

# When Homework is not Home Work: After-School Programs for Homework Assistance

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Homework does not always occur at home. With the perceived demand for higher academic performance has come an increase in the amount and complexity of assigned homework. Given the number of parents who work outside the home, and the need for safe and structured after-school activities, after-school programs have become a venue for helping students with their homework. This article examines the potential of after-school homework-assistance programs within the larger context of after-school programs in general. There is limited data on the outcomes associated with programs that offer homework assistance. The data suggest that after-school homework-assistance programs can serve a protective function for children at-risk for school failure, particularly those who do not have other structured after-school activities or those whose parents do not speak English at home. In general, the availability of homework assistance at home, the quality of the after-school homework program and the nature of the homework assigned will mediate the effect of these programs. Questions for future implementation and evaluation efforts are raised.

Although it is an oxymoron to describe “homework” as work that does not occur at home, this is the case for many students. Congruent with this, Cooper (1989) defines homework as tasks assigned by teachers to be completed outside of the normal class period, indicating that it can be done in a variety of settings. Olympia, Sheridan, and Jenson (1994) further elaborate, defining homework as “academic work assigned in school that is designed to extend the practice of academic skills into other environments during non-school hours” (pg. 62). For the purpose of this article, homework is seen as any assignment from the regular classroom teacher that is intended to occur outside of regular school hours, regardless of where that assignment is completed.

The past 10 years has seen a sharp increase in homework demands, particularly from schools serving students from middle- and upper-class socioeconomic backgrounds (Ratnesar, 1999). In part, this has come in response to the perception that there is greater competition for college admissions, and that students need to work harder to qualify for the college of their choice. By contrast, low-income urban schools report large numbers of students unable to complete even minor homework assignments because of competing de-

mands for their time from family and work (Morse, 1999). It is in this context that educators, parents, students, and researchers have begun to question the purpose of homework, as well as its effect on student achievement.

This questioning has led teachers and administrators to reflect on what had been the automatic process of assigning homework and to make their reasoning behind this practice more explicit. What has emerged from this analysis is an understanding of the complexity of this practice. Homework can serve a variety of academic functions, including drill and mastery of basic skills, or expansion and elaboration of concepts introduced in the classroom. It can also be used to build student responsibility, fulfill administrative directives, provide parents with information about the curriculum, and to punish students (Epstein, 1988). Rarely do teachers, schools, and school districts present a common rationale for their uses of homework, and well-articulated homework policies are more the exception than the rule.

It is only recently that the influence of homework on student outcomes has been addressed. Not surprisingly, findings are mixed. In their review, Cooper, Lindsay, Nye, and Greathouse (1998) found a positive relationship between homework completion and achievement particularly for students in Grades 6 through 12. For example, academic grades for high school students were correlated with time spent studying (Leone & Richards, 1989). Cooper et al. (1998) also

noted that although homework completion had a greater influence on achievement at upper grades than at lower grades, students in elementary school also benefited by learning study skills. The investigators reported a negative relationship between amount of homework assigned and students' attitudes (at lower grades) and homework completion (at upper grades; Cooper et al., 1998).

The identification of effective homework practices is addressed elsewhere in this special issue (Cooper & Valentine, 2001). This article focuses specifically on issues related to the implementation and evaluation of after-school programs to provide homework assistance. To assess the influence of school-based homework programs, the function of these programs is considered within the broader context of what children do after school each day. Our review focuses on the empirical literature regarding after-school programs, as well as a 3-year, controlled study, conducted by the authors, of an after-school homework project in Southern California.

### HOW CHILDREN SPEND THEIR TIME AFTER SCHOOL

As the number of children with caregivers working outside the home has increased, so has interest in how these children spend their time after school and before their parents return from work. Not surprisingly, recent studies find TV watching and unstructured activities relatively common (Posner & Vandell, 1999). They also find that these activities are negatively correlated with school achievement.

Participation in structured extracurricular activities, including athletics, drama, hobby clubs, youth clubs, student government, church activities, or academic-vocational clubs, in contrast, have been positively associated with academic and social-emotional functioning for high school students (Marsh, 1992). Although the findings from this study were significant, however, they accounted for less than 10% of the variance in outcomes. Nevertheless, Marsh (1992) sees these findings as supportive of a commitment-to-school hypothesis, with this commitment viewed as an important mediator of school performance in general. Congruent with these findings, Cooper, Valentine, Nye, and Lindsay (1999) found that participation in both academic and nonacademic curricular activities had a positive influence on student achievement.

### HOW CHILDREN SPEND THEIR TIME IN AFTER-SCHOOL PROGRAMS

After-school programs vary considerably in terms of the goals they set for attendees and in the outcomes they expect and achieve. A review of the literature suggests that after-school programs can serve four major functions: (a) increase safety and supervision, (b) enhance cultural and community identification and appreciation, (c) develop social

skills and increased competency, and (d) improve academic achievement. Programs typically address one or more of these functions, with the focus varying by design and because of student and community needs.

Safety and supervision are basic components of most after-school programs. Due to the increase in both single-parent and dual-employed families, children are spending more of their after-school time in unsupervised care (Marshall et al., 1997; Ross, Saavedra, Shur, Winters, & Felner, 1992; Stroman & Duff, 1982). Estimates of the number of children under age 13 who are left to care for themselves during the after-school hours each day reach as high as 10 million (Willwerth, 1993). For many inner-city children in inner-city neighborhoods, safety is an important component of after-school care due to the poverty, community violence, and family distress they otherwise face (Posner & Vandell, 1994).

Poor adult supervision is a risk factor for many children. Long and Long (1983), for example, reported that latchkey children suffered from fear, loneliness, and problems in social development when compared to supervised peers. Richardson et al. (1989) found that latchkey children were at greater risk for using alcohol and drugs than were their supervised peers. Similarly, a study by Schinke, Orlandi, and Cole (1992) found that children participating in formal after-school programs were less likely to use drugs than were children not participating in such programs. As noted by Halpern (1992), after-school programs can provide inner-city children with an emotionally and physically safe place to go, along with the opportunity to participate in activities and routines with the structure and predictability that they may not get elsewhere. Likewise, Beck's (1999) analysis of a successful urban after-school program found that safety was an essential element to the program's 25-year success.

Another role assumed by after-school programs has been the promotion of cultural and community identification, appreciation, and responsibility. Many after-school programs, particularly those that serve children from ethnic minority, low-income, urban neighborhoods incorporate cultural and community activities as part of their curriculum (Beck, 1999; Bergin, Hudson, Chryst, & Resetar, 1992; Halpern, 1992; Hamovitch, 1996; Phillips, 1978; Pedraza & Ayala, 1996; Pierce & Shields, 1998). One rationale for including these components in after-school programs is that pride in one's culture and community, along with acceptance of other cultures, is a necessary component in the development of self-esteem (Pedraza & Ayala, 1996; Pierce, Hamm, & Vandell, 1999). A second rationale is that inclusion of the community in after-school programming helps to strengthen support systems that can encourage and reinforce the child's coping efforts both in and out of school (Garmezy, 1985).

Conversely, after-school programs that do not take into account the values of the community and the culture may find success harder to achieve. In Hamovitch's (1999) evaluation of an after-school program serving African American and minority youth, the author criticized the program's focus on

teaching European American, middle-class values of achievement. The author found that from the beginning to the end of the school year the report card grades for all participants in the program dropped significantly. This is despite the fact that the children attended the after-school program consistently and seemed to buy into the ideology endorsed by the program leaders. He attributed the drop in grades to a lack of cultural sensitivity in the program and to the fact that racism, in both the school environment and society as a whole, was ignored or dismissed by program instructors. Although this is a plausible explanation, the program was only tested with minority youth; thus, it is unclear whether nonminority youth would have benefited from the program or not.

A third function of after-school programs has been to assist children in the development of social skills. After-school programs provide an environment that allows children to interact with other children as well as adults. One of the key features shared by these programs is the presence of adult supervision (Leone & Richards, 1989). Children who attend formal after-school programs tend to spend more time with adults than children who do not attend these programs (Posner & Vandell, 1994). Positive adult support is a protective factor, correlating with academic progress, whereas limited adult supervision is a risk factor, associated with an increased likelihood of children engaging in antisocial behaviors.

Further, Halpern (1992) notes that after-school programs establish a norm of participation that may generalize to other settings. Participation in after-school programs has been associated with increased pride, self-worth, and social responsibility (Bergin et al., 1992); feelings of confidence regarding achievement of goals (Danish, 1996); and prosocial behavior, self-concept, cooperation, and self-efficacy (Pierce & Shields, 1998).

#### AFTER-SCHOOL PROGRAMS THAT OFFER ACADEMIC ASSISTANCE

The final function of after-school programs is to assist children in developing and improving their academic skills. Although it is common for after-school programs to provide some academic support, these interventions vary widely in terms of the type of activities provided and the amount of time and effort allotted to them. Based on the literature, the extent to which these interventions focus on homework is minimal. Programs that include homework typically do so as part of an array of services, examples of which were highlighted in the previous section. For purposes of this review, two types of programs are examined: those that assist with homework assigned by a student's teacher and connected to the classroom curriculum, and those that provide activities that provide academic enrichment and skill building but which are not associated or coordinated with classroom requirements. Table 1 highlights the major published studies on after-school pro-

grams that provide academic support or homework assistance. These programs are discussed next.

#### Programs That Offer Academic Support

Several programs have described the use of general academic support not associated with special school curricula. In each instance, these after-school programs have enhanced positive school adjustment for participants. For example, Bergin et al. (1992) documented the effects of an after-school academic program that served low-socioeconomic African American children. The children attended the after-school reading and instructional program 4 days a week from kindergarten through first grade. By the spring of first grade, children in the treatment group had higher achievement-test scores in reading, language, and math than did children in the control group. Moreover, the treatment children also received significantly higher report card grades in reading and reading effort than matched controls. Similarly, an after-school program that provided tutoring 4 days a week to second- and third-grade children who were delayed in their acquisition of reading, found improvements in the reading and spelling scores of participants compared to those in a matched control group (Morris, Shaw, & Perney, 1990).

#### Programs That Offer Homework Support

A few programs in the literature have focused on homework assistance as part of their after-school curricula. For example, Beck (1999) conducted a qualitative evaluation of a long-standing after-school program that provided services to low-income, urban youth from kindergarten through 12th grade. The program required that children participate in 45 min of academic development each day, during which they typically received staff assistance with homework completion. The homework-intervention components that were viewed as integral to the success of the program were the provision of (a) time, (b) a structured setting for homework completion, and (c) instructional support for students. The author suggests that after-school programs that focus on academic development may affect children's confidence and status within the school environment. That is, children who participated in the program reported more confidence in their academic performance at school. Program implementers speculated that teachers looked on these students more favorably because they were able to complete their homework and turn it in each day. They also noted that staff helped with the mechanics of the homework (e.g., interpreting a question) as much as on the substance of the question.

The Beck (1999) study, although qualitative, provides some indication of the dynamics behind implementation of a successful homework-based intervention program. Similarly, Halpern (1992) described some challenges of the home-

TABLE 1  
Studies That Evaluate After-School Programs That Offer Academic Experiences and Homework Assistance

<i>Author</i>	<i>Sample</i>	<i>Program Description</i>	<i>Research Design</i>	<i>Outcomes</i>
Beck (1999)	200 K–12 at-risk African American inner-city youth	Homework help and other academic and recreation activities	Qualitative analysis	Program provided safety, care, and cultural consistency
Bergin, Hudson, Chryst, & Resetar (1992)	24 K–3 at-risk youth	Small group literacy skill building and other activities	Quasi-experimental (participant and control)	Participants had higher reading scores
Cosden, Morrison, Albanese, Brown, & Macias (2001)	90 students followed from 4th–6th grades with mixed ability and English proficiency	Homework assistance with a credentialed teacher after school 3 to 4 days per week (no drop-in)	Experimental (stratified random assignment of 4th graders to treatment and control groups)	No differences between treatment and controls; dosage correlated with achievement; protective function for LEP students.
Halpern (1992)	500 inner-city 5–12-year-olds	Homework help and other activities	Qualitative analysis	Programs offered safety, structure, and predictability
Morris, Shaw, & Perney (1990)	20 low-achieving 2nd- and 3rd-grade students	Reading with specialist and volunteers	Quasi-experimental (participant and comparison groups)	Participants had better word recognition and spelling scores
Morrison, Robertson, Harding, Weissglass, & Dondero (2000)	350 students from low-income schools; 175 with at-risk status	Homework assistance, tutoring, and cultural enrichment	Quasi-experimental (participant and comparison groups)	Program served a protective function; dosage was important
Pedraza & Ayala (1996)	Ethnically diverse, low-income elementary school children (no <i>N</i> provided)	Academic and cultural activities	Qualitative analysis	Children showed increased academic motivation
Posner & Vandell (1994)	216 low-income 3rd-grade students, 34 in formal after-school care	Formal after-school programs that could include homework assistance	Quasi-experimental (formal after-school programs, self-care, maternal care, adult supervision)	Formal after-school programs associated with better work habits, adjustment, and peer relations
Ross, Saavedra, Shur, Winters, & Felner (1992)	Approximately 400 K–6th-grade African American latchkey children	Homework and other activities; self-esteem, and decision-making curriculum	Quasi-experimental participant and control groups	No differences in self-esteem or depression
Tucker et al. (1995)	148 low-achieving, low-income, African American students in 3rd and 9th grades	2-year program of academic tutoring and adaptive skills training	Quasi-experimental (experimental, enrichment, contrast groups)	Default control group had lower math GPA.

*Note.* K = kindergarten; LEP = limited English proficiency; GPA = grade point average.

work portion of after-school programs for inner-city Chicago children. These challenges included students not bringing their homework with them to the center and the importance of providing students with the additional tutorial assistance they needed to complete their homework. They found that a group of 15 to 20 students was too large for adequate homework and instructional assistance. Despite these challenges, qualitative information suggested that provision of after-school structured routines was beneficial for students in terms of their development of a norm of participation and experience of positive adult attachments.

In addition to providing insights into issues related to effective implementation of homework assistance, the Beck (1999) study highlights the importance of homework completion as a mediator of nonacademic outcomes such as self-esteem and confidence in academic abilities. Similarly, Marsh (1992) documented the influence of extracurricular activities on the enhancement of academic self-concept, and a commitment to school, which in turn had a positive influence on educational outcomes. Other mediating factors that relate to homework completion are the development of personal responsibility, the reinforcement of school attachment and belonging, improvement of study skills and cognitive strategies, and motivation (Cooper et al., 1998; Pedraza & Ayala, 1996).

A study by Tucker et al. (1995) contributes to a more complex way of understanding the role that after-school academic assistance can play in student schooling outcomes. These authors evaluated an after-school program that included 1 hr of academic tutoring, along with adaptive skills training for 45 min for low-achieving and low-income African American students in elementary and high schools. The authors found that after 2 years there were no significant increases in grades for students in the treatment group; however, the control group showed a significant decrease in their math grades. This finding suggests that the after-school program served as a protective factor for children who participated; that is, the program arrested a negative trajectory of school performance for students who received the tutoring.

Considering program implementation as a form of “protection” or resilience enhancement reframes the thinking about appropriate outcomes for after-school intervention programs. That is, educators often consider improvement in outcomes (whether academic or personal-social) as their primary goal. The Tucker et al. (1995) study suggests that when working with at-risk populations, a preliminary step is to arrest the backsliding that students are likely to experience over their schooling career. As an example of this dynamic, Morrison, Robertson, Harding, Weissglass, and Dondero (2000) studied the academic, personal, and social effects of an after-school program that combined academic tutoring and homework assistance. Outcomes included the development of resilience in social problem solving, decision making, personal responsibility, and social (community) awareness. This study documented that the program served a protective function by maintaining student bonding to school, their percep-

tions of parent supervision, and teacher-rated student behavior. In other words, although classmates showed decreases on these measures, program participants maintained positive ratings across the academic year. These changes were associated with “dosage” effects, or the extent to which students and parents attended program activities.

As in the Morrison et al. (2000) study, homework assistance in after-school programs is usually offered in addition to other types of enrichment or intervention; thus, the specific effects of homework are difficult to determine. Ross et al. (1992) did compare after-school programs for elementary children that substituted an extended homework time with a self-esteem-building curriculum. The results of their study indicate that the self-esteem curriculum had positive effects on math and reading standardized-test results, whereas the extended homework time seemed to be counterproductive in terms of performance on standardized tests. These results reinforce the possible mediating effects of self-esteem on academic outcomes and question the effectiveness of “more time” on homework alone as an effective strategy to enhance academic achievement.

Finally, many of the studies that have examined after-school homework programs have only indirectly addressed the interaction between out-of-home homework assistance and parent involvement with homework. As noted earlier, for many students completion of homework before they go home at night may alleviate the stress of providing the place, time, and assistance with homework at home. Several studies support this contention. For example, Kay, Fitzgerald, Paradee, & Mellencamp (1994) reported that parents often feel inadequately equipped to help with homework because of the difficulty of the work and because of their lack of information about the curriculum. However, taking the parent out of the homework equation could also have the negative effect of reducing actual and perceived parent involvement with the schooling process (Cooper & Valentine, 2001; Epstein & Maragos, 1983).

#### POSITIVE INDICATORS FOR AFTER-SCHOOL HOMEWORK PROGRAMS

It is clear that the influence of after-school programs varies as a function of a number of factors, including the needs of the participants, the nature of the program offered, and family and community resources and alternatives. For example, the socioeconomic status of children appears to contribute to different outcomes. The majority of homework interventions reported here (Beck, 1999; Halpern, 1992; Morrison et al., 2000) were implemented with lower-socioeconomic students. Homework support in these programs provided the time, place, and structure assumed to be missing from home situations. The question remains as to whether such support would be beneficial for students from middle-class homes.

For example, Vandell and Corasaniti (1990) found that for low-income children participation in formal after-school programs was associated with better conduct ratings by teachers, better peer relations, and better emotional adjustment. In contrast, Marshall et al. (1997) found that middle-income students in structured after-school programs did not spend more time engaged in cognitive or academic activities than did similar students in self-care or home care. Furthermore, children from middle-class families were found to have more problems in social and emotional functioning than those who returned to their mothers after school or those in self-care (Posner & Vandell, 1994).

Posner and Vandell (1994) cite several factors that may have contributed to these different outcomes. First, they note that some of the after-school programs in their study lacked adequate stimulation and adult guidance. Second, enrollment in formal after-school programs may have prevented the middle-class children from participating in other after-school enrichment activities, such as scouting, sports, and music lessons, opportunities that are often unavailable for low-income children. Last, children living in middle-class communities have more freedom to engage in safe, informal activities in their neighborhoods, whereas safety issues may prevent such neighborhood exploration for low-income children. These studies suggest that formal after-school programs can either benefit or restrict the opportunities afforded to participants. Thus, in evaluating the efficacy of structured after-school programs, both the quality of the after-school activities offered by these programs and the child's alternatives to those activities need to be considered.

The role of homework is also a function of the age and grade of the student. In their review, Cooper and Valentine (2001) note that stronger outcomes are found for students in secondary than elementary school. However, more programs in the literature have been designed for younger students. After-school care for the lower elementary grades is likely to include a range of academic enrichment-type activities (Halpern, 1992; Morrison et al., 2000; Tucker et al., 1995). Thus, the more-common research question for younger students is, to what extent does academic enrichment enhance student outcomes? Posner and Vandell (1999) found that students who were in structured after-school programs spent more time in academic activities than those who were not in after-school programs. However, participation in academic activities per se was less influential than was participation in extracurricular activities and spending less time in front of the television or hanging out. Pierce et al. (1999) found program characteristics, such as emotional climate, quality of peer interactions, and the curriculum, to be influential in the school adjustment of first-grade children who were involved in after-school programs. These characteristics were more beneficial for boys than for girls. Although it is not clear whether academic enrichment influences the school adjustment of after-school participants, authors who examine after-school programs for young

children emphasize the need to complement, not duplicate, the academic function of schools in after-school programming (Alexander, 1986; Howes, Olenick, & Der-Kiureghian, 1987). At younger ages, it may be more important for programs to provide emotional, social, and behavioral support, which would later enhance academic functioning.

The data indicate that after-school programs can serve a protective function for children, particularly for those who do not have access to other structured after-school activities or homework assistance at home. The quality of the at-school assistance, as well as the quality of the homework itself, is also expected to mediate student outcomes. However, given the plethora of activities covered by most after-school programs, the influence of homework assistance alone on school performance and other outcomes is unclear. The study presented next was implemented to examine the effect of an after-school program focused solely on homework assistance for a wide range of students and student outcomes.

## THE GEVIRTZ HOMEWORK PROJECT

The Gevirtz Homework Project was an after-school homework-assistance program implemented and evaluated in southern California. The purpose of the project was to expand our understanding of the influence of after-school homework assistance on elementary children with a broad range of abilities. The project was designed to provide students with the opportunity to finish their homework and learn study skills on a regular basis on-site, after school. The program philosophy was to: (a) provide specific homework assistance through a credentialed teacher and aide; (b) require students to commit to attend three to four times a week over a 3-year period to build a strong academic foundation; and (c) address student homework needs without parental involvement, so as to decrease parental stress and assure that all students had the help they needed. A full description of the evaluation is available elsewhere (Cosden, Morrison, Albanese, & Macias, 1998; Cosden, Morrison, Albanese, Brown & Macias, 2001), and is summarized later in this article.

This program was implemented in three elementary schools in the Santa Barbara School Districts. The program served a cross-section of students at all levels of academic functioning. Students entered the homework program in fourth grade and were expected to continue their participation in the program through the sixth grade. Each school offered homework assistance on-site. Sessions were held on a regular basis, either 3 or 4 days a week, and were 50 min in length with snacks provided at the beginning of each session. A credentialed teacher was responsible for supervising the homework sessions in addition to an assistant; given the demographics of the local area, either one or both teachers was bilingual.

## Sample

At the program's inception, all fourth-grade parents at the three schools were offered the opportunity to consent to participate. Children whose parents gave consent were assigned to the control or participant group using a stratified random-sampling procedure. Students from within each school were stratified based on gender, teacher perceptions of their level of academic functioning (high, medium, or low), and English fluency (full English proficiency or limited English proficiency).

Based on these criteria, 146 students across the three schools were assigned to the project, 72 to the control nonparticipant group and 74 to the homework participation group. At the end of its 3rd year, 90 of the original students remained in the study (36 participants; 54 controls). For students in the control group, 94% of attrition was a result of moving out of the area, and 6% (one student) a function of not wanting to fill out the assessments; for students in the homework group, 42% of the attrition was due to moving, and 58% due to not wanting to participate in the program.

The initial student sample consisted of 61 boys (45%) and 74 (55%) girls; by the end of year 3, a similar proportion of boys (48%) and girls (52%) remained in the sample. In terms of ethnicity, the original sample was largely Latino (60%) and Caucasian (30%) with the remaining 10% of students identified as African American, Asian American and Other. By the end of year 3, 65% of the participants were Latino, 25% Caucasian, and 10% from other ethnic groups. In terms of language proficiency, 31% of the original sample was categorized as having limited English proficiency (LEP) whereas by the end of the study 36% of the students were LEP.

Data were collected on all students at the beginning and again at the end of each school year. Academic skills, school bonding, and social behavior were assessed from the perspective of the students, their parents, and their teachers. Structured survey instruments, grades, and standardized test scores were used.

## Outcomes

The results from three sets of analyses are summarized here. First, a direct comparison of students in the treatment and control groups found no significant differences on any of the outcome measures, including homework completion as reported by the homeroom teacher. The differences between groups were so small that it precluded the possibility of finding statistical significance even with greater power. There are many possible explanations for this outcome, including the finding by Cooper and Valentine (2001) regarding the limited influence of homework completion on elementary students. Furthermore, qualitative data (interviews with children and teachers at the end of the study) revealed that approximately 31% the students in the control group participated in other types of after-school programs (Brown & Herrity, 2001). In

fact, other programs that provided homework assistance were implemented at several of the schools. In one instance, an after-school homework-assistance program was developed, in part, as a reaction to the presence of the Gevirtz Homework project on-site. Unfortunately, the data on program participation for the control group was not collected in a manner that allowed the investigators to identify specific students who had participated in these activities, so they could not be eliminated from subsequent analyses. Thus, the lack of "control" over the control group in studies conducted in the public schools may also have contributed to our lack of significant findings between treatment and control groups.

Nevertheless, the data expand our understanding of after-school homework-assistance programs in several ways. First, this study included a large proportion of students who were not at-risk for school failure, a population not typically served by these programs. Second, a wide variation in attendance patterns was noted among program participants. This difference in program "dosage" was used in a second set of analyses. Finally, a range in outcomes among students in the participant and control groups suggested the need for further analysis of within as well as between group differences. Thus, the interaction between student characteristics and program participation was assessed, focusing on program influence for students at greater risk in the school system (i.e., children with LEP) relative to those with full English proficiency (FEP).

To assess the influence of treatment dosage, students were divided into high or low attendees based on whether the percentage of sessions attended was relative to those available. A median split at 77% attendance was used, with students classified as high-dosage participants if they attended more than 77% of the sessions and low dosage if they attended fewer sessions. With attrition, and incomplete data, 18 children were classified as high attendees and 17 as low attendees.

Some significant differences were obtained based on attendance patterns. Students who attended a greater proportion of sessions across the 3 years of the program had higher Reading,  $F(1,33) = 4.88, p < .05$ , Math,  $F(1,33) = 4.89, p < .05$ , and Language,  $F(1,33) = 4.07, p < .05$ , scaled scores on the Stanford Achievement Test-9 (SAT-9) at the end of sixth grade than did students who attended fewer sessions. Further, students in the high-dosage group reported more self-efficacy,  $F(1, 33) = 7.83, p < .01$ , and higher future aspirations,  $F(1, 33) = 5.08, p < .05$ , at the end of sixth grade than did low-dosage students. Other outcomes, including reading, math, and language grades, and ratings of parent support and supervision, did not differ between high- and low-dosage groups.

Analyses comparing high- and low-dosage participants with students in the control group were not conducted for the reason cited earlier—a large proportion of student in the control group had participated in an after-school program that offered some form of homework assistance. Thus, some of the students in the control group may have been "high" dosage recipients of assistance, whereas others received little or no homework assistance.

Interviews with teachers and students identified several reasons for irregular attendance patterns among those in the treatment group (Brown & Herryty, 2001). Some children reported alternative extracurricular activities, involving nonacademic (e.g., soccer, dance) as well as academic (e.g., computers, science club) activities. However, teachers also noted that low attendance patterns were observed among some students who were having problems at school and who could have benefited from the homework assistance.

The third set of analyses addressed differences in outcomes for students who were classified by the school as having LEP or FEP. Overall, students with LEP scored lower than the students with FEP on standardized achievement tests at the beginning of the program; these differences continued through the end of sixth grade. Of interest, however, were possible interaction patterns. That is, it was anticipated that students with LEP in the homework program would show gains above those of students with LEP in the control group even if these differences were not apparent for students with FEP.

Significant interactions between language proficiency and program participation were noted in several domains. There were significant interactions on teacher-rated effort in language,  $F(1, 77) = 14.61, p < .001$ ; reading,  $F(1, 81) = 10.71, p < .01$ ; and math,  $F(1, 81) = 5.05, p < .05$ . Post-hoc tests using Tukeys Honestly Significant Difference critical values found that, in each instance, teachers rated participant students with LEP and control students with FEP higher at the end of sixth grade, with control students with LEP and participant students with FEP rated lower. The largest differences in these comparisons were attributed to the lower scores of the control students with LEP relative to the other groups. This same pattern was found for teachers' ratings of students' study skills,  $F(1, 79) = 4.13, p < .05$ ; and social skills,  $F(1, 79) = 6.00, p < .05$ . The means for these analyses are presented in Table 2.

Subsequent analyses looked at the 3-year trajectories in teacher ratings for all groups of students. It was noteworthy that participant students with LEP and control students with FEP did not have higher ratings at the end of sixth grade than they did at the beginning of fourth grade. Rather, their ratings stay at similar levels throughout the 3 years of the project. Students in the control group with LEP and participant group with FEP, in contrast, demonstrate a decline in teacher ratings over time. Thus, the interaction effects are a function of declining scores for two groups of students—control students with LEP, and participant students with FEP. However, although outcomes were more pronounced for students with LEP, it must be noted that during the first 2 years of the study teachers reported that the social integration of this mixed group of students was a benefit in that it reduced the potential stigmatization of participants.

It is hypothesized that the decline in scores for students with LEP in the control group can be attributed, in part, to limitations in outside resources for this group. These students have lower income, as well as parents for whom English skills are limited, thus reducing their ability to help with their chil-

TABLE 2  
Mean Scores for Participants and Controls With Limited English Proficiency and Full English Proficiency on Outcomes With Significant Interaction Effects

Outcome	Participant		Control	
	LEP	FEP	LEP	FEP
Language effort	3.45	2.80	2.25	3.45
Reading effort	3.18	2.57	2.29	3.27
Math effort	3.13	2.77	2.29	3.08
Study skills	3.10	2.94	2.62	3.28
Social skills	3.64	3.36	2.89	3.60

*Note.* All outcomes reported in this table are from teacher ratings at the end of 6th grade. Language, reading, and math effort, study skills, and social skills scores were based on a 1 (*low*) to 4 (*high*) scale used on report cards. LEP = limited English proficiency; FEP = full English proficiency.

dren's schoolwork. It would appear that participation in the homework project served a protective function for students with LEP, reducing the likelihood of a decline in teacher ratings for those assigned to the program. Reasons for the decline in effort ratings for students with FEP who participated in the program are less clear. It is possible that classroom teachers who knew these students were not "at-risk" yet attending the Homework Program over a 3-year period attributed less effort to them, but the reason requires further exploration.

Thus, this after-school homework program served as a protective factor for a subgroup of students. Parents of the children with LEP in this study typically had limited education themselves as well as problems with English. The model of homework assistance used in this study did not require parents to be involved in their children's homework. This type of program may be particularly helpful to parents who, for any reason, cannot help with their children's homework. However, as others (e.g., Valentine & Cooper, 2001) note, parent involvement with homework can help parents understand and support their children's efforts in school. The long-reaching effects of reduced parent involvement in the homework process require further attention.

## SUMMARY AND CONCLUSIONS

Homework assistance is one of many components in after-school programs. The programs reviewed in this study provide child care, safety, cultural reinforcement, and personal-social development as well as homework and other types of academic assistance. Given recent federal and state funding of extended day programs for schools (e.g., 21st Century After-School Community Learning Centers), the interest in developing programs that will boost the academic achievement of participants from low-socioeconomic backgrounds has intensified. These programs may take a number of forms, including homework assistance or academic enrichment or tutoring.

Cooper and Valentine (2001) describe some of the beneficial and negative effects of homework per se. After-school homework programs share some of these strengths and weaknesses (see Table 3). For example, the value of the homework assigned will limit the effectiveness of homework assistance in after-school programs. Programs that provide an opportunity to help students improve their school performance can only do so if the work given to the students is appropriate to their needs. Programs also need to have teachers who have the skills to assist students effectively in their work, and in a ratio with students that will allow them to provide assistance at the level required.

One of the major strengths of after-school programs is that they can help students when their parents either do not have the skills or time to do likewise. Thus, it is not surprising that most of the programs reviewed serve children who have limited resources at home and are at-risk for school failure. This strength was evidenced, too, in the interaction effects from the Givertz program in which students with a range of abilities were served. This program provided a protective function for children with LEP, whereas their peers with LEP that did not participate showed some downward trajectories over this same period of time with regard to teacher ratings of school effort and behavior.

Furthermore, after-school programs run the risk of denying children access to other leisure activities. This is a particular concern in that the needs of children and the quality of homework-assistance programs will both vary. Children with access to alternative resources should consider all possibilities, including home care, and programs that emphasize sports, cultural activities and homework assistance, before deciding on how to spend their time after school.

After-school homework programs also present their own challenges. Some of the benefits of homework noted by Cooper and Valentine (2001), such as demonstrating that learning can occur at home as well as at school, fostering independent learning, and giving parents an opportunity to become more

involved with their children's education, may not occur in programs such as these. There are instances, however, given the alternative of not having sufficient support at home to fulfill homework requirements, that this will be an acceptable loss.

One of the limitations in the current literature is that most of the after-school programs that are evaluated serve younger children. This is of particular concern as homework has a greater effect on outcomes for students in the secondary than elementary schools (Cooper & Valentine, 2001). This indicates a significant gap in both research and practice. The lack of findings associated with after-school programs is clearly influenced by the differences in the role of homework for younger children, as well as difficulties in finding outcome measures that are valid indicators of their school performance. For example, younger students' grades may reflect effort rather achievement, whereas the validity of standardized tests for students from ethnic minority groups remains at issue.

Two factors require particular consideration in the development of future after-school homework-assistance programs. First, as noted earlier, there are few programs described in the literature that serve older children, despite the fact that homework has a more pronounced effect on student outcomes at the secondary level. There is a need to develop and test models of after-school homework assistance for older students. Second, the issue of mandatory versus voluntary attendance should be examined. As noted by Cooper and Valentine (2001), both homework assistance, and other types of after-school activities, can be beneficial to students. Many students may do well by attending homework programs as needed, integrating their attendance at these programs with participation in other extracurricular activities. In contrast, there are some students who will need assistance with their homework, and with other schoolwork, whether or not it is their activity of choice. Thus, attendance on more than a "drop in" basis may be necessary. It must also be noted that children who have low-income or non-English-speaking parents are not the only ones who may need and benefit from after-school homework assistance. There are many reasons that children may not receive the homework assistance they need at home, and programs should be available to all students with those needs.

Finally, it is evident that more complex research and evaluation designs will be necessary to isolate the influence of homework assistance on student outcomes. It is rare to find a "no treatment" group of students to compare to those participating in a program. In addition, when services other than homework are provided within a program, isolating the specific effects of homework assistance may not be possible. Researchers and evaluators need to consider designs that provide for control within the statistical method (e.g., hierarchical regression) and examine the complex interactions between student groups, interventions, and developmental-academic change.

In conclusion, after-school programs serve different functions for different students. For students who would otherwise have little structure or supervision after school, these programs provide a safety net. Increasing academic and

TABLE 3  
Positive and Negative Indicators of Need for School-Based Homework Assistance Programs

Positive indicators
School has a homework policy that is consistent across classes
School has a homework policy that is congruent with specified goals
School has trained staff to help with homework
Amount of homework is appropriate for grades level and goals
Parents do not have ability, time, or interest to help with homework
Child needs homework assistance after school
Child needs supervised, safe, and structured environment after school
Negative indicators
Child has other extracurricular activities
Parents have interest, ability, and time to help with homework
Child does not need help with homework outside of school
Child has a supervised, safe, and structured home environment after school
Factors for future consideration
Should attendance be voluntary or drop-in?
Should programs be open to all students or those at risk?
What is the optimal help ratio for children with different needs?

school-related activities in the context of adult time and supervision reduces the likelihood that these students will engage in risk-related behaviors (Cooper et al., 1999). For students with other positive after-school options, homework-assistance programs may still be a valuable option, particularly when parents are concerned about their ability to assist their children with homework. However, all options for after-school activities should be considered relative to the students' needs.

This article has highlighted issues to consider in the implementation and evaluation of after-school homework-assistance programs. It is also recognized that there is much to learn about the value of homework inside as well as outside the home.

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