.80)	ns	2.38 (.80)	2.35 (.93)	ns	2.29 (.77)	2.25 (.90)	ns
13. I complain about homework	2.47 (.87)	2.05 (.95)	ns	2.50 (1.0)	2.20 (.95)	ns	2.35 (.61)	2.79 (.72)	4.2*
14. I forget what homework was assigned	2.29 (.92)	1.90 (.79)	ns	2.04 (.72)	2.05 (.69)	ns	1.76 (.66)	2.00 (1.1)	ns
15. I make excuses for not doing my homework	1.59 (.62)	1.50 (.76)	ns	1.88 (.77)	1.90 (1.0)	ns	1.82 (.81)	2.13 (.99)	ns

Table 5 cont'd
Descriptive Statistics of Post-Test for Control and Treatment Groups of Student Survey of Homework Practices by Teacher

# Survey Question	Teacher One Cntrl M (SD)	Teacher One Treat M (SD)	F	Teacher Two Cntrl M (SD)	Teacher Two Treat M (SD)	F	Teacher Three Cntrl M (SD)	Teacher Three Treat M (SD)	F
16. Sports and music are more important than homework	2.41 (1.1)	2.20 (.89)	ns	2.65 (.94)	2.25 (1.2)	ns	2.00 (.79)	2.54 (1.1)	ns
17. Friends are more important than doing homework	2.29 (1.0)	2.25 (.97)	ns	2.85 (.97)	2.50 (1.1)	ns	2.47 (1.1)	2.96 (1.0)	ns
18. I misunderstand the assignments and due dates	1.82 (.53)	1.65 (.75)	ns	1.81 (.69)	1.70 (.87)	ns	1.82 (.81)	2.00 (.98)	ns
19. I forget to take home materials to do homework	2.41 (.87)	1.85 (.81)	4.1*	2.15 (.68)	2.25 (.97)	ns	2.18 (.53)	2.50 (1.1)	ns
20. I forget to bring assignments back to school	1.82 (.95)	1.60 (.60)	ns	1.62 (.57)	1.80 (.89)	ns	1.65 (.86)	2.08 (.97)	ns
21. I start my homework before making a list	2.47 (1.1)	2.85 (1.1)	ns	2.73 (1.1)	3.15 (.93)	ns	2.65 (1.0)	3.29 (1.0)	ns
22. I start my homework without planning study time	2.82 (1.1)	3.40 (.68)	ns	3.08 (.98)	3.20 (1.1)	ns	3.00 (1.0)	3.42 (.72)	ns
23. I have problems completing extra long assignments	2.29 (.99)	2.30 (1.1)	ns	2.50 (1.0)	2.40 (1.0)	ns	2.35 (1.0)	2.42 (1.0)	ns
24. When I don't understand an assignment, I stop working	2.41 (.87)	2.40 (.82)	ns	2.58 (.86)	2.55 (.89)	ns	2.65 (.79)	2.50 (1.1)	ns
25. I start with subjects I like, but don't complete others	1.94 (.97)	2.00 (.73)	ns	2.58 (.95)	2.40 (1.0)	ns	2.24 (.83)	2.38 (1.1)	ns
26. Difficulty estimating time for homework, so incomplete	1.82 (.88)	1.85 (.81)	ns	2.15 (.83)	1.95 (.83)	ns	2.12 (1.1)	2.25 (1.0)	ns
27. I do not check the completion of all assignments	2.18 (1.2)	2.40 (.88)	ns	2.12 (1.1)	2.20 (1.1)	ns	2.00 (1.1)	2.38 (1.1)	ns

ns = not significant
* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Academic-Related Variable Analyses by Control and Treatment Group and by Teacher

To examine differences in academic outcomes for each teacher, comparisons for each teacher were conducted separately (see Table 6). Teacher Two was the only teacher for whom significant differences between the control and treatment groups were found, and these differences were all in favor of the control group. Control group students in Teacher Two's classes earned significantly higher grades than did students in the treatment group $F = 6.7\ (1, 45)\ p < .01$. The control group for Teacher Two had a final grade mean of 3.88 as compared to the treatment group's final grade mean of 3.14 on a scale of A = 5, B = 4, C = 3, etc. In addition, control students in Teacher Two's classes also completed and turned in significantly more research paper projects than treatment group students in these same classes, $F = 4.1\ (1, 45)\ p < .05$. In fact, every student who participated in the study in Teacher Two's control group turned in a final research paper project. Teacher Two also rated control group students significantly higher on total engagement concerning the project than treatment group students $F = 5.6\ (1, 45)\ p < .02$. All other comparisons were not significant.

Pre- and Post-Intervention Attitude Trend Analyses by Control and Treatment Group

Since these analyses of the means did not result in a large number of questions on the SSHP showing significant differences between the control and treatment groups, a further analysis of the means between the control and treatment groups was needed. When looking at the data on the means, it is important to remember that the higher the mean for each question and group, the worse the students' attitude was toward that specific area of homework. As stated previously, even though many of the questions

Table 6
Descriptive Statistics of Post-Intervention Academic-Related Variables by Teacher

	Teacher One			Teacher Two			Teacher Three		
	Cntrl	Treat		Cntrl	Treat		Cntrl	Treat	
	M (SD)	M (SD)	F	M (SD)	M (SD)	F	M (SD)	M (SD)	F
Final Grade on Project	2.82 (1.8)	3.38 (1.4)	ns	3.88 (.65)	3.14 (1.3)	6.7*	2.87 (1.5)	3.37 (1.6)	ns
Project Completion	1.71 (.47)	1.90 (.30)	ns	2.00 (.00)	1.86 (.36)	4.1*	1.77 (.43)	1.93 (.27)	ns
Total Days Absent	3.47 (3.3)	2.48 (3.7)	ns	1.27 (1.5)	2.19 (2.8)	ns	2.97 (4.6)	1.85 (3.0)	ns
Teacher Rated Engagement	6.18 (2.6)	5.67 (2.2)	ns	6.96 (.92)	5.86 (2.2)	5.6*	5.13 (1.7)	5.63 (1.7)	ns
Teacher Rated Student Behavior	1.00	1.00	ns	1.00	1.19	ns	1.00	1.00	ns

ns = not significant
* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

were not significant, a practical difference was noted when examining trends among the differences in the means. Examining the means of the overall treatment and control groups at the pre-intervention stage of the study revealed that the treatment group had a slightly worse attitude toward homework ($M = 2.32$) than did the control group ($M = 2.21$) indicating that the treatment group had a slightly higher overall mean at the pre-intervention stage. Then looking at the post-intervention within groups, the control group's attitude slightly worsened ($M = 2.25$), while the treatment group's attitude toward homework improved slightly ($M = 2.27$) (see Table 7). While looking at the means of the 27 items from the survey, the control group's attitude remained the same or worsened on 17 items (63% of the questions) from pre- to post-intervention. In contrast, students' attitude in the treatment group worsened on only 7 items (26% of the questions) from pre- to post-intervention (see Table 7).

In order to be consistent when comparing the overall groups and the separate teacher groups, the data were examined for a baseline difference between the groups. It was decided that questions with a mean difference of .20 or higher between the pre- and post-intervention within each group demonstrated a practical difference and tended to highlight possible trends in the data. The responses by students in the overall control group revealed that by the end of the study, students felt increasingly stronger that homework was not important (+ .20), and they had more difficulty estimating the time needed to complete their homework so they did not finish it (+ .20). Responses by students in the overall treatment group at post-intervention indicated that students'

Table 7

Descriptive Statistics of Attitude Trends on the Student Survey of Homework Practices

	Control Group				Treatment Group			
	Average of All Means		# of items same/ worse	% of items same/worse	Average of All Means		# of items same/ worse	% of items same/worse
	Pre	Post			Pre	Post		
Overall Total	2.21	2.25	17	63%	2.32	2.27	7	26%
Teacher One	2.02	2.18	23	85%	2.18	2.12	7	26%
Teacher Two	2.27	2.32	14	52%	2.38	2.21	4	15%
Teacher Three	2.32	2.21	8	30%	2.40	2.44	17	63%

Total number of items = 27
ns = not significant
* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Table 8
Descriptive Statistics of Trends Between Pre-test and Post-test Means for Control and Treatment Groups

#	Survey Question	Control Means Pre	Control Means Post	Mean Difference	Treatment Means Pre	Treatment Means Post	Mean Difference
1.	Work 30 minutes, lose interest, and quit	2.48	2.48	same	2.57	2.47	- .10
2.	Easily distracted when doing homework	2.72	2.85	+ .13	2.87	2.69	- .18
3.	It takes me a long time to begin my homework	2.48	2.47	- .01	2.54	2.42	- .12
4.	Unsure about homework assignment to do first	1.80	1.90	+ .10	1.81	1.72	- .09
5.	Takes long time to do homework, get tired and quit	2.02	2.18	+ .16	2.10	2.02	- .08
6.	Find it difficult to stick to my homework schedule	2.50	2.45	- .05	2.56	2.42	- .14
7.	I must be reminded to start my homework	1.65	1.53	- .12	1.73	1.75	+ .02
8.	I need someone to do my homework with me	1.42	1.43	+ .01	1.30	1.47	+ .17
9.	I feel teachers are unfair and give too much homework	2.40	2.47	+ .07	2.63	2.41	- .22
10.	Homework is not important because it is not graded	1.77	1.97	+ .20	2.08	2.02	- .06
11.	I hate doing homework and put off doing it	2.50	2.62	+ .12	2.76	2.66	- .10
12.	I go to school without completing my homework	2.23	2.37	+ .14	2.43	2.30	- .13
13.	I complain about homework	2.30	2.45	+ .15	2.48	2.37	- .11
14.	I forget what homework was assigned	2.00	2.03	+ .03	2.14	1.98	- .16
15.	I make excuses for not doing my homework	1.67	1.78	+ .11	2.00	1.86	- .14
16.	Sports and music are more important than homework	2.50	2.40	- .10	2.29	2.34	+ .05
17.	Friends are more important than doing homework	2.67	2.58	- .09	2.65	2.59	- .06
18.	I misunderstand the assignments and due dates	1.82	1.82	same	1.83	1.80	- .03
19.	I forget to take home materials to do homework	2.35	2.23	- .12	2.41	2.22	- .19
20.	I forget to bring assignments back to class	1.75	1.68	- .07	1.78	1.84	+ .06
21.	I start my homework before making a list	2.45	2.63	+ .18	2.62	3.11	+ .49
22.	I start my homework without planning study time	3.02	2.98	- .04	3.08	3.34	+ .26
23.	I have problems completing extra long assignments	2.52	2.40	- .12	2.71	2.38	- .33
24.	When I don't understand an assignment, I stop working	2.47	2.55	+ .08	2.57	2.48	- .09
25.	I start with subjects I like, but don't complete others	2.15	2.30	+ .15	2.40	2.27	- .13
26.	Difficulty estimating time for homework, so incomplete	1.85	2.05	+ .20	2.00	2.03	+ .03
27.	I do not check the completion of all assignments	2.17	2.10	- .07	2.37	2.33	- .04

ns = not significant
* = $p < .05$; ** = $p < .01$; *** = $p < .001$

attitude toward their teacher giving too much homework had improved (- .22), and students felt more confident that they could complete extra-long assignments such as projects (- .33). However, students in the treatment group also reported that they decreased the amount of homework planning they did as indicated by them not making a list before starting their homework (+ .49) and by not spending a few minutes to plan their study time (+ .26) (see Table 8).

Pre- and Post-Intervention Attitude Trend Analyses by Teacher

To examine pre and post changes at the teacher level, similar trends were examined by teacher. The treatment group for each teacher began with a slightly worse attitude toward homework than did the control group for each teacher. Following the previous trend of the overall groups after the intervention, the treatment groups' attitude toward homework for Teacher One and Teacher Two had improved, while the control groups' attitude had slightly worsened. Examining the means of the 27 items from the survey for Teacher One, the control group's attitude worsened on 23 items (85% of the questions), while the treatment group's attitude worsened on only 7 items (26% of the questions) from pre- to post-intervention. For Teacher Two, the control group's attitude worsened on 14 items (52% of the questions), while the treatment group's attitude worsened on only 4 items (15% of the questions) from pre- to post-intervention. However, for Teacher Three, the control group's attitude toward homework improved during the study, while the treatment group's attitude slightly worsened. Looking at the individual means for items on the survey for Teacher Three, the control group's attitude remained the same or worsened on only 8 items (30% of the questions), while the treatment group's attitude remained the same or worsened on 17 items (63% of the

questions) from pre- to post-intervention (see Table 7). It is important to note that while these differences did not reach significance, they do show a practical difference among the control and treatment groups overall and for individual teachers.

Teacher One

Continuing these analyses of the means at the individual teacher level, questions with a mean difference of .20 or higher between the pre- and post-intervention within each group were further examined to reveal any trends in the data. For Teacher One, responses by students in the control group suggest that by the end of the study, students experienced more problems with motivation, as reflected in their responses on taking a long time to begin their homework (+ .30) and complaining more about homework (+ .36). In addition, control students' attitudes toward homework worsened, as indicated by their feeling homework was not important (+ .32), "hate doing homework and put off doing it" (+ .24), and forgetting the homework assignment (+ .40). Homework planning by control students also worsened by them not making a list before starting their homework (+ .64) and by them not spending a few minutes to plan their study time (+ .26). However, student responses were mixed concerning effective study skills or homework planning with an increasing feeling of giving up when they don't understand an assignment or it's too hard (+ .35), but an improvement on starting with subjects they like and not completing assignments in other subjects (- .23) (see Table 9).

For students in the treatment group for Teacher One, student responses after the intervention support the idea that students were less easily distracted when doing their

Table 9

Descriptive Statistics of Trends Between Pre-test and Post-test Means for Control and Treatment Groups for Teacher One

#	Survey Question	Control Means Pre	Control Means Post	Mean Difference	Treatment Means Pre	Treatment Means Post	Mean Difference
1.	Work 30 minutes, lose interest, and quit	2.28	2.41	+ .13	2.43	2.25	- .18
2.	Easily distracted when doing homework	2.56	2.71	+ .15	2.71	2.50	- .21
3.	It takes me a long time to begin my homework	2.17	2.47	+ .30	2.33	2.25	- .08
4.	Unsure about homework assignment to do first	1.78	1.88	+ .10	1.95	1.60	- .35
5.	Takes long time to do homework, get tired and quit	1.94	2.00	+ .06	1.95	1.75	- .20
6.	Find it difficult to stick to my homework schedule	2.39	2.41	+ .02	2.62	2.55	- .07
7.	I must be reminded to start my homework	1.67	1.65	- .02	1.67	1.55	- .12
8.	I need someone to do my homework with me	1.33	1.41	+ .08	1.29	1.45	+ .16
9.	I feel teachers are unfair and give too much homework	2.06	2.18	+ .12	2.43	2.30	- .13
10.	Homework is not important because it is not graded	1.50	1.82	+ .32	2.14	2.05	- .09
11.	I hate doing homework and put off doing it	2.11	2.35	+ .24	2.76	2.60	- .16
12.	I go to school without completing my homework	2.22	2.41	+ .19	2.33	2.30	- .03
13.	I complain about homework	2.11	2.47	+ .36	2.19	2.05	- .14
14.	I forget what homework was assigned	1.89	2.29	+ .40	2.00	1.90	- .10
15.	I make excuses for not doing my homework	1.50	1.59	+ .09	1.95	1.50	- .45
16.	Sports and music are more important than homework	2.22	2.41	+ .19	1.86	2.20	+ .34
17.	Friends are more important than doing homework	2.11	2.29	+ .18	2.05	2.25	+ .20
18.	I misunderstand the assignments and due dates	1.72	1.82	+ .10	1.81	1.65	- .16
19.	I forget to take home materials to do homework	2.33	2.41	+ .08	2.19	1.85	- .34
20.	I forget to bring assignments back to class	1.78	1.82	+ .04	1.62	1.60	- .02
21.	I start my homework before making a list	1.83	2.47	+ .64	2.33	2.85	+ .52
22.	I start my homework without planning study time	2.56	2.82	+ .26	3.05	3.40	+ .35
23.	I have problems completing extra long assignments	2.22	2.29	+ .07	2.48	2.30	- .18
24.	When I don't understand an assignment, I stop working	2.06	2.41	+ .35	2.38	2.40	+ .02
25.	I start with subjects I like, but don't complete others	2.17	1.94	- .23	2.14	2.00	- .14
26.	Difficulty estimating time for homework, so incomplete	1.89	1.82	- .07	1.86	1.85	- .01
27.	I do not check the completion of all assignments	2.22	2.18	- .04	2.38	2.40	+ .02

ns = not significant

* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

homework (- .21), more sure about which homework assignment to do first (- .35), taking less time to do their homework and finishing it (- .20), making fewer excuses about not doing homework (- .45), and not forgetting to take home materials for homework (- .34). However, student responses also indicated that students in the treatment group increasingly believed that extra-curricular activities (+ .34) and being with friends (+ .20) were more important than their homework, and they did less homework planning as reflected by starting their homework without making a list of assignments (+ .52) or spending a few minutes planning their study time (+ .35) (see Table 9).

Teacher Two

For Teacher Two, responses by students in the control group suggested that by the end of the study students were having more problems with motivation, as indicated by them taking a very long time to do their homework and not finishing it (+ .39) and attitude toward homework, as demonstrated by "hate doing homework and put off doing it" (+ .28), going to school without doing their homework (+ .26), and making excuses for not doing their homework (+ .20). In addition, control students had problems with effective study skills or homework planning, as shown by starting their homework with subjects they like, but then not completing assignments in other subjects (+ .42) and having difficulty estimating the time needed to do their homework, so they did not finish it (+ .35). However, these same students reported that they felt more confident about completing extra-long assignments such as projects (- .26) after the study (see Table 10).

For students in the treatment group for Teacher Two, student responses indicated that following the intervention students reported mixed concerns with maintaining

Table 10

Descriptive Statistics of Trends Between Pre-test and Post-test Means for Control and Treatment Groups for Teacher Two

# Survey Question	Control Means Pre	Control Means Post	Mean Difference	Treatment Means Pre	Treatment Means Post	Mean Difference
1. Work 30 minutes, lose interest, and quit	2.60	2.54	- .06	2.70	2.35	- .35
2. Easily distracted when doing homework	2.84	3.00	+ .16	2.65	2.55	- .10
3. It takes me a long time to begin my homework	2.56	2.38	- .18	2.60	2.40	- .20
4. Unsure about homework assignment to do first	1.72	1.85	+ .13	1.75	1.60	- .15
5. Takes long time to do homework, get tired and quit	1.88	2.27	+ .39	2.00	1.90	- .10
6. Find it difficult to stick to my homework schedule	2.64	2.62	- .02	2.50	2.35	- .15
7. I must be reminded to start my homework	1.64	1.50	- .14	2.00	1.75	- .25
8. I need someone to do my homework with me	1.44	1.38	- .06	1.30	1.65	+ .35
9. I feel teachers are unfair and give too much homework	2.40	2.50	+ .10	2.50	2.15	- .35
10. Homework is not important because it is not graded	1.96	2.15	+ .19	2.30	1.85	- .45
11. I hate doing homework and put off doing it	2.64	2.92	+ .28	2.75	2.35	- .40
12. I go to school without completing my homework	2.12	2.38	+ .26	2.50	2.35	- .15
13. I complain about homework	2.32	2.50	+ .18	2.35	2.20	- .15
14. I forget what homework was assigned	2.16	2.04	- .12	2.35	2.05	- .30
15. I make excuses for not doing my homework	1.68	1.88	+ .20	2.20	1.90	- .30
16. Sports and music are more important than homework	2.56	2.65	+ .09	2.55	2.25	- .30
17. Friends are more important than doing homework	2.88	2.85	- .03	3.00	2.50	- .50
18. I misunderstand the assignments and due dates	1.68	1.81	+ .13	1.85	1.70	- .15
19. I forget to take home materials to do homework	2.24	2.15	- .09	2.55	2.25	- .30
20. I forget to bring assignments back to class	1.76	1.62	- .14	1.90	1.80	- .10
21. I start my homework before making a list	2.72	2.73	+ .01	2.50	3.15	+ .65
22. I start my homework without planning study time	3.24	3.08	- .16	3.05	3.20	+ .15
23. I have problems completing extra long assignments	2.76	2.50	- .26	2.75	2.40	- .35
24. When I don't understand an assignment, I stop working	2.72	2.58	- .14	2.70	2.55	- .15
25. I start with subjects I like, but don't complete others	2.16	2.58	+ .42	2.35	2.40	+ .05
26. Difficulty estimating time for homework, so incomplete	1.80	2.15	+ .35	2.20	1.95	- .25
27. I do not check the completion of all assignments	2.16	2.12	- .04	2.40	2.20	- .20

ns = not significant

* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

attention on their homework, as shown by improvement on "after working 30 minutes on their homework, they lose interest and quit" (- .35), but they reported more often needing someone to do their homework with them (+ .35). However, student responses clearly indicated that students felt more motivated, as shown by taking less time to start their homework (- .20) and not having to be reminded to start their homework (- .25). Treatment students had better attitudes toward their homework, based on their improved responses on feeling teachers were unfair and gave too much homework (- .35), feeling homework was not important because it wasn't graded (- .45), "hate doing homework and put off doing it" (- .40), forgetting homework assignments (- .30), making fewer excuses for not doing their homework (- .30), and not forgetting to take home materials for homework (- .30). Students put homework as a higher priority than before the study concerning extra-curricular activities like sports and music (- .30) and being with their friends (- .50). In addition, treatment students had more effective study skills, as shown by having less problems completing extra long assignments like projects (- .35), having less difficulty estimating the time needed to do their homework (- .25), and checking to make sure all of their assignments were completed (- .20). However, following the intervention these same students felt even stronger about not making a list of homework assignments before starting their homework (+ .65) (see Table 10).

Teacher Three

For Teacher Three, responses by students in the control group indicated that student attitudes were improving toward their homework, as shown by their responses on, hate doing homework and procrastinated until the last minute (- .30), misunderstanding assignments and due dates (- .30), and forgetting to take home materials to do their

homework (- .35). Students in the control group also indicated that after the study, homework was increasing as a priority for them when compared to extra-curricular activities such as sports and music (- .71) and being with their friends (- .47). However, students still reported that they had difficulty estimating the time needed to do their homework and as a result they didn't finish it (+ .24) (see Table 11).

For students in the treatment group for Teacher Three, student responses suggested that following the intervention students were less easily distracted when doing their homework (- .27), but they had to be reminded more often to start their homework (+ .37). Student responses pertaining to student attitudes toward homework revealed mixed feelings about teachers being unfair and giving too much homework (- .24) and going to school less often with unfinished homework (- .20), but students felt stronger about homework not being important because it is not graded (+ .31), made more excuses for not doing their homework (+ .27), and forgot more often to bring their assignments back to class (+ .26). Treatment students also reported that they continued to start their homework without making a list of assignments first (+ .29) or spending a few minutes organizing their study time (+ .28), and experienced difficulty estimating the time needed to do their homework (+ .30). However, following the intervention students reported having more confidence completing extra long assignments like projects (- .49) and improved on starting their homework with their favorite subjects and then not completing the assignments in other subjects (- .30) (see Table 11).

Table 11

Descriptive Statistics of Trends Between Pre-test and Post-test Means for Control and Treatment Groups for Teacher Three

#	Survey Question	Control Means Pre	Control Means Post	Mean Difference	Treatment Means Pre	Treatment Means Post	Mean Difference
1.	Work 30 minutes, lose interest, and quit	2.53	2.47	- .06	2.59	2.75	+ .16
2.	Easily distracted when doing homework	2.71	2.76	+ .05	3.23	2.96	- .27
3.	It takes me a long time to begin my homework	2.71	2.59	- .12	2.68	2.58	- .10
4.	Unsure about homework assignment to do first	1.94	2.00	+ .06	1.73	1.92	+ .19
5.	Takes long time to do homework, get tired and quit	2.29	2.24	- .05	2.32	2.33	+ .01
6.	Find it difficult to stick to my homework schedule	2.41	2.24	- .17	2.55	2.38	- .17
7.	I must be reminded to start my homework	1.65	1.47	- .18	1.55	1.92	+ .37
8.	I need someone to do my homework with me	1.47	1.53	+ .06	1.32	1.33	+ .01
9.	I feel teachers are unfair and give too much homework	2.76	2.71	- .05	2.95	2.71	- .24
10.	Homework is not important because it is not graded	1.76	1.82	+ .06	1.82	2.13	+ .31
11.	I hate doing homework and put off doing it	2.71	2.41	- .30	2.77	2.96	+ .19
12.	I go to school without completing my homework	2.41	2.29	- .12	2.45	2.25	- .20
13.	I complain about homework	2.47	2.35	- .12	2.86	2.79	- .07
14.	I forget what homework was assigned	1.88	1.76	- .12	2.09	2.00	- .09
15.	I make excuses for not doing my homework	1.82	1.82	same	1.86	2.13	+ .27
16.	Sports and music are more important than homework	2.71	2.00	- .71	2.45	2.54	+ .09
17.	Friends are more important than doing homework	2.94	2.47	- .47	2.91	2.96	+ .05
18.	I misunderstand the assignments and due dates	2.12	1.82	- .30	1.82	2.00	+ .18
19.	I forget to take home materials to do homework	2.53	2.18	- .35	2.50	2.50	same
20.	I forget to bring assignments back to class	1.71	1.65	- .06	1.82	2.08	+ .26
21.	I start my homework before making a list	2.71	2.65	- .06	3.00	3.29	+ .29
22.	I start my homework without planning study time	3.18	3.00	- .18	3.14	3.42	+ .28
23.	I have problems completing extra long assignments	2.47	2.35	- .12	2.91	2.42	- .49
24.	When I don't understand an assignment, I stop working	2.53	2.65	+ .12	2.64	2.50	- .14
25.	I start with subjects I like, but don't complete others	2.12	2.24	+ .12	2.68	2.38	- .30
26.	Difficulty estimating time for homework, so incomplete	1.88	2.12	+ .24	1.95	2.25	+ .30
27.	I do not check the completion of all assignments	2.12	2.00	- .12	2.32	2.38	+ .06

ns = not significant

* = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Fidelity of Implementation

In this study, three high school English Composition teachers implemented a communication system over a six-week period designed to benefit students in writing a research paper. Parents were involved as well and were provided with a two-page questioning system for parents to utilize with their children based on "The Big Six Approach to Information Problem-Solving" developed by Eisenberg and Berkowitz (1996). The teachers agreed to make an initial phone contact to all of the parents with children in their treatment group and then follow-up contacts every two weeks to those students experiencing any problems in class or with the project. In addition, teachers were to send home an assignment sheet to be signed by a parent and returned to the teacher every week. The phone contacts were recorded in a phone log and all of this data were returned to the researcher.

The teachers involved in the study had teaching experience of two, nine, and twenty-six years, not all in the same school. The treatment group class size for each teacher varied with Teacher One having twenty-one students, Teacher Two having twenty-two students, and Teacher Three having twenty-five students. As detailed above, all three teachers made phone calls home. For the purpose of this study, a contact was defined as the teacher either leaving a message on a machine or with a person, and an attempt was defined as not reaching either of them. Because of this definition, the number of initial phone contacts was usually higher than the total number of students in the treatment class, except for Teacher Three. Teacher One reported in the phone log forty-seven total phone contacts out of sixty-two attempts. Out of these, Teacher One made thirty-one initial contacts and sixteen follow-up contacts. These sixteen contacts

were made every Friday over the course of the entire study, instead of the prescribed every other week. Teacher Two reported thirty-seven phone contacts out of thirty-seven attempts. Out of these, Teacher Two made thirty initial contacts and seven follow-up contacts. These seven contacts were made on the two consecutive Friday's directly following the week of the initial contacts, not as the prescribed every other week. Because of the method which Teacher Two reported the data, it is unclear if someone was actually reached at home every time a call was made or if the teacher did not report the total number of attempts that were made. Teacher Three reported twenty-four phone contacts out of thirty-seven attempts. Out of these, Teacher Three made twenty-four initial contacts and zero follow-up contacts. Teacher Three made these twenty-four initial contacts over the course of the last three weeks of the study, but they are being labeled initial contacts because the teacher only spoke to each student's parent one time during the entire study (see Table 12). The exact length and content of the phone contacts were not recorded, but teachers were asked to answer four questions per call including whether parents had received the packet, read and understood the information, implemented any part of the process, and if the teacher had offered any advice.

Table 12
Summary of Teacher and Treatment Group Data

	Years of Experience	Treatment Students	Initial Contacts/ Attempts	Follow-up Contacts/ Attempts	Total Phone Contacts/ Attempts
Teacher 1	26	21	31/42	16/20	47/62
Teacher 2	2	22	30/30	7/7	37/37
Teacher 3	9	25	24/37	0/0	24/37

In addition to the phone contacts, the teachers collected and returned students' signed assignment sheets to the researcher. The weekly assignment sheets were given to

the students in the treatment group for five out of the six weeks of the study, because the project was due at the end of the sixth week. Teacher One had twenty-one students in the treatment class and had 100 out of 105 signed sheets returned, an overall percentage of 95%. Teacher Two had twenty-two students in the treatment class and had 62 out of 110 signed sheets returned, an overall percentage of 56%. Teacher Three had twenty-five students in the treatment class and had 59 out of 125 signed sheets returned, an overall percentage of 47%. These totals and weekly returns by teacher can be found in Table 13.

Table 13
Returned Homework Assignment Sheets for Treatment Groups by Teacher

	Teacher One (n = 21) Sheets/Percentage		Teacher Two (n = 22) Sheets/Percentage		Teacher Three (n = 25) Sheets/Percentage	
Week 1	21	100%	15	68%	21	84%
Week 2	20	95%	14	64%	15	60%
Week 3	20	95%	17	77%	23	92%
Week 4	19	90%	12	55%	0	0%
Week 5	20	95%	4	18%	0	0%
Total	100	95%	62	56%	59	47%

n = number of students in treatment class

Chapter Five

Discussion

Based on the research reviewed for this study, the vast majority of literature on the subject of parent involvement and student achievement has been completed at the elementary or middle school levels and has been correlational by design (Epstein, 1990; Thorkildsen & Stein, 1998). As a result, this study has attempted to examine a segment of the educational environment that has previously been insufficiently studied, the area of parent involvement at the secondary level and do it in such a way through an experimental design as to bring about new information and procedures to benefit educational practitioners. Within this area, the more specific area of communication between the school and the home environment of our children was chosen. According to research, improving the area of communication between the school and the home can have significant benefits on student achievement and for all those involved (Ames, de Stefano, Watkins, & Sheldon, 1995; Ames, Khoju, & Watkins, 1993; Connors & Epstein, 1994; Epstein, 1986; Epstein, 1995; Epstein & Dauber, 1991; Fantuzzo, Davis, & Ginsburg, 1995; Kay, Fitzgerald, Paradee, & Mellencamp, 1994; Prescott, Pelton, & Dornbusch, 1986; Sanders, Epstein, & Connors-Tadros, 1999).

In order to study the effects of an improved communication system, the researcher chose one content area, English Composition, and one activity, writing a research paper, which all three teachers involved would be teaching over an extended period of time and therefore limiting extenuating variables. The home-school communication system that was developed for this study reflected the relevant literature, including information being sent home on parenting skills, phone calls concerning student progress, and weekly

homework checklists sent home by teachers and signed by a parent (Ames, de Stefano, Watkins, & Sheldon, 1995; Ames, Khoju, & Watkins, 1993; Becker & Epstein, 1982; Connors & Epstein, 1994; Epstein, 1986; Epstein & Dauber, 1991; Fantuzzo, Davis, & Ginsburg, 1995; Hoover-Dempsey & Sandler, 1997; Kay, Fitzgerald, Paradee, & Mellencamp, 1994; Polloway et al., 1994; Prescott, Pelton, & Dornbusch, 1986; Rodick & Henggeler, 1980; Rosenberg, 1989; Salend & Schliff, 1989). The students, parents, and especially the teachers accomplished each of these three parts of the intervention at widely varying degrees.

Control and Treatment Results on the SSHP and Academic-Related Variables

Based on the review of literature, measurable if not significant differences were expected on the academic-related variables and the students' attitude toward their homework (SSHP) between the overall control and treatment groups. However, the analysis of the data did not overwhelmingly support that position. Following the intervention, the overall student attitude toward homework in both groups did not substantially differ, but the treatment group did show a slight improvement while the control group showed a slight worsening. However, the overall treatment group did show a significant worsening in their attitude toward planning their homework schedule. The treatment group reported starting their homework without first making a list of homework assignments or spending a few minutes planning their study time (see Table 2). This is consistent with the findings by Gajria and Salend (1995) who reported that both learning disabled and regular education students reported the same lack of homework planning. However, in that investigation the researchers were trying to identify differences between the two groups concerning possible problems completing homework. In this study, the

intervention was designed to improve communication with the homes and therefore improve student homework practices and attitudes of all students in the treatment group. One possibility for this negative answer by the treatment group is that the students may have not needed to spend the time organizing their study time because they were already aware of what work needed to be completed. By the teacher increasing communication with the students and the parents, successful students could be expected to have their homework schedule already planned when they leave class each day. As a result, the questions pertaining to taking additional time to plan their study time or making a list of homework assignments before starting their homework would not have been necessary steps for the treatment students.

In addition to examining student practices and attitudes toward homework on the SSHP, no statistically significant differences between the control and treatment groups were reported for the academic-related variables. This is not what was expected to happen as a result of the multi-faceted intervention that was created based on the review of literature. Epstein (1986) and Kay, Fitzgerald, Paradee, and Mellencamp (1994), found that parents wanted information on how to help their children, phone calls at home, handwritten notes from the teacher, and homework checklists in order to help their children on their homework. Connors and Epstein (1994) reported that parents, teachers, and students all desired these same involvement activities in order to promote greater participation in the students' education. In addition, Fantuzzo Davis, and Ginsburg (1995) found that their parent involvement intervention that included a reward system by the parents for student effort and communication with the home resulted in more competence in math and improved conduct in elementary students. However, these

studies either reported what parents, students, and teachers stated they wanted without providing any experimental investigation of the effects of those practices on students or student effects were noted on a population of elementary students, not high school students. Because these same effects were not found on the population of high school students in this study, it was decided to examine the data at another level. One possible reason the same effects were not found for the overall treatment group could have been something that the individual teachers did or did not do during the study, which would have affected the overall results.

Control and Treatment Results on the SSHP by Teacher

On the pre-test of the SSHP, the treatment group for Teacher One was the only group to report significant differences on the pre-survey (Question 10 and 11). Treatment students reported feeling stronger about homework not being important because it was not graded and that they procrastinated significantly more than the control group while doing their homework (see Table 4). These findings were consistent with what Gajria and Salend (1995) found using the SSHP while studying learning disabled and nondisabled middle school students. In that study, the researchers found that learning disabled and nondisabled students reported feeling this way toward homework. In addition, Anesko, Schoiock, Ramirez, and Levine (1987) found that parents reported that their elementary students procrastinated while doing their homework. It is not clear why the treatment group for Teacher One in the current study reported significantly more problems in these two areas than the control group. It could be that the treatment students for Teacher One mirrored the overall treatment group by starting out with a slightly worse attitude toward their homework and it was shown on their responses to

these two questions. In fact, most, if not all, teachers could at one time or another support the idea that different classes have different personalities based on who is enrolled in the class. The treatment class for Teacher One may have had a higher percentage of students who felt stronger about these two questions than other groups.

For whatever the reason was that the treatment students for Teacher One started with a worse attitude toward homework, the intervention seemed to lessen their negative attitude toward homework (see Table 5). Following the intervention, the control students for Teacher One reported significantly more trouble forgetting to take home materials to do their homework. This could be contributed in part to the consistent reminders given the treatment group through the increased communication by the teacher with the students and their parents. In addition, the intervention seemed to benefit the treatment students for Teacher Two. Teacher Two's control students reported significantly more procrastination while doing their homework than the treatment group. Once again, a reason for this may have been the increased communication with the treatment group by the teacher with the students and the parents at home. However, following the intervention, treatment students for Teacher Three reported complaining about homework significantly more than the control students. This may be a reflection of Teacher Three's lack of commitment to the intervention over the entire six-week period. As shown in Tables 12 and Table 13, Teacher Three failed to complete any follow-up phone calls and either stopped filling out homework assignment sheets for the students or did not require them to be returned after the third week of the intervention. Having only received one contact from their teacher and after the third week not having the benefit of a weekly written note outlining missing assignments, students may have felt isolated or unable to

ask the right questions in order to clear up their confusion. As a result, students complained more often because they were struggling without having the benefit of the support that they started the project.

Control and Treatment Results for the Academic-Related Variables by Teacher

Teacher Two was the only teacher for whom significant differences between the control and treatment groups were found and these differences were all in favor of the control group. Teacher Two's control students earned significantly higher grades on average ($M = 3.88$) than the treatment group ($M = 3.14$) and the highest mean grades of any class involved in the study whether treatment or control. However, Teacher Two's treatment class final grade mean of 3.14 was the lowest out of the three treatment classes. It is important to remember that these final grade means are on a 5.0 scale. Naturally, Teacher Two also rated the control class significantly higher than the treatment class in engagement over the six-week period, and it was the highest in engagement out of all the groups. In addition, these highly engaged students completed significantly more research papers than the treatment group and also any other treatment or control group. However, Teacher Two's treatment group project completion mean of 1.86 was the lowest of all three treatment groups. Even though not significant, this same teacher's control group also had the lowest mean absenteeism rate of any group reported at 1.27 days in a six-week period (see Table 6).

There could be several possible reasons why this specific control group did so well on the academic-related measurements. One factor introduced into the study by Teacher Two was that the teacher reported awarding extra-credit points for turning the project in early, something no other teacher did in the study. According to Teacher Two,

12 students out of 26 in the control group handed the paper in early and received extra-credit toward their final grades as compared to only 5 students out of 22 in the treatment group. These extra points on the research paper would directly affect students' final grades and possibly indirectly affect project completion and engagement averages. Based on Teacher Two's comments about how focused and engaged the students in the control class were it is reasonable to believe that these students in the control class were increasingly motivated by the promise of extra points on the paper. This would help to explain why Teacher Two's control group had the highest final grade average of all classes and probably kept the treatment group's final grade mean from being even lower. A second explanation could be that Teacher Two's control group had the most students in any class not participate in the study. The data are not available on these three students, but it is likely that their inclusion in the data would have negatively impacted the means for final grades, project completion (100% of students in Teacher Two's control class turned in a project), attendance, and engagement. A third reason could be that Teacher Two had the class syllabus for the project posted on Teacher Two's personal website for the students and their parents to access at anytime. It is not known whether Teacher Two also communicated via electronic mail with the students or their parents, but that possibility could have also impacted the favorable results. It would be reasonable to believe that the more motivated students with access to computers took advantage of this opportunity. However, why was just the control class affected and not the treatment class?

The answer to that question may be the underlying reason for Teacher Two's control class reporting the highest grades, teacher-rated engagement, and project

completion, and the lowest absenteeism rate of any other group, as well as, the treatment class having the lowest average grades and project completion rate of any treatment group. It is based on Teacher Two's reply to two questions posed after the completion of the study concerning how the process met their expectations and student behavior. Teacher Two replied, "I wasn't surprised by the results of the process. The four students who did not complete the research project [all four were in the treatment class] also did not complete the writing assignments for the first part of the semester." The teacher later added:

> The control group was a great group of students. They were very focused on the assignment and had little difficulty staying on task in class. The treatment group was more of a discipline problem. I had a few students who just refused to do the assignment and were behavior problems. As a group, they were less focused and disruptive behavior was common.

Teacher Two reported six students in the treatment class as misbehaving in class for three consecutive weeks, which according to the teacher, many times resulted in distracting others in the class. Three of these six students were reported by the teacher as misbehaving the entire six-week period. This negative student behavior was not present in the other classes according to the other teachers' reports. However, because the data were collected anonymously it is unclear exactly how this misbehavior directly affected the other academic-related variables of individual students. However, if Teacher Two was consistently dealing with behavior problems in this treatment class, it would have negatively affected the time available to help the other students in this class, therefore,

negatively impacting their grades, level of teacher-rated engagement, and project completion rate.

In comparison to the behavior problems in the treatment group, it could be possible that Teacher Two's control group was just an exceptionally good class. As a result, the variables may be interrelated to each other, meaning when students get good grades in school, they naturally complete more of their homework or projects, are more engaged in class, and attend school on a more regular basis. This does not imply causation on the part of one of these variables affecting the others, but just the idea that good students tend to demonstrate these characteristics.

In addition to explaining Teacher Two's classes, there should be additional discussion on variables of some of the other two teachers. Just as Teacher Two noted some probably realistic expectations based on previous student work for the treatment class, the other two teachers had some of the same expectations for their classes. Following the study, both teachers were asked for their opinions concerning the study, just as Teacher Two had been and all responded by electronic mail. Teacher One expressed a pre-study estimate that five to seven students in the control class would not complete a term paper based on the amount of work the students' had previously completed in the class. In reality, five students in the control class for Teacher One ended up not completing a term paper. This was not from lack of consistent effort on the part of Teacher One. Teacher One reported having to threaten the use of negative consequences at the end of the third week of keeping the students after class every day that they didn't produce the first step of the process, a list of topics for the paper. Once Teacher One stopped using these threats, the students reportedly stopped all efforts.

Teacher One continued to remind these students of the importance of completing a research paper, including receiving credit for Sophomore English. Teacher One even told the students that papers would receive some percentage of credit up to the last week of school, which was several weeks away from the original due date. It should be noted that the rule at the school was a student could not pass Sophomore English without completing a term paper, which would then require the student to re-enroll in Sophomore English the next year. For the treatment class, Teacher One estimated before the study began that three to five students would not complete the paper. According to Teacher One, "only two didn't, this is quite low and unusual, but not the record. One time, in the last four or five years, all but one got it in on time." Based on this response from the teacher, the intervention did have a surprising effect on project completion for this treatment group, especially when Teacher One compared this treatment class to all of the classes over the last four or five years.

Teacher Three responded after the study to the same question about expectations but only for the treatment group. Teacher Three stated, "My guess is that the process helped three complete the project and thus earn credit for Sophomore English II." In actual numbers of students, the treatment class only had two students out of the teacher-expected five students not complete a research paper. However, Teacher Three's control class had seven students not complete a research paper. Even though these data did not reach significance, it is clear according to the professionals involved in the process that the intervention had a positive effect on project completion in their treatment classes.

In addition to the practical differences in project completion between the control and treatment groups for Teacher One and Teacher Three, there was also a practical

difference noted for final grades on the project. Teacher One and Teacher Three each reported that students in their treatment classes earned on average at least half of a letter-grade higher grade on the research paper than students in their control classes (see Table 6). Once again, even though these data did not reach significance in this study, it is important to note the likely impact of the intervention on two out of the three teacher sections in the study. However, as previously discussed Teacher Two experienced the opposite effect. As a result, the researcher suggests that the intervention be implemented with a larger population, over a longer time period, and attempts be made to create more consistent teacher commitment toward implementation through teacher-owned strategies, such as teacher-created forms and procedures.

Analyses of Attitude Trends by Control and Treatment Groups and by Teacher

The analyses of the SSHP by control and treatment group yielded some trends in the data even though they did not reach significance. The overall treatment group started the study with a slightly worse attitude than the control group, but following the intervention, the treatment group's attitude had slightly improved while the control group's attitude had slightly worsened. This was shown by the total means of each group and the total number of individual questions that remained the same or worsened from pre- to post-intervention (see Table 7).

Analyzing the data at the teacher level, Teacher Two's treatment group reported the largest improvement of any group in their attitude toward homework following the intervention, as shown by them having the most significant difference between pre- and post-survey means (see Table 7). This effect is especially noteworthy since Teacher Two's treatment class also demonstrated the worst behavior of any class in the study as

reported by their teacher. Also showing improvement in the treatment group, Teacher One's students reported having the best attitude toward homework of any group following the intervention (see Table 7). Whether the intervention improved the treatment groups' attitudes or whether it just lessened the negative impact that a large project might have on students' attitudes toward homework is uncertain, but there seems to be a marked difference for these two groups. In addition, according to responses to questions and reporting of information for the study, Teacher One seemed to put forth the most consistent effort at actually implementing the prescribed intervention, which may explain why the treatment class for Teacher One had the best attitude toward homework following the intervention.

On the other hand, Teacher Three seemed to put forth the most inconsistent effort over the course of the six-week intervention. According to Teacher Three's response to the question, how would you improve the study?, "In my case the phone calls should have been completed earlier when the project is just getting started." This was demonstrated by Teacher Three by not making any phone calls to parents at the beginning of the study and failing to make any follow-up phone calls. Teacher Three only made one phone contact to each parent in the last three weeks and did not collect any homework assignment sheets after the third week of the study. All of this probably helped to bring about the opposite attitude trend for students of Teacher Three as compared to students for Teacher One and Teacher Two.

Fidelity of Implementation

The Sophomore English Composition students who were involved in this study had one basic job to do pertaining to the study and that was to take a homework

assignment sheet home to their parent and return the sheet to their teacher with their parent's signature. As described previously and detailed in Table 13, students accomplished this task at widely varying degrees. Teacher One reported witnessing a female student attempt to sign her mom's name while in class and return the sheet to Teacher One the same day it was handed out. Teacher One also reported having a mother report that she realized that her daughter had been forging her signature on the homework sheets and that she will be getting punished. These were probably not the only forgeries occurring in all of the classes, but these were the only ones discovered and reported. Teacher One also supplied some possible factors for this problem and why students might not return the sheets until after the weekend, even though they were handed out on Thursday to be returned on Friday. According to Teacher One, if parents saw the homework sheets on Thursday, they may restrict the student's recreational time on the weekend, therefore, it would be better for the students to show the sheets to their parents on Sunday night or Monday morning and avoid ruining their weekend. Teacher One also suggested that the students had learned that "there are no significant consequences for not turning them in." As a result if a teacher did not continue to ask for the sheets, students may not see the importance of returning them, such as what happened with Teacher Two and Teacher Three's return rates in the later weeks of the study.

Parents offered different obstacles to implementing the design of the study. Having the ability to contact a parent required that the school have an updated and working phone number for home or work in order to contact them. This was a problem that all of the teachers experienced during the study. A related problem was that if the parent wasn't home, there may or may not be an answering machine to leave a message

for the parent. In addition, if the teacher left a message for the parent to call them and the student found the message first and wanted to avoid possible negative consequences the message may have been erased.

Other than contact being made with the home, it was still up to the parent to implement the parent involvement part of the intervention, "The Big Six Approach to Information Problem-Solving" techniques. Teachers were asked to determine if parents had received the packet, read and understood the information, and implemented any part of the parent involvement packet that was sent home initially. According to Teacher Two, based on phone conversations with parents, only nine parents implemented any part of the Big Six process. Teacher Three reported that only two parents implemented the Big Six process. Teacher One answered this question in the phone log with checkmarks, and therefore, it cannot be determined how many parents implemented the process in that treatment group. The problem of not being able to contact parents is an ongoing problem throughout the year for the school system. Parents and families move, lose phone service for various reasons, or just fail to supply a working number. Teachers, administrators, support staff, and parents must work diligently to ensure this avenue of communication is maintained.

The three teachers who were involved in the study probably had the biggest impact on the implementation of the study. At the beginning of the study, Teacher Two and Teacher Three started the study approximately two weeks later than Teacher One because of having to finish other content in the class. Once they did begin, both Teacher Two and Teacher Three sent home a copy of their syllabus with the parent information packet. The researcher agreed this would be a good idea even though it would change the

study's design and give their treatment students a possible advantage over the treatment students for Teacher One.

The teachers were then supposed to make initial phone calls to all of the parents of students in the treatment groups. As discussed earlier, Teacher One was the most consistent at making these calls but did it every week instead of calling every other week, and later commented that the study was "labor intensive." After the initial phone contacts, Teacher Two made seven follow-up contacts in the next two weeks and then stopped making calls. Teacher Three contacted all of the students' parents one time over the course of the study, starting in the third week of the study. Ironically, Teacher Three later made the comment concerning how to improve the study, "In my case the phone calls should have been completed earlier when the project is just getting started" (see Table 12).

In addition, teachers were to send homework assignment sheets home with students on a weekly basis and have them returned to them with a parent signature. Teacher One was again the most consistent at implementing this part of the process with an overall 95% return rate. Teacher Two's return rate fell off dramatically in the last week to only 18%, resulting in an overall return rate of 56%. In addition, Teacher Three either just stopped handing the sheets out or didn't have any returned after the third week of the study, ending with an overall return rate of 47% (see Table 13). In fact, Teacher Three sent home missing assignment sheets for the first three weeks and then made one phone call to each parent in that last three weeks of the study.

Teacher Attitudes

Based on the teacher-reported information and answers to certain questions, the teachers' attitudes had a direct effect on how they implemented the proposed study. Teacher One demonstrated a consistent, responsible effort throughout the entire process. Teacher One began this effort in the beginning of the study as shown by the willingness to create a written script to discuss the process uniformly with each parent and another script to leave a message on an answering machine. Teacher One's persistence was noted when during the fourth week, Teacher One emailed me that less than half of the students returned their sheets that week. However, over the next couple days and probably with much prodding by Teacher One, the treatment students returned 90% of the homework sheets for that week. At the end of the study, Teacher One offered some final opinions concerning the study. Teacher One stated that all of the initial calls, follow-up calls, weekly homework sheets, and reporting information on the data forms were "extremely time-consuming." Teacher One offered the idea of creating a standard rubric or checklist for the homework sheets in order to reduce the hand-writing time needed to complete the sheets. However, Teacher One also stated

> Phoning is additionally time-consuming and frustrating, especially in the cases of those parents who have failed to provide a contact method with the school. The actual live conversations, when they occurred, were for me positive and emotionally satisfying (no yelling or insulting comments from parents). A good group of parents, so far, has been vocally appreciative. Additionally, a few have noted on the sheets a 'thank you' for them.

It seems that even though the work was "labor-intensive" for Teacher One, it was also emotionally and professionally satisfying. As a result, Teacher One planned on implementing certain parts of the study next year, including the introductory information being sent home with encouragement for parents to call if any questions and a weekly assignment sheet that could be requested by the parents of those students who needed the support.

On the other hand, a more negative teacher attitude toward parent involvement can have different effects on the implementation of the study. Teacher Three probably demonstrated the most inconsistent implementation of the study and it was probably related to attitude toward parent involvement. Teacher Three stated "the assignment sheet sent home was probably the most helpful part of the whole process." However, Teacher Three went on to comment "I guess that overall I think that part of the project is developing responsibility for self. A minimal amount of parent involvement is good, but I don't want the parent taking on too much prodding and pushing and feeling they are responsible for guiding their child through the process." This attitude was clearly demonstrated by Teacher Three's aversion toward contacting parents by phone and sending home weekly homework sheets.

The finding that Teacher One made a more consistent effort throughout the study and as a result found the communication with students' parents to be "positive and emotionally satisfying" coincides with what was found in the review of literature. Epstein and Dauber (1991) found that positive teacher attitudes brought about more success contacting hard-to-reach parents and increased use of those activities as demonstrated in this study by Teacher One's consistent effort in phoning student's

parents and having signed homework sheets returned. Another study by Ames, de Stefano, Watkins, and Sheldon (1995) also supports these findings when they found that the frequency of teacher-parent communication was significantly related to the teacher's beliefs about the importance of parent involvement and the effectiveness of these communications. This finding not only supports the positive feelings that Teacher One found to be true, but it also supports the more negative feelings toward parent involvement that Teacher Three held to be true.

Limitations

Research studies inherently have some limitations especially studies involving human participants. This quasi-experimental study may have had several limitations due to different factors involved in its implementation. Collecting all of the data in this study anonymously limited the amount of useful data that can be applied to the current literature on the effects of communication on individual students. If students' names would have been recorded, student data could have been correlated with other variables to examine any possible relationships between outcomes.

In addition to collecting the data anonymously, the use of self-reported data on the SSHP from the students and teacher-reported data for everything else could have affected the data. It is possible that what students reported were their practices and attitudes toward homework may have not been the same as what they actually did. Teacher-reported data could have been influenced by their feelings toward certain students or classes based on the comments that all three teachers made following the study. Additional feedback from students' parents should have been gathered concerning their

students' homework practices, attitudes, and engagement in order to supplement these present findings.

According to the teachers' feedback following the study, the actual forms that were used could have limited the amount and type of data that were gathered. More than one of the teachers expressed a desire to limit the amount of writing that had to be done in order to complete the forms for the study. It is possible that teachers didn't follow through on parts of the study because it was just too time consuming or expectations were unclear. A streamlining of the forms may allow more data to be gathered and greater participation on the part of the teachers. Related to this is teachers may have not been committed to the study because they didn't have any input into the collection of data. In the future, it would be a good idea to involve the teachers in creating or piloting the data collection forms to gain their feedback and commitment to the study.

Context

Another factor that may have affected the study was implementing the study in the researcher's own school. When approached about participating in the study, all three teachers seemed willing and interested in the study. However, through the course of the study based on individual teacher task completion and answers to follow-up questions pertaining to the study some of the teachers demonstrated their lack of interest or commitment to implementing a parent involvement program. It could be that some of the teachers participated in the study as a favor to the researcher instead of having a full commitment to parent involvement as demonstrated by comments made by Teacher Three and a decrease in task completion toward the end of the study by Teacher Two and Teacher Three. The relatively small student sample was contained in one building and

one geographical area and was mostly Caucasian, which could limit the generalization of this study to other populations. However, one of the goals of this study was to investigate the effects of increased school-to-home communication on a specific homework project, the research paper. Therefore, in order to maintain some similarities in the process and limit other variables one setting was utilized. In addition to the almost singular ethnicity of the sample population, the gender and the number in special education versus regular education in the sample was not recorded. This information could have brought out the possible effects that increased communication had on these specific populations.

Teachers

There was an attempt made in the design of the study to limit the possible effects that the teachers had on the study. Having each teacher instruct one treatment group and one control group may have minimized the teacher effect. In addition, randomization of the classes as treatment or control should have limited the differences between the classes.

However, the attitudes, practices, and organizational qualities of the teachers may have had an effect on the study. All three teachers verbally supported the importance of parent involvement in the research paper. However, the teacher's underlying personal belief about how important it is to involve parents in the education of their children may have affected their implementation of the study in the later weeks. In addition to this underlying belief system of the teachers, English Composition teachers are inherently busy teachers due to the heavy load of reading and grading writing assignments. The increased amount of necessary paperwork that this study required might have proven to

be too much for at least two of the teachers based on their decreased level of task completion toward the later part of the study.

Parents

Since the study focused on examining the possible benefits of communication with parents at home, the ability to contact parents in the treatment groups would have directly affected the study. Even though this study took place in the spring of the year, some parents had still not provided the school with a working phone number, which could have been for a variety of reasons. Also, some parents just simply may not have been available to receive phone calls, sign missing assignment sheets, or help with homework during the day or evening because of their work schedules. Another limitation may have been when a message was left on an answering machine, the message could have been erased before reaching the parents.

Other than the physical limitations involved in communication between the school and the home, some parents in the treatment group may not have understood their role in helping their student at home. Parents may not have understood how to or cared to implement the Big Six Questioning System or just got involved with their child's homework in their own way. In addition, some parents in the control group may have helped their children with the research paper as a natural process of involvement.

Students

The limitations involving students dealt with their involvement in communication with the home by being responsible for bringing home and returning the missing assignment sheets. After a few weeks of participating in the study, students could have realized that there was not a negative consequence if they didn't bring home or return the

assignment sheet, but if they did and the information on the sheet was negative then their upcoming weekend could be negatively impacted. In fact, students who did return assignment sheets could have forged their parent's signature and avoided any negative consequences from their parents or the teacher.

Conclusion and Recommendations

This study tends to support what Sanders (1998) found to be true about barriers to parent involvement. Some of the barriers that she found were misguided attitudes of teachers, lack of time, and limited experience working with each other. These findings reflect what the three teachers in this study demonstrated through their actions and reported in their own words. Although more importantly according to Epstein and Dauber (1991) these practices and attitudes toward parent involvement will determine the overall strength of the school's parent involvement program. School administrators need to remember when implementing change in their schools that one of the most important factors in ensuring a program's success is the commitment of those persons charged with its implementation. Teachers need to have input into the process and be able to give their feedback when parts of the process can be improved.

As a result of knowing some of these barriers, improving parent involvement programs should begin with teacher education programs at the university and college level. Just as future teachers are instructed on how to create a good lesson plan, teacher candidates can be shown how to positively involve the parents of their students through notes sent home and phone calls as experimented with in this study. Then once instructed on how to go about contacting parents, teacher candidates should practice and build upon this skill throughout their mandatory student teaching program. By building this skill

when teachers are beginning to learn their craft, teachers will more likely view it as a vital part of their job as educators, as opposed to having it mandated by the administration and resenting whatever form of accountability is established.

Subsequently, once educators are better trained and equipped to work with parents, they can more actively take part and feel more comfortable in shaping the parental involvement program in their own classrooms and schools. As a result, administrators and teachers should actively engage parents in discussing what exactly the parents want out of a school-wide parent involvement program. This exchange of ideas can be brought about through parent nights, open house events, or parent-teacher organizations in which the free flow of ideas can create forms and guidelines for a system that provides for the needs of everyone involved. In this way, the teachers' need for a time-efficient method of involving parents can be met simultaneously with the parents' need for helpful information that is beneficial to the educational success of their children. The one thing that is certain is that parent involvement takes additional time and effort on everyone's part, but what better reward than the reuniting of the school and the family in the superior education of today's youth.

References

Ames, C., Khoju, M., & Watkins, T. (1993). Parent involvement: The relationship between school-to-home communication and parents' perceptions and beliefs. *Center On Families, Communities, Schools & Children's Learning, 15,* 1-29.

Ames, C., de Stefano, L., Watkins, T., & Sheldon, S. (1995). Teachers' school-to -home communications and parent involvement: The role of parent perceptions and beliefs. *Center on Families, Communities, Schools & Children's Learning, 28,* 1-29.

Anesko, K. M., Schoiock, G., Ramirez, R., & Levine, F. M. (1987). The homework problem checklist: Assessing children's homework difficulties. *Behavioral Assessment, 9,* 179-185.

Astone, N. M., McLanahan, S. S. (1991). Family structures, parental practices and high school completion. *American Sociological Review, 56,* 309-320.

Bauch, P. A. (1988). Is parent involvement different in private schools? *Educational Horizons, 66*(2), 78-82.

Becker, H. J., & Epstein, J. L. (1982). Parent involvement: A survey of teacher practices. *The Elementary School Journal, 83*(2), 85-102.

Catsambis, S., & Garland, J. E. (1997). Parental involvement in students' education during middle school and high school. *Center for Research on the Education of Students Placed At Risk, 18,* 1-42.

Coleman, J. S. (1987). Families and schools. *Educational Researcher, 16*(6), 32-38.

Conklin, M. E., & Dailey, A. R. (1981). Does consistency of parental educational

encouragement matter for secondary school students? *Sociology of Education, 54,* 254-262.

Connors, L. J., & Epstein, J. L. (1994). Taking stock: Views of teachers, parents, and students on school, family, and community partnerships in high schools. *Center on Families, Communities, Schools & Children's Learning, 25,* 1-31.

Cooper, H. (1989). Synthesis of research on homework. *Educational Leadership, 47*(3), 85-91.

Dolan, L., & Haxby, B. (1995). Removing barriers to learning: Factors that affect participation and dropout in parent interventions. *Center on Families, Communities, Schools & Children's Learning, 27,* 1-18.

Dornbusch, S. M., Carlsmith, J. M., Bushwall, S. J., Ritter, P. L., Leiderman, H., Hastorf, A. H., Gross, R. T. (1985). Single parents, extended households, and the control of adolescents. *Child Development, 56,* 326-341.

Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development, 58,* 1244-1257.

Downey, D. B. (1995). When bigger is not better: Family size, parental resources, and children's educational performance. *American Sociological Review, 60,* 746-761.

Eisenberg, M. B., & Berkowitz, R. E. (1996). *Helping with homework: A parent's guide to information problem-solving.* Syracuse, NY: Information Resources Publications, Syracuse University.

Epstein, J. L. (1986). Parents' reactions to teacher practices of parent involvement. *The Elementary School Journal, 86*(3), 277-294).

Epstein, J. L. (1990). Single parents and the schools: Effects of marital status on parent and teacher interactions. In M. T. Hallinan, D. M. Klein, & J. Glass (Eds.), *Changes In Societal Institutions* (pp. 91-121). Baltimore: Plenum Publishing Corporation.

Epstein, J. L. (1991). Effects on student achievement of teachers' practices of parent involvement. *Advances in Reading/Language Research, 5,* 261-276.

Epstein, J. L. (1995). School/family/community partnerships. *Phi Delta Kappan, 76*(9), 701-712.

Epstein, J. L., & Dauber, S. L. (1991). School programs and teacher practices of parent involvement in inner-city elementary and middle schools. *The Elementary School Journal, 91*(3), 289-305.

Epstein, M. H., Polloway, E. A., Foley, R. M., & Patton, J. R. (1993). Homework: A comparison of teachers' and parents' perceptions of the problems experienced by students identified as having behavioral disorders, learning disabilities, or no disabilities. *Remedial and Special Education, 14*(5), 40-50.

Fantuzzo, J. W., Davis, G. Y., & Ginsburg, M. D. (1995). Effects of parent involvement in isolation or in combination with peer tutoring on student self-concept and mathematics achievement. *Journal of Educational Psychology, 87*(2), 272-281.

Gajria, M., & Salend, S. J. (1995). Homework practices of students with and without learning disabilities: A comparison. *Journal of Learning Disabilities, 28*(5), 291-296.

Grolnick, W. S., & Ryan, R. M. (1989). Parent styles associated with children's self -regulation and competence in school. *Journal of Educational Psychology, 81*(2),

143-154.

Hickman, C. W., Greenwood, G., & Miller, M. D. (1995). High school parent involvement: Relationships with achievement, grade level, ses, and gender. *Journal of Research and Development in Education, 28*(3), 125-134.

Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research, 67*(1), 3-42.

Hossler, D., & Stage, F. K. (1992). Family and high school experience influences on the postsecondary educational plans of ninth-grade students. *American Educational Research Journal, 29*(2), 425-451.

Kay, P. J., Fitzgerald, M., Paradee, C., & Mellencamp, A. (1994). Making homework work at home: The parent's perspective. *Journal of Learning Disabilities, 27*(9), 550-561.

Keith, T. Z. (1982). Time spent on homework and high school grades: A large-sample path analysis. *Journal of Educational Psychology, 74*(2), 248-253.

Keith, T. Z., & Page, E. B. (1985). Homework works at school: National evidence for policy changes. *School Psychology Review, 14*(3), 351-359.

Keith, T. Z., Reimers, T. M., Fehrmann, P. G., Pottebaum, S. M., & Aubey, L. W. (1986). Parental involvement, homework, and tv time: Direct and indirect effects on high school achievement. *Journal of Educational Psychology, 78*(5), 373-380.

Lamborn, S. D., Mounts, N. S., Steinberg, L, & Dornbusch, S. M. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development, 62,* 1049-1065.

O'Melia, M. C., & Rosenberg, M. S. (1994). Effects of cooperative homework teams on

the acquisition of mathematics skills by secondary students with mild disabilities. *Exceptional Children, 60*(6), 538-548.

Polloway, E. A., Epstein, M. H., Bursuck, W. D., Jayanthi, M., & Cumblad, C. (1994). Homework practices of general education teachers. *Journal of Learning Disabilities, 27*(8), 500-509.

Polloway, E. A., Foley, R. M., & Epstein, M. H. (1992). A comparison of the homework problems of students with learning disabilities and nonhandicapped students. *Learning Disabilities Research & Practice, 7,* 203-209.

Prescott, B. L., Pelton, C., & Dornbusch, S. M. (1986). Teacher perceptions of parent-school communication: A collaborative analysis. *Teacher Education Quarterly, 13*(2), 67-83.

Rich, D. (1988). Bridging the parent gap in education reform. *Educational Horizons, 66*(2), 90-92.

Rodick, J. D., Henggeler, S. W. (1980). The short-term and long-term amelioration of academic and motivational deficiencies among low-achieving inner-city adolescents. *Child Development, 51,* 1126-1132.

Rosenberg, M. S. (1989). The effects of daily homework assignments on the acquisition of basic skills by students with learning disabilities. *Journal of Learning Disabilities, 22*(5), 314-323.

Salend, S. J., & Schliff, J. (1989). An examination of the homework practices of teachers of students with learning disabilities. *Journal of Learning Disabilities, 22*(10), 621-623.

Sanders, M. G. (1998). School, family, community partnerships: An action team

approach. *The High School Magazine, 5*(4), 38-49.

Sanders, M. G., Epstein, J. L. (1998). School-family-community partnerships in middle and high schools: From theory to practice. *Center for Research on the Education of Students Placed At Risk, 22,* 1-37.

Sanders, M. G., Epstein, J. L., & Connors-Tados, L. (1999). Family partnerships with high schools: The parent's perspective. *The Johns Hopkins University Center on Families, Communities, Schools & Children's Learning,* 1-20.

Sanders, M. G., & Herting, J. R. (2000). Gender and the effects of school, family, and church support on the academic achievement of african-american urban adolescents. *The Johns Hopkins University Center on Families, Communities, Schools & Children's Learning,* 1-39.

Steinberg, L. (1987). Single parents, stepparents, and the susceptibility of adolescents to antisocial peer pressure. *Child Development, 58,* 269-275.

Steinberg, L. (1991). The logic of adolescence. In P. Edelman & J. Ladner (Eds.), *Adolescence and poverty: Challenge for the 1990's* (pp. 19-36). Washington, D. C.: Center for National Policy Press.

Steinberg, L. (1995). *Adolescence* (4th ed.). New York: McGraw-Hill.

Tell, C. (2000). Generation what? Connecting with today's youth. *Educational Leadership, 57*(4), 8-13.

Thorkildsen, R., & Stein, M. (1998). Is parent involvement related to student achievement? Exploring the evidence. *Phi Delta Kappa Research Bulletin, 22,* 17-20.

Walberg, H. J., Paschal, R. A., & Weinstein, T. (1985). Homework's powerful effects

on learning. *Educational Leadership, 42*(7), 76-79.

Weisner, T. S., & Garnier, H. (1992). Nonconventional family life-styles and school achievement: A 12-year longitudinal study. *American Educational Research Journal, 29*(3), 605-632.

Zimiles, H., & Lee, V. E. (1991). Adolescent family structure and educational progress. *Developmental Psychology, 27*(2), 314-320.

Appendix A

Child Assent Form

DEPAUL UNIVERSITY

School of Education
2320 North Kenmore
Chicago, Illinois 60614-3250
312/362-7740
FAX: 312/362-7713
www.depaul.edu/~educate

CHILD'S ASSENT TO PARTICIPATE IN RESEARCH

School-to-home Communication in High School: Effects on Task Engagement and Homework Completion

My name is Dan McDonnell. I am a doctoral student at DePaul University, and I am presently working on my dissertation. We are asking you to take part in a research study because we are trying to learn more about how communication between the school and the home influences students' homework completion. Your participation in this study is being sought for us to be able to develop a system of communication between the school and the home that will benefit high school students. If you agree to be in this study, you will be asked to complete a questionnaire asking you about your attitude towards homework. This questionnaire will take approximately ten minutes to complete in class and we have no knowledge of any risks associated with completing this survey.

Your participation in this study will be completely anonymous, except for the class period that you are enrolled in. There are no direct benefits of participation, however, you may indirectly benefit from this study or you may help students in the future to get better grades, improve their attendance, and/or improve their ability to do their homework.

We have asked your parents to give their permission for you to take part in this study. But even if your parents have said "yes" you can still decide not to do this. We hope that you have talked this over with your parents before deciding whether or not to participate. If you don't want to be in this study, you don't have to participate. Remember, being in this study is up to you and no one will be upset if you don't want to participate. Even if you change your mind later and want to stop, you may withdraw your agreement to participate without any consequences.

You can ask any questions that you have about the study. If you have a question later that you did not think of now, you can call me at (815) 433-1326, ask me next time, or you may speak to the Coordinator of the DePaul University Institutional Review Board for the Protection of Research Participants by calling (773) 325-2593.

Signing your name at the bottom means that you agree to be in this study. You and your parents will be given a copy of this form after you have signed it.

Name of Participant_____ Date_____

Signature_____ Age_____ Grade in School_____

DPU-IRB approval number_____

Appendix B

Parental Consent Form

DEPAUL UNIVERSITY

School of Education
2320 North Kenmore
Chicago, Illinois 60614-3250
312/362-7740
FAX: 312/362-7713
www.depaul.edu/~educate

PARENTAL/GUARDIAN PERMISSION FORM FOR CHILD'S PARTICIPATION IN RESEARCH

School-to-Home Communication in High School: Effects on Task Engagement and Homework Completion

My name is Dan McDonnell. I am a doctoral student at DePaul University, and I am presently working on my dissertation. We are asking you to permit your child to take part in a research study because we are trying to learn more about how communication between the school and the home influences students' homework completion. Your child's participation in this study is being sought for us to be able to develop a system of communication between the school and the home that will benefit high school students. If you agree to allow your child to be in this study, your child will be asked to complete a questionnaire relating to their attitude towards homework. This questionnaire will take approximately ten minutes for them to complete. In addition, your child may be selected to participate in the intervention, fifty percent of students will be randomly assigned to the intervention while the others will not participate at this time. If selected to participate, you will receive a packet providing information about how you can assist your child with a project that he/she will be working on and you may receive a phone call from his/her teacher to discuss progress. This intervention is designed to improve student behavior, engagement in class, and homework completion.

Your child's participation in this study will be completely anonymous, except for the class period they are enrolled. There are no direct benefits related to participation, however, your child may benefit indirectly from this study by improving his or her behavior, homework completion rates, attendance, and grades, or they may indirectly benefit by helping teachers design better systems of communicating with parents. The possible risks associated with participation are that you, as the student's parent will have an increased amount of information regarding student progress and this could lead to parental disciplinary action if the student is not completing his or her assignments.

If you do not want your child to be in this study, your child does not have to participate. Remember, your child's being in this study is entirely up to you and no one will be upset if you do not want your child to participate. You may even change your mind later and withdraw your agreement for your child's participation without any consequences to you or your child. Even if you permit your child's participation in this study, your child may choose not to participate. All information that your child provides in this research study will be kept strictly confidential and any report of this research will not identify your child personally in any way.

You can ask any questions that you have about the study. If you have a question later that you did not think of now, you can call me at 433-1326. Signing your name at the bottom means that you agree to allow your child to be in this study. You will be offered a copy of this form after you have signed it.

Investigator's Responsibility: I have fully explained to (parent/guardian) _____ the nature and the purpose of the above described research procedures and the risks and benefits involved in its performance. I have answered all (and will continue to answer all) questions to the best of my ability. I will inform the parent/guardian of any changes in the procedures or risks and benefits if they should occur during or after the course of this study. I have offered a copy of this permission form to the parent/guardian.

Investigator's signature_____ Date _____

Parent/guardian's Consent: I have been satisfactorily informed of the above-described procedure with its possible risks and benefits. I agree to allow my child _____ (print child's full name) to participate in this research study. If I have any questions regarding my child's rights as a participant in this research study, I may request to speak to the Coordinator of the DePaul University Institutional Review Board for the Protection of Research Participants by calling (773) 325-2593. I understand that my child's participation in this research study is voluntary and that I am free to stop my child's participation at any time, without any consequences, even after signing this form. I have been offered a copy of this form.

Name of Parent/Guardian _____ Date _____

Signature _____

DPU-IRB approval number _____

Appendix C

Student Survey of Homework Practices

Student Survey of Homework Practices

Period_____ A or B

For each statement, Check One:	Never	At Times	Often	Very Often
1. After working for 30 minutes on my homework, I lose interest and quit or take a long break.	0	1	2	3
2. I get easily distracted when I am doing my homework.	0	1	2	3
3. It takes me a long time to begin my homework.	0	1	2	3
4. I feel unsure about which homework assignment to do first.	0	1	2	3
5. It takes me a very long time to do my homework, so I get tired and cannot finish my work.	0	1	2	3
6. I find it very difficult to stick to my homework schedule.	0	1	2	3
7. I must be reminded to start my homework.	0	1	2	3
8. I need someone to do my homework with me.	0	1	2	3
9. I feel teachers are unfair and give too much homework.	0	1	2	3
10. I feel homework is not important because you do not get graded on it.	0	1	2	3
11. I hate doing homework and put off doing it until the last minute.	0	1	2	3
12. I go to school without completing my homework.	0	1	2	3
13. I complain about homework.	0	1	2	3
14. I forget what homework was assigned.	0	1	2	3
15. I make excuses for not doing my homework.	0	1	2	3
16. Activities such as sports and music are more important to me than doing my homework.	0	1	2	3
17. Being with friends is more important to me than doing my homework.	0	1	2	3

18. I misunderstand the assignments and due dates.	0	1	2	3
19. I forget to take home materials I need to complete my homework.	0	1	2	3
20. I forget to bring my homework assignments back to class.	0	1	2	3
21. I start my homework before making a list of homework assignments.	0	1	2	3
22. I start my homework without spending a few minutes to plan my study time.	0	1	2	3
23. I have problems completing extra-long assignments such as projects and lab reports because I do not divide the work into smaller parts and work on it a little at a time.	0	1	2	3
24. When I do not understand an assignment or find it too hard, I stop working on it.	0	1	2	3
25. I start my homework with subjects I like and then find no time or feel too tired to complete the assignment in other subjects.	0	1	2	3
26. I have difficulty estimating the time needed to complete my homework, so my homework is incomplete.	0	1	2	3
27. After I finish my homework, I do not check to see that I have completed all my assignments.	0	1	2	3

Appendix D

Student Grades, Attendance, and Project Completion

List of Student Grades, Attendance, and Project Completion

Period: _____ Teacher: _____

Student	Final Grade	NUMBER OF ABSENCES FOR 6 WEEK PERIOD	PROJECT COMPLETION **YES**	**NO**
Student 1				
Student 2				
Student 3				
Student 4				
Student 5				
Student 6				
Student 7				
Student 8				
Student 9				
Student 10				
Student 11				
Student 12				
Student 13				
Student 14				
Student 15				
Student 16				
Student 17				
Student 18				
Student 19				
Student 20				
Student 21				
Student 22				
Student 23				
Student 24				
Student 25				
Student 26				
Student 27				
Student 28				
Student 29				
Student 30				
Student 31				
Student 32				
Student 33				
Student 34				

Appendix E

Teacher Rating of Homework Completion Grades

Teacher Rating of Homework Completion Grades

Period: _____ Teacher: _____

Student	Directions: Give each student a weekly grade (e.g., A, B, C, D, F) according to the timeliness and quality of their homework.					
	Week 1	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**
Student 1						
Student 2						
Student 3						
Student 4						
Student 5						
Student 6						
Student 7						
Student 8						
Student 9						
Student 10						
Student 11						
Student 12						
Student 13						
Student 14						
Student 15						
Student 16						
Student 17						
Student 18						
Student 19						
Student 20						
Student 21						
Student 22						
Student 23						
Student 24						
Student 25						
Student 26						
Student 27						
Student 28						
Student 29						
Student 30						
Student 31						
Student 32						
Student 33						
Student 34						

Appendix F

Teacher Rating of Student Engagement

Teacher Rating of Engagement

Period: _____ Teacher: _____

Directions: Please rate each student on the statements at the top of each column by the checking the box that best describes the student.

Student	**In my class this student seems very tuned in.**			**This student comes to class unprepared.**			**This student does more than required.**		
	Very True	True	Not True	Very True	True	Not True	Very True	True	Not True
Student 1									
Student 2									
Student 3									
Student 4									
Student 5									
Student 6									
Student 7									
Student 8									
Student 9									
Student 10									
Student 11									
Student 12									
Student 13									
Student 14									
Student 15									
Student 16									
Student 17									
Student 18									
Student 19									
Student 20									
Student 21									
Student 22									
Student 23									
Student 24									
Student 25									
Student 26									
Student 27									
Student 28									
Student 29									
Student 30									
Student 31									
Student 32									
Student 33									

Appendix G

Teacher Rating of Student Behavior

Teacher Rating of Student Behavior

Period: _____ Week: 1 2 3 4 5 6 7 8 9 Teacher: _____

Directions: Please rate each student on the statements at the top of each column by checking the box that best describes the student.

Student	In my class this student misbehaved this week.			This student's behavior distracts others.			This student required disciplinary action this week.		
	Very True	True	Not True	Very True	True	Not True	Very True	True	Not True
Student 1									
Student 2									
Student 3									
Student 4									
Student 5									
Student 6									
Student 7									
Student 8									
Student 9									
Student 10									
Student 11									
Student 12									
Student 13									
Student 14									
Student 15									
Student 16									
Student 17									
Student 18									
Student 19									
Student 20									
Student 21									
Student 22									
Student 23									
Student 24									
Student 25									
Student 26									
Student 27									
Student 28									
Student 29									
Student 30									
Student 31									
Student 32									

Daniel S. McDonnell

2610 Switch Grass Rd., Morris, IL 60450
Phone 815-941-2639

Objective

To obtain an administrative position that will utilize my skills and knowledge in a school environment.

Education

2003 DePaul University Chicago, IL
Doctorate of Educational Leadership and Administration

1996 Illinois State University Normal, IL
Masters of Education in Education Administration

1992 Illinois State University Normal, IL
Bachelor of Science in Education

Major: English Secondary Endorsement: Secondary P.E.

Professional Experience

2000 - present Ottawa High School Ottawa, IL
Assistant Principal/Head Wrestling Coach

Responsibilities: Discipline, attendance, supervision, employment and evaluation of staff, drug testing coordinator, staff development for first year teachers, rewrote parent/student handbook, recruitment, participate in Special Education placement decisions, all components of a Head Coaching position.

1997-2000 Ottawa High School Ottawa, IL
Physical Education Teacher/Head Wrestling Coach

Responsibilities: Instruction of P.E. grades 9-12, head of strength and conditioning, all components of a Head Coaching position.

1996-1997 William Penn College Oskaloosa, IA
English Instructor/Head Wrestling Coach

Responsibilities: Instruction of Argumentative English Composition, budget, scheduling of meets and officials, recruiting, work-study supervisor.

1993-1996 Prairie Central High School Fairbury, IL
English Instructor/P.E. Instructor

Responsibilities: English instructor of grade 9, P.E. instructor grades 9-12, Assistant Wrestling Coach, Assistant Football Coach

Professional Affiliations

Illinois Principal Association, Assistant Principal Representative for Starved Rock Region, Illinois Wrestling Coaches and Officials Association

References

Available upon request