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Final Performance Report for OERI Grant # R305T010673:

The Social Context of Parental Involvement: A Path to Enhanced Achievement

Presented to:
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To the best of my knowledge and belief, all data in this performance report are true and correct. See Appendix A for Annual Certifications of IRB approval.

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Executive Summary

This three-year project focused on parental involvement in elementary and middle school children's education. Based on Hoover-Dempsey and Sandler's (1995, 1997) model of the parental involvement process, the study was designed to accomplish two major goals. The first was to develop reliable and valid measures for assessing constructs included in the model. The second was to test model-driven hypotheses about the causes and consequences of parental involvement in children's education. Both goals were addressed in a series of four studies over the course of the project (2001-2004). Findings indicated satisfactory measurement properties for all scales; these findings and all measures developed during the three-year study are included in this report. The findings also suggested revisions to the model, which are described briefly. A sample of findings on hypothesized relationships among constructs suggested by the model as central to understanding the causes and consequences of parental involvement are also noted.

Final Performance Report for OERI Grant # R305T010673:

The Social Context of Parental Involvement: A Path to Enhanced Achievement

This three-year study (2001-2004) focused on parental involvement in elementary and middle school children's education. It was grounded in Hoover-Dempsey and Sandler's (1995, 1997) theoretical model of the parental involvement process. The model addresses three central questions: *Why* do parents become involved in children's education? *What* do they do when they're involved (i.e., what mechanisms of influence do they engage when they are involved)? *How* does their involvement, once engaged, influence student outcomes? In its original form (Hoover-Dempsey & Sandler, 1995, 1997), the model included five levels (see Figure 1).

The *first level* focused on parent's motivations for involvement; predictors of parental involvement included parental role construction for involvement, parent's sense of efficacy for helping the child succeed, and parent's perceptions of general invitations to involvement from the school and the child.

The *second level* focused on parents' choice of involvement forms; constructs assumed to influence these choices included parent's perceptions of skills and knowledge for involvement, parent's perceptions of time and energy available for involvement, and parent's perceptions of specific invitations to involvement from the teacher and the child.

The *third level* included mechanisms used by parents during involvement activities that likely account for involvement's influence on student outcomes; hypothesized mechanisms were reinforcement, modeling, and instruction.

The *fourth level* focused on mediating or tempering variables in the involvement process: the fit between (a) the parent's choice of involvement activities and the child's

developmental level and (b) the parent's involvement choices and the school's expectations for parents' involvement. While we continue to believe these constructs are important to a full understanding of the parental involvement process, we became aware that examination of these constructs would require a research design incompatible with the general design and overall goals of the full project. Specifically, the project was designed to develop valid and reliable measures of model constructs; for the most part, this involved development and testing of survey measures compatible with examining relatively large groups of parents and students. The constructs originally included at Level 4 required assessment of individual students' developmental levels, individual parent's involvement activities, and determination of fit between parent-child and parent-school pairs. The project did not include resources sufficient to support these individually focused assessments. Thus, we were not able to examine Level 4 as originally specified. However, on-going work suggested the importance of additional 'levels' in the model, both compatible with the general survey design of measures:

- *children's perceptions of parent's involvement activities*: this reflected theoretical and empirical literature suggesting that children's perceptions and understanding of parents' activities influence the effect of parental involvement activities on student outcomes;
- *proximal student outcomes that lead to achievement*: this reflected scholarly literature suggesting that parents' influence on students' school outcomes may occur most directly in supporting student attributes that lead to student achievement (i.e., parental involvement's most critical influence on student learning may not be on summary measures of school achievement but on student

attributes and skills that support achievement). As a consequence, we replaced constructs at Level 4 of the original model with constructs centered on children's perceptions of parents' involvement activities and a sample of student attributes, or proximal academic outcomes, that are associated with or lead to achievement.

The *fifth level* of the model included summary measures of student achievement, most specifically, student performance on standardized achievement tests.

The major goals of this research project included (a) the development of reliable and valid measures for constructs included at each level of the model (including model modifications as described above), and (b) the testing of model-driven hypotheses about the parental involvement process. Both goals were pursued in a series of four studies conducted over the three-year grant period. (See Appendix A for Annual Certification of IRB Approval for the studies.)

Study 1 focused on parents' motivations for involvement (model Level 1). Study 2 focused on parents' choice of involvement forms (model Level 2). Study 3 focused on mechanisms parents employ during their involvement activities (model Level 3), student perceptions of parents' involvement activities, and proximal student academic outcomes influenced by parental involvement (model Level 4, in revised form as described briefly above). Study 4 examined all levels of the model and summary measures of student achievement (model Level 5). Specific demographic and descriptive information on the samples of public school elementary and middle school students and parents included in Studies 1 through 4 is included in Table 1, below; a summary of measures developed and used in the four studies is included in Table 2 below.

Table 1: Summary Information on Participants in Studies 1, 2, 3 and 4

	Study 1	Study 2	Study 3	Study 4
<u>Date of study</u>	Spring 2002	Fall 2002	Spring 2003	Fall 2003
<u>Participating public schools</u>	4 elementary 2 middle	3 elementary 2 middle	6 elementary 2 middle	5 elementary 4 middle
<u>Parent participants</u>	Grades K-6	Grades 1-6	Grades 4-6	Grades 4-6
Number	877	495	421	358
Demographic info:				
Mean parent education	Some college or 2 year college	Some college or 2 year college	Some college or 2 year college	Some college or 2 year college
Mean family income	20,000-30,000	20,000-30,000	20,000-30,000	30,000-40,000
Single parent family (% of total participants)	27.5%	18%	24.7%	18.2%
Race (% of total participants)				
African American	36.2%	16.5%	38.0%	27.4%
Asian American	3.2%	5.6%	5.5%	3.9%
Hispanic American	10.2%	26.3%	15.0%	6.4%
White	32.0%	30.5%	37.1%	57.3%
Other	3.6%	5.0%	3.1%	4.2%
Kurdish	1.6%	0.9%	NA	NA
Albanian	0.1%	NA	NA	NA
Missing Value	13.1	15.2	1.4	0.8
Gender, parents (% of total participants)				
Male	18.0%	21.7%	20.9%	17.4%
Female	82.0%	78.3%	79.1%	82.6%
Number of parents completing questionnaire in Spanish	71	128	46	11
<u>Student participants</u>	0	0	421	358
Student grade levels	0	0	421	358
Fourth grade			239 (56.7%)	96 (26.8%)
Fifth grade			108 (25.7%)	131 (36.6%)
Sixth grade			74 (17.6%)	131 (36.6%)
Gender, students (% of total participants)	0	0	48%	52.5%
Male	0	0	52%	47.5%
Female				
Number of classrooms involved	102	56	63	75
Parent Questionnaire: Translations for non-English-speaking parents	Spanish Kurdish, Lao, Arabic, and Albanian	Spanish	Spanish	Spanish

Table 2: Measures Developed and Used, by Study

Constructs	Study 1	Study 2	Study 3	Study 4
<u>Original Model Level 1</u>				
Parental role construction for involvement in children’s education	√	√		√
Parental sense of efficacy for helping the child succeed in school	√	√		√
Parental perception of general invitations to involvement from the school (school climate)	√	√		√
Parental perception of general invitations to involvement from the child	√	√		
<u>Original Model Level 2</u>				
Parent perception of personal knowledge and skills		√		√
Parent perception of time and energy		√		√
Parent perception of specific invitations to involvement from the teacher		√		√
Parent perception of specific invitations from the child		√		√
Parent report of home-based involvement activities	√	√		√
Parent report of school-based involvement activities	√	√		√
<u>Original Model Level 3</u>				
Parent report of modeling			√	√
<i>(Added to model)</i> Parent report of encouragement			√	√
Parent report of reinforcement			√	√
Parent report of instruction			√	√
<u>Original Model Level 4</u> (Constructs included at this level of the original model were replaced by <i>Child perceptions of parents’ involvement activity</i> and <i>Child proximal academic outcomes</i>)				
<i>Child perceptions of parents’ involvement activities</i>				
<i>(Added to model)</i> Student report of parents’ use of encouragement			√	√
Student report of parents’ use of modeling			√	√
Student report of parents’ use reinforcement			√	√
Student reports of parents use of instruction			√	√
<i>Child proximal academic outcomes</i>				
<i>(Added to model)</i> Student report of academic self-efficacy			√	√
<i>(Added to model)</i> Student report of intrinsic motivation to learn			√	√
<i>(Added to model)</i> Student report of self-regulatory strategy use			√	√
<i>(Added to model)</i> Student report of social self-efficacy for relating to the teacher			√	√
<u>Original Model Level 5</u>				
Summary measure(s) of achievement (<i>not project-developed</i>)				√

This report focuses primarily on research project activities and results related to the development of measures for each of the constructs included in the model of the parental involvement process and related model revisions. We also report a sample of research results related to model-driven hypotheses about the parental involvement process. Some of the results reported here in summary form have been included in papers and publications drawing from the study findings (e.g., Hoover-Dempsey, Walker,

Sandler, Whetsel, Green, Wilkins, & Clossen, in press; Hoover-Dempsey, Walker & Sandler, in press; Walker, Hoover-Dempsey, Whetsel, & Green, 2004; Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, in press). A list of all study-related papers and publications, including those in progress, is included in Appendix B.

Scale Development and Related Model Revisions

In this section, we describe scale development outcomes and related model revisions. We have organized this section by levels of the original theoretical model (Figure 1). Many of the scales reported here were used in two or more of the studies during the full research project (see Table 2 above for a summary of scales developed for and used in Studies 1 through 4). We focus below on the version of each scale as refined and used in Study 4 of the full research project. Each of the scales as used in Study 4 is included in the Appendices C through W.

Scale development work in combination with simultaneous conceptual and theoretical discussions also led to several revisions to the original model (Hoover-Dempsey & Sandler, 1995, 1997; Figure 1). Each of these revisions, we believe, allows a more accurate set of hypotheses about the parental involvement process, especially as related to understanding why parents become involved and how their involvement influences student school outcomes. These revisions are included in Figure 2; each revision is discussed in somewhat more detail at the end of each section below.

Motivators of Parental Involvement: Original Model Level 1

The original model's first level (Hoover-Dempsey & Sandler, 1995, 1997) includes constructs believed to influence parents' decisions about becoming involved in their children's education. They include parental role construction for involvement,

parental sense of efficacy for helping the child succeed in school, parents' perceptions of general school invitations to involvement, and parents' perceptions of children's general invitations to involvement.

Parental Role Construction for Involvement

Parental role construction for involvement includes parents' beliefs about what they *should* do in relation to their children's education (Hoover-Dempsey & Sandler, 1995, 1997; Hoover-Dempsey et al., in press; Hoover-Dempsey, Wilkins, Sandler, & O'Connor, 2004; Sheldon, 2002; Walker et al., in press). Prior work in our lab suggested that parental role construction often takes one of three forms: parent-focused (parent believes that the parent is ultimately responsible for the child's educational success), school-focused (parent believes that the school is ultimately responsible for the child's educational success), and partnership-focused (parent believes that a parent-school partnership is ultimately responsible for the child's educational success: Hoover-Dempsey et al., 2004; Walker et al., in press). The final role construction scale (Appendix C) includes two subscales: Role Activity Beliefs (10 items, e.g., "I believe it is my responsibility to help my child with homework;" "I believe it is my responsibility to communicate with my child's teacher regularly") and Valence Toward School (6 items, e.g., "My teachers ignored me . . . cared about me"). Alpha reliabilities for the two scales were .80 and .85 respectively. The subscales may be used independently as indicators of role construction and may be used together to create role construction categories (parent-, school-, partnership-focused (Walker et al., in press).

Parental Sense of Efficacy for Helping Child Succeed in School

Parental sense of efficacy includes parents' beliefs about their personal ability to make a difference in the child's educational outcomes through their involvement (Bandura, 1997; Hoover-Dempsey, Bassler, & Brissie, 1992; Hoover-Dempsey & Sandler, 1995, 1997; Hoover-Dempsey et al., in press; Walker et al., in press). The final scale (see Appendix D) included seven items (e.g., "I know how to help my child do well in school"). Alpha reliability for the scale as used in the final study of this project was .78.

Parental Perceptions of General Invitations to Involvement from the School

Perceptions of general invitations from the school include the parental perceptions that school staff and the school environment or climate in general makes the parent feel that he or she is a valued participant in the child's education and welcome in the school (e.g., Griffith, 1998; Hoover-Dempsey & Sandler, 1995, 1997; Hoover-Dempsey et al., in press; Walker et al., in press). The final scale included six items (e.g., "Teachers at this school are interested and cooperative when they discuss my child;" see Appendix E). Alpha reliability for the scale as used in Study 4 was .88.

Parental Perceptions of General Invitations to Involvement from the Child

As included in the original model (Hoover-Dempsey & Sandler, 1995, 1997), this construct focused on child attributes and characteristic child behaviors that tend to invite parental involvement (e.g., child age, difficulty with school work: Dauber & Epstein, 1993; Eccles & Harold, 1993; Hoover-Dempsey, Bassler & Burow, 1995). Initial efforts to develop a scale for this construct produced an acceptable measure (Walker & Hoover-Dempsey, 2001), but subsequent analyses and considerable conceptual discussion suggested that the power of the construct to predict parents' involvement is likely

subsumed by parental role construction (i.e., parents take the child's characteristics and attributes into account in thinking about the involvement activities they should undertake: Walker et al., in press).

Summary: Original Model Level 1

Scale Development. Scale development work at the first level of the model yielded reliable and valid measures of three constructs hypothesized to predict parents' decisions about involvement in their children's education: parental role construction, efficacy, and perceptions of general invitations to involvement from the school. A fourth construct, parents' perceptions of general invitations from the child, could not be adequately assessed.

Changes to the Original Model. As reflected in the revised model of the parental involvement process (Figure 2), we retained parental role construction, efficacy and general invitations from the school as constructs at the first level of the model. We eliminated the fourth construct originally included at this level of the model (Figure 1: general child invitations).

Variables that Influence Parents' Choice of Involvement Forms: Original Model Level 2

The original model (Hoover-Dempsey & Sandler, 1995; Figure 1) suggested that parents, having made the decision to become involved, would choose specific involvement forms consistent with constructs at the second level of the model. These constructs included: parents' perceptions of personal skills and energy related to involvement; parents' perceptions of other demands on their time and energy (especially from employment or other family needs); parents' perceptions of specific invitations to involvement from the child's teacher(s); and parents' perceptions of specific invitations

to involvement from the child. As described below, scale development work led to reliable and valid measures of the constructs included at this level of the model.

However, these analyses (in concert with on-going conceptual discussions of Level 1 motivators of involvement) also led to revisions in the model. These revisions, included in Figure 2, are discussed briefly below.

Parental Perception of Personal Knowledge and Skills

This construct focuses on parents' perceptions of the knowledge and skills they possess relevant to involvement in the child's education. Consistent with related empirical work (e.g., Dauber & Epstein, 1993; Hoover-Dempsey et al., 1995; Hoover-Dempsey et al., in press; Kay, Fitzgerald, Paradee, & Mellencamp, 1994; Lareau, 1989), the construct assumes that parents will be motivated to engage in involvement activities if and as they believe they have the skills and knowledge to be helpful in specific domains of activity. The scale developed includes nine items (e.g., "I know how to explain things to my child about his or her homework;" "I have the skills to help out at my child's school;" see Appendix F). Alpha reliability for the scale as refined and used in Study 4 was .83.

Parental Perceptions of Time and Energy for Involvement

This construct includes parents' perceptions of demands on their time, especially those related to employment and other family needs, that influence possibilities of involvement in the child's education (Hoover-Dempsey & Sandler, 1995). It is grounded in work suggesting the power of such demands to shape parents' involvement ideas and activities (e.g., Hoover-Dempsey et al., 1995; Hoover-Dempsey et al., in press; Lareau, 1989; Weiss, Mayer, Kreider, Baughan, Dearing, Hencke, & Pinto, 2003). The scale as

refined and used in the final study of the research project includes six items (e.g., “I have enough time and energy to attend special events at school;” “I have enough time and energy to communicate effectively with my child’s teacher;” see Appendix G). Alpha reliability was .84.

Parental Perceptions of Specific Invitations to Involvement from the Teacher

Parents’ perceptions of specific invitations from the teacher include direct requests from the teacher, in any of a number of forms, for parental involvement in helping the child at home or engaging in school-based activities (Hoover-Dempsey & Sandler, 1995). The construct is based on considerable empirical work underscoring parents’ wishes to know more about *how* to help their children succeed in school (e.g., Corno, 2000; Hoover-Dempsey et al., 1995) and suggesting the power of such invitations to predict involvement (e.g., Balli, Demo, & Wedman, 1998; Epstein & Van Voorhis, 2001; Shumow, 1998). Grounded in part on work by Epstein and Salinas (1993), the scale developed and used in Study 4 included six items (e.g., “My child’s teacher asked me or expected me to supervise my child’s homework;” “My child’s teacher asked me to help out at the school;” see Appendix H); alpha reliability was .81.

Parental Perception of Specific Invitations to Involvement from the Child

These invitations include child requests to the parent for help or other engagement in school-related activities, at home or at school. As true of invitations from the teacher, they are grounded in an empirical literature suggesting their power in eliciting involvement activity from parents (e.g., Balli et al., 1998; Hoover-Dempsey et al., 1995; Xu & Corno, 1998). They also draw on developmental literature suggesting parents’ general wishes to respond to their children’s needs and their valuing of children’s

developmental and educational success (e.g., Baumrind, 1991). The scale as refined and used in Study 4 included six items paralleling those used in specific teacher invitations scale (e.g., “My child asked me to help explain something about his or her homework;” “My child asked me to help out at school;” see Appendix I). Alpha reliability obtained with the Study 4 sample was .70.

Summary: Original Model Level 2

Scale Development. Scale development work at the second level of the original model resulted in reliable and valid scales for all constructs originally included here: parental perceptions of: knowledge and skills related to involvement, time and energy for involvement, specific invitations to involvement from the teacher, and specific invitations to involvement from the child. These results, considered in combination with results for Model Level 1 and considerable conceptual discussion, led to two changes in the original model (Walker et al., in press).

Changes to the Original Model. We made two major changes to the original model (Figure 1). First, we incorporated Level 2 of the original model into Level 1 of the revised model (Figure 2). The original model depicted parents’ decisions about involvement as a two-level process; this original decision grew from theoretical work that suggested the importance of distinguishing major psychological motivators for involvement from the pragmatic issues that often attend involvement (Hoover-Dempsey & Sandler, 1995, 1997). However, empirical work and on-going conceptual discussions suggested the wisdom of a more integrated perspective on this level of the parental involvement process. We decided to make two changes:

- We shifted life-context constructs (i.e., parental perceptions of knowledge and skills, as well as time and energy available for involvement) from Level 2 of the original model (Figure 1) to the Level 1 of the revised model (Figure 2). This move reflected the importance of these life-context constructs in shaping (but not determining) parents' involvement.
- We moved parental perceptions of specific invitations to involvement from the teacher and child from Level 2 of the original model (Figure 1) to Level 1 of the revised model (Figure 2); this move acknowledged the fit of specific invitations within the broader category of invitations to involvement.

Taken together, these changes resulted in a revised model (see Figure 2) suggesting that parents' decisions to become involved in children's schooling are influenced by (a) their motivational beliefs (role construction, sense of efficacy for helping the child succeed in school), (b) their perceptions of invitations to involvement from others (perceptions of general school invitations or school climate, specific invitations from the child, and specific invitations from the teacher), and (c) their perceptions of personal life context issues pertinent to involvement (perceived knowledge and skills for involvement, perceived time and energy for involvement).

The second change focused on defining parental involvement activity. Conceptual and methodological discussions led to adding a sample of parental involvement activities (in two relatively discrete categories: parents' home-based and school-based involvement behaviors) to the revised model. These are included in Figure 2, Level 2, and are described more fully below.

Mechanisms of Parental Involvement's Influence on Students: Original Model Level 3

Following Studies 1 and 2, we added *types of parental involvement behaviors* to the general mechanisms level of the original model (see Figure 2, Level 2). This addition situated ‘types of involvement behaviors’ as a variable to be assessed in relation to the originally hypothesized *mechanisms of parental involvement’s influence* on student outcomes: modeling, reinforcement, and instruction (Hoover-Dempsey & Sandler, 1995).

Types of Parental Involvement Behaviors

Adding specific types of parental involvement behaviors reflected a decision to incorporate this more traditional approach to thinking about parental involvement into the full model. Analyses and discussions following Studies 1 and 2 led us to believe that including measures of involvement activities *per se* would (a) help us connect research grounded in the model to the wider body of literature focused on describing or assessing varied categories of parental involvement activities and behaviors and (b) facilitate understanding—when examined in conjunction with mechanisms of influence—of involvement activities’ impact on student learning and educational success.

We identified a sample of specific involvement activities and behaviors in related work (e.g., Epstein, 198; Epstein & Salinas, 1993; Hoover-Dempsey et al., 1995; Hoover-Dempsey, Battiato, Walker, Reed, DeJong, & Jones, 2001). Consistent with this literature, we divided these activities the general categories of home-based and school-based involvement. Home-based involvement was defined as that taking place between the child and parent outside of school. These activities and parental behaviors generally focus on the individual child’s learning-related behaviors, attitudes, or strategies, and includes parental activities such as helping with homework, reviewing for a test, and keeping an eye on the child’s progress. School-based involvement activities include those

typically undertaken by parents at school. School-based involvement behavior may focus on the child (e.g., attend a parent-teacher conference, observe the child in class, watch a child's performance), but may also focus on school issues or needs more broadly construed (e.g., attend a school open house, volunteer to assist on class field trips).

While more comprehensive measures of involvement activities are available and quite useful for varied purposes (e.g., Epstein, 1986; Epstein & Salinas, 1993; Garcia, 2004), we were conscious of the need to keep the full survey of model constructs to a reasonable length (see Walker et al., in press) and thus developed relatively short measures for describing parents' choice of involvement types. The home-based activity scale included five items (e.g., "Someone in this family talks with this child about the school day [never to daily]"); it achieved an alpha reliability of .85 with the Study 4 sample (Appendix J). The school-based involvement scale included five items (e.g., "Someone in this family helps out at this child's school [never to daily]"), and achieved an alpha reliability of .82 with this sample (Appendix K).

Mechanisms of Influence

Our major interest at the 'mechanisms level' of the model (original model, Level 3: Figure 1; revised model, Level 2: Figure 2) continued to center on the psychological mechanisms parents engage when they enact involvement activities and behaviors. Three major mechanisms were identified in the original model (Figure 1): parental modeling, reinforcement, and instruction. Consideration of related work by Martinez-Pons (1996) and simultaneous conceptual discussions led to the addition of a fourth mechanism to the revised model, parental encouragement.

In developing scales to assess parents' reports of the four identified mechanisms of parental involvement's influence (encouragement, modeling, reinforcement, instruction), we adapted Martinez-Pons' (1996) questionnaires for children. We also worked to include items in each mechanism scale reflective of the student attributes related to school learning that we came to include in Level 4 of the revised model (Figure 2). These attributes include student academic self-efficacy, intrinsic motivation to learn, self-regulatory strategy use, and social self-efficacy for relating to teacher (these are described in more detail in the section on model Level 4 below).

Parental Report of Encouragement. Parental encouragement focused on parents' explicit affective support for the student's engagement in school- or learning-related activities (e.g., Hess & Holloway, 1984; Steinberg, Lamborn, Dornbusch & Darling, 1992). Adapted from Martinez-Pons (1996), our scale included 13 items focused on explicit parental support and encouragement for the student's interest in school and learning, self-efficacy for learning, and varied learning strategies (e.g., "We encourage this child when he or she has trouble doing school work;" "We encourage this child to ask other people for help when a problem is hard to solve;" see Appendix L). The scale achieved an alpha reliability of .92.

Parental Report of Modeling. Modeling theory suggests that students learn in part by observing models (e.g., Bandura, 1997; Schunk, 1989). Modeling is especially effective when undertaken by adults, particularly parents, whom children perceive to be responsive, competent, powerful, and accessible (Bandura, 1997). To the extent that parents and children engage in reciprocal interactions related to school activities—and

their interactions involve cognitions and behaviors related to school learning—parental involvement is likely to influence student school outcomes through parental modeling.

Our scale was adapted from Martinez-Pons' (1996) measure, and includes items developed to assess parental modeling as keyed to the student learning attributes included at Level 4 (described in the next section of the revised model: Figure 2). The modeling scale included 10 items (e.g., “We show this child we know how to solve problems;” see Appendix M); it achieved an alpha reliability of .94 with the Study 4 parent sample.

Parental Report of Reinforcement. Reinforcement references the fundamental learning principle that behavior patterns occur and are maintained because of their consequences (e.g., Skinner, 1989). Applied to student learning, reinforcement theory and related research suggests that children will repeat behaviors (or learn patterns of behaviors) when they consistently associate the behaviors with receiving positive reinforcement for doing so. Of particular interest thus are parents' reinforcing behaviors that act to develop and maintain student attributes associate with positive learning outcomes. Our scale to assess parental reinforcement during involvement was adapted from Martinez-Pons' (1996) measure, and included items designed to assess reinforcement as related to the student learning attributes of primary interest. The scale included 13 items (e.g., “We show this child we like it when he or she organizes his or her schoolwork;” see Appendix N) and achieved an alpha reliability of .96.

Parental Report of Instruction. Parental instruction emerges in social interactions between parent and child during involvement activities as they engage in shared thinking related to learning strategies and processes (e.g., Goncu & Rogoff, 1998; Rogoff & Wertsch, 1984), collaborate on learning skills, tasks, strategies and outcomes within the

student's 'zone of proximal development' (Vygotsky, 1978), and engage in more direct instructional strategies (e.g., Sigel, 1990) that may be closed-ended (e.g., focused on memorization) or open-ended (e.g., focused on developing conceptual understanding). Our scale, adapted from Martinez-Pons' (1996) measure, included 15 items (e.g., "We teach this child how to check homework as he or she goes along;" "We teach this child to ask questions when he or she doesn't understand something;" see Appendix O). The scale achieved an alpha reliability of .92 with the Study 4 sample.

Summary: Original Model Level 3

Scale development. Scale development work at this stage of the research project yielded reliable and valid measures of two major categories of parental involvement activities (home-based and school-based). It also produced highly reliable measures of the psychological mechanisms hypothesized to link parents' involvement behaviors to student attributes associated with achievement (i.e., mechanisms that help explain 'how involvement gets into the student'): parental encouragement, modeling, reinforcement, and instruction.

Changes to the Original Model. Scale development and related conceptual discussions led to two changes in the original model, as noted above. Both are included in Level 2 of the revised model (Figure 2). The first was the addition of types of parental involvement activities and behaviors (home-based and school-based) as an explicit component of Level 2 of the revised model. The second was the addition of encouragement to the mechanisms (modeling, reinforcement, instruction) hypothesized to transmit parental involvement's influence to student outcomes; these are included in Level 2 of the revised model (Figure 2).

*Variables that Temper or Mediate the Influence of Parents' Involvement
on Student Outcomes: Original Model Level 4*

As noted earlier, the original model (Figure 1) was changed at Level 4 early in the implementation of the full research project. Simultaneously, on-going conceptual work suggested the importance of two additions to the model, both compatible with the general survey design of measures being developed and tested in this research project.

One change was the addition to the revised model (Figure 2, Level 3) of *students' perceptions of parent's involvement activities and behaviors*. This addition to the model grew from theoretical and empirical literature suggesting that children's perceptions and understanding of parents' activities will influence the impact of parents' involvement behaviors on student outcomes.

The second change involved the addition of *student attributes that lead to achievement* (or *proximal student academic outcomes*) to the revised model (Figure 2, Level 4). This change reflected scholarly literature suggesting that parents' influence on student school outcomes occurs most directly in its support of student attributes that *lead* to achievement. For example, parents seldom have direct influence on students' thinking and behavior in taking summary measures of achievement; their involvement, however, is quite likely to have direct influence on student attributes positively associated with achievement, such as *academic self-efficacy, intrinsic motivation to learn, self-regulatory strategy knowledge and use, and social self-efficacy for relating to teachers*. In this conceptualization, summary measures of achievement (e.g., standardized test scores) are seen as more *indirect* outcomes of parental involvement behaviors.

Thus, we added constructs to the revised model that were not included in our original model. The additions to the revised model (Figure 2) occurred at Level 3 (*students' perceptions of parents' involvement*) and Level 4 (a sample of student attributes associated with parental involvement and summary measures of achievement, or *student proximal academic outcomes*). These additions at both Levels 3 and 4 of the revised model are discussed briefly below.

Children's Perceptions of Parents' Involvement

We added children's perceptions of parents' involvement to on-going revisions of the model because developmental research suggests that children's perceptions of events in their environments often mediate the influence of those events on their behavior and learning (e.g., Grolnick, Ryan & Deci, 1991; Dornbusch, Leiderman, Roberts, & Fraleigh, 1987). This research also suggests that children must perceive and experience parents' involvement if those involvement activities are to influence learning and behavior (e.g., Grolnick & Slowiaczek, 1994). This view is compatible with broader developmental theories suggesting that children's learning evolves from their active processing of information and their active construction of personal knowledge. While adults' and children's perceptions and understandings of events they both experience (e.g., parental involvement activities) are often correlated (e.g., Grolnick & Slowiaczek, 1994; Dornbusch et al., 1987), they may also reflect differences consistent with variations in cognitive development across childhood and adulthood, as well as differences associated with personal interests in and perspectives on events experienced in common (e.g., Xu & Corno, 1998).

In developing measures to assess children's perceptions of the mechanisms parents enact during their involvement activities, we adapted our parent measures of involvement mechanisms to accommodate child perspectives on those mechanisms. We took parents' involvement activities and behaviors related to students' homework as a specific instantiation of involvement. We also geared items to the four constructs we selected as representative of student attributes that are (a) subject to parental influence and (b) related to students' school learning and summary measures of achievement.

Student Report of Parent's Use of Encouragement. We adapted items included in the Parent Report of Encouragement Scale, again changing the stem to reflect child perceptions of the parents' encouragement during involvement. For example, the parent stem ("We encourage this child . . .") was applied to items such as ". . . believe that he/she can learn new things." The adapted question for children used the stem, "The person in my family who usually helps me with my homework encourages me . . .," applied to adapted items such as: ". . . to believe that I can learn new things." The 12-item scale (see Appendix P) achieved an alpha reliability of .87.

Student Report of Parent's Use of Modeling. We used the items included in the Parent Report of Modeling Scale, adapting the stem to reflect child perceptions (i.e., the parent scale stem read, "We show this child that we . . . like to learn new things;" the adapted stem for children read, "The person in my family who usually helps me with homework . . . likes to learn new things."). The 10 item scale (see Appendix Q) achieved an alpha reliability of .75 with the Study 4 student sample.

Student Report of Parent's Use of Reinforcement. Again adapting items from the companion scale for parents, we changed the parent item stem (“We show this child we like it when he or she . . .”) to a stem appropriate for children (“The person in my family who usually helps me with my homework shows me that he or she likes it when I . . .”) and applied it to adapted items (e.g., parent scale: “. . . works hard on homework;” child scale: “. . . work hard on my homework”). The 12-item scale (see Appendix R) achieved an alpha reliability of .87 with this sample.

Student Report of Parent's Use of Instruction. We used items included in the Parent Report of Instruction Scale and adapted them for children. Thus, the parent scale used the stem, “We teach this child . . .,” while the child version used the stem, “The person in my family who usually helps me with my homework teaches me” Individual items retained wording very similar to items in the parent scale, adapted as appropriate (e.g., parent scale: “. . . to take a break from his or her work when he or she gets frustrated;” “. . . to take a break from my work when I get frustrated”). The 15-item scale (see Appendix S) achieved an alpha reliability of .86 with the Study 4 student sample.

Student Proximal Academic Outcomes

While the parental involvement literature has often focused on student academic achievement as an outcome of primary interest, a body of research work suggests that parental involvement may have its most direct and critical influence not on summary measures of achievement, but on student attributes that *lead* to achievement. As several have suggested (e.g., Grolnick & Slowiaczek, 1994; Hoover-Dempsey, Battiato, Walker, Reed, DeJong, & Jones, 2001; Steinberg, Elmen, & Mounts, 1989), students’

development of these attributes may mediate the relationship between parental involvement and student school success. The work suggests further that parents play critical role in supporting these attributes, which may include positive attitudes about school and school-related work, personal perceptions of competence for school work, and knowledge of strategies that support effective engagement with school tasks.

Drawing on a sample of literature in developmental and educational psychology, we identified four major student attributes that are a) susceptible to parental influence through involvement activities and b) likely causally related to school success. They included academic self-efficacy, intrinsic motivation to learn, self-regulatory strategy use, and social self-efficacy for relating to teachers.

Academic self-efficacy. The inclusion of academic self-efficacy in the group of proximal variables linked to parental involvement and student achievement is consistent with Bandura's (1997) work on the role of efficacy in human behavior. Student academic self-efficacy includes student beliefs about their abilities to complete schoolwork successfully (e.g., Ryan & Patrick, 2001; Schunk, 1991). In general, students with stronger academic self-efficacy (i.e., students who believe they have the ability to act in ways that will produce valued academic outcomes) are likely to realize better performance in a variety of academic tasks (e.g., Corno, 2000; Gutman & Midgley, 2000). Informed by varied investigators' work (e.g., Patrick, Hicks, & Ryan, 1977), we developed a three-item scale to assess children's sense of academic self-efficacy (see Appendix T; sample item: "I can learn the things taught in school"). Alpha reliability for the scale with the study sample was .71.

Intrinsic motivation to learn. In general, the construct references children's interest in learning for its own sake, in contrast with learning for the external consequences or rewards it may yield. Children's development of motivation for learning is influenced by patterns of parental behavior and variations in motivation for learning are associated with different patterns of school achievement (e.g., Baumrind, 1989; Hokoda & Fincham, 1995; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). Drawing in part on work by Stipek and Gralinski (1996), we assessed students' intrinsic motivation for learning with a three-item scale (see Appendix U; sample item: "I want to understand how to solve problems"). Alpha reliability for the scale with the Study 4 student sample was .66.

Self-regulatory strategy use. Self-regulation has been defined by varied investigators as a relatively wide-ranging set of cognitions, metacognition, and behaviors that promote learning and developmental success (e.g., goal-setting, self-monitoring, evaluation of strategy effectiveness, adjustments in strategy use, active attention to and engagement in learning; Martinez-Pons, 1996; Schunk & Zimmerman, 2003; Stipek & Gralinski, 1996). Parental involvement behaviors have been linked to students' knowledge and use of self-regulatory strategies (e.g., Brody, Flor, & Gibson, 1999; Grolnick & Ryan, 1989; Walker & Hoover-Dempsey, in press), and stronger self-regulatory skills are associated with higher levels of school success (e.g., Zimmerman & Martinez-Pons, 1988, 1990). We assessed student self-regulatory strategy knowledge and use with a four-item scale (see Appendix V; sample item: "I go back over things I don't understand"). The scale achieved an alpha reliability .61 with the Study 4 student sample.

Social self-efficacy for relating to teachers. Grounded in broader efficacy theory (e.g., Bandura, 1997), sense of social self-efficacy for relating to teachers reflects student beliefs that their engagement with teachers will be productive and will yield positive outcomes (e.g., Patrick et al, 1997). Drawing on Ryan and Patrick's (2001) work, we developed a four-item scale (see Appendix W; sample item: "I can explain what I think to most of my teachers"). The scale achieved an alpha reliability of .72.

Summary: Original Model Level 4

As noted in some detail at the beginning of this section, the original model's Level 4 (Hoover-Dempsey & Sandler, 1995, 1997) was modified completely soon after we began this three-year, multi-study project. Specifically, we realized early in the process that the original model's call for examination of fit between parent's involvement activities and child's developmental level, as well as fit between parent's choice of involvement activities and school expectations for parent's involvement activities, could not be realized within the overall scope of this study. Specifically, major study goals for most of the model required the development and testing of survey measures designed for relatively large samples of parents and students; constructs originally included at Level 4 required individual assessment of specific parent-child and parent-school combinations. At the same time, on-going discussions about the 'upper half' of the model (focused on "Why and how does parental involvement influence student outcomes?") suggested the addition of two sets of constructs new to the model. Thus, changes to the original model at Level 4 preceded rather than followed scale development.

Changes to the original model. The two sets of constructs added to the model are focused on conceptual efforts to understand more about the processes through which

parental involvement activities influence student outcomes. In the additions to this level of the revised model (Figure 2), we built on the original model's suggestion that parental involvement has an impact on student outcomes through its activation of specific mechanisms of influence. We proposed in the revised model that the influence of these mechanisms on student achievement is mediated by two constructs.

The first construct is children's perceptions of parents' involvement activities (i.e., what children attend to, hear, and experience in the course of their parents' involvement). These student perceptions are important because children learn from what they perceive and experience; absent perception and engagement, parents' and teachers' actions are much less likely to influence target outcomes in students. The second construct includes a sample of student attitudes, behaviors and skills that influence or lead to achievement, or proximal student academic outcomes. These are important not only because they often lead to achievement, but also because they are more directly amenable to parental influence than is student performance on summary measures of achievement.

We suggest that these student attributes are the proximal targets of parental involvement, while summary measures of achievement are the more distal outcomes of the parental involvement process. They are more distal from parental influence because, by the very design of schooling in this culture, students' school achievement (especially summary measures of achievement) depends most directly on teachers' skills, knowledge, and practices, the goals and content of school curricula, and, especially as children grow older, the child's peer group. The broad achievement goals that schools and families hold for children are also more distant from parental influence than are the

proximal student outcomes because content of students' school achievement, especially as they grow older, often exceeds the knowledge base readily available to many parents.

Scale development. Scale development at this fully revised level of the original model thus focused on selection of: (a) a sample of student perceptions of parental involvement activities and (b) a sample of proximal academic outcomes subject to relatively direct parental influence and likely to lead to school achievement.

The sample of *student perceptions of parental involvement*, built on the specific mechanisms included at Level 2 of the revised model (Figure 2), are responsible for the 'transmission' of parental involvement's influence to children. Thus, we developed measures to assess children's perceptions of parental encouragement, modeling, reinforcement and instruction (Level 3 of the revised model: Figure 2). These measures achieved satisfactory reliabilities, ranging from .71 to .87.

The sample of *proximal student academic outcomes* (Level 4 of the revised model: Figure 2) was selected based on examination of the developmental, cognitive, and educational literature pertinent to understanding what student variables are subject to relatively direct parental influence *and* likely to lead to school achievement. We selected academic self-efficacy, intrinsic motivation to learn, self-regulatory strategy use, and social self-efficacy for relating to teachers. Scales developed to assess students in each area achieved acceptable reliability levels (.71, .66, .61, and .72, respectively).

Distal Outcomes of Parental Involvement: Original Model Level 5

The original model (Figure 1, Level 5) identified student achievement as the summary outcome of the parental involvement process; it also included an example of a more proximal or 'process' approach to thinking about outcomes of the parental

involvement process (student sense of efficacy for doing well in school). Work described above had the effect of moving more proximal outcomes of the parental involvement process into the revised model's Level 4. This move left summary measures of achievement as the ultimate or distal outcome of the parental involvement process at Level 5 in the revised model (Figure 2).

We originally identified student grades and student performance on standardized tests of achievement as the two summary measures to be used in this research. Difficulties attending the participating public school district's ability to produce records of student grades caused us to eliminate this measure of achievement in the project's final study, Study 4. Thus, we used a single measure of student achievement, student performance on the Tennessee Comprehensive Assessment Program (TCAP). The data provided by the district included the total TCAP score for each participating student based on a composite of reading, language arts, and math subtest performance. Unfortunately, the district decided to provide TCAP scores for participating students from the end of the school year (Spring 2003) *preceding* Study 4 (which was conducted in Fall 2004), and it became apparent that political and logistical circumstances in the district precluded provision of TCAP scores for Spring 2004. Given the model's implicit assumption that parent and student standing on variables at Levels 1 through 4 of the model *contribute* to student achievement at Level 5, the district's decision placed unfortunate limitations on our ability to affirm or disconfirm the model's predictions regarding summary measures of student achievement. However, having developed a full set of reliable measures for all constructs in the model during this project—and having generated the data necessary to testing hypotheses regarding Levels 1 – 4 of the revised

model—we proceeded with analyses for these levels of the model and conducted some interim analyses on Level 5.

Summary: Original Model Level 5

Scale development. We used the state-approved and mandated standardized achievement test as our measure of student achievement. In future studies, we would strongly recommend adding student classroom grades to the set of achievement measures assessed, and would seriously consider adding as well summary teacher assessments of student effort and performance as well as attendance records.

Changes to the Original Model. We made no changes to the original model at Level 5. We continue to believe that student achievement is an important variable that must be considered in research on parental involvement in student education, and we continue to believe that standardized achievement test scores should be used as one measure of these distal outcomes of parental involvement. As suggested clearly in revisions to the original model at Level 4 (above), we also believe that more proximal student outcomes of parental involvement (student behaviors, attitudes, habits, and skills conducive to achievement) must be considered as intermediate outcomes of the parental involvement process.

Summary: Scale Development and Related Model Revisions

Overall, this three-year project—which included four studies assessing different levels of the model—supported the development and refinement of 21 measures, one for each construct included in the model (other than the summary measure of student achievement). Across a minimum of two studies, each measure was tested, refined, and revised as indicated by varied analyses and related conceptual discussions.

Development of the measures, in combination with on-going theoretical and conceptual discussions, also led to several revisions in the model. Noted in more detail in the sections above, the most important of these revisions to the theoretical model may be summarized as follows:

- The integration of the original model Levels 1 and 2 (Figure 1) into one conceptually expanded level of the revised model (Figure 2, Level 1). Thus Level 1 of the revised model included parent's motivational beliefs (role construction; efficacy for helping the child), parent's perceptions of invitations for involvement (from the school, the teacher, and the student), and parent's perceived life context (skills and knowledge, time and energy).
- The expansion of the original model's (Figure 1) Level 3 to include forms of parental involvement (home-based, school-based) and a slightly expanded set of mechanisms that explain *how* parental involvement influences students' school success. These appear at Level 2 of the revised model (Figure 2), and include encouragement, modeling, reinforcement and instruction).
- The addition student perceptions of parental involvement to the model; this is included at Level 3 of the revised model (Figure 2), and includes student perceptions of parents' encouragement, modeling, reinforcement, and instruction.
- The replacement of constructs included in Level 4 of the original model (Figure 1) with new constructs at Level 4 of the revised model (Figure 2). These include a sample of proximal student academic outcomes (or student attributes that are associated with school achievement): academic self-efficacy, intrinsic motivation for learning, self-regulatory strategy use, and social self-efficacy for relating to

teachers). Conceptual work suggested that these attributes are important *proximal* outcomes of the parental involvement process; indicators of student achievement, in this line of reasoning, are more accurately considered distal outcomes of the parental involvement process.

- Student school achievement continued to be the major distal outcome or goal of the parental involvement process (Level 5 I the revised model, Figure 2).

We turn now to a sample of findings on relationships among model constructs. What we offer below is a sample of results from on-going analyses.

A Sample of Findings: Relationships among Model Constructs

The findings below are presented by study. For the most part, they highlight current findings related to major hypotheses or questions about relationships within or between levels of the model.

Study 1

Study 1 tested instruments designed to assess constructs included at Level 1 of the original model (Figure 1). This level of the model focused on the question: “Why do parents become involved in their children’s education?” Predictor constructs in the original model included parental role construction, parental sense of efficacy for helping the child succeed in school, and parental perceptions of general invitations to involvement from the school and from the child. The dependent variable, parent’s decision to become involved ($\alpha = .89$), was operationalized as parent reports of home-based involvement activities and school-based involvement activities. Instruments designed to measure Level 1 constructs in Study 1 suggested satisfactory reliabilities, reported below in Table 3:

Table 3: Study 1 scales and reliabilities

Scale	alpha
Parental role construction for involvement: parent-focused	.62
Parental role construction for involvement: school-focused	.63
Parental role construction for involvement: partnership-focused	.72
Parental efficacy for helping the child succeed in school	.80
Parental perception of general invitations from the school (school climate)	.88
Parental perceptions of general invitations from the child	.60

Although we assessed parental perceptions of general invitations from the child in Study 1, consistent with the model, subsequent conceptual problems with the construct led us to eliminate it from the model; thus, we did not consider it further during this research project.

Results for Study 1 suggested that parental role construction for involvement, parental sense of efficacy for helping children learn, and parental perceptions of general invitations to involvement from the school all contributed significantly, although at modest levels, to parents' decisions about becoming involved in their children's education. Hierarchical regression analyses indicated that parental role construction was the strongest motivator of total parental involvement (Adj. $R^2 = .162$, $F = 58.18$, $p < .000$); specifically, partnership-focused role construction ($B = .292$), school-focused role construction ($B = -.194$), and parent-focused role construction ($B = .081$) all contributed to total involvement. When we examined parents' reports of school-based and home-based involvement separately, somewhat different patterns of results emerged. School-based involvement was predicted (Adj. $R^2 = .137$, $F = 71.2$, $p < .000$) by partnership-focused role construction ($B = .310$) and school-focused role construction ($B = -.173$), while home-based involvement was predicted (Adj. $R^2 = .133$, $F = 46.270$, $p < .000$) by

partnership-focused role construction ($B = .249$), school-focused role construction ($B = -.157$), and parents' sense of efficacy for helping the child succeed in school ($B = .118$).

Thus, in all instances (total, school-based, home-based involvement) partnership-focused role construction emerged as the most important predictor; this suggests that schools and parents who build a strong sense that the child's educational success is the responsibility of a *parent-school partnership* create and experience greater levels of parental involvement. School-focused role construction also figured in each prediction, but negatively; this suggests that parents and schools who believe that the child's education is primarily (or solely) the school's responsibility tended to experience relatively low levels of involvement. Findings for home-based involvement also suggested the important of parents' sense of efficacy—parents' beliefs that their involvement activities will help the child learn—in motivating involvement.

After considering these results in some detail, we came to two conclusions. First, we decided to consider integrating the original Levels 1 and 2 of the model. While the proportions of variance in parents' involvement decisions accounted for by role construction, efficacy, and perception of general school invitations to involvement were statistically significant, they were not as strong as anticipated. As we considered potential reasons for the discrepancy, we suggested that role construction and efficacy both may be manifested in invitations to involvement and parents' perceptions thereof. That is, because roles are socially constructed and because efficacy is subject to substantial influence from salient elements of the environment (e.g., Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al, in press), elements of constructs included in the model at Level 2 may also be implicated in parents' basic decisions about involvement. While we

originally separated Levels 1 and 2 of the model (Hoover-Dempsey & Sandler, 1995, 1997) as a means of highlighting and examining the role of psychological motivators in parents' involvement, our decision to integrate Levels 1 and 2 of the original model in designing Study 2 reflected concerns that we might not be giving original Level 2 variables their full due in examining the question, "What motivates parents to become involved in their children's education?"

Second, we decided to alter the original definition of role construction. Specifically, while the parent-, school-, and partnership-focused configuration of role construction used in Study 1 grew well out of previous work (see Hoover-Dempsey et al., 2004), close consideration of Study 1 results revealed that it posed problems for the remainder of the full research project. Specifically, the initial conceptualization of role construction, consistent with role theory, included *both* beliefs and behaviors (i.e., parents' role beliefs *and* characteristic role behaviors; see Hoover-Dempsey & Sandler, 1997). Because this definition created the potential for confounds between (a) involvement behaviors as incorporated within role construction and (b) involvement behaviors as a freestanding dependent variable at various points during the full research project, the construct was re-conceptualized for use in Study 2 as parent-focused, school-focused, and partnership-focused *role beliefs* (see Hoover-Dempsey et al., 2004; Walker et al., in press). Simultaneously, we began working on a new two-component operationalization of role construction, ultimately including role activity beliefs and valence toward (or attitudes based on prior experiences with) schools. The latter definition and instrumentation were used to measure role construction in Study 4, reported below; see also Hoover-Dempsey et al., 2004; Walker et al., in press).

Study 2

In Study 2, our primary goal was to assess the reliability of measures for constructs included in Level 2 of the original model (Figure 1); these included parents' perceptions of their own skills and knowledge, perceptions of demands on their time and energy from family and work, and perceptions of specific invitations for involvement from the child and the child's teacher. Measures for each of the four constructs as used in Study 2 recorded satisfactory reliabilities, as can be seen below in Table 4. Because we decided following Study 1 that the first two levels of the original model should be integrated into one broad level predicting parents' involvement decisions (revised model, Level 1: see Figure 2), we also included measures of the original model's Level 1 constructs in Study 2 (revised role construction: parent-focused role beliefs, school-focused role beliefs, partnership-focused role beliefs; parental efficacy; perceptions of general invitations from the school). Alpha reliabilities for Study 1 constructs used in Study 2 sample were also acceptable, as noted in Table 4 below:

Table 4: Study 2 scales and reliabilities

Scale	alpha
<i>Level 1 constructs</i>	
Parental role construction for involvement: parent-focused role beliefs	.61
Parental role construction for involvement: school-focused role beliefs	.65
Parental role construction for involvement: partnership-focused role beliefs	.60
Parental efficacy for helping the child succeed in school	.78
Parental perception of general invitations from the school (school climate)	.88
<i>Level 2 constructs</i>	
Parental perceptions of knowledge & skills for involvement	.83
Parental perceptions of time and energy for involvement	.84
Parental perceptions of specific invitations to involvement from the child	.70
Parental perceptions of specific invitations to involvement from the teacher	.81

Hierarchical regression analyses were run on the combined former Level 1 and Level 2 variables, using the following order of entry. Consistent with the revised model's Level 1 (see Figure 2), block 1 included parents' motivational beliefs (parent-focused role beliefs, partnership-focused role beliefs, school-focused role beliefs, and efficacy); block 2 included perceptions of invitations to involvement (specific invitations from the child, specific invitations from the teacher, perception of school climate); block 3 included perceived life context variables (skills and knowledge; time and energy).

Results suggested that a substantial subset of the constructs accounted for 64.6% of the variance in *total involvement* ($F = .181, p < .000$). Strongest predictors were perceptions of specific child invitations to involvement ($B = .428$) and perceptions of specific teacher invitations to involvement ($B = .283$). These were followed by parents' perceptions of time and energy for involvement ($B = .221$), partnership-focused role beliefs ($B = .181$) and school-focused role beliefs ($B = -.082$). Comparing parent reports of school-based and home-based involvement revealed interesting differences between the two. *Home-based involvement* ($\text{Adj. } R^2 = .378, F = 61.12, p < .000$) was predicted by parents' perceptions of specific invitations to involvement from the child ($B = .446$), parent's sense of efficacy for helping the child succeed in school ($B = .253$), parents' perceptions of time and energy ($B = .142$), school-focused role construction beliefs ($B = -.116$) and partnership-focused role beliefs ($B = .088$). *School-based involvement* ($\text{Adj. } R^2 = .548, F = 100.67, p < .000$), was predicted by parents' perceptions of specific invitations from the teacher ($B = .388$), specific invitations from the child ($B = .178$), perceptions of time and energy ($B = .178$), partnership-focused role beliefs ($B = .175$), parent-focused role beliefs ($B = -.088$), and parent efficacy ($B = -.80$).

These findings overall suggested the power of specific invitations to parents' decisions about involvement. Specific invitations from children contributed powerfully to total and home-based involvement particularly, and they were also implicated in parents' decisions about school-based involvement. Specific invitations from teachers were particularly notable in contributions to parents' school-based involvement, and also figured in total involvement. Findings reported elsewhere that teachers can enhance and support children's invitations to involvement (e.g., Epstein & Van Voorhis, 2001; Hoover-Dempsey et al., in press) underscore further the power of teachers and schools to invite involvement, not only directly but also through well-designed assignments for students. The set of results in Study 2 also highlighted role of parents' perceptions of time and energy as well as partnership-focused role construction in total, home-based, and school-based involvement. They also identified the contributions of parental efficacy to home-based involvement decisions. Given the reality that role construction (especially partnership-focused role construction) and efficacy are socially constructed (i.e., families and schools contribute to parents' standing in each area), the results offer support for serious school attention to theoretically and empirically grounded initiatives in parental involvement.

Study 3

In Study 3, one of our goals was to examine the reliability of measures of the constructs included in the now revised model at Level 2 (mechanisms of parental involvement's influence), Level 3 (children's perceptions of parental involvement [not included in the original model]), and revised model Level 4 (hypothesized proximal

outcomes of parental involvement child attributes that lead to achievement [not included in the original model]). Reliabilities overall were satisfactory.

Measures of parental reports of involvement mechanisms included encouragement, modeling, reinforcement, and instruction. Measures of student perceptions of parent's involvement included the same constructs, adapted to assess children's perceptions of parents' involvement activities. Scale reliabilities were acceptable, as reported below in Table 5. Reliabilities for measures of student proximal outcomes (student attributes that lead to achievement: revised model, Level 4: student-reported academic self-efficacy; intrinsic motivation to learn; self-regulatory strategy use; and social self-efficacy for relating to teachers) were also acceptable (see Table 5).

Table 5: Study 3 scales and reliabilities

Scale	alpha
<i><u>Level 2, revised model: Parent's report of involvement mechanisms</u></i>	
Encouragement	.84
Modeling	.81
Reinforcement	.89
Instruction	.82
<i><u>Level 3, revised model: Student's report of parent's involvement</u></i>	
Encouragement	.69
Modeling	.69
Reinforcement	.87
Instruction	.82
<i><u>Level 4, revised model: Student proximal academic outcomes</u></i>	
Student-reported academic self-efficacy	.84
Student-reported intrinsic motivation to learn	.85
Student-reported self-regulatory strategy use	.64
Student-reported social self-efficacy for relating to teachers	.71

Another goal of Study 3 was to examine relationships between and among parents' reports of involvement mechanisms, student perceptions of parents' involvement activities and student proximal academic outcomes. We anticipated that (a) parent and

student reports of parental involvement would be positively related, at modest levels, (b) that parent and student reports of parent's involvement would both be positively related to student proximal academic outcomes, and (c) that student reports of parents' activities would be more strongly related than parent reports to student proximal academic outcomes. Analyses overall supported these expectations.

Parent and student reports of parents' involvement activities were positively related at modest levels; specifically, parent reports of encouragement were positively related to student perceptions of parental encouragement, $r = .16$, $p < .01$; parent modeling with student perceptions of parental modeling, $r = .14$, $p < .01$; parent reports of reinforcement with student perceptions of reinforcement, $r = .16$, $p < .01$; parent reports of instruction with student perceptions of instruction, $r = .16$, $p < .01$.

Relationships between parent reports of involvement and student proximal academic outcomes also supported expectations. For example,

- *Parental report of reinforcement* was related to all student proximal outcomes (self-regulatory strategy use, $r = .20$, $p < .01$; academic self-efficacy, $r = .18$, $p < .01$; intrinsic motivation, $r = .12$, $p < .05$; and social self-efficacy for relating to teachers, $r = .11$, $p < .05$).
- *Parent report of modeling* was related to three of the four proximal student outcomes: self-regulatory strategy use, $r = .15$, $p < .01$; intrinsic motivation, $r = .12$, $p < .05$, and academic self-efficacy, $r = .12$, $p < .05$.
- *Parent report of instruction* was related to two proximal outcomes, self-regulatory strategy use, $r = .22$, $p < .01$, and social self-efficacy for relating to teachers, $r = .11$, $p < .05$.

- *Parental report of encouragement* was related to the same two proximal outcomes: self-regulatory strategy use ($r = .19, p < .01$) and social self-efficacy for relating to the teacher ($r = .13, p < .05$).

Thus, parents' report of involvement mechanisms was positively related to all four student proximal outcomes. The two student outcomes most consistently related to parent-reported use of involvement mechanisms were student self-regulatory strategy use and social self-efficacy for relating to teachers.

Findings for relationships between *student perceptions of parental involvement* and student proximal outcomes revealed a similar but stronger pattern of positive relationships, as might be anticipated given the single-source reporter (student) for both items. Specific correlations, all significant at the .01 level or higher, are noted below in

Table 6:

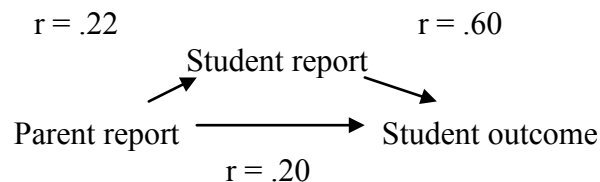
Table 6: Bivariate correlations: Student-reported perceptions of parents' involvement with student-reported proximal outcomes

<u>Student reported proximal academic outcomes</u>	Student-reported perceptions of parental encouragement	Student-reported perceptions of parental modeling	Student-reported perceptions of parental reinforcement	Student-reported perceptions of parental instruction
Academic self-efficacy	.36	.36	.42	.38
Intrinsic motivation	.36	.42	.40	.45
Self-regulatory strategy use	.45	.43	.58	.56
Social self-efficacy for relating to teachers	.21	.29	.32	.32

Results for students thus suggested positive links between all student reports of parental involvement and student outcomes. Student-reported perceptions of parental reinforcement and instruction seemed to record the strongest relationships with student proximal outcomes as a group. Among student outcomes, student self-regulatory strategy

use appeared to be most strongly linked to student perceptions of parental involvement, across the board.

In order to examine the hypothesis implicit in our decision to add student perceptions of parents' involvement activities to the revised model as a level (Level 3), between parent reports of involvement mechanisms (Level 2) and student proximal outcomes (Level 4), we performed a mediational analysis. Specifically, we wanted to see if the influence of parents' use of involvement mechanisms on student proximal academic outcomes is mediated by students' perceptions of their parents' involvement. As prescribed by Baron and Kenny (1986), three sets of regressions are necessary to test for mediation. In order to support mediation (in this case, a finding that student perceptions of parents' involvement activities mediate the relationship between parent reports of involvement mechanisms and the outcome of interest, student proximal academic outcomes), it is first necessary to show that all paths are initially significant. This was the case. First, there was a significant bivariate correlation between parent report of involvement mechanisms and student proximal academic outcomes ($r = .20$, $p < .01$), between parent report of involvement mechanisms and student report of parents' involvement ($r = .22$, $p < .01$), and between student reports of parents' involvement and student proximal academic outcomes ($r = .60$, $p < .01$; see below):



Regression results suggested that parent reports of involvement mechanisms were significant in predicting student proximal academic outcomes ($\text{Adj. } R^2 = .039$, $F =$

17.890, $p < .000$; $t = 4.230$, $p < .000$) and that student reports of parental involvement were also significant in predicting student outcomes (Adj. $R^2 = .357$, $F = 234.393$, $p < .000$; $t = 15.310$, $p < .000$). When parent reports and student reports were both entered into the equation predicting proximal academic student outcomes, the direct path between parent reports and student outcomes became insignificant, while the path between student reports and student outcomes remained significant (Adj. $R^2 = .361$, $F = 119.431$, $p < .000$ [parent report standardized $B = .072$, $t = 1.796$, ns; student report $B = .714$, standardized $B = .583$, $t = 14.559$, $p < .000$]). These results supported the hypothesis that the influence of parent-reported involvement mechanisms on proximal student outcomes is mediated by student perceptions of parents' involvement activities.

Overall, findings from Study 3 suggest that parents' engagement of involvement mechanisms is positively related to important student outcomes that lead to achievement. The findings also suggest that students' perceive their parents' involvement in ways similar to those reported by parents, but the modest size of the correlations also suggests that parents' and students certainly do not have identical views of parents' activities during involvement. This is a developmentally expectable finding, one that is supported further by results of the mediational analysis, which indicated that the influence of parents' involvement is indeed mediated by children's perceptions of that involvement.

Study 4

Based on findings from Studies 1, 2, and 3, this final stage of the full study asked the question: How well does the full theoretical model of the parental involvement process (Hoover-Dempsey & Sandler, 1995, 1997) 'work'? We asked two major questions in this study. First, do constructs at Level 1 of the revised model predict

parents' involvement decisions (revised model Level 2, forms of involvement)? Second, do constructs at subsequent steps in the revised model (Level 2, parent reports of involvement mechanisms; Level 3, student reports of parents' involvement activities; Level 4, student proximal academic outcomes; and Level 5, student achievement) function as hypothesized? That is, do parent and student reports of predict students' proximal academic outcomes and student achievement?

Before summarizing these results, we briefly review data on the final forms of each measure as used in Study 4. Because Study 4 included all constructs in measures for parents and for students, it became important to shorten some scales developed and used in Studies 1, 2, and 3. The length of each scale and related reliability figures as used in Study 4 are summarized below in Table 7. The full scales as used in Study 4 are included in Appendices C – W. The full Study 4 questionnaires are included in Appendices X (parent questionnaire, English version), Y (parent questionnaire, Spanish version), and Z (student questionnaire).

Table 7: Study 4 scales and reliabilities

Scale	alpha
<i>Level 1 (revised model)</i>	
<i>Personal motivators of involvement</i>	
Parental role construction	
Role activity beliefs (10 items)	.80
Valence toward school (6 items)	.85
Sense of efficacy for helping child succeed in school (7 items)	.78
<i>Parental perceptions of invitations to involvement</i>	
General invitations from the school (6 items)	.88
Specific invitations from the child (6 items)	.70
Specific invitations from the teacher (6 items)	.81
<i>Parents' perceived life context</i>	
Perceptions of knowledge and skills (9 items)	.83
Perceptions of time and energy (6 items)	.84
<i>Level 2 (revised model)</i>	
<i>Parent's report of involvement forms</i>	
Home-based involvement activities (5 items)	.85
School-based involvement activities (5 items)	.82
Total involvement activities (10 items)	.76
<i>Parent's report of involvement mechanisms</i>	
Encouragement (13 items)	.92
Modeling (14 items)	.94
Reinforcement (13 items)	.96
Instruction (15 items)	.92
<i>Level 3 (revised model: Student's perceptions of parent's involvement)</i>	
Student reports of parental encouragement (12 items)	.87
Student reports of parental modeling (10 items)	.75
Student reports of parental reinforcement (12 items)	.87
Student reports of parental instruction (15 items)	.86
<i>Level 4 (revised model): Student's report of proximal outcomes of involvement</i>	
Student report of academic self-efficacy (3 items)	.71
Student report of intrinsic motivation to learn (3 items)	.66
Student report of self-regulatory strategy use (4 items)	.61
Student report of social self-efficacy for relating to teachers (4 items)	.72
<i>Level 5 (revised model): Student distal outcome: summary measure of achievement</i>	
State's Annual Comprehensive Achievement Assessment Package (TCAP)	

At this point we note again the limits in testing the model's prediction of Level 5, the distal outcome of the parental involvement process, student achievement. Issues in the public school district in which the three-year study was conducted caused school officials, in the year the study ended, to allow access only to the *previous* year's

standardized achievement test data for participating students. Thus, our data on achievement here are at most suggestive of possible ‘answers’ to the model’s final question: Does parental involvement, as perceived by children and mediated by impact on proximal outcomes, influence the distal outcome of student achievement?

In the sections that follow, we present brief summaries of analyses related to major questions asked in Study 4:

1. Do constructs at Level 1 of the revised model predict parents’ involvement decisions (home-based involvement, school-based involvement, total involvement [Level 2: forms of involvement])?
2. Are parent reports of involvement mechanisms (Level 2) and student perceptions of parents’ involvement (Level 3) positively related to student proximal academic outcomes (Level 4)? As a point of information (given the reality that summary, end-of-year achievement scores were made available only for the year prior to Study 4), we also asked: Are the constructs at each of these levels positively related to a summary measure of student achievement (Level 5, Summary measure of student achievement: TCAP total scores)?
3. Do student perceptions of parents’ involvement (Level 3) mediate the influence of parent’s involvement mechanisms (Level 2) on proximal academic student outcomes (Level 4)?

Do constructs at Level 1 of the revised model predict parents’ involvement decisions (Level 2: forms of involvement)?

Hierarchical regressions on home-based, school-based and total involvement supported the hypothesis that Level 1 constructs would contribute significantly to

parents' involvement decisions. Findings suggested that the full set of constructs accounted for 32.6% of the variance in *home-based involvement* ($F = 44.258, p < .000$); specific contributors included parent's perception of specific invitations from the child ($B = .447$), parent's perception of knowledge and skills for involvement ($B = .215$), and parent's sense of efficacy for helping the child succeed in school ($B = .138$). *School-based involvement* was also predicted, but less strongly, by Level 1 constructs, accounting for 18% of the variance ($F = 27.727, p < .000$); specific variables included in the equation were parents' role activity beliefs ($B = .231$), parent's perception of knowledge and skills for involvement ($B = .201$), and parent's perception of specific invitations to involvement from the child ($B = .186$). Finally, results suggested that 36.9% of the variance in *total involvement* ($F = 53.122, p < .000$) was predicted by Level 1 constructs. Specific predictors included parent's perception of specific invitations from the child ($B = .450$), parent's perception of knowledge and skills for involvement ($B = .247$), parent's sense of efficacy for helping the child succeed in school ($B = .118$), and parent role activity beliefs ($B = .093$).

The predictors emerging as significant across the three measures of involvement (*home-based, school-based, total*) thus included parent's perception of specific invitations to involvement from the child and parent's perception of knowledge and skills for involvement. Role activity beliefs emerged as a predictor of both *home-based and school-based* involvement, and parent's sense of efficacy appeared as an important predictor of *home-based* involvement.

Other questions emerged in as we examined these findings, especially in relation to findings on the same question from Studies 1 and 2 (both of these studies focused on

the question at issue here). Three of these questions, which we are examining in more depth in on-going analyses of the full data set, are the following:

1. Why did parental perceptions of general school invitations/school climate *not* appear in predictions of involvement in Study 4, 2 or 1? We hypothesize at this point that school climate may function most often as a background construct in influencing parents' involvement decisions, i.e., school climate supports other contributors to involvement. For example, parental role activity beliefs (strongly related to perceptions of school climate in Study 4, $r = .42$, $p < .000$) are theoretically strongly subject to school influence. In turn, personal role activity beliefs seems a more proximal predictor of involvement than school climate (e.g., positive school climate may be 'internalized' by parents as support for more active role beliefs; conversely, negative school climate may be internalized as support for more passive role activity beliefs). Similarly, specific teacher invitations to involvement (correlated with perceptions of school climate in Study 4, $r = .36$, $p < .000$) are also likely strongly influenced by school climate and are also likely to serve as more proximal, personal motivators of involvement (relative to school climate) for many parents, especially those who are not often able to get into the school.
2. Why did specific invitations from the teacher (a significant predictor of school-based and total involvement in Study 2) disappear from Study 4 results? We hypothesize that differences in the grade levels included in the two studies may be implicated here. Specifically, Study 2 included parents of students in grades 1 through 6; Study 4 included parents of students in grades 4 through 6. Prior work

suggests that parents are more involved in the earlier elementary grades than in later elementary and middle school grades, and teacher invitations to involvement likely decline across these grades. We are conducting follow-up analyses on the Study 2 sample for differences in parental perceptions of teacher invitations to involvement in grades 1-3 v. grades 4-6; we will also compare the parents of 4th through 6th graders across Studies 2 and 4. We believe it is likely that 1st through 3rd grade parents will report significantly stronger perceptions of invitations to involvement from teachers when compared to their 4th through 6th grade counterparts, and that there will be few differences in 4th through 6th grade parents across the two study samples.

3. Why did parental perceptions of time and energy (significant in predicting home, school, and total involvement in Study 2) disappear from Study 4 results? Why did knowledge and skills (which did not appear in Study 2 results) emerge in Study 4 as contributing to all three forms of involvement? We suspect here again that differences in the child grade levels represented in Studies 2 and 4 are implicated. For example, time and energy factors may be somewhat more salient to parents of younger children (i.e., parents of 1st through 3rd graders; e.g., greater likelihood of younger siblings in infancy and preschool years) than to parents of older children (i.e., parents of 4th through 6th grade children). We also suspect that parents of older children, when compared to parents of younger children, experience stronger concerns about the limits of personal knowledge and skill in helping children with school work and contributing to school success in general.

Having observed strong bivariate correlations between these two life-context variables in both Studies 2 and 4, we are also examining these possibilities.

Are parent reports of involvement mechanisms (Level 2: mechanisms of involvement's influence) and student perceptions of parents' involvement (Level 3) positively related to student proximal academic outcomes (Level 4) and (as a point of suggestion only, given that fully appropriate data for answering this part of the question were not available) the student distal outcome of achievement?

As noted below in Table 8, results suggested significant relationships among parents' reports of involvement mechanisms, student perceptions of parents' involvement, and proximal student academic outcomes, and to a limited extent, summary achievement for the previous year.

Table 8: Correlations among parents' reports of involvement mechanisms (Level 2), student perceptions of parent's involvement (Level 3), student proximal academic outcomes (Level 4), and a summary measure of student achievement (Level 5)

Variable name	Parent rept of encouragem't	Parent rept of modeling	Parent rept of reinforcement	Parent rept of instruction	Student rept of parent encouragem't	Student rept of parent'l modeling	Student rept of parent'l reinforcement	Student rept of parent'l instruction	Academ. self-efficacy	Intrinsic motivation	Self-regulatory strat'gy use	Social self-effic'cy for rel. to tchrs	Ach'vment: TCAP
<i>Parent report of involvement mechanisms</i>													
Encouragement	--												
Modeling	.67**	--											
Reinforcement	.70**	.75**	--										
Instruction	.61**	.72**	.70**	--									
<i>Student report of parental involvement</i>													
Encouragement	ns	.17**	.14**	ns	--								
Modeling	.11*	.22**	ns	.20*	.59**	--							
Reinforcement	.10*	.22**	.16**	.22**	.82**	.61**	--						
Instruction	ns	.16**	ns	.17**	.76**	.71**	.74**	--					
<i>Student proximal outcomes</i>													
Academic self-efficacy	ns	.20**	.17**	.17**	.46**	.42**	.50**	.44**	--				
Intrinsic motivation	ns	ns	ns	.13*	.50**	.41**	.54**	.50**	.44**	--			
Self-regulatory strategy use	ns	.12*	ns	.14**	.52**	.43**	.57**	.55**	.56**	.62*	--		
Social self-efficacy for relating to teachers	ns	ns	ns	ns	.47**	.38**	.45**	.46**	.36**	.44**	.46**	--	
<i>Student achievement: prior year's TCAP scores</i>	.18**	.15**	.25**	ns	ns	ns	ns	-.12*	.14*	-.14**	ns	ns	--

Several observations emerge in these findings, some of which are noted here:

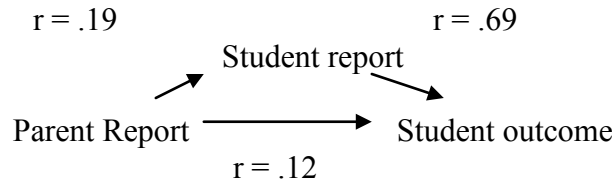
1. *Parent reports* of the four involvement mechanisms (encouragement, modeling, reinforcement, instruction) reflected strong intercorrelations, as did student reports of parents' involvement across these four areas. Thus, there is some evidence that parents and their children experience parents' use of these four mechanisms during involvement as a multi-component set of strategies associated with involvement.
2. Correlations between *parent and student reports* of parents' involvement activities recorded several modestly positive relationships, notably in the areas modeling ($r = .22, p < .01$), reinforcement ($r = .16, p < .01$), and instruction ($r = .17, p < .01$).
3. *Parent reports* of involvement mechanisms were related most notably (again, at modestly positive levels) with the student proximal academic outcomes of academic self-efficacy (modeling, $r = .20, p < .01$; reinforcement, $r = .17, p < .01$; instruction, $r = .17, p < .01$). They were also related to student self-regulatory strategy use (modeling, $r = .12, p < .05$; instruction, $r = .14, p < .01$) and to intrinsic motivation (instruction, $r = .13, p < .05$). In all, parental reports of instruction reflected the strongest relationships between involvement mechanisms and student proximal academic outcomes.
4. *Student reports* of parents' involvement were strongly related to all four proximal academic outcomes (all recorded correlations at $p < .01$ or higher). The fact that the same reporter (student) provided data on perceptions of parents' involvement and on proximal academic outcomes likely accounts for

a good portion of the positive relationship found here, but some of the relationship is quite likely attributable to parents' involvement as mediated by students' perceptions of parents' involvement.

5. *Parent reports* of involvement mechanisms were positively related to the previous year's TCAP achievement score; specifically, parental reports of encouragement, modeling and reinforcement recorded positive links with the previous year's TCAP scores, while instruction did not. This pattern is perhaps not too surprising: the first three mechanisms may be engaged by parents across school years, while instruction is more likely to be keyed to specific learning tasks in the present year. *Student reports* of parental involvement recorded only one significant link with the previous year's achievement, instruction ($r = -.12, p < .05$); this finding suggests, consistent with other literature, that parents may increase instructional involvement in response to concerns about student performance.

We examined the data then to see if student perceptions of parents' involvement mediated the influence of parental reports of involvement mechanisms on student proximal outcomes. As noted earlier, Baron and Kenny (1986) suggest that three sets of regressions are necessary to test for mediation. It is first necessary to show that all paths are initially significant. This was the case. There was a significant bivariate correlation between parental report of involvement mechanisms and student proximal academic outcomes ($r = .12, p < .05$), between parental report of involvement mechanisms and student report of parents' involvement ($r = .19, p < .01$), and between student reports of

parents' involvement and student proximal academic outcomes ($r = .69$, $p < .01$; see below):



Regression results suggested that parent reports of involvement mechanisms were significant in predicting student proximal outcomes (Adj. $R^2 = .011$, $F = 5.12$, $p < .05$; $t = 2.26$, $p < .05$) and that student reports of parental involvement were also significant in predicting student outcomes (Adj. $R^2 = .470$, $F = 318.00$, $p < .000$; $t = 17.834$, $p < .000$). When parent reports and student reports were both entered into the equation predicting proximal student outcomes, the direct path between parent reports and student outcomes became insignificant, while the path between student reports and student outcomes remained significant (Adj. $R^2 = .469$, $F = 158.67$, $p < .000$ [parent report standardized $B = -.01$, $t = ns$; student report standardized $B = .69$, $t = 17.54$, $p < .000$]). The results supported the hypothesis that the influence of parent-reported involvement mechanisms on proximal student outcomes is mediated by student perceptions of parents' involvement activities. Thus, results for both Studies 3 and 4 provided evidence of a mediating effect of student perceptions of parents' involvement on the relationship between parents' engagement of involvement mechanisms and student proximal academic outcomes.

We performed one more set of analyses to further explore links between current year study constructs and prior year's summary achievement scores. We divided the full Study 4 student sample (4th through 6th graders) into three groups: high achievers (TCAP total score > 686 , $n = 56$), medium achievers (TCAP total score between 615-685, $n =$

248), and low achievers (TCAP total score < 615, n = 54). We then compared the high-achieving with the low achieving group on Level 2 (parental involvement: forms; parental involvement: mechanisms), Level 3 (student perceptions of parental involvement), and Level 4 (proximal student academic outcomes) constructs. The results are reported in Table 9 below:

Table 9: Comparison of low-achieving and high achieving groups

Study construct	Low group Mean (sd) n = 56	High group Mean (sd) n = 54	t	p	d
<i>Level 2: forms of involvement</i>					
Home-based	4.65 (1.19)	4.13 (0.89)	-2.64	.010**	-.50
School-based	1.63 (0.49)	1.82 (0.48)	1.97	.052*	.37
Total	3.14 (0.71)	2.97 (0.58)	-1.39	ns	-.26
<i>Level 2: parent reports of involvement mechanisms</i>					
Encouragement	5.07 (1.13)	5.47 (0.61)	2.28	.025*	.44
Modeling	5.12 (1.03)	5.46 (0.67)	2.05	.043*	.39
Reinforcement	5.12 (1.10)	5.69 (0.46)	3.57	.001**	.68
Instruction	5.01 (0.98)	5.19 (0.68)	1.16	ns	.22
<i>Level 3: student perceptions of parent's involvement</i>					
Encouragement	3.40 (0.57)	3.30 (0.57)	-0.91	ns	-.17
Modeling	3.32 (0.47)	3.35 (0.45)	0.31	ns	.06
Reinforcement	3.53 (0.51)	3.36 (0.58)	-1.70	ns	-.32
Instruction	3.47 (0.41)	3.27 (0.52)	-2.27	.025*	-.43
<i>Level 4: student proximal academic outcomes</i>					
Academic self-efficacy	3.24 (0.74)	3.59 (0.51)	2.86	.005*	.55
Intrinsic motivation	3.45 (0.61)	3.19 (0.69)	-2.08	.039*	-.39
Use of self-regulatory strategies	3.31 (0.67)	3.25 (0.54)	-0.52	ns	-.10
Social self-efficacy for relating to the teacher	3.35 (0.64)	3.16 (0.65)	-1.55	ns	-.29

Parents of students who recorded lower achievement in the previous academic year reported offering significantly more home-based involvement than parents of students with higher achievement in the previous year. At the same time, parents of students who recorded higher achievement reported offering significantly more encouragement, modeling, and reinforcement during involvement than did parents of lower achieving students. Student perceptions of parents' involvement, however, distinguished higher

from lower achieving groups only in instruction: here, lower achieving students perceived significantly more instruction than did higher achieving students. Results for proximal academic outcomes suggested that students who were lower achieving in the previous year reported more intrinsic motivation in the current year, while students who were higher achieving the previous year reported stronger academic self-efficacy in the current year.

Overall, these findings for Study 4 suggest that constructs at Level 1 of the revised model (Figure 2) predict significant portions of the variability in parental involvement, particularly parents' home-based involvement. Parent reports of mechanisms engaged during involvement (encouragement, modeling, reinforcement and instruction) were positively related to selected student proximal academic outcomes, most notably academic self-efficacy and student self-regulatory strategy use. Student reports of parents' use of involvement mechanisms were positively related to all student proximal academic outcomes, although some of this relationship is attributable to the fact that students reported on the both constructs. Parent and student reports of parental modeling, reinforcement, and instruction were positively related, suggesting a level of basic agreement between parent and child on the mechanisms parents engage when they are involved. As true in Study 3, however, students' perceptions of parents' involvement mediated the influence of that involvement on student proximal academic outcomes.

Conclusions

Overall, the full study succeeded in producing reliable measures for assessing all constructs included in the (original and revised) model of the parental involvement process under consideration. Use of these measures with samples of first through sixth

grade students, generally diverse in socioeconomic and ethnic characteristics, in public elementary and middle schools suggested that constructs included at Level 1 of the revised model (psychological motivators of involvement; perceptions of invitations to involvement; perceptions of life-context variables) predict significant portions of the variance in parental involvement. They suggested further that parents' engagement of specific mechanisms during involvement (Level 2 of the revised model: encouragement, modeling, reinforcement, instruction) are positively related to students' proximal academic outcomes (Level 4 of the revised model). They also suggested that student perceptions of parental involvement (Level 3 of the revised model) mediate the influence of involvement on those proximal academic outcomes.

Several general recommendations for next steps in research in this area emerge from limitations attending elements of this study. For example, future studies should employ multiple measures of study constructs wherever financially and logistically possible. Observations of parent-student interaction during involvement, or parent and student diary-accounts of involvement, would complement parent self-reports of activities and mechanisms engaged during involvement. Such measures would also augment student-reported perceptions of parents' involvement. Obtaining other measures of student proximal academic outcomes would lend further strength to future studies (e.g., teacher, parent, or observer ratings of students on these outcomes) and, as suggested below also, other proximal academic outcomes should be considered for inclusion in the set believed to be most important to student achievement and school success. Multiple measures of the distal academic outcome of achievement (e.g., grades, classroom test scores) should be added to the use of a single standardized test assessment (and all such

assessments clearly should focus on academic year during which involvement and its outcomes are assessed).

Research on parental involvement and its effects on student school success would also benefit by more longitudinal focus, for example: How does parental involvement develop over the course of an academic year? How do specific motivators of involvement function and influence patterns of involvement across a year or across points of transition in students' schooling (e.g., the transition from elementary middle school)? It would also clearly benefit by the addition of a substantial body of well-designed experimental studies of involvement to the literature. For example, such studies should test the (relative) strength of interventions employing different motivators of involvement and the specific interactive effects of multiple motivators of involvement (see Hoover-Dempsey et al, in press, for several specific related suggestions). They should examine the (relative) impact of specific interventions on (specific groups of) parents' ability to be effective in supporting their children's academic success, and the impact of such interventions on both proximal and distal student academic outcomes. Studies, across varied design approaches, should also be grounded in further theoretical and conceptual work that identifies other important constructs likely to influence the impact of parental involvement on student outcomes (e.g., parenting style, parental expectations) and other proximal academic outcomes that exert critical influence on student achievement and school success.

In all, parental involvement in children's education represents a rich resource for schools and communities as they seek educational success for all children, and it represents a rich vein of continued parental influence in the lives of children as they

develop through the elementary, middle, and high school years. We hope that the conceptual, measurement, and empirical findings made possible by the grant funding this set of studies moves the field forward in both dimensions.

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Figure 1: Hoover-Dempsey and Sandler (1995, 1997) original model of the parental involvement process

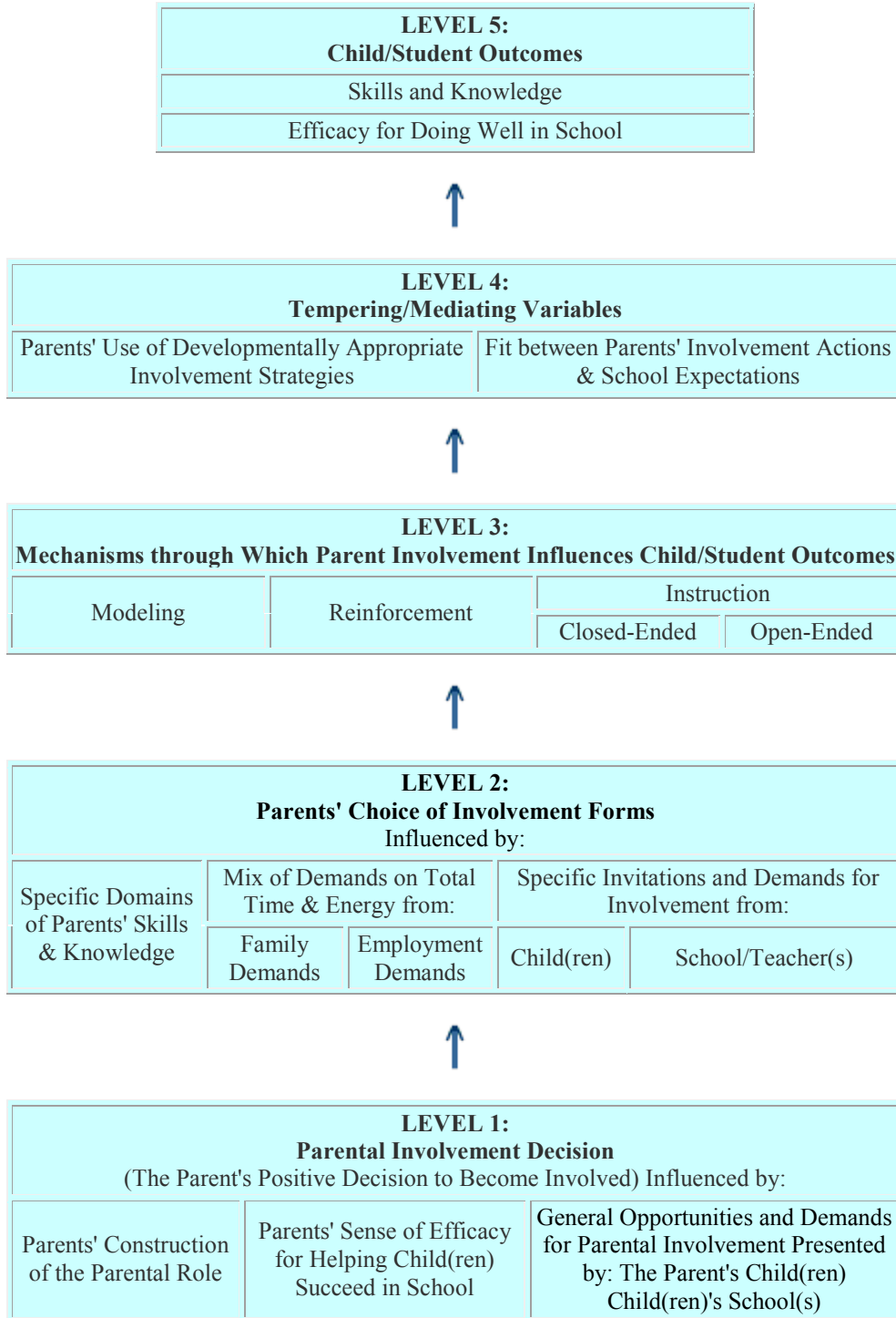
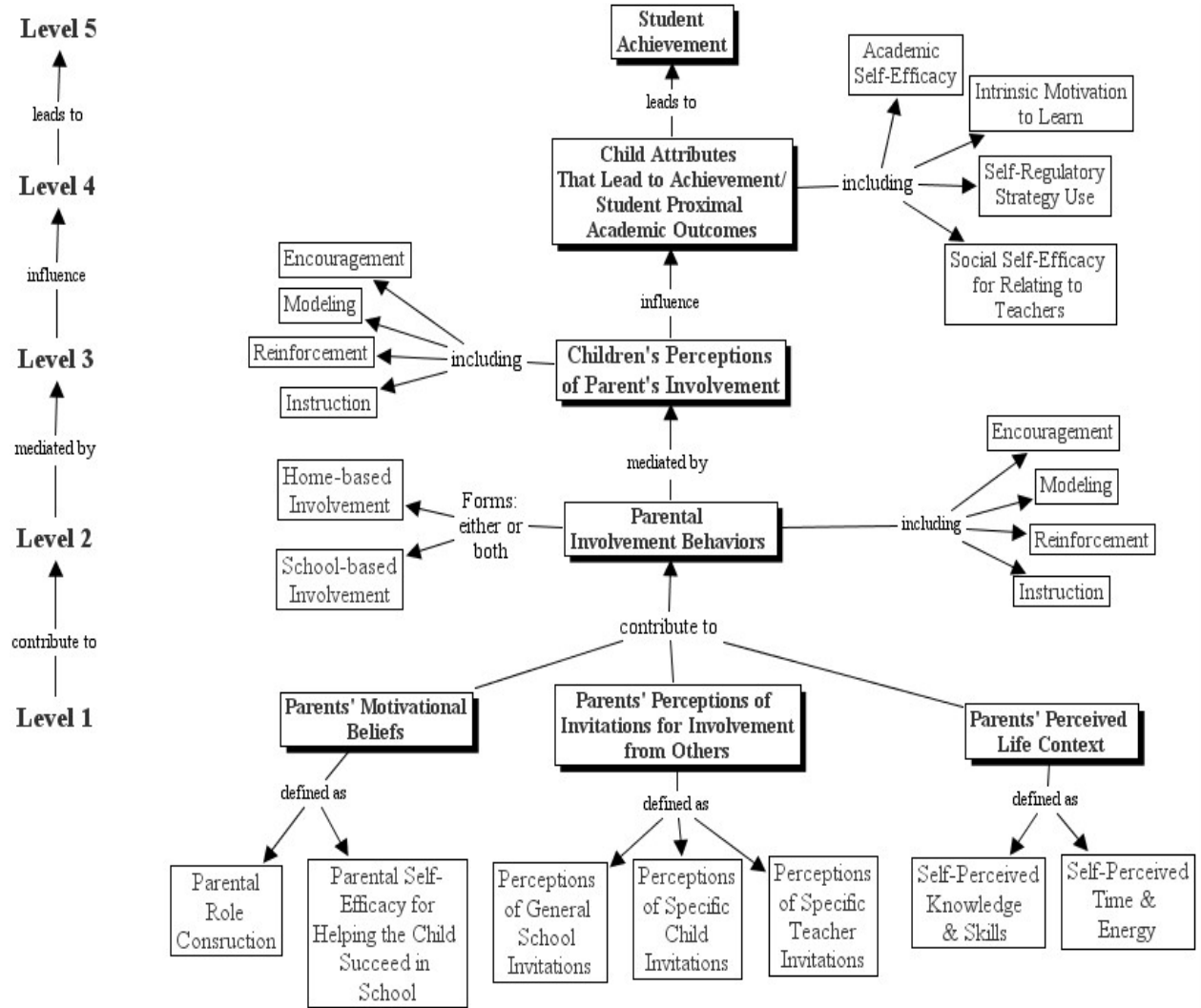


Figure 2: Revised Hoover-Dempsey and Sandler model of the parental involvement process



Appendix A

Annual Certifications of IRB Approval



Vanderbilt University

Institutional Review Board

D-3232 Medical Center North Nashville, Tennessee 37232-2598
(615) 322-2918 Fax: (615) 343-2648
www.mc.vanderbilt.edu/irb

March 16, 2004

Kathleen Hoover-Dempsey, Ph.D.
Psychology and Human Development
Box 512, GPC
Nashville, TN 37203

Darlene Whetsel
Psychology and Human Development
Box 512 Peabody College
Nashville, TN 37203

RE: IRB# 010521 "The Social Context of Parental Involvement: A Path to Enhanced Achievement"
(OERI/Department of Education)

Dear Dr. Hoover-Dempsey:

A sub-committee of the Institutional Review Board reviewed the Umbrella grant identified above. This Umbrella is recognized by the IRB as a compilation of research being conducted under the said grant. Please note this does not cover approval for the individual sub-studies that are/will be conducted under the grant. Those studies must be submitted for review and approval separate from this acknowledgement. A copy of this grant will be maintained with this Umbrella file. The grant will be reviewed and approved with the separate sub-study submissions.

REVIEW DATE: 3/16/2004

EXPIRATION DATE: 3/16/2005

Sincerely,

A handwritten signature in black ink, appearing to read "Jan van Eys".

Jan van Eys, Ph.D., M.D., Chair
Institutional Review Board
Behavioral Sciences Committee

JvE/ajm

Appendix B

List of Publications, Presentations and Papers Drawing on Research Project Findings,
2001-2004*Theoretical/conceptual*

- Hoover-Dempsey, K.V., Walker, J.M.T., Green, C., & Sandler, H.M. (in preparation). *How does parental involvement influence student outcomes? Research findings and implications.*
- Hoover-Dempsey, K.V., Walker, J.M.T., Sandler, H.M., Whetsel, D.R., Green, C.L., Wilkins, A.S., & Clossen, K. (in press). Why do parents become involved? Research findings and implications. *Elementary School Journal.*
- Hoover-Dempsey, K.V., Walker, J.M.T., & Sandler, H.M. (in press). What motivates parents to become involved in their children's education? In E.N. Patrikakou, R.P. Weisberg, J.B. Manning, H.J. Walberg, & S. Redding (Eds.), *School-family partnerships: Promoting the social, emotional, and academic growth of children.* NY: Teachers College Press.
- Walker, J.M., & Hoover-Dempsey, K.V. (in press). Parental involvement and classroom management. In C.M. Evertson & C.S. Weinstein (Eds.), *Handbook for classroom management: Research, practice, and contemporary issues.* Hillsdale, NJ: Erlbaum.
- Walker, J.M., Hoover-Dempsey, K.V., Whetsel, D.R., & Green, C.L. (2004). *Parental involvement in homework: A review of current research and its implications for teachers, after-school program staff, and parent leaders.* Cambridge, MA: Family Involvement Network of Educators (FINE), Harvard Family Research Project.
- <http://www.gse.harvard.edu/hfrp/projects/fine/resources/research/homework.html>.

Weiss, H. (Moderator), Epstein, J.L., Henderson, A.T., Hoover-Dempsey, K.V., & Jeynes, W. (2004). *Researching family involvement in education: What lies ahead?* Panel discussion proposal accepted for presentation at the Annual Meeting of the American Educational Research Association, Montreal, April 2005.

Empirical

Closson, K.E., Wilkins, A.S., Sandler, H.M., & Hoover-Dempsey, K.V. (2004). *Crossing cultural boundaries: Latino parents' involvement in their children's education*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Goldring, E.B., Hoover-Dempsey, K.V., & Rowley, K.J. (2004). *Voluntary integration and magnet schools under unitary status*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Green, C.L. & Hoover-Dempsey, K.V. (2004). *Home-schooling as an extreme form of parental involvement*. Paper accepted for presentation at the Annual Meeting of the American Educational Research Association, Montreal, April 2005.

Hoover-Dempsey, K.V., Wilkins, A.S., Sandler, H.M., & O'Connor, K.P.J. (2004). *Parental role construction for involvement: Theoretical, measurement and pragmatic issues in instrument development*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Hoover-Dempsey, K.V., & Jones, K.P. (2002). *Parental role construction*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

- Raser, K., Hoover-Dempsey, K.V., & Dallaire, J. (2004). *Why teachers do what they do in their classrooms: Authoritative teaching as related to efficacy, school climate, and contextual support for teaching*. Paper accepted for presentation at the Annual Meeting of the American Educational Research Association, Montreal, April 2005.
- Reed, R.P., Hoover-Dempsey, K.V., & Flynn, C. (2001, April). *Parents' involvement in children's education: Testing a mediational model*. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Minneapolis, MN.
- Walker, J.M. & Hoover-Dempsey, K. V (2001, April). *Age-related patterns in students' invitations to parental involvement in homework*. Symposium paper presented at the Annual Meeting of the American Educational Research Association, Seattle, WA.
- Walker, J.M.T., Whetsel, D.R., Dallaire, J.R., Green, C.L., Hoover-Dempsey, K.V., & Sandler, H.M. (in preparation). *How does parental involvement influence student outcomes? Model revision through scale development*.
- Walker, J.M.T, Wilkins, A.S., Dallaire, J., Sandler, H.M., & Hoover-Dempsey, K.V. (in press). Parental involvement: Model revision through scale development. *Elementary School Journal*.
- Walker, J.M.T., Wilkins, A.S., Dallaire, J.R., Sandler, H.M. & Hoover-Dempsey, K.V. (2004). *Parental involvement: Model revision through scale development*. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.
- Walker, J.M.T., Dallaire, J., Green, C.L., Sandler, H.M., & Hoover-Dempsey, K.V. (2004).

Parental involvement and student self-regulation: Testing a mediational model. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Appendix C

Parental Role Construction for Involvement in the Child's Education Scale

Part 1: Role Activity Beliefs

Instructions

Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about the current school year as you consider each statement.

Response format

All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

I believe it is my responsibility...

1. ...to volunteer at the school
2. ...to communicate with my child's teacher regularly.
3. ...to help my child with homework.
4. ...make sure the school has what it needs.
5. ...support decisions made by the teacher.
6. ...stay on top of things at school.
7. ...explain tough assignments to my child.
8. ...talk with other parents from my child's school.
9. ...make the school better.
10. ...talk with my child about the school day.

Part 2: Valence toward School

Instructions

People have different feelings about school. Please mark the number on each line below that best describes your feelings about your school experiences when you were a student.

Items

My School:	disliked	1	2	3	4	5	6	liked
My Teachers:	were mean	1	2	3	4	5	6	were nice
My Teachers:	ignored me	1	2	3	4	5	6	cared about me
My school experience:	bad	1	2	3	4	5	6	good
I felt like:	an outsider	1	2	3	4	5	6	I belonged
My overall experience:	failure	1	2	3	4	5	6	success

Appendix D

Parental Self-Efficacy for Helping the Child Succeed in School Scale

Instructions to respondent

Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about the current school year as you consider each statement.

Response format

All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

1. I know how to help my child do well in school.
2. I don't know if I'm getting through to my child. (reversed)
3. I don't know how to help my child make good grades in school. (reversed)
4. I feel successful about my efforts to help my child learn.
5. Other children have more influence on my child's grades than I do. (reverse)
6. I don't know how to help my child learn. (reversed)
7. I make a significant difference in my child's school performance.

Appendix E

Parents' Perceptions of General Invitations for Involvement from the School Scale

Instructions to respondent

Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about the current school year as you consider each statement.

Response format

All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

1. Teachers at this school are interested and cooperative when they discuss my child.
2. I feel welcome at this school.
3. Parent activities are scheduled at this school so that I can attend.
4. This school lets me know about meetings and special school events.
5. This school's staff contacts me promptly about any problems involving my child.
6. The teachers at this school keep me informed about my child's progress in school.

Appendix F

Parents' Perceptions of Personal Knowledge and Skills Scale

Instructions to respondent

Please indicate how much you AGREE or DISAGREE with each of the following statements with regard to the current school year.

Response format

All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

1. I know about volunteering opportunities at my child's school.
2. I know about special events at my child's school.
3. I know effective ways to contact my child's teacher.
4. I know how to communicate effectively with my child about the school day.
5. I know how to explain things to my child about his or her homework.
6. I know enough about the subjects of my child's homework to help him or her.
7. I know how to communicate effectively with my child's teacher.
8. I know how to supervise my child's homework.
9. I have the skills to help out at my child's school.

Appendix G

Parents' Perceptions of Personal Time and Energy Scale

Instructions to respondent

Please indicate how much you AGREE or DISAGREE with each of the following statements with regard to the current school year.

Response format

All items in the scale use a six-point response format (disagree very strongly to agree very strongly): 1 = Disagree very strongly; 2 = Disagree; 3 = Disagree just a little; 4 = Agree just a little; 5 = Agree; 6 = Agree very strongly.

Items

I have enough time and energy to...

1. ... communicate effectively with my child about the school day.
2. ... help out at my child's school.
3. ... communicate effectively with my child's teacher.
4. ... attend special events at school.
5. ... help my child with homework.
6. ... supervise my child's homework.

Appendix H

Parents' Perceptions of Specific Invitations for Involvement from the Teacher

Instructions to respondent

Please indicate HOW OFTEN the following have happened SINCE THE BEGINNING OF THIS SCHOOL YEAR.

Response format

All items in the scale use a six-point response format (never to daily): 1 = never; 2 = 1 or 2 times; 3 = 4 or 5 times; 4 = once a week; 5 = a few times a week; 6 = daily.

Items

1. My child's teacher asked me or expected me to help my child with homework.
2. My child's teacher asked me or expected me to supervise my child's homework.
3. My child's teacher asked me to talk with my child about the school day.
4. My child's teacher asked me to attend a special event at school.
5. My child's teacher asked me to help out at the school.
6. My child's teacher contacted me (for example, sent a note, phoned, e-mailed).

Appendix I

Parents' Perceptions of Specific Invitations for Involvement from the Child Scale

Instructions to respondent

Please indicate HOW OFTEN the following have happened SINCE THE BEGINNING OF THIS SCHOOL YEAR.

Response format

All items in the scale use a six-point response format (never to daily): 1 = never; 2 = 1 or 2 times; 3 = 4 or 5 times; 4 = once a week; 5 = a few times a week; 6 = daily.

Items

1. My child asked me to help explain something about his or her homework.
2. My child asked me to supervise his or her homework.
3. My child talked with me about the school day.
4. My child asked me to attend a special event at school.
5. My child asked me to help out at the school.
6. My child asked me talk with his or her teacher.

Appendix J

Parent Report of Home-based Involvement Activities Scale

Instructions to respondent

Parent and families do many different things when they are involved in their children's education. We would like to know how true the following things are for you and your family. Please think about the current school year as you read and respond to each item.

Response format

All items in the scale use a six-point response format: 1 = Never; 2 = 1 or 2 times this year; 3 = 4 or 5 times this year; 4 = once a week; 5 = A few times a week; 6 = Daily.

Items

Someone in this family...

1. ... talks with this child about the school day.
2. ... supervises this child's homework.
3. ... helps this child study for tests.
4. ... practices spelling, math or other skills with this child.
5. ... reads with this child.

Appendix K

Parent Report of School-based Involvement Activities Scale

Instructions to respondent

Parent and families do many different things when they are involved in their children's education. We would like to know how true the following things are for you and your family. Please think about the current school year as you read and respond to each item.

Response format

All items in the scale use a six-point response format: 1 = Never; 2 = 1 or 2 times this year; 3 = 4 or 5 times this year; 4 = once a week; 5 = A few times a week; 6 = Daily.

Items

Someone in this family...

1. . . . helps out at this child's school.
2. . . . attends special events at school.
3. . . . volunteers to go on class field trips.
4. . . . attends PTA meetings.
5. . . . goes to the school's open-house

Appendix L

Parent Report of Encouragement Scale

Instructions

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are for you and your family when you help your child with schoolwork. Please think about the current school year as you read and respond to each item.

Response format

All items in the scale use a six-point response format (not at all true to completely true):

Not at all true = 1, A little bit true = 2, Somewhat true = 3, Often true = 4, Mostly true = 5,

Completely true=6

Items

We encourage this child ...

1. ... when he or she doesn't feel like doing schoolwork.
2. ... to look for more information about school subjects.
3. ... to develop an interest in schoolwork.
4. ... to believe that he/she can do well in school.
5. ... to stick with problems until he/she solves it.
6. ... to believe that he/she can learn new things.
7. ... when he or she has trouble doing schoolwork.
8. ... to ask other people for help when a problem is hard to solve.
9. ... to explain what he/she thinks to the teacher.
10. ... to follow the teacher's directions.
11. ... when he or she has trouble organizing schoolwork.

12. ... to try new ways to do schoolwork when he or she is having a hard time.
13. ... to be aware of how he or she is doing with schoolwork.

Appendix M

Parent Report of Modeling Scale

Instructions to respondent

Parents and families do many different things when they help their children with schoolwork.

We would like to know how true the following things are for you and your family when you help your child with schoolwork. Please think about the current school year as you read and respond to each item.

Response format

All items in the scale use a six-point response format (not at all true to a little bit true):

Not at all true = 1, A little bit true = 2, Somewhat true = 3, Often true = 4, Mostly true=5,

Completely true=6

Items

We show this child we like it when he or she ...

1. ... wants to learn new things.
2. ... tried to learn as much as possible.
3. ... has a good attitude about doing his or her homework.
4. ... keeps working on homework even when he or she doesn't feel like it.
5. ... works hard on homework.
6. ... sticks with a problem until he or she solves it.
7. ... sticks with a problem until he or she solves it.
8. ... asks the teacher for help.
9. ... explains what he or she thinks to the teacher.
10. ... explains to us what he or she thinks about school.

11. ... understands how to solve problems.
12. ... organizes his or her schoolwork.
13. ... checks his or her work.
14. ... finds new ways to do schoolwork when he or she gets stuck.

Appendix N

Parent Report of Reinforcement Scale

Instructions to respondent

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are for you and your family when you help your child with schoolwork. Please think about the current school year as you read and respond to each item.

Response format

All items in the scale use a six-point response format (not at all true to completely true): Not at all true = 1, A little bit true = 2, Somewhat true = 3, Often true = 4, Mostly true = 5, Completely true = 6

Items

We show this child we like it when he or she . . .

1. . . . wants to learn new things.
2. . . . tries to learn as much as possible.
3. . . . has a good attitude about doing his or her homework.
4. . . . keeps working on homework even when he or she doesn't feel like it.
5. . . . asks the teacher for help.
6. . . . explains what he or she thinks to the teacher.
7. . . . explains to us what he or she thinks about school.
8. . . . works hard on homework.
9. . . . understands how to solve problems.
10. . . . sticks with a problem until he or she solves it.

11. . . . organizes his or her schoolwork.
12. . . . checks his or her work.
13. . . . finds new ways to do schoolwork when he or she gets stuck.

Appendix O

Parent Report of Instruction Scale

Instructions to respondent

Parents and families do many different things when they help their children with schoolwork.

We would like to know how true the following things are for you and your family when you help your child with schoolwork. Please think about the current school year as you read and respond to each item.

Response format

All items in the scale use a six-point response format (not at all true to completely true): Not at all true = 1, A little bit true = 2, Somewhat true = 3, Often true = 4, Mostly true = 5,

Completely true = 6

Items

We teach this child . . .

1. . . . to go at his or her own pace while doing schoolwork.
2. . . . to take a break from his or her work when he or she gets frustrated.
3. . . . how to check homework as he or she goes along.
4. . . . how to get along with others in his or her class.
5. . . . to follow the teacher's directions.
6. . . . how to make his or her homework fun.
7. . . . how to find out more about the things that interest him or her.
8. . . . to try the problems that help him or her learn the most.
9. . . . to have a good attitude about his or her homework.
10. . . . to keep trying when he or she gets stuck.

11. . . . to stick with his or her homework until he or she finishes it.
12. . . . to work hard.
13. . . . to talk with the teacher when he or she has questions.
14. . . . to ask questions when he or she doesn't understand something.
15. . . . to make sure he or she understands one part before going onto the next.

Appendix P

Student Report of Parental Encouragement Scale

Instructions to respondent

Dear Student, Families do many different things when they help children with school. Please think about how your family helps you with school and fill in the circle that matches what is most true for them. Thank you!

Response format

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4.

Items

The person in my family who usually helps me with my homework encourages me . . .

1. . . . when I don't feel like doing my schoolwork.
2. . . . when I have trouble organizing my schoolwork.
3. . . . to be aware of how I'm doing with my schoolwork.
4. . . . to try new ways to do schoolwork when I'm having a hard time.
5. . . . when I have trouble doing my schoolwork.
6. . . . look for more information about school subjects.
7. . . . to develop an interest in schoolwork.
8. . . . to believe that I can do well in school.
9. . . . to believe that I can learn new things.
10. . . . to ask the teacher for help when a problem is hard to solve.
11. . . . to follow the teacher's directions.
12. . . . to explain what I think to the teacher.

Appendix Q

Student Report of Parental Modeling Scale

Instructions to respondent

Dear Student, Families do many different things when they help children with school. Please think about how your family helps you with school and fill in the circle that matches what is most true for them. Thank you!

Response format

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4.

Items

The person in my family who usually helps me with my homework . . .

1. . . . likes to learn new things
2. . . . wants to learn as much as possible.
3. . . . likes to solve problems.
4. . . . enjoys figuring things out.
5. . . . knows how to solve problems.
6. . . . tries a different way if he or she has trouble solving a problem.
7. . . . doesn't give up when things get hard.
8. . . . can learn new things.
9. . . . asks other people for help when a problem is hard to solve.
10. . . . can explain what he or she thinks to other people.

Appendix R

Student Report of Parent's Use of Reinforcement Scale

Instructions to respondent

Dear Student, Families do many different things when they help children with school. Please think about how your family helps you with school and fill in the circle that matches what is most true for them. Thank you!

Response format

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4.

Items

The person in my family who usually helps me with my homework shows me that he or she likes it when I...

1. ...try to learn as much as possible.
2. ...have a good attitude about doing my homework.
3. ...want to learn new things.
4. ...check my work.
5. ...understand how to solve problems.
6. ...organize my schoolwork. ...find new ways to do my work when I get stuck.
7. ...stick with a problem until it gets solved.
8. ...work hard on my homework.
9. ...keep working on my homework even when I don't feel like it.
10. ...ask the teacher for help.
11. ...explain what I think to the teacher.

12. ...explain what I think about school to him or her.

Appendix S

Student Report of Parent's Use of Instruction Scale

Instructions

Dear Student, Families do many different things when they help children with school. Please think about how your family helps you with school and fill in the circle that matches what is most true for them. Thank you!

Response format

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4.

Items

The person in my family who usually helps me with my homework teaches me...

1. ... ways to make my homework fun.
2. ... how to find out more about things that interest me.
3. ... to try the problems that help me learn the most.
4. ... to have a good attitude about my homework.
5. ... to make sure I understand one part before I go on to the next.
6. ... to take a break from my work when I get frustrated.
7. ... how to check my homework as I go along.
8. ... to go at my own pace while doing my homework.
9. ... to keep trying when I get stuck.
10. ... to stick with my homework until I get it all done.
11. ... to work hard.
12. ... to ask questions when I don't understand something.

13. ... how to get along with others in my class.
14. ... to follow the teacher's directions.
15. ... to talk with the teacher when I have questions.

Appendix T

Student Report of Academic Self-Efficacy Scale

Instructions

Dear Student, Students have many different ideas about school and homework. Please tell us how true each of the following ideas are for you. There are no right or wrong answers. The right answer is the answer that is most true for you. Your parents and teachers will NOT see what you say. Thank you!

Response format and scale

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4

Items

1. I can do even the hardest homework if I try.
2. I can learn the things taught in school.
3. I can figure out difficult homework.

Appendix U

Student Report of Intrinsic Motivation to Learn Scale

Instructions

Dear Student, Students have many different ideas about school and homework. Please tell us how true each of the following ideas are for you. There are no right or wrong answers. The right answer is the answer that is most true for you. Your parents and teachers will NOT see what you say. Thank you!

Response format and scale

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4.

Items

1. I want to understand how to solve problems.
2. I like to look for more information about school subjects.
3. I want to learn new things.

Appendix V

Student Report of Self-regulatory Strategy Use Scale

Instructions

Dear Student, Students have many different ideas about school and homework. Please tell us how true each of the following ideas are for you. There are no right or wrong answers. The right answer is the answer that is most true for you. Your parents and teachers will NOT see what you say. Thank you!

Response format and scale

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4.

Items

1. I try to find a place that makes it easier to do my homework.
2. I ask myself questions as I go along to make sure my homework makes sense to me.
3. I try to figure out the hard parts on my own.
4. I go back over things I don't understand.

Appendix W

Student Report of Social Self-Efficacy for Relating to Teachers Scale

Instructions

Dear Student, Students have many different ideas about school and homework. Please tell us how true each of the following ideas are for you. There are no right or wrong answers. The right answer is the answer that is most true for you. Your parents and teachers will NOT see what you say. Thank you!

Response format and scale

All items in the scale use a four-point response format (not true to very true): Not true = 1, A little true = 2, Pretty true = 3, Very true = 4.

Items

1. I can get along with most of my teachers.
2. I can go and talk with most of my teachers.
3. I can get my teachers to help me if I have problems with other students.
4. I can explain what I think to most of my teachers.

Appendix X



Parent Questionnaire (Study 4), English

Parent Involvement Project (PIP) Parent Questionnaire Study 4

MARKING INSTRUCTIONS

- Use a No. 2 pencil only.
- Do not use ink, ballpoint, or felt tip pens.
- Make solid marks that fill the circle completely.
- Erase cleanly any marks you wish to change.

• Make no stray marks on this form.
• Do not fold, tear, or mutilate this form.

CORRECT MARK  **INCORRECT MARKS** 

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

People have different feelings about school. Please mark the number on each line below that best describes your feelings about your school experiences WHEN YOU WERE A STUDENT.

1. My school:	disliked	1	2	3	4	5	6	7	8	9	liked
2. My teachers:	were mean	1	2	3	4	5	6	7	8	9	were nice
3. My teachers:	ignored me	1	2	3	4	5	6	7	8	9	cared about me
4. My school experience:	bad	1	2	3	4	5	6	7	8	9	good
5. I felt like:	an outsider	1	2	3	4	5	6	7	8	9	I belonged
6. My overall experience:	failure	1	2	3	4	5	6	7	8	9	success

Please indicate how much you **AGREE** or **DISAGREE** with each of the following statements. Please think about the current school year as you consider each statement.

	Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
7. I know how to help my child do well in school.	1	2	3	4	5	6
8. I don't know if I'm getting through to my child.	1	2	3	4	5	6
9. I don't know how to help my child make good grades in school.	1	2	3	4	5	6
10. I feel successful about my efforts to help my child learn.	1	2	3	4	5	6
11. I don't know how to help my child learn.	1	2	3	4	5	6
12. Teachers at this school are interested and cooperative when they discuss my child.	1	2	3	4	5	6
13. I feel welcome at this school.	1	2	3	4	5	6

Please indicate **HOW OFTEN** the following have happened **SINCE THE BEGINNING OF THIS SCHOOL YEAR.**

	Never	1 or 2 times this year	4 or 5 times this year	once a week	a few times a week	daily
14. My child's teacher asked me or expected me to help my child with homework.	1	2	3	4	5	6
15. My child's teacher asked me to talk with my child about the school day.	1	2	3	4	5	6
16. My child's teacher asked me to attend a special event at school.	1	2	3	4	5	6
17. My child's teacher asked me to help out at the school.	1	2	3	4	5	6
18. My child's teacher contacted me (for example, sent a note, phoned, e-mailed).	1	2	3	4	5	6

Parents have many different beliefs about their level of responsibility in their children's education. Please respond to the following statements by indicating the degree to which you believe you are responsible for the following.

	Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
19. ...volunteer at the school.	1	2	3	4	5	6
20. ...communicate with my child's teacher regularly.	1	2	3	4	5	6
21. ...help my child with homework.	1	2	3	4	5	6
22. ...make sure the school has what it needs.	1	2	3	4	5	6
23. ...support decisions made by the teacher.	1	2	3	4	5	6
24. ...stay on top of things at school.	1	2	3	4	5	6
25. ...explain tough assignments to my child.	1	2	3	4	5	6
26. ...talk with other parents from my child's school.	1	2	3	4	5	6
27. ...make the school better.	1	2	3	4	5	6
28. ...talk with my child about the school day.	1	2	3	4	5	6

PLEASE DO NOT WRITE IN THIS AREA

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Dear Parent, please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about THE CURRENT SCHOOL YEAR as you consider each statement.

	Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
29. I know about special events at school.	1	2	3	4	5	6
30. I have enough time and energy to help out at my child's school.	1	2	3	4	5	6
31. I know enough about the subjects of my child's homework to help him or her.	1	2	3	4	5	6
32. I have enough time and energy to communicate effectively with my child's teacher.	1	2	3	4	5	6
33. I have enough time and energy to attend special events at school.	1	2	3	4	5	6
34. I know how to supervise my child's homework.	1	2	3	4	5	6
35. I know about volunteering opportunities at my child's school.	1	2	3	4	5	6
36. I know how to explain things to my child about his or her homework.	1	2	3	4	5	6
37. I have enough time and energy to help my child with homework.	1	2	3	4	5	6
38. I have the skills to help out at my child's school.	1	2	3	4	5	6
39. I have enough time and energy to supervise my child's homework.	1	2	3	4	5	6

Parents and families do many different things when they are involved in their children's education. We would like to know how often you have done the following SINCE THE BEGINNING OF THE SCHOOL YEAR.

Someone in this family ...	Never	1 or 2 times this year	4 or 5 times this year	once a week	a few times a week	daily
40. ... talks with this child about the school day.	1	2	3	4	5	6
41. ... supervises this child's homework.	1	2	3	4	5	6
42. ... helps out at this child's school.	1	2	3	4	5	6
43. ... attends special events at school.	1	2	3	4	5	6
44. ... helps this child study for tests.	1	2	3	4	5	6
45. ... volunteers to go on class field trips.	1	2	3	4	5	6
46. ... attends PTA meetings.	1	2	3	4	5	6
47. ... practices spelling, math or other skills with this child.	1	2	3	4	5	6
48. ... reads with this child.	1	2	3	4	5	6
49. ... goes to the school's open-house.	1	2	3	4	5	6

Please indicate how much you AGREE or DISAGREE with each of the following statements. Please think about THE CURRENT SCHOOL YEAR as you consider each statement.

	Disagree very strongly	Disagree	Disagree just a little	Agree just a little	Agree	Agree very strongly
50. Parent activities are scheduled at this school so that I can attend.	1	2	3	4	5	6
51. This school lets me know about meetings and special school events.	1	2	3	4	5	6
52. This school's staff contacts me promptly about any problems involving my child.	1	2	3	4	5	6
53. The teachers at this school keep me informed about my child's progress in school.	1	2	3	4	5	6

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are *for you and your family* when you help your child with schoolwork. Please think about the *current school year* as you read and respond to each item.

We encourage this child ...	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
54. ... when he or she doesn't feel like doing schoolwork.	1	2	3	4	5	6
55. ... when he or she has trouble organizing schoolwork.	1	2	3	4	5	6
56. ... to try new ways to do schoolwork when he or she is having a hard time.	1	2	3	4	5	6
57. ... to be aware of how he or she is doing with schoolwork.	1	2	3	4	5	6
58. ... to develop an interest in schoolwork.	1	2	3	4	5	6
59. ... to look for more information about school subjects.	1	2	3	4	5	6
60. ... to stick with a problem until he or she solves it.	1	2	3	4	5	6
61. ... to believe that he or she can do well.	1	2	3	4	5	6
62. ... to believe that he or she can learn new things.	1	2	3	4	5	6
63. ... to ask other people for help when a problem is hard.	1	2	3	4	5	6
64. ... to follow the teacher's directions.	1	2	3	4	5	6
65. ... to explain what he or she thinks to the teacher.	1	2	3	4	5	6
66. ... when he or she has trouble doing schoolwork.	1	2	3	4	5	6

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are *for you and your family* when you help your child with schoolwork. Please think about the *current school year* as you read and respond to each item.

We show this child that we ...	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
67. ... like to learn new things.	1	2	3	4	5	6
68. ... know how to solve problems.	1	2	3	4	5	6
69. ... enjoy figuring things out.	1	2	3	4	5	6
70. ... do not give up when things get hard.	1	2	3	4	5	6
71. ... ask others for help when a problem is hard to solve.	1	2	3	4	5	6
72. ... can explain what we think to others.	1	2	3	4	5	6
73. ... can learn new things.	1	2	3	4	5	6
74. ... want to learn as much as possible.	1	2	3	4	5	6
75. ... like to solve problems.	1	2	3	4	5	6
76. ... try different ways to solve a problem when things get hard.	1	2	3	4	5	6

We show this child we like it when he or she ...	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
77. ... wants to learn new things.	1	2	3	4	5	6
78. ... tries to learn as much as possible.	1	2	3	4	5	6
79. ... has a good attitude about doing his or her homework.	1	2	3	4	5	6
80. ... keeps working on homework even when he or she doesn't feel like it.	1	2	3	4	5	6
81. ... asks the teacher for help.	1	2	3	4	5	6
82. ... explains what he or she thinks to the teacher.	1	2	3	4	5	6
83. ... explains to us what he or she thinks about school.	1	2	3	4	5	6
84. ... works hard on homework.	1	2	3	4	5	6
85. ... understands how to solve problems.	1	2	3	4	5	6
86. ... sticks with a problem until he or she solves it.	1	2	3	4	5	6
87. ... organizes his or her schoolwork.	1	2	3	4	5	6
88. ... checks his or her work.	1	2	3	4	5	6
89. ... finds new ways to do schoolwork when he or she gets stuck.	1	2	3	4	5	6

Please indicate **HOW OFTEN** the following have happened **SINCE THE BEGINNING OF THIS SCHOOL YEAR.**

	Never	1 or 2 times this year	4 or 5 times this year	once a week	a few times a week	daily
90. My child asked me to help explain something about his or her homework.	1	2	3	4	5	6
91. My child asked me to supervise his or her homework.	1	2	3	4	5	6
92. My child asked me to attend a special event at school.	1	2	3	4	5	6
93. My child asked me to help out at the school.	1	2	3	4	5	6
94. My child asked me to talk with his or her teacher.	1	2	3	4	5	6

Parents and families do many different things when they help their children with schoolwork. We would like to know how true the following things are *for you and your family* when you help your child with schoolwork. Please think about the *current school year* as you read and respond to each item.

We teach this child ...	Not at all true	A little bit true	Somewhat true	Often true	Mostly true	Completely true
95. ... to go at his or her own pace while doing schoolwork.	1	2	3	4	5	6
96. ... to take a break from his or her work when he or she gets frustrated.	1	2	3	4	5	6
97. ... how to check homework as he or she goes along.	1	2	3	4	5	6
98. ... how to get along with others in his or her class.	1	2	3	4	5	6
99. ... to follow the teacher's directions.	1	2	3	4	5	6
100. ... ways to make his or her homework fun.	1	2	3	4	5	6
101. ... how to find out more about things that interest him or her.	1	2	3	4	5	6
102. ... to try the problems that help him or her learn the most.	1	2	3	4	5	6
103. ... to have a good attitude about his or her homework.	1	2	3	4	5	6
104. ... to keep trying when he or she gets stuck.	1	2	3	4	5	6
105. ... to stick with his or her homework until he or she finishes it.	1	2	3	4	5	6
106. ... to work hard.	1	2	3	4	5	6
107. ... to talk with the teacher when he or she has questions.	1	2	3	4	5	6
108. ... to ask questions when he or she doesn't understand something.	1	2	3	4	5	6
109. ... to make sure he or she understands one part before going on to the next.	1	2	3	4	5	6

We understand that the following information may be of a sensitive nature. We ask for this information because it helps us describe the range of families in our total group. Please bubble the response for each item that best describes you and your family.

1. Your Gender: Female Male

2. Please choose the job that best describes yours (please choose only one):

- | | | |
|---|--|---|
| <input type="radio"/> Unemployed, retired, student, disabled | <input type="radio"/> Skilled Craftsman (plumber, electrician, etc.) | <input type="radio"/> Real Estate/Insurance Sales |
| <input type="radio"/> Labor, custodial, maintenance | <input type="radio"/> Retail sales, clerical, customer service | <input type="radio"/> Social services, public service, related governmental |
| <input type="radio"/> Warehouse, factory worker, construction | <input type="radio"/> Service technician (appliances, computers, cars) | <input type="radio"/> Teacher, nurse |
| <input type="radio"/> Driver (taxi, truck, bus, delivery) | <input type="radio"/> Bookkeeping, accounting, related administrative | <input type="radio"/> Professional, executive |
| <input type="radio"/> Food services, restaurant | <input type="radio"/> Singer/musician/writer/artist | |

3. On average, how many hours per week do you work?

- 0-5 6-20 21-40 41 or more

4. Your level of education (please mark highest level completed):

- | | | |
|---|--|--|
| <input type="radio"/> less than high school | <input type="radio"/> some college, 2-year college or vocational | <input type="radio"/> some graduate work |
| <input type="radio"/> high school or GED | <input type="radio"/> bachelor's degree | <input type="radio"/> master's degree |
| | | <input type="radio"/> doctoral degree |

5. Please choose the job that best describes your spouse or partner's:

- | | | |
|---|--|---|
| <input type="radio"/> No Spouse or Partner | <input type="radio"/> Skilled Craftsman (plumber, electrician, etc.) | <input type="radio"/> Real Estate/Insurance Sales |
| <input type="radio"/> Unemployed, retired, student, disabled | <input type="radio"/> Retail sales, clerical, customer service | <input type="radio"/> Social services, public service, related governmental |
| <input type="radio"/> Labor, custodial, maintenance | <input type="radio"/> Service technician (appliances, computers, cars) | <input type="radio"/> Teacher, nurse |
| <input type="radio"/> Warehouse, factory worker, construction | <input type="radio"/> Bookkeeping, accounting, related administrative | <input type="radio"/> Professional, executive |
| <input type="radio"/> Driver (taxi, truck, bus, delivery) | <input type="radio"/> Singer/musician/writer/artist | |
| <input type="radio"/> Food services, restaurant | | |

6. Your spouse or partner's level of education (please mark highest level completed):

- | | | |
|---|--|--|
| <input type="radio"/> less than high school | <input type="radio"/> some college, 2-year college or vocational | <input type="radio"/> some graduate work |
| <input type="radio"/> high school or GED | <input type="radio"/> bachelor's degree | <input type="radio"/> master's degree |
| | | <input type="radio"/> doctoral degree |

7. On average, how many hours per week does your spouse or partner work?

- 0-5 6-20 21-40 41 or more

8. Family income per year (mark one):

- | | | | |
|---|---|---|-------------------------------------|
| <input type="radio"/> less than \$5,000 | <input type="radio"/> \$10,001-\$20,000 | <input type="radio"/> \$30,001-\$40,000 | <input type="radio"/> over \$50,000 |
| <input type="radio"/> \$5,001-\$10,000 | <input type="radio"/> \$20,001-\$30,000 | <input type="radio"/> \$40,001-\$50,000 | |

9. How many children (under the age of 19) live in your home?

- 1 2 3 4 5 6 or more

10. Your Race/Ethnicity:

- Asian/Asian-American Black/African-American Hispanic/Latino-American White/Caucasian Other

THANK YOU!!!

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Appendix Y

Parent Questionnaire (Study 4), Spanish



Proyecto de Familias en Compromiso
(PIP)
Cuestionario para Padres de Familia
Estudio 4

Las personas tienen diferentes sentimientos acerca de su escuela. Por favor marque con un círculo su respuesta que describa su sentimiento acerca de su experiencia escolar. CUANDO USTED ERA ESTUDIANTE.

1	Mi escuela:	no me gustaba 1	2	3	4	5	me gustaba 6
2	Mis maestros:	fueron malos 1	2	3	4	5	fueron buenos 6
3	Mis maestros:	me ignoraron 1	2	3	4	5	se preocuparon por mí 6
4	Mi experiencia escolar:	malo 1	2	3	4	5	bueno 6
5	Yo me sentía como:	un extraño 1	2	3	4	5	confortable 6
6	Mi final experiencia escolar fué:	fracaso 1	2	3	4	5	éxito 6

Por favor indique que tanto esta usted de ACUERDO o NO con cada una de las preguntas. Por favor piensen el presente año escolar al contestar cada pregunta.

		En total desacuerdo	Desacuerdo	Poco desacuerdo	Poco en acuerdo	Acuerdo	En total acuerdo
7	Yo sé como ayudar a mi hijo(a) para que progrese en la escuela.	1	2	3	4	5	6
8	No sé si estoy teniendo una buena comunicación con mi hijo(a).	1	2	3	4	5	6
9	Yo no sé como ayudarlo a mi hijo (a), para que tenga buenas calificaciones en la escuela.	1	2	3	4	5	6
10	Estoy complacido (a) con los esfuerzos que hago para ayudar a mi hijo (a) en aprender.	1	2	3	4	5	6
11	Yo no sé como ayudarlo a mi hijo (a), para que tenga buenas calificaciones en la escuela.	1	2	3	4	5	6
12	Los maestros de la escuela se interesan y cooperan cuando ellos hablan acerca de mi hijo (a).	1	2	3	4	5	6
13	Yo me siento confortable en la escuela.	1	2	3	4	5	6

Por favor continúe en la siguiente página

Estimados padres, por favor indique que tan seguido se ha comprometido con las siguientes conductas por lo que va DEL PRESENTE AÑO ESCOLAR.

	Nunca	Una vez hasta ahora	Una vez al mes	Una vez cada 2 semanas	Una vez a la semana	A diario
14 El maestro de mi hijo(a) me pregunta o espera que ayude a mi hijo(a) con las tareas.	1	2	3	4	5	6
15 El maestro de mi hijo(a) me pide que hable con mi hijo(a) acerca del día escolar.	1	2	3	4	5	6
16 El maestro de mi hijo(a) me pidió que asistiéra a un evento especial en la escuela.	1	2	3	4	5	6
17 El maestro de mi hijo(a) me pidió que ayudára en la escuela.	1	2	3	4	5	6
18 El maestro de mi hijo(a) se comunica conmigo (por ejemplo: envi notas, por teléfono o correo electrónico).	1	2	3	4	5	6

Padres de familia tienen diferentes ideas acerca del límite y responsabilidad en la educación de sus hijos. Por favor responda a las siguientes preguntas, indicando el nivel de acuerdo o no de las siguientes prácticas.

Yo creo que es mi responsabilidad que yo...

	En total desacuerdo	Desacuerdo	Poco desacuerdo	Poco en acuerdo	Acuerdo	En total acuerdo
19 ...sea voluntario(a) en la escuela.	1	2	3	4	5	6
20 ...comunicarme con el maestro de mi hijo(a) regularmente.	1	2	3	4	5	6
21 ...ayudar a mi hijo(a) con la tarea.	1	2	3	4	5	6
22 ...asegurarme que la escuela tenga lo que necesita.	1	2	3	4	5	6
23 ...apoyar las decisiones que tome el maestro(a).	1	2	3	4	5	6
24 ...estar pendiente de situaciones que pasen en la escuela.	1	2	3	4	5	6
25 ...explicar tareas difíciles a mi hijo(a).	1	2	3	4	5	6
26 ...hablar con otros padres de familia de la escuela.	1	2	3	4	5	6
27 ...hacer que la escuela mejore.	1	2	3	4	5	6
28 ...hablar con mi hijo(a) acerca del día escolar.	1	2	3	4	5	6

Estimados padres, por favor indique que tan seguido se ha comprometido con las siguientes conductas por lo que va DEL PRESENTE AÑO ESCOLAR.

	En total desacuerdo	Desacuerdo	Poco desacuerdo	Poco en acuerdo	Acuerdo	En total acuerdo
29 Estoy informado(a) acerca de eventos especiales en la escuela.	1	2	3	4	5	6
30 Yo tengo suficiente tiempo y energía para ayudar a la escuela de mi hijo(a).	1	2	3	4	5	6
31 Yo tengo los suficientes conocimientos para poder ayudar con las tareas de mi hijo(a).	1	2	3	4	5	6
32 Yo tengo suficiente tiempo y energía para ayudar a la escuela de mi hijo(a).	1	2	3	4	5	6
33 Yo tengo suficiente tiempo y energía para asistir a eventos especiales en la escuela.	1	2	3	4	5	6
34 Yo sé como supervisar las tareas de mi hijo(a).	1	2	3	4	5	6
35 Yo sé acerca de oportunidades para ser voluntario(a) en la escuela de mi hijo(a).	1	2	3	4	5	6
36 Yo sé como explicar las tareas a mi hijo(a).	1	2	3	4	5	6
37 Yo tengo suficiente tiempo y energía para ayudar a mi hijo(a) con sus tareas.	1	2	3	4	5	6
38 Yo tengo las habilidades para ayudar a la escuela de mi hijo(a).	1	2	3	4	5	6
39 Yo tengo suficiente tiempo y energía para supervisar las tareas de mi hijo(a).	1	2	3	4	5	6

Por favor continúe en la siguiente página

Padres y familiares hacen diferentes cosas para ayudar con la educación de sus hijos. Estimados padres, por favor indique que tan seguido se ha comprometido con las siguientes conductas por lo que va DEL PRESENTE AÑO ESCOLAR.

Alguien en la familia...	Nunca	Una vez hasta ahora	Una vez al mes	Una vez cada 2 semanas	Una vez a la semana	A diario
40 ...habla con el niño(a) acerca del año escolar.	1	2	3	4	5	6
41 ...superviza las tareas del niño(a).	1	2	3	4	5	6
42 ...ayuda en la escuela.	1	2	3	4	5	6
43 ...atiende eventos especiales.	1	2	3	4	5	6
44 ...ayuda al niño(a) a estudiar para el examen.	1	2	3	4	5	6
45 ...es voluntario(a) en paseos escolares.	1	2	3	4	5	6
46 ...atiende a las juntas de PTA.	1	2	3	4	5	6
47 ...practica matemáticas, ortografía y otras materias con el estudiante.	1	2	3	4	5	6
48 ...lee con el niño(a).	1	2	3	4	5	6
49 ...asiste a "open house" en la escuela.	1	2	3	4	5	6

Estimados padres, por favor indique que tan seguido se ha comprometido con las siguientes conductas por lo que va DEL PRESENTE AÑO ESCOLAR.

	En total desacuerdo	Desacuerdo	Poco desacuerdo	Poco en acuerdo	Acuerdo	En total acuerdo
50 Las actividades para padres de familia se llevan a cabo en la escuela para que podamos atender.	1	2	3	4	5	6
51 La escuela me deja saber acerca de eventos especiales y juntas.	1	2	3	4	5	6
52 El personal de la escuela hace contacto conmigo por cualquier problema con mi hijo(a).	1	2	3	4	5	6
53 Los maestros de la escuela me mantienen informado(a) acerca del progreso académico de mi hijo(a).	1	2	3	4	5	6

Padres y familiares hacen diferentes cosas para ayudar con la educación de sus hijos. Nos gustaría saber que tan verdaderas son las siguientes preguntas para usted y sus familiares Piense en el presente año escolar en cada pregunta y respuesta.

Notros animamos al niño(a) cuando:	Falso	un poco verdadero	algo verdadero	Varias verdadero	Mayoría verdadero	Verdadero
54 ...cuando él/ella no tienen ganas de hacer la tarea.	1	2	3	4	5	6
55 ...cuando él/ella tiene problemas en <i>organizar</i> sus tareas.	1	2	3	4	5	6
56 ...buscar nuevas maneras para que él/ella hagan su tarea.	1	2	3	4	5	6
57 ...estar pendiente de como hacen sus tareas.	1	2	3	4	5	6
58 ...desarrollar interés en tareas escolares.	1	2	3	4	5	6
59 ...buscar más información acerca de las materias escolares	1	2	3	4	5	6
60 ...que no deje sin terminar un problema.	1	2	3	4	5	6
61 ...creer que él/ella pueden hacerlo bien.	1	2	3	4	5	6
62 ...creer que él/ella pueden aprender nuevas cosas.	1	2	3	4	5	6
63 ...buscar ayuda cuando el problema es difícil.	1	2	3	4	5	6
64 ...cumplir con las instrucciones del maestro(a).	1	2	3	4	5	6
65 ...explicar que es lo que él/ella piensa de su maestro(a).	1	2	3	4	5	6
66 ...cuando él/ella tienen problemas en hacer tareas.	1	2	3	4	5	6

Por favor continúe en la siguiente página

Padres y familiares hacen diferentes cosas para ayudar con la educación de sus hijos. Nos gustaría saber que tan verdaderas son las siguientes preguntas para usted y sus familiares. Piense en el presente año escolar en cada pregunta y respuesta.

Nosotros <u>mostramos</u> al niño(a) que nosotros:		Falso	un poco verdadero	algo verdadero	Varias verdaderos	Mayoría verdadero	Verdadero
67	...nos gusta aprender nuevas cosas.	1	2	3	4	5	6
68	...sabemos como resolver problemas.	1	2	3	4	5	6
69	...disfrutamos tratando en resolver algo.	1	2	3	4	5	6
70	...no vencerse cuando la situación es difícil.	1	2	3	4	5	6
71	...pedir ayuda a otros, cuando el problema es difícil.	1	2	3	4	5	6
72	...que podemos explicar lo que pensamos de otras personas.	1	2	3	4	5	6
73	...podemos aprender nuevas cosas.	1	2	3	4	5	6
74	...deseamos aprender todo lo que podamos.	1	2	3	4	5	6
75	...nos gusta resolver problemas.	1	2	3	4	5	6
76	...tratar diferentes maneras de resolver un problema cuando es difícil.	1	2	3	4	5	6
Nosotros <u>apreciamos</u> cuando el niño(a):		Falso	un poco verdadero	algo verdadero	Varias verdaderos	Mayoría verdadero	Verdadero
77	...quiere aprender cosas nuevas.	1	2	3	4	5	6
78	...trata de aprender todo lo que puede.	1	2	3	4	5	6
79	...tiene una actitud positiva cuando hace sus tareas.	1	2	3	4	5	6
80	...continúa trabajando en su tarea, aunque él/ella no tenga ganas.	1	2	3	4	5	6
81	...pregunta a su maestro(a) por ayuda.	1	2	3	4	5	6
82	...explica que es lo que piensa de su maestro(a).	1	2	3	4	5	6
83	...nos explica que es lo que piensa de su escuela.	1	2	3	4	5	6
84	...trabaja muy bien en sus tareas.	1	2	3	4	5	6
85	...entiende como resolver problemas.	1	2	3	4	5	6
86	...no deja un problema hasta que lo termina.	1	2	3	4	5	6
87	...organiza sus tareas.	1	2	3	4	5	6
88	...reviza sus tareas.	1	2	3	4	5	6
89	...encuentra nuevas formas en hacer sus tareas, cuando se ve en problemas.	1	2	3	4	5	6

Por favor continúe en la siguiente página

Estimados padres, por favor indique que tan seguido se ha comprometido con las siguientes conductas por lo que va DEL PRESENTE AÑO ESCOLAR.

	Nunca	Una vez hasta ahora	Una vez al mes	Una vez cada 2 semanas	Una vez a la semana	A diario
90 Mi hijo(a) me pide ayuda cuando no entiende su tarea.	1	2	3	4	5	6
91 Mi hijo(a) me pide que supervise sus tareas.	1	2	3	4	5	6
92 Mi hijo(a) me pide que atienda algun evento especial en la escuela.	1	2	3	4	5	6
93 Mi hijo(a) me pide que ayude a la escuela.	1	2	3	4	5	6
94 Mi hijo(a) me pide que hable con sus maestros.	1	2	3	4	5	6

Padres y familiares hacen diferentes cosas para ayudar con la educación de sus hijos. Nos gustaria saber que tan verdaderas son las siguientes preguntas para usted y sus familiares Piense en el presente año escolar en cada pregunta y respuesta.

Nosotros le enseñamos al niño(a) que:	Falso	un poco verdadero	algo verdadero	Varias verdaderos	Mayoría verdadero	Verdadero
95 ...que haga su tarea en paz y en el lugar indicado.	1	2	3	4	5	6
96 ...que tome un descanso cuando él/ella se sienta cansado(a) o molesto(a).	1	2	3	4	5	6
97 ...como revizar su tarea en el momento de estar haciendola.	1	2	3	4	5	6
98 ...como relacionarse con sus compañeros de clase.	1	2	3	4	5	6
99 ...seguir las instrucciones de su maestro(a).	1	2	3	4	5	6
100 ...maneras de hacer sus tareas divertidas.	1	2	3	4	5	6
101 ...como encontrar más información en actividades que le interesan.	1	2	3	4	5	6
102 ...ayudarle con sus problemas para que aprenda más.	1	2	3	4	5	6
103 ...que tenga una actitud positiva en relación con sus tareas.	1	2	3	4	5	6
104 ...que continúe tratando de resolver un problema.	1	2	3	4	5	6
105 ...que termine su tarea completamente.	1	2	3	4	5	6
106 ...que trabaje duro.	1	2	3	4	5	6
107 ...que hable con su maestro(a) cuando él/ella tenga alguna pregunta.	1	2	3	4	5	6
108 ...que haga preguntas cuando él/ella no entienda algo.	1	2	3	4	5	6
109 ...que esté seguro(a) que entienda desde el principio, para que pueda continuar adelante.	1	2	3	4	5	6

Por favor continúe en la siguiente página

Nosotros entendemos que las siguientes preguntas son de carácter delicado. Hacemos estas preguntas para identificar el total del grupo familiar. Por favor señale la respuesta que más lo describa a usted y su pareja.

1. Su género: Femenino Masculino

2. Por favor describa el empleo que describa su trabajo (por favor escoja uno solamente):

- Desempleado, jubilado, estudiante, deshabilitado
- Obrero, conserje, mantenimiento
- Empleado de almacén, fábrica, construcción
- Chofer (taxi, trailer, autobus, entrega)
- Servicio de comida, restaurante
- Habilidades especiales (plomero, electricista, etc)
- Empleado de ventas, recepcionista, servicio al cliente
- Servicio técnico (electrodomésticos, computadoras, automóviles)
- Contabilidad, contador, servicios administrativos
- Cantante/musocp/escritor/artista
- Agente de Bienes Raices/Venta de Seguros
- Servicios sociales, servicio público, relacionado con el gobierno
- Maestro(a), enfermero(a)
- Profesional, ejecutivo

3. ¿En un promedio, cuantas horas al día usted trabaja?

- 0-5 21-40
- 6-20 41 o más

4. Su nivel de educación

(por favor marque el grado más alto que atendió):

- Menos de secundaria Bachillerato
- Secundaria o GED Algunos cursos postgraduados
- Algunos cursos universitarios, Licenciatura Superior
- universidad de 2 años, Doctor en Filosofía
- o escuela vocacional y Letras/ Ciencias

5. Por favor escoja el trabajo u oficio que mejor describa a su esposo(a) o pareja:

- No Esposa(o), o pareja
- Desempleado, jubilado, estudiante, deshabilitado
- Obrero, conserje, mantenimiento
- Empleado de almacén, fábrica, construcción
- Chofer (taxi, trailer, autobus, entrega)
- Servicio de comida, restaurante
- Habilidades especiales (plomero, electricista, etc)
- Empleado de ventas, recepcionista, servicio al cliente
- Servicio técnico (electrodomésticos, computadoras, automóviles)
- Contabilidad, contador, servicios administrativos
- Cantante/musocp/escritor/artista
- Agente de Bienes Raices/Venta de Seguros
- Servicios sociales, servicio público, relacionado con el gobierno
- Maestro(a), enfermero(a)
- Profesional, ejecutivo

6. Nivel educativo que su esposo(a) o pareja atendió: (por favor marque el grado más alto que atendió):

- Menos de secundaria Bachillerato
- Secundaria o GED Algunos cursos postgraduados
- Algunos cursos universitarios, Licenciatura Superior
- universidad de 2 años, Doctor en Filosofía y Letras/
- o escuela vocacional Ciencias

7. ¿En un promedio, cuantas horas al día su esposo(a) o pareja trabaja?

- 0-5 21-40
- 6-20 41 o más

8. Ingreso familiar por un año (marque uno):

- menos de \$5,000
- \$5,100-\$10,000
- \$10,001-\$20,000
- \$20,001-\$30,000
- \$30,001-\$40,000
- \$40,001-\$50,000
- más que \$50,001

9. Cuantos hijos(as) menores (de 19 años)

viven en su hogar?

- 1 4
- 2 5
- 3 6 o más

10. Su raza/étnico:

- Asiatico-Asiatico Americano
- Negro/Americano Africano
- Hispano/Hispano-Americano
- Blanco/Caucásico
- Otro

!!!MUCHAS GRACIAS!!!

Appendix Z



Student Questionnaire (Study 4)


Parent Involvement Project (PIP)
Study 4
Student Questionnaire

MARKING INSTRUCTIONS

- Use a No. 2 pencil only.
- Do not use ink, ballpoint, or felt tip pens.
- Make solid marks that fill the circle completely.
- Erase cleanly any marks you wish to change.

• Make no stray marks on this form.
• Do not fold, tear, or mutilate this form.

CORRECT MARK  INCORRECT MARKS 



0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

I am in the ... 4th Grade 5th Grade 6th Grade I am a ... Boy Girl

Dear Student,
Families do many different things when they help children with school. Please think about how your family helps you with school and fill in the circle that matches what is most true for them. **Thank you!**

The person in my family who usually helps me with my homework ...

		Not True	A Little True	Pretty True	Very True
1. ... likes to learn new things.	1	2	3	4	4
2. ... knows <i>how</i> to solve problems.	1	2	3	4	4
3. ... doesn't give up when things get hard.	1	2	3	4	4
4. ... wants to learn as much as possible.	1	2	3	4	4
5. ... asks other people for help when a problem is hard to solve.	1	2	3	4	4
6. ... <i>likes</i> to solve problems.	1	2	3	4	4
7. ... enjoys figuring things out.	1	2	3	4	4
8. ... can explain what he or she thinks to other people.	1	2	3	4	4
9. ... tries a different way if he or she has trouble solving a problem.	1	2	3	4	4
10. ... can learn new things.	1	2	3	4	4

PLEASE DO NOT WRITE IN THIS AREA



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	Not True	A Little True	Pretty True	Very True
The person in my family who usually helps me with my homework teaches me ...				
11. ... ways to make my homework fun.	①	②	③	④
12. ... to keep trying when I get stuck.	①	②	③	④
13. ... to ask questions when I don't understand something.	①	②	③	④
14. ... how to find out more about things that interest me.	①	②	③	④
15. ... to make sure I understand one part before I go on to the next.	①	②	③	④
16. ... to take a break from my work when I get frustrated.	①	②	③	④
17. ... how to check my homework as I go along.	①	②	③	④
18. ... how to get along with others in my class.	①	②	③	④
19. ... to try the problems that help me learn the most.	①	②	③	④
20. ... to follow the teacher's directions.	①	②	③	④
21. ... to go at my own pace while doing my homework.	①	②	③	④
22. ... to talk with the teacher when I have questions.	①	②	③	④
23. ... to stick with my homework until I get it all done.	①	②	③	④
24. ... to work hard.	①	②	③	④
25. ... to have a good attitude about my homework.	①	②	③	④
The person in my family who usually helps me with my homework encourages me ...				
26. ... when I don't feel like doing my schoolwork.	①	②	③	④
27. ... when I have trouble <i>organizing</i> my schoolwork.	①	②	③	④
28. ... when I have trouble <i>doing</i> my schoolwork.	①	②	③	④
29. ... to be aware of how I'm doing with my schoolwork.	①	②	③	④
30. ... to <i>try new ways</i> to do schoolwork when I'm having a hard time.	①	②	③	④
31. ... to look for more information about school subjects.	①	②	③	④
32. ... to develop an interest in schoolwork.	①	②	③	④
33. ... to believe that I can learn new things.	①	②	③	④
34. ... to believe that I can do well in school.	①	②	③	④
35. ... to ask the teacher for help when a problem is hard to solve.	①	②	③	④
36. ... to follow the teacher's directions.	①	②	③	④
37. ... to explain what I think to the teacher.	①	②	③	④

Parent Involvement Project (PIP)
Study 4
Student Questionnaire

The person in my family who usually helps me with my homework shows me that he or she likes it when I . . .

	Not True	A Little True	Pretty True	Very True
38. . . .stick with a problem until it gets solved.	1	2	3	4
39. . . .check my work.	1	2	3	4
40. . . .understand how to solve problems.	1	2	3	4
41. . . .ask the teacher for help.	1	2	3	4
42. . . .try to learn as much as possible.	1	2	3	4
43. . . .organize my schoolwork.	1	2	3	4
44. . . .have a good attitude about doing my homework.	1	2	3	4
45. . . .work hard on my homework.	1	2	3	4
46. . . .explain what I think to the teacher.	1	2	3	4
47. . . .want to learn new things.	1	2	3	4
48. . . .find new ways to do my work when I get stuck.	1	2	3	4
49. . . .explain what I think about school to him or her.	1	2	3	4
50. . . .keep working on my homework even when I don't feel like it.	1	2	3	4

Dear Student,
Students have many different ideas about school and homework. Please tell us how true each of the following ideas are for you. There are no right or wrong answers. The right answer is the answer that is most true for you. Your parents and teachers will NOT see what you say. **Thank you!**

	Not True	A Little True	Pretty True	Very True
51. I can explain what I think to most of my teachers.	1	2	3	4
52. I want to learn new things.	1	2	3	4
53. I try to figure out the hard parts on my own.	1	2	3	4
54. I go back over things I don't understand.	1	2	3	4
55. I ask for help from most of my teachers when I have trouble understanding something.	1	2	3	4

	Not True	A Little True	Pretty True	Very True
56. I can do even the hardest homework if I try.	①	②	③	④
57. I ask for help from my parents when I have trouble understanding something.	①	②	③	④
58. I can get along with most of my teachers.	①	②	③	④
59. I want to understand how to solve problems.	①	②	③	④
60. I can learn the things taught in school.	①	②	③	④
61. I can go and talk with most of my teachers.	①	②	③	④
62. I ask teachers to tell me how well I'm doing in class.	①	②	③	④
63. I ask myself questions as I go along to make sure my homework makes sense to me.	①	②	③	④
64. I can get most of my teachers to help me if I have problems with other students.	①	②	③	④
65. I try to find a place that makes it easier to do my homework.	①	②	③	④
66. I like to look for more information about school subjects.	①	②	③	④
67. I can figure out difficult homework.	①	②	③	④

THANK YOU!

PLEASE DO NOT WRITE IN THIS AREA

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