Families and schools:
How can they work together to promote children's school success?

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We have known for some time that parents play a critical role in their children's academic achievement as well as in their children's socioemotional development (e.g., Clark, 1983; Comer, 1980, 1988; Eccles et al., 1993; Eccles-Parsons, Adler, & Kaczala, 1982; Epstein, 1983, 1984; Marjoribanks, 1979). It is only recently, however, that researchers have begun to look at the role schools might play in encouraging and facilitating parents' roles in children's academic achievement. Critical to this role is the relationship that develops between parents and teachers, and between communities and schools. Although a relatively new research area, there is increasing evidence that the quality of these links influences children's and adolescents' school success (e.g., Comer, 1980; Comer & Haynes, 1991; Epstein, 1982, 1990; Stevenson & Baker, 1987; Zigler, 1979), in part because high quality linkages make it easier for parents and teachers to work together in facilitating children's intellectual development (e.g., Bronfenbrenner, 1974, 1979; Epstein, 1983, 1984, 1986, 1990; Epstein & Dauber, 1988; Jacobs, 1983; Stevenson & Baker, 1987). Yet mounting evidence suggests that parents and teachers are not as involved with each others as they would like to be. Several studies have found that parents want to be more involved with their children's education and would like more information and help from the schools in order to meet this goal (Baker & Stevenson, 1986; Comer, 1980, 1988; Dauber & Epstein, 1989, Dornbusch & Ritter, 1988; Leitch & Tangri, 1988; Rich, 1985). Teachers also want more contact with parents (Epstein & Becker, 1982; The condition, 1988). Furthermore, the situation gets worse as children move from elementary school into secondary school when parents' active involvement at the school declines dramatically (Epstein, 1986; The report, 1989).

The message, then, seems clear: Both teachers and parents think that collaborative involvement in children's education is important. So why are parents and teachers not more involved with each other? This question usually takes the form of "why aren't parents more involved at school?" and we will discuss a variety of reasons why this might be true (e.g., time, energy and/or economic resources; familiarity with the curriculum and confidence in one's ability to help; attitudes regarding the appropriate role for parents to play at various ages; and prior experiences with the schools that have left some parents disaffected). But even more importantly, the extent of family-school collaboration is affected by various school and teacher practices and characteristics related to reporting practices, attitudes regarding the families of the children in the school, and both interest in, and understanding of, how to effectively involve parents. There is mounting evidence that specific school and teacher practices are a major factor influencing
parent involvement (Dauber & Epstein, 1989; Epstein, 1985, 1986). Furthermore, the power of schools and teachers to influence parent involvement and to improve parent-school links has been demonstrated even with "hard-to-reach" parents (e.g., Comer, 1980, 1988; Epstein, 1990a, b): "Status variables are not the most important measures for understanding parent involvement. At all grade levels, the evidence suggests that school policies and teacher practices and family practices are more important than race, parent education, family size, marital status, and even grade level in determining whether parents continue to be part of their children's education (Epstein, 1990a, p. 109)." So why aren't parents more involved at school? And why is it so difficult for schools and families to work together more effectively in educating children?

To fully understand what is limiting parent involvement, we need a general model of parent involvement. Presenting such a model is one of the primary goals of this chapter. Our second goal is to summarize the results of two of our own studies designed to investigate this model. The first study - The Michigan Childhood and Beyond Study (MCABS) - focuses on the elementary school years. The second study - The Maryland Adolescent Growth in Context Study (MAGICS) - focuses on the junior high school years. For each of these studies we present findings regarding the amount and type of parent involvement in their children's intellectual education. When possible we compare these findings with parents' more general levels of involvement in other aspects of their children's lives, particularly in the development of their children's athletic abilities. We then summarize preliminary analyses of the predictors of parent involvement outlined in Figure 1. In these summaries, we focus on the proximal influences on parent involvement both at home and school. Lastly, we make recommendations about how schools might use our findings to design more effective strategies for more effective collaboration with parents in the service of children's education.

**Influences on Parent Involvement**

As noted above, to fully understand parent involvement, we need a theoretical framework/model to guide our analysis. One such model is presented in Figure 1. This model was designed to provide a framework for thinking about the dynamic processes that underlie parents' involvement in their children's education (Eccles & Harold, 1993). It treats parent involvement as both an outcome of parent, teacher, and child influences, and as a predictor of child outcomes. It also suggests a
framework for thinking more generally about the ways in which both schools and parents influence children's school performance.

In this model, we hypothesize that there are a variety of influences on parent involvement. The first set of these are commonly referred to as exogenous variables - variables that have indirect or more global and removed effects on parent involvement. These variables are summarized in the left most column of Figure 1. They include various family/parent characteristics, neighborhood/community influences, child characteristics, general teacher characteristics, and school structural and general climate characteristics. There are no arrows connecting these five boxes with the other boxes in the model. We assume that the variables listed in these five boxes have both direct and indirect effects on all of the other boxes in the model. The second column (Boxes F and G) includes teacher and parent beliefs and attitudes. The model assumes these affect each other and have a direct effect on the two boxes in the third column; namely, specific teacher practices (Box H) and specific parent practices (Box I). Finally we assume that the variables listed in boxes F, G, H, and I all affect the child outcomes listed in the last column in Box J. The model summarizes a wide range of possible relations among the many listed influences. For example, the impact of the exogenous variables listed in boxes A, B, C, D, and E on teachers' practices of involving parents (Box H) are proposed to be mediated by teachers' beliefs systems (Box F) including their stereotypes about various parents' ability and willingness to help their children in different academic subjects. As you will also note, some of the child outcome variables listed in Box I are identical (or very similar) to the child characteristics in Box C. This overlap is intentional and captures the cyclical nature of the relations outlined in the model. Today's child outcomes become tomorrow's child characteristics and so the cycle continues over time. A more detailed discussion of some of the most important these many influences follows.

Parent/family characteristics. Numerous studies have documented the relation between parent involvement and such characteristics as family income, parents' education level, ethnic background, marital status, parents' age and sex, number of children, and parent's working status (e.g., Baker & Stevenson, 1986; Bradley, Caldwell, & Elardo, 1977; Bradley, Caldwell, & Rock, 1988; Clark, 1983;
Coleman, et al., 1966; Coleman, 1987; Corno, 1980; Eccles (Parsons), 1983; Epstein, 1984; Epstein & McPartland, 1979; Goldsmith, 1986; Marjoribanks, 1979). For example, parents who are better educated are more involved in school and at home than parents who are less well educated; parents with fewer children are also more involved at home but family size does not seem to affect amount of involvement at the school; and parents who work outside the home are less likely to be involved at school, but parents' working status does not seem to affect the level of involvement at home (Dauber & Epstein, 1989). The following additional parent/family characteristics are likely to be important:

(a) Social and psychological resources available to the parent - for example, social networks, social demands on one's time, parents' general mental and physical health, neighborhood resources, and parents' general coping strategies.

(b) Parents' efficacy beliefs - e.g., parents' confidence that they can help their child with school work, parents' view of how their competence to help their children with school work changes as the children enter higher school grades and encounter more specialized subject areas, and parents' confidence that they can have an impact on the school by participating in school governance.

(c) Parents' perceptions of their child - e.g., parents' confidence in their child's academic abilities, parents' perceptions of the child's receptivity to help from their parents, parents' educational and occupation expectations and aspirations for the child, and parents' view of the options actually available for their child in the present and the future.

(d) Parents' assumptions about both their role in their children's education, and the role of educational achievement for their child - e.g., what role the parents would like to play in their children's education, how they think this role should change as the children get older, how important they believe participation in school governance is, and what they believe are the benefits to their children of doing well in school and having parents who are highly involved at their children's school.

(e) Parents' attitude toward the school - e.g., what role they believe the school wants them to play, how receptive they think the school is to their involvement both at home and at school, the extent to which they think the school is sympathetic to their child and to their situation, their previous history of negative and positive experiences at school, their belief that teachers only call them in to give them bad news about their child or to blame them for problems their children are having at school versus a belief that the teachers and other school personnel want to work with them to help their child.
(f) **Parents' ethnic identity** - e.g., the extent to which ethnicity and/or religion are critical aspects of the parents' identity and socialization goals, the relationship between the parents' conceptualization of their ethnic identity and their attitudes toward parent involvement and school achievement, and the extent to which they think the school supports them in helping their children learn about their ethnic heritage.

(g) **Parents' general socialization practices** - e.g., how does the parent usually handle discipline and issues of control versus autonomy, and how does the parent usually "manage" the experiences of their children.

(f) **Parents' history of involvement in their children's education** - e.g., parents begin accumulating experiences with the school as soon as their children begin their formal education. Parents also had their own experiences with schools as they grow up. These experiences undoubtedly affect parents attitudes toward and interest in involvement with their children's schools and teachers.

**Community Characteristics.** Evidence also suggests that neighborhood characteristics such as cohesion, social disorganization, social networking, resources and opportunities, and the presence of undesirable and dangerous opportunities affect family involvement (e.g., Coleman, et al., 1966; Furstenberg, 1992; Laosa, 1984; Marjoribanks, 1979). Factors such as these are associated with variations in both parents' beliefs and practices, and opportunity structures in the child's environment. For example, Eccles, Furstenberg, Cook, Elder, and Sameroff have been studying the relation of family management strategies to neighborhood characteristics as part of their involvement with the MacArthur Network on Successful Adolescent Development in High Risk Environments. These investigators are especially interested in how families try to provide both good experiences and protection for their children when they live in high risk neighborhoods - neighborhoods with few resources and many potential risks and hazards. To study this issue, they are conducting two survey interview studies (one of approximately 500 families living in high to moderate risk neighborhoods in the inner city Philadelphia and the other of approximately 1400 families living in a wide range of neighborhoods in a large county in Maryland. Initial results suggest that families who are actively involved with their children's development and in their children's schooling use different strategies depending on the resources available in their neighborhoods: As one would expect, families living in high risk, low resource neighborhoods rely more on in-home management strategies to both help their child develop talents and skills and to protect their child from the dangers in
the neighborhood; families in these neighborhoods also focus more attention on protecting their children from danger than on helping their children develop specific talents. In contrast, families in less risky neighborhoods focus more on helping their children develop specific talents and are more likely to use neighborhood resources, such as organized youth programs, to accomplish this goal. Equally interesting, there are families in all types of neighborhoods who are highly involved in their children’s education and schooling (e.g., Eccles, McCarthy, Lord, Furstenberg, Geitz, & Teitler 1993; Furstenberg, 1992).

Such neighborhood characteristics have also been shown to influence the extent to which parents can successfully translate their general beliefs, goals and values into effective specific practices and perceptions. Evidence from several studies suggest that it is harder to do a good job of parenting if one lives in a high risk neighborhood or if one is financially stressed (e.g., Elder, 1974; Elder & Caspi, 1989; Flanagan, 1990a, 1990b; Furstenberg, 1992; Goldsmith, 1986; McLoyd, 1990). Not only do such parents have limited resources available to implement whatever strategies they think might be effective, they also have to cope with more external stressors than white middle class families living in stable, resource rich neighborhoods. Being confronted with these stressors may lead parents to adopt a less effective parenting style because they don’t have the energy or the time to use a more demanding but more effective strategy. For example, several investigators have found that economic stress in the family (e.g., loss of one’s job or major financial change) has a negative affect on the quality of parenting (e.g., Elder, 1974, Elder, Conger, Foster, & Ardelt, 1992; Flanagan, 1990a; Goldsmith, 1986; Harold-Goldsmith, Radin, & Eccles, 1988). To the extent that schools could help relieve some of this stress, they could facilitate more effective parent involvement.

Far less work has investigated the dynamic processes by which these global social factors actually affect parent involvement and children’s school outcomes. In addition, it is clear that there is substantial variation in parental involvement within any of these social categories, and that teachers can successfully involve even the hardest-to-reach parents (e.g. Becker & Epstein, 1982; Clark, 1983; Dauber & Epstein, 1989; Epstein & Dauber, 1991; Scott-Jones, 1987). More research is badly needed to identify the characteristics of parents that are associated with effective parent involvement, especially in underrepresented ethnic groups and high risk neighborhoods, and especially for adolescent children.
Child characteristics. Numerous studies indicate that parents vary their involvement in their children's school achievement depending on the characteristics of the child. We know, for example, that the child's sex and age influence the extent of parent involvement (e.g., Dornbusch & Ritter, 1988; Eccles et al., 1982; Epstein & Dauber, 1988; Baker & Stevenson, 1986; Stevenson & Baker, 1987). Age is especially relevant for this discussion. As noted earlier, parent involvement drops off rather dramatically as children move into junior high school or middle school. Why? It is likely that some of this decrease reflects a belief held by many parents that they should begin to disengage from their adolescents (The report, 1989). Parents may feel that young adolescents both desire and need independence, and thus feel that their involvement in their children's education is not as important. They may also feel that the children do not want them to be as visible, as evidenced by a common adolescent plea to not have their parents chaperone school activities. Although there may be an element of truth in this belief, it is too extreme. Adolescents may indeed want greater autonomy, but they still need to know that their parents support their educational endeavors. They need a safe haven in which to explore their independence, a safe haven in which both parents and schools are actively involved.

The decrease in parent involvement as their children move into secondary school may also result from a decrease in parents' feelings of efficacy as their children grow older. It may be that parents feel less able to help their children with school work as the school work becomes more advanced and technical. No longer are children working on basic reading and spelling skills, or drilling on math facts. Parents may feel that the method of teaching math, for instance, is very different than the one that they learned, and that if they try and help their children, they will mislead them. Finally, research (Freedman-Doan, Arbreton, Harold, & Eccles, 1993) has shown that parents believe they have more influence over their children when they are in the elementary grades than they will when their children reach adolescence.

At a more general level, it also seems likely that the child's previous academic experiences and the child's personality will also affect parent involvement (i.e., parents may be more likely to try to help a child who is having trouble than a child who is doing very well, especially if that child has done well in the past; alternatively, parents of high achieving children may be more likely to participate in school governance and school activities than parents of lower achieving children; parents should also be more likely to continue trying to help a child with whom
they get along than a child with whom they have many conflicts). Finally, it seems likely that the parents' experiences with helping the other children in the family will also impact on the parents' involvement with the seventh grade targeted child in this study.

**School and teacher characteristics and practices.** It is also important to think about the school and teacher characteristics that influence parent involvement. As noted earlier, work by Epstein and her colleagues suggests that school factors are a primary influence on parent involvement. In fact, the strongest predictors in several studies are the specific school programs and teacher practices being used (or not used) to encourage parent involvement: When parents feel that schools are doing things to involve them, they themselves are more involved in their children's education (Dauber & Epstein, 1989).

Two aspects of school characteristics are especially important for this chapter: the physical and organizational structure of schools, and the beliefs and attitudes of school personnel. Variations in the physical and organizational structure of the school building itself are likely to either facilitate or hinder parent-teacher collaboration. For example, change in the physical and organizational structure is one of the primary differences parents and students confront as children move from elementary school into secondary school. Junior high schools and middle schools are much bigger; they serve a wider range of communities and social/ethnic groups; they are typically much more bureaucratic in the governance and management systems and are more likely to be departmentalized - resulting in less personal contact between specific teachers and either students or families. Changes such as these could result in an increase in parents' feelings of alienation from the school. [These changes are most certainly associated with greater feelings of alienation on the part of the adolescents themselves (Eccles & Midgley, 1989; Simmons & Blyth, 1987)]. Parents who are involved in their neighborhood elementary schools may see this involvement as their connection with their community and friends. The "home" elementary school may seem like an extension of the family, particularly in neighborhoods where the population is relatively stable. Parents and teachers get to know each other well over the years their children are in the school. As children leave their "home" schools and several elementary schools merge into one middle school, there may be a decrease in the extent to which the families feel connected to the school. Junior high schools and middle schools expand the physical community, but may not expand the emotional sense of community. The sense of
belonging and investment may decrease, and as a result, parents may feel less able and less inclined to be involved and/or try to affect change in the educational experiences of their children. Additionally, children typically spend six or seven years in an elementary school and only two or three in a middle school. The attachment that has formed over the elementary years when parent help seems more essential has less time to form and feels less necessary in the middle and upper grades.

Alternatively, school personnel may either facilitate or inhibit parent involvement by their own beliefs and attitudes about parent involvement. Like parents, teachers and school personnel at this level may think it is better for the adolescent to have less parental involvement. They may also think it is too much trouble to involve parents at this level because parents are busy, disinterested or "ignorant". As a result of these beliefs, school personnel at this level have been to found to actively discourage parent involvement in the classroom and the school (Epstein & Dauber, 1991; Hoover-Dempsey, Basslet, & Brissie, 1987; The report, 1989). This appears to be especially true in low income and minority neighborhoods where parents are seen as part of the problem in educating their children, rather than as a resource (Comer, 1980). The negative interactions that these parents are likely to have with the schools, combined with potentially negative recollections of their own educational experiences, can serve as a major barrier to parent involvement in ethnic communities and high-risk inner city school districts. The following teacher and school characteristics are likely to important predictors of the school's response to parent involvement and collaboration: (a) beliefs about what is the appropriate amount and type of parent involvement, (b) beliefs about influences on parents' levels of participation, particularly their beliefs regarding why parents are not more involved, (c) sense of efficacy about their ability to affect the parents' level of participation, (d) knowledge of specific strategies for getting parents more involved, (e) their plans for implementing these strategies, and (f) support for implementing specific plans. These influences are discussed more fully by Epstein.

In the next section, we summarize two studies we are conducting to assess some of the relations described thus far. These studies focus primarily on the parent and school characteristics that influence parent participation.
Empirical Studies of the Influences on Parent Involvement

The Michigan Childhood and Beyond Study (MCABS)

Eccles and her colleagues (Eccles & Blumenfeld, 1984; Eccles, Blumenfeld, Harold, & Wigfield, 1990) are conducting a large scale, longitudinal study of development in four primarily white, lower-middle to middle class school districts in midwestern urban/suburban communities. The study began with groups of children in kindergarten, first, and third grade, and initially followed them for four years (at which time the cohorts were in third, fourth, and sixth grades). The students, approximately two-thirds of their parents, and their teachers participated by completing questionnaires and interviews. The study examined many issues including children's achievement self-perceptions in various domains and the roles that parents and teachers play in socializing these beliefs. The issue of parent involvement in their children's education was also explored; these results are summarized in this section.

During the third wave of the study, 354 children were in the second grade, 375 in the third, and 518 in the fifth grade. Because of variations between the school districts in terms of school structure, 247 fifth graders were in an elementary school setting and 262 fifth graders were in a five-six middle school setting. This structural difference allowed for exploring differences across the three grades, and within the two types of fifth grade. Questionnaire data were gathered from the children, approximately two-thirds of their parents, and from their teachers. Teachers supplied information on their classroom practices including those regarding parent involvement, as well as completing an individual assessment questionnaire on each child who participated in the study.

Involvement with teachers and at school. Parent data on parent-school involvement are presented in Tables 1 and 2. As can be seen in Table 1, three scales were formed based on the parent data. The first (MONITOR) deals with the parent's response to teacher requests for helping their child with school work; the second (VOLUNTEER) is made up of items that ask about parent participation in volunteer activities at school; and the third (INVOLVEMENT) is a report of parent involvement with the child's daily activities. In addition, two single items were asked: Do you contact the school about your child's progress? and Do you contact the school about how to give extra help?
Similar to other studies, (e.g., Dauber and Epstein, 1989), the parents of fifth graders did significantly less monitoring of their children's work than the parents of second and third graders. In addition, parents of fifth graders housed in the middle school did less monitoring than parents of fifth graders housed in the elementary school. While there is also a downward trend in the percentage of time parents report volunteering in school across the grades, the significant decrease is only found between the elementary and middle school fifth grades, as shown in Table 2. As discussed above, the grade level difference may reflect parents' assumption that their children need and desire less direct supervision as they enter early adolescence. Although a decrease was expected, the difference within the fifth grade suggests that school structure is also a factor. Perhaps parents feel less connected with the middle school outside of their neighborhood and therefore volunteer less often; or perhaps middle schools make less of an effort to connect with parents. The new environment of the middle school may also heighten the awareness of adolescent changes for parents, leading to the difference between the two types of fifth grades. Alternatively, a decrease in feelings of parental efficacy could account for some of the decrease in parental monitoring of school work. As the material children are taught gets more technical, parents may feel that they do not have adequate background to help their children, particularly in math and science.

The amount of reported parent involvement and the extent of contact with the school did not differ significantly by grade. However, the frequency with which parents contact the school to learn how to give their children extra help increases significantly among the parents of fifth graders who are in the middle school setting. It may be that the heightened awareness of approaching adolescence also arouses a heightened sense of the seriousness of school and achievement, leading parents to seek new ways to help their children. Alternatively, these parents may feel that they are not getting as much information from the schools as they need to help their children and are therefore, asking for more to bring them back up to the level they had been accustomed to during the elementary school years.

Tables 3 and 4 present teacher data. The first scale (HELP TIPS) encompasses ideas or tips that teachers send home regarding how parents can help their children with school work; the next scale (GOALS) relates to teachers' sharing of information with parents about classroom goals; and the final scale (REQUESTS) assesses the
number of requests that teachers make of parents to monitor their children's work. Two single items were also included in the analyses: How often do you encourage parents to get involved? and Did you provide feedback other than regular conferences or report cards for this child?

Insert Tables 3 and 4 About Here

Consistent with the findings of Epstein and Dauber (1991), there were no significant differences across grades or within the fifth grade in the extent of most types of communications from teachers to parents. The only significant grade level effect occurred for the extent of evaluative feedback - with fifth grade teachers, particularly if they worked in a middle school context, providing less supplemental feedback than second or third grade teachers. What is especially striking about the communication findings is the absolute low levels of several types of communication: On the average, these teachers provided helpful hints about how to work with one's child less than once a month; furthermore, between 50 and 70% of the teachers provided no supplementary evaluation to parents about how their children were doing in school beyond the information provided at conferences and on report cards.

There were also two interesting school type effects: both the extent to which fifth grade teachers encouraged parents to get involved in classroom activities and the extent to which fifth grade teachers provided supplementary feedback on the children's performance were lower for fifth grade teachers in a middle school than for fifth grade teachers in an elementary school context. The first finding is consistent with the notion that the school-home connection is not as strong in the middle school as it is in the elementary school. With regard to the second finding (providing supplementary evaluative feedback) perhaps fifth grade teachers, particularly those in the middle school, subscribe to the notion that the children should be more independent by this time, and that parents need less child specific feedback because they are already accustomed to their child being in school and understand the way the school system and teachers function. The teachers may not fully understand that the link between parents and teachers is particularly important during this early adolescent period. This difference may, in fact, account for the heightened levels in the fifth grade middle school parents' contacts with the school seeking information on how to give extra help to their children discussed earlier. Although the teachers may feel that these parents need fewer individual
contacts or feedback, the parents seem to be responding to the decline with an increased desire for information about how to help their early adolescent children.

**Involvement at home.** At each wave the parents were asked to indicate how often they do various activities with their children at home using a scale anchored with specified frequencies (e.g., 1 = never, 4 = once a week and 7 = almost everyday for a long while). We have chosen to focus here only on the data for families with two parents in the home because we want to present and discuss some of the sex of parent effects. We summarize findings from both Wave 1 (when the children were in kindergarten, first, and third grade) and Wave 3 (when the same children were in second, third, and fifth grade) to provide a full picture of developmental changes during the elementary school years. Table 5 summarizes the MANOVA results for the time use data from the first and third waves. Table 6 summarizes the means and standard deviations associated with each of these sets of MANOVAs.

Insert Tables 5 and 6 About Here

At each wave, there were substantial sex of parent effects. Mothers were much more involved with their children's intellectual and school related development than fathers, even for math and science-related activities in the early grades. In contrast, fathers were more involved in their children's athletic development. There were also consistent and stereotypic sex of child effects: girls did more reading with their parents (primarily their mothers) than boys. In contrast, boys did more athletics activities with their parents (primarily their fathers) than girls.

There were also interesting grade level effects that suggest a curvilinear pattern during the elementary school period. Parents appeared to become more involved in monitoring their children's school work as the children moved from kindergarten to third grade and then became less involved in this type of activity from the third to the fifth grade. We see this pattern in both the cross-sectional and the longitudinal results.

A different pattern emerged for parents' involvement in less formal activities related to their children's intellectual development. As one might expect, the frequency with which parents read to their children declined steadily over the elementary school years. In contrast, the frequency parents helped their children prepare for tests, taught their children general knowledge, and discussed both news events and their children's experiences at school remained stable and fairly high.
over these years. Finally, the frequency parents helped their children with their homework increases during the early grades and then stabilizes at a relatively high level from grade 3 to grade 5.

It is interesting to compare these changes to the results for parents involvement with their children in recreational domains. The frequency of parents active involvement with their children in both indoor and outdoor play activities decline steadily over the elementary school years. In addition, at virtually all grade levels, parents (mothers in particular) reported interacting directly with their children in school-related activities more frequently than in recreational activities, suggesting that these parents were very involved on a regular basis with their children's intellectual education even though they are not very involved at their children's schools.

Predictors of parent involvement. To investigate the model presented in Figure 1, we correlated indicators of several of the parent/family and child characteristics with a composite indicator of parent involvement comprised of both the encouragement and the time use measures within a specific domain (e.g., reading, math, and sports). Since the results were very similar for the two waves, we will only summarize the findings for the Wave 3 data here. Also since the results did not vary in any meaningful way across grade levels, the findings summarized here are collapsed across grade level. Finally, since the fathers' data essentially replicated the findings for mothers, we summarize the results for mothers for math and reading and the results for fathers for sports (focusing in each domain on the parent most frequently involved with that area of the child's education).

At the general level, two parent psychological characteristics were significantly correlated with parent involvement in both reading and math education: intellectual confidence ($r=.21^{**}$, $26^{**}$) and achievement motivation ($r=.16^*$, $31^{*}$). The more confident a mother was of her intellectual abilities and the more she expressed high achievement motivation (liking intellectual challenges and sticking with hard problems rather than giving up), the more actively she was to be involved in her child's education in math and reading. We also looked at two family level characteristics: valuing mastery (importance of learning, sticking with problems and using time productively) and valuing competition (importance of winning, doing better than others, and the enjoyment of beating each other at games). As one would expect, there was a significant positive association between
mothers' perception of the family's valuing of mastery and her involvement in her children's education in math ($r=.37^{**}$) and reading ($r=.27^{**}$). The valuing of competition was not related in either subject area. Contrary to what we had expected, neither mother's education level nor family income were related to these mothers' involvement in their children's education for either math or reading, perhaps because the sample of two-parent families was composed of largely middle class families.

At the more specific level, the extent of mothers' involvement in their children's math education was significantly and positively related to their evaluation of their children's math interest ($r=.13^*$) and to their confidence in their ability to help their child with math work (efficacy, $r=.28^{**}$). Similarly, mothers' involvement in their children's reading education was significantly and positively related to their evaluation of their children's reading interest ($r=.13^*$) and to their confidence in their ability to help their child with language arts work (efficacy, $r=.31^{**}$). In both intellectual domains, however, these relations largely disappeared when one controlled for the general parent and family level characteristics discussed in the previous paragraph. Apparently, mother's involvement in their children's math and reading education are linked more strongly to general beliefs about the importance of mastery and achievement than to more specific beliefs about either one's child or the specific subject matter itself during the elementary school years.

A somewhat different picture emerges for fathers' (and mothers') involvement in their children's athletic development. As was true for math and reading, fathers' education was not related to involvement. In contrast, family income was weakly and negatively related to fathers' (but not mothers') involvement in their child's athletic development ($r=-.17^*$ for fathers). Of the general parent and family-level characteristics, the fathers' view of the importance of competition within the family was most strongly related to their involvement in their child's sports activities ($r=.23^{**}$): higher ratings of competitiveness were associated with higher levels of involvement. The fathers' rating of family mastery orientation was also related ($r=.17^{**}$). The biggest contrast of this domain with the results for the math and reading domains occurred for the correlations between the sport specific predictors and fathers' involvement with their children's sports: fathers were more involved to the extent that they rated their child's sport ability and interest high ($r=.42^*$ and $.46^{**}$ respectively), rated the general importance of sports skills high ($r=.51^{**}$), and were confident of their ability to influence their child's ability and interest in this domain ($r=.45^{**}$). These effects continued to be
quite strong even after controlling for the children's gross motor skills and the father's rating of the family's competitiveness. Apparently, involvement in one's children's sports education is much more idiosyncratic than involvement in one's children's intellectual education among these middle class families.

We next correlated these same parent characteristics with the parent school involvement variables outlined in Tables 1 and 2. These correlations were quite weak and only a few were significant. Only parents' intellectual confidence related to the parents' volunteering at school - more confident parents were more likely to volunteer at school - but this association was quite weak ($r = .13^{**}$). The strongest associations occurred between mother's and father's education and parents' requests for information from the school about their children's progress: both mother's and father's education were positively associated with these requests ($r = .21^{**}$ and $r = .17^{**}$, respectively). Finally, contrary to what one might expect, both mother's and father's education were negatively related to the extent to which parents monitored their children's school work ($r = -.14^{**}$ and $r = -.12^{**}$, respectively). This latter effect, however, makes sense if teachers make more requests for parental monitoring when a child is having difficulty with his/her schoolwork. Such requests for additional monitoring are probably needed less if a child is doing all right. In support of this explanation, there is a positive correlation between teachers' reports of making requests for parents to monitor their children's schoolwork and parents' reports of the extent to which they monitor their children's schoolwork ($r = .15^{**}$), again, however this association is quite weak.

**The Maryland Adolescent Growth in Context Study (MAGICS)**

The second study we summarize was conducted in Maryland with a population of approximately 1400 African-American and European-American early adolescents and their parents. All children were enrolled in a two year middle school comprised of grades seven and eight. The population included a wide socioeconomic range in both the African-American and European-American samples. Data were gathered from the primary care giver and the target adolescent in their home using both a face-to-face interview and a self-administered questionnaire and by telephone. The data reported here were collected either during the adolescent's seventh grade school year or in the summer immediately following the seventh grade year.

Investigating parent involvement in their adolescents' education was one of the primary goals of this study. We gathered extensive information regarding
parents' involvement both at home and at school. First we describe the results regarding involvement at school, next we summarize the results regarding involvement at home, and finally we summarize the results regarding the predictors of parent involvement both at school and at home.

**Frequency of involvement at school.** As has been found in other studies, the parents in this study were not very involved at their children's school. Although 61% were members on the Parent Teacher Student Association, only 5 - 6 % reported playing a leadership role either in the PTSA or other school advisory groups. On the average, all parents reported attending between 3 and 4 activities and between 2 and 3 teacher conferences at school; they also reported doing volunteer work at the school 1 to 2 times during the seventh grade school year. A much higher percent indicated that they would like to be involved at school and 86% agreed with statement that schools are more effective when parents are involved. The vast majority (65%) also agreed that teachers should do more to get parents involved.

We then asked the parents why they were not more involved at school. The most frequently checked reasons related to work commitments (62% indicated this was an important limiting factor). In contrast, most parents indicated that the following reasons did not apply to them: not feeling they could be of help (77%), child not wanting them to come to school (84%) and teachers making them feel unwelcomed (85%).

Our data also suggest that the schools were making relatively little attempt to involve the parents more in educational activities either at home or in school; the one exception being requests for parents to monitor the completion of homework. For example, the parents reported that teachers had provided information regarding specific homework assignments only 1-2 times over the year, and regarding meetings and other school activities only 2-3 times. In response to a question regarding how often teachers gave their children assignments that required getting information from the family, 36 % of the parents said this had never happened and another 38% said it had happened only once. Finally, we asked how often the parents thought their children's teachers wanted parents to visit class in order to see what their children was doing; 44% said never and another 43% said once a month or less.

**Frequency of involvement at home.** In contrast, parents were much more involved with their children's education at home. On the average these parents
reported helping their children with homework 1-3 times each week, more often than they reported doing any other single activity with their children except discussing current news events. They also reported checking their children's homework an average of 4 times per week. Clearly, these parents were reporting relatively high levels of involvement in their children's school-related academic activities at home even though they were not very involved with activities at the school itself.

We asked the youth similar types of questions and got similar responses. When asked about their teachers' efforts to involve their parents in their school work, they, like their parents, reported relatively infrequent attempts. For example, they reported that their teachers asked them to get someone at home to help them study for tests, to check their homework, and to help them with school projects an average of 1-2 times per month. In contrast, they reported that they get help from their parents on their school work an average of 1-3 times a week. Like their parents, they reported that they work with their parents on their school work as much or more than any other single activity. They also reported that their parents actively monitored their school progress fairly often (averaging between 3.3 to 3.8 on a five point scale with 1=almost never, 3=sometimes, and 5=almost always).

Predictors of parent involvement in their adolescents' education. We have just begun our analyses of the predictors of parent involvement in this study. As a first step, we have correlated the parents' reports of their involvement at school and home and the adolescents' reports of their parents' involvement at home with the indicators we have of the following constructs drawn from the model illustrated in Figure 1: (a) family demographic characteristics, (b) demands on parents' time, (c) parents' sense of efficacy to help their children with their school work, (e) parents' perceptions of their children's characteristics, (f) parents' valuing of education in general and of parent involvement in particular, (g) parents' perception of the school, and (h) parents' more general involvement in their children's activities.

The significant relations were all in the predicted direction; but the effects are generally quite weak - with correlations typically in the range of .12 to .25. In addition, since these data are correlational and represent only one point in time, it would be unwise to even speculate about the causal nature of these relations until the subsequent waves of longitudinal are available for analysis. Consequently, at present one should take these results as food for thought.
In general, higher income, more education, and being married rather than single predicted greater parent involvement at school but not at home. In addition, African-American parents were somewhat more involved at home than European-American parents while European-American parents were somewhat more involved at school than the African-American parents. Both of these effects, however, were very small although highly reliable given the sample size.

As one would expect, having other demands, like work and family responsibilities, on one’s time was related negatively to involvement both at school and at home. In contrast, and again as one would expect, both parents’ confidence in their ability to influence their child’s academic performance and school experiences and the importance they attached to being involved in their children’s schooling were correlated positively with involvement both at home and at school. These associations were among the strongest predictors of involvement at school—ranging from .15 to .35 with most hovering near .22 to .26.

There was also fairly consistent support for the significance of the parents’ perception of the school context as a correlate of involvement at school. Parents who had a positive view of the school in terms of its concern about the families and adolescents in the school, the accessibility of school personnel to parents, and the teachers’ desire to actively involve parents were more involved at the school. And as one would expect, parents who reported more frequent requests from their child’s teachers for parent involvement also reported greater involvement in their children’s education both at school and at home. Their children also reported greater parental involvement at home.

Finally, parents with a more positive view of their child and higher educational expectations for their child were more involved in their children’s education both at home and at school. Furthermore, there was evidence of consistency in parents’ involvement in their children’s lives more generally. Parents who were actively involved in several different aspects of their children’s lives and who engaged in the most proactive encouragement of skill acquisition in other domains were also the parents most likely to be actively involved in their children’s academic education.

Increasing Parent and School Collaboration

Now let us turn to more specific suggestions about the ways to improve parent-teacher collaboration on behalf of children’s education. Epstein and her colleagues (e.g., Epstein, 1987; Epstein & Dauber, 1991) have suggested the following
six areas of parent-school involvement: 1) basic obligations of families to provide for the safety and health of their children; 2) basic obligations of schools to communicate with families about school programs and the individual progress of their children; 3) parental involvement at school; 4) parental involvement in learning activities at home; 5) parental involvement in decision making at school, and 6) collaboration and exchange with community organizations. In a study of parental involvement in education in Ireland (Morgan, Fraser, Dunn, & Cairns, 1992), the authors suggest that involvement can be divided into levels. "Low level involvement" is the traditional parent-school link (referred to in point two above) that tends to be of a formal nature and consists of such activities as parent-teacher conferences regarding their individual child and open houses that discuss curriculum. At this level of involvement, parents are primarily interested in their students' progress, and the school's focus is on how parents can support the institutional goals to maximize that progress. The second, "higher" level of involvement parallels Epstein's third and fifth points: parents extending their relationship with the school beyond their focus on their own children and volunteering in the classroom, helping on field trips, and participating in parent-teacher organizations. This type of involvement, the authors suggest, is more difficult to maintain because the relevance is more limited. Morgan et al. (1992) suggest a final level of "formal, structural involvement" that few parents become involved in, that is more political in nature such as a school board.

We focus our recommendations on two of the areas discussed above, communication with parents and involvement in learning activities at home, because they are particularly relevant to the concerns raised in this chapter regarding both grade level differences in parent participation at school and capitalizing on the ways parents are already participating in their children's education.

Communicating with parents. Schools and teachers communicate with parents about school programs and the individual progress of their children in several ways: Parent-teacher conferences, curriculum nights, open houses, phone contacts, report cards, and summaries of standardized test results are typical examples of this type of parent-school connection. In order to develop an effective system of communication between the school and the family, however, it is critical that old stereotypes of "family" be re-thought to welcome the persons who make up the student's family (Pennekamp & Freeman, 1988). Who should be invited to school functions? Should schools change father-daughter or mother-son events to
parent-child or even "significant adult"-child events? Who should receive copies of report cards and test scores? Making the definition of family more inclusive in the school's communications home may result in more children having adult "parent-type" figures participate on their behalf. In addition, schools must be cognizant of working with families from diverse cultural and linguistic backgrounds and may need to find new methods of forming the family-school connection (Delgado-Gaitan, 1991; Salend & Taylor, 1993).

School-family communication begins in the earliest grades and usually continues through high school, although the nature and frequency of the contacts may change as the child goes through the school system. As students move to the middle grades and have more than one core teacher, "capsule" nights are sometimes used to provide parents with information about each class and an opportunity to meet each teacher. Such programs involve attending a miniaturized version of the child's daily schedule, e.g., 15 minutes in each classroom, and are generally held in the evening to accommodate working parents. Many school districts also have special programs for parents and students at transitional points like the transition into junior or senior high school. Such an opportunity was provided by the district in the MAGIC study and it was highly successful from the perspective of the parents: Seventy-two percent of the parents of our sample reported attending this program; of these 64% reported that is was very useful and another 28% reported that is was mildly useful.

Providing extensive and accurate information regarding curricular choices to parents becomes increasingly critical as their children move into and through secondary school. As children move into junior high school or middle school, they begin to make course choices that have short and long term implications for the future options open to adolescents. Often neither the full range of choices nor the implications of various choices are made clear to parents. For example, in one of our school districts, school administrators told us that parents make the decision regarding which math class their child is to be placed into in the seventh grade at the end of the sixth grade school year. It was clear from our interviews with parents in this school district, however, that the parents did not know they had this choice. Instead, what actually happens in the district is that the sixth grade teachers send home the course selection form with the seventh grade math course already filled in with the teacher's recommendation regarding the child's math placement and do not explicitly indicate that this is only a recommendation. In addition, our interviews revealed that the parents did not know the consequences of being placed
in the various seventh grade math courses. Apparently, the school had not communicated their policy clearly enough to the parents for the parents to really play a role in this important decision. We know that early course choices in subjects like math and science often play a major role in shaping the curricular track a student ends up in when they get to high school. If parents do not fully understand this connection, they can not play their role as advocates for their children.

Recent findings reported by Dornbusch at the 1994 biennial meeting of the Society for Research on Adolescence confirms our speculations about the likely consequences of poor curricular choices, making the negative consequences of this lack of communication to parents even more apparent (Dornbusch, 1994). In a survey of students in four northern California high schools, he found that 55% of the students did not know even one entrance requirement of the University of California system and that lack of knowledge was not related to their achievement level. He also summarized the findings of a study by Jose Carrasco, who found that teachers were also uninformed about the entrance requirements of the University system, particularly teachers with a high proportion of students of color in their classrooms. As a consequence, Dornbusch (1994) also found that many students who intend to go to college and have the requisite ability according to eighth grade achievement tests did not enroll in the courses required for entrance into the college or university of their choice.

One way to avoid these enrollment mistakes is for schools to make sure parents understand the requirements as well as the implications of not taking particular courses. We asked the parents in the MAGIC study whether the school had provided them with curricular information. The results contain both good and bad news. With regard to making course selections for their child in the seventh grade, the vast majority (70%) of the parents indicated that the school had provided them with adequate information on the available options. The results for information on college requirements were less encouraging: Only 40% of the parents indicated that they thought that they knew most of the courses in the college preparatory sequences; and 60% the parents indicated that they had not gotten their information from the schools. These results suggest that the schools in this county, at least, are not doing a very extensive job of providing parents with the adequate information to help their adolescent children select the courses the adolescents will need to get into the colleges they want to attend.

There is also growing evidence of the importance of personalized communication with the families, especially during the secondary school years.
Two kinds of such communication are needed. First, there is a need for coordination across teachers at this grade level to insure effective monitoring of the child's socioemotional development so that parents and other relevant support persons can be alerted to any danger signs. The ability to provide this type of information is particularly important in early adolescence following the transition into junior high school. We have found that junior high school teachers are not very good at identifying students who are having a difficult with this transition (Lord, Eccles, & McCarthy, 1994). Yet they are the adults who spend the most time with these youth and thus are uniquely situated to identify danger signs at school early enough to get at risk students the help they need. Working more closely together with each other and with the parents of their students could help them play this critical role in the lives of early adolescents and their families. Middle schools in one of our districts handled this issue by organizing each of their three grades, six, seven, and eight, into “houses”. Each house had a counselor and secretary that traveled with their group of students from sixth through eighth grades. In addition, the students were assigned to an “advisory” teacher whom they met with as a group for about twenty minutes a day, in addition to having that teacher for one of their core subjects. These teachers were expected to function as liaisons between the parent and the school, and the other teachers and the child.

Teachers are in a unique position to help parents provide appropriate educational and occupational counseling for their children. Because teachers see many adolescents and interact with each student more directly in terms of intellectual skills, teachers are well positioned to help students and parents think about the adolescent’s talents and aptitudes in terms of future occupational choices. Parents often do not know very much about the relation of specific academic skills to various future jobs possibilities, particularly if they themselves do not excel in the same domains. For example, we know that girls are not going on in the fields of applied mathematics (e.g., engineering) and physical science. We also know the girls are less likely to take these courses in secondary school than the males. Girls appear to select themselves out of these intellectual domains. And they do so at great cost to themselves. By not taking these courses in high school, they are not eligible to take many college courses, including courses and majors they might be interested in like nursing or economics or ecological sciences. They also significantly decrease the possibility that they can decide in college to major in engineering or the physical sciences. Parents often do not understand these implications. And parents may not notice that their daughter is exceptionally good
in math and science (see Eccles, 1989). Bright girls often do quite well in all of their courses and may not give their parents any reason to think they are unusually good in math and science. In addition, parents may not understand that there are many good jobs in these fields and that females are more likely to be paid an equitable salary in these fields. Teachers can provide parents with this type of specific information relevant to their child's future. They can also let parents know about special programs for which their child is eligible.

Ample evidence now exists documenting the power of such information to increase the odds that girls and minority students will take advanced courses in math and science in high school and will consider occupations requiring these courses and requiring a college education (see Eccles 1989). For example, in a study of the 20 best programs in terms of placement of high numbers of females in AP math and science courses, Casserly (1980) found that direct and frequent encouragement to the parents of talented females was one of the distinguishing characteristics of the most effective teachers. Information such as this is especially important for families who live in high risk neighborhoods and for families who have recently immigrated to this country or to the state or city in which they are currently living.

Involvement in learning activities at home. The findings we reported earlier indicate that parents are very actively involved with their children's education at home, even in middle school. And numerous studies have documented the importance of this type of involvement for school achievement. This participation, however, does seem to decline with age, according to the reports of the parents in MCABS and the adolescents in MAGICS. Given the importance of this involvement and the fact that this is the type of involvement parents are most likely to do on their own, teachers and other school personnel ought to be doing as much as they can to encourage and support this type of collaboration with parents, particularly during the middle grades.

Schools and teachers try to foster this type of involvement in a variety of ways. For example, in our samples, the teachers sometimes asked family members to work with their children on particular learning tasks that might facilitate and promote the child's class work. Requests to monitor their children's homework is another example of this type of collaboration and this was done with some regularity in both of our samples. Some of the teachers in both of our studies also provided information on learning goals and ways in which parents may be helpful
to their children in achieving these goals, but they did this less frequently than the previously mentioned strategies.

Work by Epstein and her colleagues suggest that these kinds of practices begin in early elementary school and continue through secondary school, although the kind of information provided and the tasks that are targeted for help usually change across grade levels. As children get older, teachers often send home "contracts" at the beginning of a term, i.e., letters that detail their expectations, their grading system, and/or assignments, to which both students and parents are asked to affix their signatures. Teachers are also less likely to ask for parent help with specific skills such as reading or learning math facts. This may be due to perceptions held by both teachers and parents that a) students should have mastered basic skills by this point, and that b) parents are less able to help now than they were before. Although neither of these perceptions are necessarily true, teachers seem more likely to describe a larger task, such as a science project where parents might choose to be involved with a given part of the project. But given the concerns that many teachers raise about parents expertise and ability to help their children with homework as the subject matters being taught become more technical, it would be helpful for schools to consider some ways in which they could provide parents with some supplementary educational training so that the parents could both be more helpful and could feel more confident in their ability to help. Family Math and Family Computers are two exemplar programs with this goal. Both seek to provide supplementary educational experiences for both students and parents. Both are run at school by teachers in the evenings and on weekends. Both have generated extremely enthusiasm among both parent and teacher groups. And both are relatively inexpensive to introduce and sustain in a school system.

Teachers could also increase parent involvement in learning activities at home by developing assignments that provide a meaningful role for parents to play. Adolescence, for example is a time when children are increasingly interested in things like their cultural heritage, their parents' experience while growing up, and their community's history. They are also interested in how people make important life decisions and how people learn from their mistakes. Teachers could take advantage of these interests by giving assignments that involve interviewing one's parents and other community members, or involve accompanying one's parents on important activities like work or volunteer activities. Assignments such as these might accentuate the areas in which parents have special expertise and information rather than highlighting the areas in which the parents' knowledge may be dated or
limited. Similar activities could be designed for younger children. For example, teachers could have children bring in stories about the kinds of toys and activities they did when they were growing up.

Summary

In this chapter, we have tried to accomplish three goals: First, to document the importance of parent involvement in their children's schooling; second, to discuss the various influences on parental involvement and the many barriers to parent involvement; and third, to provide some concrete recommendations for ways to increase parent involvement in their children's educational development particularly at home because this is the place that most parents participate in their children's education. We began by noting the critical role parents and teachers can play if they work together to support healthy development. Unfortunately, the collaboratively relationship between parents and schools seems to decrease as children move into their adolescent years and into secondary schools. We discussed ways in which this downward trend might be reversed. There are effective ways to involve parents in a collaborative relationship with the schools even during the secondary school years. Furthermore, there is every reason to believe that parent involvement is just as important, if not more important, during these years.
References


Johns Hopkins University, Center for Research on Elementary and Middle Schools.


Figure 1. A Model of the Influences on and Consequences of Parent Involvement in the Schools

A. Parent/Family Characteristics
- Education
- Income, Financial Resources
- Sex, Age, Ethnicity
- Number of Children
- Marital Status
- Employment Status
- General Mental Health and Psychological Resources

B. Neighborhood
- Cohesion
- Social Support
- Opportunity Structures
- Norms
- Dangers
- Social Controls
- Role Models

C. Child Characteristics
- Age, Sex, Ethnicity
- Past Performance
- Aptitudes, Talents, and Interests
- Personality and Temperament

D. Teacher Characteristics
- Age, Sex, Ethnicity
- Years of Teaching

E. School Characteristics
- Type/level
- Resources
- Climate
- Size
- Support for Parent Involvement
- Special Programs

F. Teacher Beliefs
GENERAL
- Proper Role of Parents
- General Self-Efficacies
- Gender-role Schema
- Ethnic Schema
- Knowledge of Techniques

SPECIFIC TO CHILD
- Efficacy
- Goals (Desire to help)
- Affective Relationship

G. Parent Beliefs
GENERAL
- Proper Role of Parents
- Gender-role Schema
- Ethnic Schema
- Efficacies
- Values
- Knowledge of Techniques
- View of Schools Receptivity

SPECIFIC TO CHILD
- Achievement Expectations
- Perceptions of Child's Abilities and Interests
- Value of Various Skills
- Socialization Goals
- Affective Relationship
- Efficacy

H. Teacher Practices
- Conferences
- Requests for Help
- Help Tips for Parents
- Encourage Participation
- Provide Information
- Provide Meaningful Ways to Be Involved
- Give Individual Feedback

I. Parent Practices
- Provide Opportunities
- Direct instruction & Involvement
- Monitor Schoolwork
- Help with Schoolwork
- Volunteer
- Support School Activities
- Attend Conferences
- Request Information
- Participate in School Governance

J. Child Outcomes
- Beliefs
- Self-Perceptions
- Values
- Interests
- Expectations
- Motivational Orientation
- Performance
- Achievement/Activity Choices
- Persistence
<table>
<thead>
<tr>
<th>Scales/Items</th>
<th>Variable Descriptions</th>
<th>Reliability&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MONITOR</strong></td>
<td>Parent response to teacher requests and information (1=never ... 4=about once a month ... 7=daily) Listen to child read Listen to or discuss a story that child writes Practice spelling or other skills before a test Check to see that homework is complete Check to see that homework is done correctly Do arithmetic problems with child</td>
<td>.88</td>
</tr>
<tr>
<td><strong>VOLUNTEER</strong></td>
<td>The rate of parent participation in volunteer activities at school (0=no, 1=yes) PTO/PTA participation Leader in PTO/PTA General volunteer work at school</td>
<td>.65</td>
</tr>
<tr>
<td><strong>INVOLVEMENT</strong></td>
<td>Parent report of frequency of involvement with child's daily activities (1=never ... 4=weekly ... 7=almost every day for a long while) Help child do his/her homework Check homework after completion Help child prepare for tests</td>
<td>.83</td>
</tr>
<tr>
<td><strong>PROGRESS</strong></td>
<td>Do you contact the school about child's progress? (0=no, 1=yes)</td>
<td></td>
</tr>
<tr>
<td><strong>EXTRA HELP</strong></td>
<td>Do you contact the school about how to give extra help? (0=no, 1=yes)</td>
<td></td>
</tr>
</tbody>
</table>

Note: <sup>a</sup>Cronbach’s α coefficients as reliability estimates were computed on scales consisting of multiple items.
Table 2
Means, Standard Deviations, and F statistics of Parent Scales and Items by Grade Level and School Type

<table>
<thead>
<tr>
<th>Scales/Items</th>
<th>2 (n=216) M (SD)</th>
<th>Grade 3 (n=229) M (SD)</th>
<th>Grade 5 (n=340) M (SD)</th>
<th>F</th>
<th>School Typea elementary (n=140) M (SD)</th>
<th>School Typea middle (n=193) M (SD)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONITOR</td>
<td>3.50 (1.78)</td>
<td>3.02 (1.80)</td>
<td>2.67 (1.53)</td>
<td>14.20 ***</td>
<td>2.93 (1.60)</td>
<td>2.50 (1.46)</td>
<td>6.17 *</td>
</tr>
<tr>
<td>VOLUNTEER</td>
<td>.30 (.34)</td>
<td>.28 (.34)</td>
<td>.26 (.32)</td>
<td>1.18 ns</td>
<td>.33 (.34)</td>
<td>.21 (.29)</td>
<td>12.79 ***</td>
</tr>
<tr>
<td>INVOLVEMENT</td>
<td>3.90 (1.30)</td>
<td>3.88 (1.22)</td>
<td>3.72 (1.21)</td>
<td>1.83 ns</td>
<td>3.59 (1.16)</td>
<td>3.71 (1.22)</td>
<td>2.76 ns</td>
</tr>
<tr>
<td>PROGRESS</td>
<td>.52 (.50)</td>
<td>.52 (.50)</td>
<td>.46 (.50)</td>
<td>1.23 ns</td>
<td>.46 (.50)</td>
<td>.46 (.50)</td>
<td>.00 ns</td>
</tr>
<tr>
<td>EXTRA HELP</td>
<td>.40 (.49)</td>
<td>.38 (.49)</td>
<td>.46 (.50)</td>
<td>.80 ns</td>
<td>.27 (.44)</td>
<td>.40 (.49)</td>
<td>6.13 *</td>
</tr>
</tbody>
</table>

Note: aAmong the fifth graders; ns not significant; * p<.05; ** p<.01; *** p<.001.
<table>
<thead>
<tr>
<th>Scales/Items</th>
<th>Variable Descriptions</th>
<th>Reliability$^a$</th>
</tr>
</thead>
</table>
| **HELP TIPS** | Ideas or tips for how parent can help child  
(1=never ... 4=a few times a month ... 7=daily)  
Ideas to help parent talk with child about school work  
Ideas on how to monitor homework  
Ways to practice spelling or other skills at home before a test | .87             |
| **GOALS** | Sharing information about goals or orientation  
(1=never ... 4=a few times a month ... 7=daily)  
Learning objectives for the school year  
Expectations about completion of assignments  
How report card grades are earned | .72             |
| **REQUESTS** | Requests of parent to monitor work  
(1=never ... 4=a few times a month ... 7=daily)  
Listen to or discuss a report or story child has written  
Practice skills before a test  
Check to see that homework is done  
Check to see that homework is done correctly  
Review materials with child | .87             |
| **ENCOURAGE** | How often do you encourage parents to get involved in classroom activities?  
(1=very infrequently ... 7=very frequently) |                |
| **FEEDBACK** | Did you provide feedback other than regular conferences or report cards for this child?  
(0=no, 1=yes) |                |

Note: $^a$Cronbach’s $\alpha$ coefficients as reliability estimates were computed on scales consisting of multiple items.
### Table 4
Means, Standard Deviations, and F statistics of Teacher Scales and Items by Grade Level and School Type

<table>
<thead>
<tr>
<th>Scales/Items</th>
<th>Grade 2 (n=23)</th>
<th>Grade 3 (n=23)</th>
<th>Grade 5 (n=31)</th>
<th>F</th>
<th>School Typea Elementary (n=19)</th>
<th>School Typea Middle (n=12)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>HELP TIPS</td>
<td>2.79 (1.60)</td>
<td>3.54 (2.51)</td>
<td>2.76 (1.62)</td>
<td>1.28 ns</td>
<td>2.98 (1.89)</td>
<td>2.36 (.96)</td>
<td>1.02 ns</td>
</tr>
<tr>
<td>GOALS</td>
<td>3.31 (1.93)</td>
<td>4.22 (2.02)</td>
<td>2.95 (1.66)</td>
<td>3.11 ns</td>
<td>3.13 (1.64)</td>
<td>2.64 (1.72)</td>
<td>.61 ns</td>
</tr>
<tr>
<td>REQUESTS</td>
<td>4.02 (1.97)</td>
<td>4.57 (2.11)</td>
<td>4.03 (1.81)</td>
<td>.56 ns</td>
<td>4.15 (2.05)</td>
<td>3.82 (1.35)</td>
<td>.20 ns</td>
</tr>
<tr>
<td>ENCOURAGE</td>
<td>5.17 (1.56)</td>
<td>5.48 (1.44)</td>
<td>4.60 (2.19)</td>
<td>1.63 ns</td>
<td>5.50 (1.58)</td>
<td>3.25 (2.34)</td>
<td>9.93 **</td>
</tr>
<tr>
<td>FEEDBACKb</td>
<td>.49 (.50)</td>
<td>.50 (.50)</td>
<td>.37 (.48)</td>
<td>6.86 **</td>
<td>.44 (.50)</td>
<td>.30 (.46)</td>
<td>8.06 **</td>
</tr>
</tbody>
</table>

**Note:** aAmong the fifth graders. ns not significant; * p<.05; ** p<.01; *** p<.001. bThis item is based on the Teacher's Individual Assessment Questionnaire. The sample size of each group is 237, 245, and 358 for the 2nd, 3rd, and 5th grade respectively. Within the 5th grade, n=174 in the elementary schools and n=184 in the middle school.
### Table 5

Repeated Measures MANOVA F-statistics of Parent Time Spent With Child - Wave 1

| Question                                             | Between-Subject Effects | Within-Subject Effects - Parents |          |          |          |          |          |
|------------------------------------------------------|-------------------------|----------------------------------|----------|----------|----------|----------|
|                                                      | Grade                  | Sex                              | Grade by | Sex by   | Grade by | Sex by   | Grade by |
|                                                      |                        |                                  | Parent   | Parent   | Parent   | Parent   | Parent   |
| Do math or science activities with child             | 1.53                   | --                               | --       | --       | 12.73*** | --       | 3.80*    |
| Read to child                                        | 43.81***               | --                               | --       | --       | 98.92*** | --       | --       |
| Help child with his/her homework                     | 6.03**                 | --                               | --       | --       | 74.26*** | --       | --       |
| Check child's homework after completed               | 2.24                   | --                               | --       | --       | 26.19*** | --       | --       |
| Play sports with child                               | 2.71                   | 23.96***                         | --       | --       | 32.69*** | 6.52**   | --       |
| Play indoor games with child                         | 15.54***               | --                               | --       | --       | 6.58**   | 2.34     | 3.13*    |

Repeated Measures MANOVA F-statistics of Parent Time Spent With Child - Wave 3

| Question                                             | Between-Subject Effects | Within-Subject Effects - Parents |          |          |          |          |          |
|------------------------------------------------------|-------------------------|----------------------------------|----------|----------|----------|----------|
|                                                      | Grade                  | Sex                              | Grade by | Sex by   | Grade by | Sex by   | Grade by |
|                                                      |                        |                                  | Parent   | Parent   | Parent   | Parent   | Parent   |
| Do math or science activities with child             | 2.01                   | --                               | 3.35*    | --       | 1.67     | --       | --       |
| Read to child                                        | 55.68***               | --                               | 3.26*    | 67.57*** | 3.51*    | --       | --       |
| Have child read to you                               | 53.08***               | 4.51*                           | --       | 58.45*** | 3.59*    | --       | 2.4      |
| Help child with his/her homework                     | --                     | --                               | 2.81     | 33.32*** | --       | --       | --       |
| Check child's homework after completed               | 7.15***                | --                               | --       | --       | 53.25*** | --       | --       |
| Help child prepare for test                          | 1.13                   | --                               | --       | --       | 55.31*** | 4.41*    | --       |
| Discuss important news with child                    | --                     | --                               | --       | --       | 55.60*** | 2.14     | --       |
| Play sports with child                               | --                     | 31.07***                        | 2.33     | 86.21*** | --       | 3.93*    | 3.10*    |
| Play indoor games with child                         | 12.76***               | --                               | --       | --       | --       | 2.18     | --       |

**Notes.** N=272; sample size may vary slightly due to list-wise deletion

* p<.05  ** p<.01  *** p<.001  - F value is less than 2.00
## Table 6

### Means For Time Parents Spend With Child - Wave 1

<table>
<thead>
<tr>
<th>Question</th>
<th>Grade</th>
<th>Sex of child</th>
<th>Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kindergarten</td>
<td>First</td>
<td>Third</td>
</tr>
<tr>
<td>Do math or science activities with child</td>
<td>3.45</td>
<td>3.17</td>
<td>3.24</td>
</tr>
<tr>
<td>Read to child</td>
<td>4.68</td>
<td>4.00</td>
<td>3.06</td>
</tr>
<tr>
<td>Help child with his/her homework</td>
<td>3.71</td>
<td>3.52</td>
<td>4.12</td>
</tr>
<tr>
<td>Check child’s homework after completed</td>
<td>3.85</td>
<td>3.86</td>
<td>4.32</td>
</tr>
<tr>
<td>Play sports with child</td>
<td>3.33</td>
<td>3.18</td>
<td>2.90</td>
</tr>
<tr>
<td>Play indoor games with child</td>
<td>4.16</td>
<td>3.57</td>
<td>3.21</td>
</tr>
<tr>
<td>Do active, outdoor activities with child</td>
<td>4.23</td>
<td>3.65</td>
<td>3.61</td>
</tr>
</tbody>
</table>

### Means For Time Parents Spend With Child - Wave 3

<table>
<thead>
<tr>
<th>Question</th>
<th>Grade</th>
<th>Sex of child</th>
<th>Parent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Second</td>
<td>Third</td>
<td>Fifth</td>
</tr>
<tr>
<td>Do math or science activities with child</td>
<td>3.41</td>
<td>3.35</td>
<td>3.17</td>
</tr>
<tr>
<td>Read to child</td>
<td>3.97</td>
<td>3.41</td>
<td>2.22</td>
</tr>
<tr>
<td>Have child read to you</td>
<td>3.78</td>
<td>3.09</td>
<td>2.38</td>
</tr>
<tr>
<td>Help child with his/her homework</td>
<td>4.03</td>
<td>4.01</td>
<td>4.00</td>
</tr>
<tr>
<td>Check child’s homework after completed</td>
<td>4.03</td>
<td>4.11</td>
<td>3.56</td>
</tr>
<tr>
<td>Help child prepare for tests</td>
<td>3.52</td>
<td>3.65</td>
<td>3.42</td>
</tr>
<tr>
<td>Discuss important news with child</td>
<td>4.11</td>
<td>4.13</td>
<td>4.14</td>
</tr>
<tr>
<td>Play Sports with Child</td>
<td>3.13</td>
<td>2.97</td>
<td>2.95</td>
</tr>
<tr>
<td>Play indoor games with child</td>
<td>3.60</td>
<td>3.33</td>
<td>2.93</td>
</tr>
</tbody>
</table>