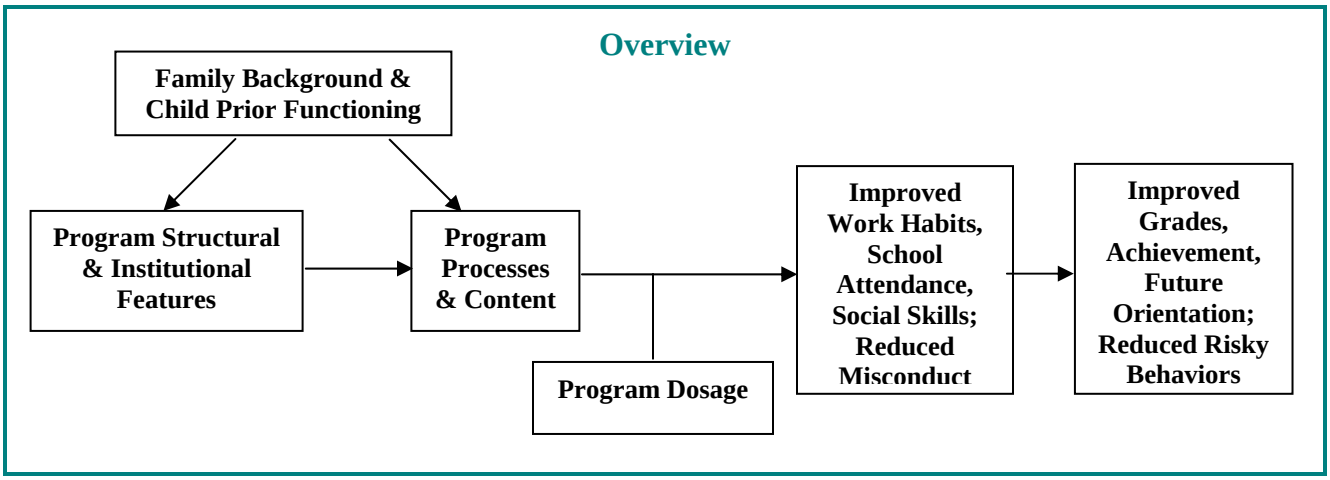
THE STUDY OF PROMISING AFTER-SCHOOL PROGRAMS
September 2003

With the support of the Charles Stewart Mott Foundation, the Wisconsin Center for Education Research at the University of Wisconsin-Madison, and Policy Studies Associates, Inc., are conducting a national study, the **Study of Promising After-School Programs**, that examines the effects of high-quality after-school programs on developmental and learning outcomes among children and youth who are at high risk of school failure. The study has two major goals:

(1) to identify elementary school and middle school programs that feature promising practices for enhancing students' academic and social development and their emotional and physical well-being, and

(2) to test the hypothesis that disadvantaged youth between the ages of 8 and 14 who participate in high-quality after-school programs achieve significantly greater developmental and learning gains over a two-year period than disadvantaged youth who do not participate in similar opportunities.

What Is the Theory of Change That Guides the Study?



The study is grounded in a theory of change that includes the following propositions:

- To achieve positive life outcomes, children and youth require opportunities and supports in multiple developmental domains, including academic, social, psychological, and behavioral areas

- High-quality after-school programs can stimulate positive experiences (processes) for children and youth in these core developmental areas, while employing varied program content foci (e.g., arts, academics, sports)

- Certain structural and institutional features support the implementation of high-quality programs

- Children and youth who participate in high-quality programs more often, thus receiving a higher "dosage" of programming, will derive greater benefits than children and youth who participate less often

- Because preexisting family and child differences may affect the participation of children and youth in voluntary after-school programs, the examination of program effects must take these differences into account

As shown in the overview figure, the study's theory of change incorporates both structural and institutional features and also process and content features that characterize effective programs for children and youth. **Structural and institutional features** are those elements of a program that establish the setting and context for positive relationships and high-quality activities. These features include staff qualifications and support, program size, financial and physical resources, external affiliations, and sustainability efforts. **Process and content features** are those practices that participating children and youth experience directly, including adults' interactions and relationships with participants, relationships among participants, program content and activities, and methods for delivering content and activities.

The Study of Promising After-School Programs was designed with the understanding that effective after-school programs must incorporate certain process and content features and also certain structural and institutional features in order to achieve positive effects for disadvantaged children and youth. The study was *not* designed to examine the effects of variations in program quality, nor was it designed to ascertain the effects of programs that are strong in some areas and not others. Instead, the study is examining the impact of sustained participation in high-quality programs on the academic, social, and behavioral development of students at risk of school failure.

What Process and Content Features Characterize High-Quality Programs?

The study defines essential process and content features in terms of practices that prior research and theory indicate most directly shape the after-school program experiences of children and youth. These features respond to the core developmental needs of children and youth for affiliation, identity, and mastery, and include:

- **Positive relationships**, including positive staff-child relationships and positive peer relationships

- **Rich content-based program activities**, including a mix of academic and nonacademic (physical and recreational) enrichment activities that build skills

- **Learning- and mastery-oriented content delivery strategies** that provide both structured and unstructured learning opportunities and promote autonomy and choice

Our identification of these process and content features as core elements of high-quality programs reflects evidence from youth development research and also from teaching and learning research about the content and instructional strategies that promote learning. McLaughlin (2000) observed that after-school programs that capture youths' interest and promote their learning are "not happenstance." Positive outcomes emerge when adults deliberately create opportunities in which both the content of activities and the instructional processes are "knowledge-centered" and "youth-centered." More generally, researchers investigating human learning point to the importance of providing learners with rich content-based experiences, led by teachers or coaches who encourage mastery and using both structured and unstructured instructional strategies to promote learning (Bransford, Brown, & Cocking, 1999).

What Structural and Institutional Supports Do High-Quality Programs Employ?

The extent to which after-school programs can provide the types of high-quality relationships and activities described above depends on certain structural and institutional features, particularly characteristics of staff, the number of staff relative to children, the availability of key resources, the program's connections to other individuals and institutions that affect children's lives (e.g., parents and schools), and the likelihood that the program will be sustainable over the long term (based on its relationships with local agencies and funding base).

Evidence in the early childhood literature supports the hypothesis that structural program features, such as the child-staff ratio and staff education, affect child outcomes (National Institute on Child Health and Development [NICHD] Early Child Care Research Network, 2002; Vandell & Wolfe, 2000). Likewise, existing evidence indicates that structural features of after-school programs affect staff practices. For example, Rosenthal and Vandell (1996) found that (a) higher child-staff ratios are associated with more negative staff-child interactions; (b) larger group sizes are associated with lower child ratings of program climate, emotional support, and support for autonomy and privacy; and (c) higher levels of staff education are associated with fewer negative staff-child interactions. These findings support the general theory that staff's prior education and training and the number of children in their care affect staff practices and their relationships with children.

Numerous child care studies have reported relationships between structural program features and either process quality or child outcomes, but few studies have considered relationships among all three sets of factors. Recent findings from the NICHD Study of Early Child Care, however, indicate that child-staff ratio and caregiver training indirectly affect cognitive and social development outcomes for young children by influencing the quality of caregiving in child care settings (NICHD Early Child Care Research Network, 2002). The evidence connecting program structures, practices, and outcomes in the after-school literature is less developed, although the available evidence from studies of after-school programs suggests similar connections between structural and institutional supports and outcomes (Beckett, Hawker, & Jacknowitz, 2001; Grossman, Walker, & Raley, 2001; Merry, 2000).

In the Study of Promising After-School Programs, we will report data on structural and institutional supports descriptively because we believe they will be of interest to researchers, practitioners, and policy makers. We do not plan to test the hypothesized relations between

structural features and process quality because we expect very little variability in these factors due to our focus on high-quality programs.

How Is the Study Measuring Program Features?

We are using observational, interview, and survey instruments to measure both program processes and content and also structural and institutional supports. The program features we are measuring and the specific instruments we are using are listed below. Further information about the instruments, including sample forms, observation manuals, and coding instructions, can be obtained at http://www.wcer.wisc.edu/childcare/form3.html.

PROGRAM PROCESSES AND CONTENT FEATURES							
	PPRS	AOI	ASES	DI	DS	ALI	ALS
Positive Relationships							
Staff-child	X	X	X				
Peer	X	X	X				
Connections with families and communities				X	X		X
Program Content and Activities							
Content-based learning opportunities	X	X					
Mix of academic and non-academic skill-building activities	X	X		X			
Encouragement of student engagement	X	X	X				
Physical/recreation activities	X	X		X			
Content Delivery Strategies							
Structured and unstructured learning opportunities	X	X		X			
Mastery orientation	X	X					
Opportunities for autonomy and choice	X	X		X		X	
STRUCTURAL AND INSTITUTIONAL SUPPORTS							
	PPRS	AOI	ASES	DI	DS	ALI	ALS
Staff Qualifications and Support							
Education and training				X	X	X	X
Supports				X	X	X	X
Planning time and assistance				X			X
Program Configuration							
Group size		X			X		
Child-staff ratios		X			X		
Program Resources							
Financial				X	X		
Space and materials		X		X	X		
Program Partnerships/Linkages/Connections							
Schools				X	X	X	X
Parents				X	X		X
Communities		X	X	X	X		
Program Sustainability		X	X	X	X		

PPRS is the Promising Practices Rating System developed for this study. This observational measure quantifies eight program processes related to program quality on a four-point scale: supportive relations with adults, supportive relations with peers, student engagement in program activities, appropriate program structure, opportunities for cognitive growth, mastery orientation, staff over-control (reverse scored in analyses), and program chaos (reverse scored in analyses). Ratings are based on two days of observation.

AOI is the Activity Observation Instrument, modified for this study based on work conducted by Policy Studies Associates in other studies. The AOI is an observational and interview measure that obtains information about content and skill areas, utilization of space and materials, youth interactions with peers and staff, student engagement, and activity structure during a 15-minute observation period. Scores are based on multiple observation periods across two days.

ASES is the After-School Environment Scale (Rosenthal & Vandell, 1996), a 36-item questionnaire that measures student perceptions of the psychosocial climate in after-school programs. Components of climate that are measured include relations with program staff, provisions for autonomy, peer affiliation, and overall satisfaction with the program. Reliability and validity of this measure are excellent.

DI is the Director Interview developed for this study. The interview obtains information about program goals, student enrollment and attendance, program activities and schedules, student opportunities for autonomy and choice, staff education and training, program connections with other agencies in the community, and funding.

DS is the Director Survey developed for this study. The survey obtains information about student enrollment and attendance; space and material resources; staff meetings; program relations with parents, the partner school, and community organizations; program funding; and background and training of the director program staff.

ALI is the Activity Leader Interview developed for this study. The interview obtains information about program activities and schedules, student opportunities for autonomy and choice, training and planning opportunities, and relations with the partner school.

ALS is the Activity Leader Survey developed for this study. It obtains information about staff background and experience, training and planning opportunities, job satisfaction and support, and relations with the partner school and parents.

How Did We Identify and Select Promising Programs for the Study?

Because the individual service-delivery site and its students are the focus of this study, the identification and selection process also focused at that level and not at large, multi-site initiatives that deliver program services after school (e.g., LA's BEST, Citizen Schools, The After-School Corporation, Boys & Girls Clubs of America). The process did, however, lead to the examination of individual program sites affiliated with these larger initiatives.

Our first step in identifying promising programs was to develop a master list of 222 programs located in 35 states, based on a review of published materials (see http://www.wcer.wisc.edu/childcare/ for more information). We then prioritized these programs based on several criteria, including evidence that the program:

- was school-linked or school-based
- served elementary or middle school students from low-income families
- met at least three days a week
- was free of charge to parents or charged only a modest fee
- anticipated being sustained for the next three years, consistent with the longitudinal focus of our study design

Fourteen programs or systems of programs met all of these criteria; an additional 11 programs or systems met three or four of the criteria.

In addition, 60 experts in the after-school field (academics, practitioners, youth-serving organizations, consultants, federal and state officials) were contacted and asked to recommend "specific after-school programs that provide substantial opportunities for skill development and mastery and that foster positive supportive relationships with staff and peers." Eighty-five percent of these individuals responded to our request, recommending 125 specific program sites (79 serving elementary school students, 62 serving middle school students, with 16 programs serving both elementary and middle school students).

Based on the published sources and the recommendations from experts, we contacted 116 programs for additional information; 75 program directors agreed to participate in telephone interviews. The purpose of these interviews was both to confirm that the programs met the criteria listed above and to evaluate the program's suitability for the study based on additional criteria stipulating that the program:

- had been in operation at least three years
- offered students opportunities for sustained involvement in substantive activities
- had access to resources and materials to support substantive activities
- employed staffing patterns (low child-adult ratios, low staff turnover, staff with training and expertise) that are conducive to students having positive and supportive relationships with staff and peers
- served a minimum of 30 students in the targeted age group—elementary students in third and/or fourth grade, or middle school students in sixth and/or seventh grade
- presented evidence of positive impacts on participants through a previous evaluation

From the information obtained in telephone interviews, 35 elementary programs and 26 middle school programs were identified as potential study sites.

Our next step in selecting programs was to consider geographical diversity and the accessibility of the program locations to the research staff. Based on these considerations, 29 elementary programs and 28 middle school programs were selected for site visits in Fall 2002. During these visits, we conducted interviews with program directors, activity leaders, and school principals, and observed program activities during two afternoons using the Promising Practices Rating System. Based on the results of the interviews and observations, 19 elementary and 18

middle school programs were selected for the study. One elementary program subsequently was dropped from the study due its loss of funding.

During Spring 2003, we returned to the selected programs to observe program activities during two afternoons using the Activity Observation Instrument and to collect additional information from program directors and activity leaders via surveys.

The selected elementary programs reported an average enrollment of 328 students (including 47 third graders and 41 fourth graders on average); 77 percent of the program participants were children of color. The selected middle school programs reported an average enrollment of 504 students (including 95 sixth graders and 72 seventh graders on average), with 66 percent children of color. The programs are located in rural areas, small towns, small cities, and large cities, in the Northeast, Mid-Atlantic, Midwest, West, and Northwest sections of the U.S.

Characteristics of the Schools Affiliated with the Selected Programs

By design, the selected programs are school-based (16 elementary and 15 middle school programs) or school-linked (2 elementary and 3 middle school programs). Consistent with study goals, the partner schools primarily serve children of low-income families.

Students	Elementary	Middle
Low income	83%	75%
Minority ethnicity	72%	67%

What Are the Process and Content Features of the Selected Programs?

Program Processes

During Fall 2002, we observed after-school programs for two afternoons using the Promising Practices Rating System to quantify certain processes that reflect program quality. Each process was rated on a four-point scale (1 = not at all characteristic, 4 = highly characteristic). These processes are:

- supportive relations with adults
- supportive relations with peers
- student engagement
- appropriate program structure
- opportunities for autonomy (more recently, we divided this process area into two parts to facilitate measurement)
- opportunities for cognitive growth
- mastery orientation

As indicated in the table on the next page, the selected programs were strong in each of these quality processes. Supportive relations with adults and supportive relations with peers were rated as somewhat or highly characteristic in all 36 programs. Student engagement and appropriate program structure were rated as somewhat or highly characteristic in over 90 percent of the programs. Opportunities for autonomy were somewhat or highly characteristic of more than 85 percent of the programs. Opportunities for cognitive growth were more evident in elementary programs, whereas mastery orientation was more evident in middle school programs. In over half of the programs (58 percent of the elementary programs and 56 percent of the

middle school programs), observers reported high scores for all seven of the processes. In 95 percent of the programs, high ratings were obtained for five or more quality processes.

	Mean rating	Highly uncharacteristic	Somewhat uncharacteristic	Somewhat characteristic	Highly characteristic
ELEMENTARY PROGRAMS (*N* = 19)					
Supportive relations w/adults	3.6	0	0	32%	68%
Supportive relations w/peers	3.8	0	0	5%	95%
Student engagement	3.8	0	5%	5%	90%
Appropriate structure	3.5	0	5%	26%	69%
Autonomy opportunities	3.2	5%	11%	47%	37%
Cognitive growth opportunities	3.2	0	16%	58%	26%
Mastery orientation	3.2	0	26%	26%	48%
MIDDLE SCHOOL PROGRAMS (*N* = 18)					
Supportive relations w/adults	3.7	0	0	12%	88%
Supportive relations w/peers	3.9	0	0	6%	94%
Student engagement	3.9	0	5%	0	95%
Appropriate structure	3.6	0	0	25%	75%
Autonomy opportunities	3.6	0	12%	19%	69%
Cognitive growth opportunities	3.0	0	31%	38%	31%
Mastery orientation	3.4	0	25%	12%	63%

Program Content

Site visitors reported considerable diversity in program activities during the Fall 2002 and Spring 2003 observations. During the Spring visit, for example, a total of 272 different activities were observed. These activities represented many varied content areas, as indicated in the table on the next page. The director and activity leader surveys indicated additional activities that we did not have an opportunity to observe, including photography, small businesses operated by students, video production, outdoor skills, drama, textile production, cooking, gardening, oral history projects, drill team, and community service projects.

Activity Type	Elementary Programs (*N* = 19)	Middle School Programs (*N* = 18)
Homework assistance	90%	50%
Arts and/or crafts	74%	78%
Performing arts (including dance, music, drama)	58%	67%
Board/table/card games or puzzles	58%	56%
Math/science enrichment	53%	44%
Reading/language arts enrichment	47%	28%
Sports: competitive and noncompetitive games	37%	50%
Recreational reading/listening to story or book	32%	22%
Tutoring	26%	44%
Sports: practice/drills/skill building	26%	39%
Fitness/exercise class (including martial arts)	26%	17%
Computer games	21%	50%
Cultural awareness clubs or projects	21%	33%
Health and well-being	11%	6%
Computer skill building	5%	28%
Service/civic (in community or program)	5%	6%
Higher education or career orientation	0	11%
Study skills/test preparation	0	6%

Examples of These Program Features and Attributes in Actual Programs

The on-site review of the programs identified for inclusion in the study found many good examples of activities and interactions that were consistent with the study's highlighted process and content features. A few of these are described below.

A middle school computer-based activity blending writing, Web design, and research. On the day we observed, two volunteers from a university education department worked with youth to develop a Web site about the students' countries of origin, using music as the common theme. Students learned how to plan and build a Web site at the same time that they learned how to conduct research using the Internet and to write about what they were learning. Students worked individually or in pairs at computers. During the time we observed, the students each wrote a

paragraph about a musical instrument used frequently in the music of their home country, employing the Internet to learn about the instrument's history and to find pictures to include on the Web site. The two volunteer teachers questioned students about their work, offered ideas, and demonstrated Web searching and paragraph organization.

An elementary school leadership council activity. In this after-school activity, a group of 12 third, fourth, and fifth graders met on the day we observed to prepare a calendar of upcoming events for the school community and to design posters to advertise try-outs for an upcoming talent show. The talent show would celebrate Mother's Day and Cinco de Mayo, and participants would compete against other groups affiliated with the citywide after-school initiative. With the activity leader, students discussed the information that the posters needed to convey and, in the process, learned about presenting information to an audience that looked to them to learn about something important. They also said, "Remember, people need to be able to read it; don't get too fancy or too sloppy." Working in groups, the students designed and made their posters, offering suggestions and encouragement to each other as they went along.

A middle school chess club. In this activity, a chess teacher and eighth-grade expert assistant worked with ten students who displayed varying skill levels in chess. While student pairs played games, the assistant explained to a newcomer how to record chess moves, an important skill because students in this chess club must record each of their moves during competition play, thus allowing them to review their games later. After circulating to observe play and comment on strategy and moves, the teacher challenged as many players as were interested to play him and the assistant simultaneously. The teacher played four games at once, while the assistant played three. The games were spirited and competitive, with players commenting continually on their own and others' play. Students were excited, motivated, and challenged.

A middle school sports activity. During this observation, the wrestling team and coach from the local high school taught wrestling to middle school students. The program students worked in pairs with either the coach or his players. The high school students demonstrated how to perform the moves, giving one-on-one instruction and encouraging youth to participate. One very gentle youth had a difficult time being forceful. A high school wrestler worked one-on-one with him, encouraging him, demonstrating proper stance, performing the move with him, and coaching him through performing the move with another youth. The boy smiled as his performance improved.

An elementary school language arts activity. After-school students in this program prepared *The Youth Journal* for their friends and classmates. The activity was headquartered in a conference room where a white board recorded the names of the students who signed up to participate and the article or story they had committed to write for the next issue. Students received a stipend for each article or story they submit. Students chose topics after brainstorming with the other students and the supervisors. Each student worked on his or her own. The activity leader interacted with students individually, helping them plan and organize their ideas. Multiple resources were available to the students, including encyclopedias and newspapers. Adult interactions with students emphasized positive aspects of the students' work and encouraged them to explore their subjects more fully.

A cooperative story-telling activity that combined sculpture, writing, computer skills, and graphic arts. Prior to our observation, students had written stories, created clay figures that

represented characters in their stories, and prepared sets. On the day of our observation, students used digital cameras to film their stories. Next they would edit their work on the computer, add sound and graphics, and create a claymation movie. Students, who were intensely focused on their projects, worked cooperatively in pairs, with one student filming while the other moved the clay figures.

An outdoor cooperative math activity. During Outdoor Adventure, students worked in pairs to learn how to use a compass. Each pair received a compass, scorecard, and a formula for converting feet to paces. The teacher had earlier set up a course in a field outside. Each pair started at a stake; the scorecard told them to move, for example, 36 degrees N for 72 feet. The students converted feet to paces, using their compass to guide them to 36 degrees N. Each pair followed a different set of directions and the students moved around the field.

A middle school music activity. During this observation, a band consisting of two sax players, keyboards, bass guitar, drums, and tuba rehearsed a new song called "Big Daddy." The instructor taught while the students played, asking questions such as "What does our key signature tell us?" to improve performance. The instructor asked one of the sax players to "play me the low D." He then helped her to play the note, finger the sax, and hold the note, telling her "That's perfect, that's perfect." The instructor moved around the group helping each student play his/her solo. The students were very engaged and clearly enjoyed what they were doing. They were patient when the teacher stopped the song to tutor one student; they continued to play and keep the beat. As they played the song, one boy moved between the keyboard and the bass clarinet. When the teacher left the room in search of some tuba music, the students continued to jam on their own.

Writing and producing a play with the help of a professional actor. We observed students practicing a play that they had written with an actor from a local performing arts venue, in preparation for a performance later in the month. As the students ran through the final scene, the actor helped them refine their performance. Adult leaders were supportive of the students, who practiced with seriousness and intensity. Two of the students had difficulty preparing their performance of a physical fight. After two or three unsuccessful takes, the other students offered suggestions about how they could help themselves to concentrate and make it through the dialogue with the demeanor required by the script.

What Structural and Institutional Supports Were Reported by the Selected Programs?

Consistent with the theory of change, the study is measuring the characteristics of the staff, including their educational background, prior work experience, training opportunities, and job satisfaction, because we posited that well-trained, well-educated, experienced, stable program staff are essential in the provision of high-quality programming. We measured child-adult ratios because we posited that programs have greater success in meeting children's developmental needs when child-adult ratios are relatively small. We collected information about the program space because we posited that diverse program spaces would support appropriately varied content and activities. We also collected information on strategies for program partnership and sustainability in order to assess programs' likely long-term integration into the community.

Staff Background Characteristics and Education

Program staff in the selected programs were relatively well educated and had prior career experiences relevant to their work. The majority (59 percent) of the activity leaders in the elementary programs had attended college, with 35 percent holding a four-year college degree. Most activity leaders (66 percent) had worked at the program for three or more years, although 22 percent had worked at the program for less than a year. Sixty-one percent of the leaders had experience working in school settings prior to their current position with the program, and one-third were employed at the partner school concurrently.

In the middle school programs, 50 percent of the activity leaders had a four-year college degree. Forty-three percent had worked at the program at least three years, while 17 percent had worked at the program for less than one year. The majority (56 percent) of the middle school activity leaders had experience working in school settings prior to their current position with the program, and over 25 percent were concurrently employed at the partner school.

Staff Training Opportunities

Across both elementary and middle school programs, 81 percent of the activity leaders reported receiving specialized training during the previous year. Training was offered in many areas including classroom management, academic enrichment, activity planning, conflict resolution, working with multicultural populations, child and youth development, first aid, and health promotion and education.

Staff Satisfaction

Activity leaders in both the elementary and middle school programs were very satisfied with their experiences working at the programs (M = 3.6 and 3.4 respectively, on a four-point scale). The leaders reported agreeing or strongly agreeing to items such as:

- I enjoy working here
- I have the materials that I need to do a good job
- I get the support and feedback that I need from my supervisor
- I have the space that I need to do a good job
- After-school staff members support each other and work as a team

Observed Child:Staff Ratios

During Spring 2003, we observed an average child:staff ratio of 11:1 in elementary program activities (range = 1:1 to 37:1 during specific activities), and an average ratio of 9:1 in middle school program activities (range = 1:2 to 40:1 during specific activities).

Program Space

Both the elementary and the middle school programs had access to varied spaces that allowed them to support diverse activities, as indicated in the table below on the next page. In addition to traditional spaces such as classrooms, playgrounds, gyms, libraries, and cafeterias, directors reported computer labs, art rooms, music rooms, science labs, and kitchens.

Program Space	Elementary Programs (*N* = 17)	Middle School Programs (*N* = 17)
Classrooms	100%	100%
Outside playground/field	100%	88%
Gym	94%	88%
Library	82%	82%
Cafeteria	82%	77%
Art room	75%	88%
Music room	69%	59%
Auditorium	63%	79%
Computer lab	56%	100%
Kitchen	56%	50%
Science lab	31%	71%

Program Partnerships and Linkages

The programs were strongly supported by community organizations—schools, businesses, and social service agencies. These organizations provided varied support to the programs, as shown in the table on the next page. The community was especially instrumental in providing programming for youth and their families (classes or activities) and donating supplies and materials. In addition, community organizations provided volunteers (activity leaders, tutors, or mentors) to lead or assist in the classes and activities that programs offered. In most cases, programs drew these resources from more than one organization.

	Elementary Programs (*N* = 16)		Middle School Programs (*N* = 17)	
Type of Support	One agency	Two or more agencies	One agency	Two or more agencies
Programming for youth	100%	81%	94%	71%
Programming for families	93%	73%	69%	44%
Volunteers	94%	69%	71%	47%
Mentors	60%	40%	59%	41%
Supplies and materials	93%	80%	88%	76%

Program Funding and Sustainability

The programs included in the study have demonstrated their sustainability. On average, the elementary programs have been in operation for over five years. Middle school programs have been operating for eight years, on average; several have been providing services for more than a decade. To sustain their activities over a long period, programs have relied on varied funding sources, as shown in the table below. Most programs, at both the elementary and middle school levels, drew some of their funding from local and federal government agencies. Federal funding included the 21st Century Community Learning Centers (35 percent of the programs), Title I (20 percent of the elementary programs), and Safe and Drug Free Schools (17 percent of the programs). About half of the programs relied on private donors or corporations to provide some of their budget. One out of three programs had grants from private foundations.

Source	Elementary Programs (*N* = 15)	Middle School Programs (*N* = 14)
School district	40%	43%
Local government	67%	71%
Federal government	73%	79%
National foundation	33%	43%
Local foundation	33%	36%
Private donor or corporation	53%	50%

How Will the Study Learn Whether Participation in Promising Programs Is Related to Family Background and Prior Child Functioning?

Our theory of change recognizes that multiple factors influence whether children and youth participate in after-school programs and whether those who participate benefit from the experience. To assess this possibility, the study is collecting information in Fall 2003 about child and family characteristics. These characteristics, and the measures we will use to collect data about them, are shown in the table on the next page. Surveys, scoring instructions, and psychometric information can be reviewed at http://www.wcer.wisc.edu/childcare/form3.html. We plan to include controls for family characteristics and prior child performance in our analyses. In addition, to further reduce potential selection bias, we will select comparison students who are very similar to treatment students at baseline.

Child or Family Characteristic	Parent Survey	Student Survey	Teacher Survey	Activity Leader Survey	School Records
Child's participation in other after-school activities	X	X		X	
Child's prior academic proficiency, including special education and ESL status, grades, and standardized test scores, which may lead teachers to encourage enrollment or parents to enroll children in programs that include academic support or, alternatively, may dampen children's interest in participating, particularly if the program is perceived as an extension of school					X
Child's social and behavioral adjustment, which may affect parental decisions about the types of after-school settings that are most appropriate for their children	X	X	X	X	
Family income, which may affect the breadth and quality of after-school choices available to children	X				
Parent employment, which may affect the need for after-school care	X				
Parent education	X				
Household size	X				
Family structure	X				
Child race/ethnicity					X
Child gender					X
Child perceptions of neighborhood safety		X			

How Will the Study Learn Whether Program Attendance (Dosage) Is Related to Program Effects?

A key element of our theory of change is program attendance. Consistent with previous research (Vandell & Pierce, 1999; Welsh et al., 2002), we expect that children and youth who participate in high-quality after-school programs for more days will derive more benefits than less active participants. Therefore, the study will measure the frequency of child participation in the programs in order to assess the influence of dosage on program effects.

Because the number of days that children and youth can participate in after-school programs depends in part on the number of days that programs are open, the study will collect information each year about program availability, including months of operation, days open per week, and hours open per day. We also will collect information about attendance requirements that might influence attendance patterns across programs.

During Spring 2003, consistent with our sampling criteria, all of the programs provided services a minimum of three days a week. Seventy-one percent of the elementary programs and 78 percent of the middle school programs operated at least five days a week. On average, the elementary programs were open 3.5 hours per day and the middle school programs for 3.8 hours per day. Directors reported that 65 percent of the elementary students and 50 percent of the middle school students attended the programs three or more days per week.

What Are the Anticipated Relations between Participation in Promising Programs and Child Outcomes?

The study will examine program effects in four domains: academic development, social development, psychological development, and behavioral development. The study is investigating both intermediate and long-term outcomes. From a long list of possible outcomes, we selected variables that can be measured reliably within the limits of the study. Following collection of baseline data in Fall 2003, we will assess all outcomes in Spring 2004 (intermediate outcomes) and Spring 2005 (long-term outcomes). The study will test intermediate effects by contrasting outcomes for treatment and comparison group members, as well as among treatment group members participating in the programs at different levels of intensity. The long-term outcomes are expected to derive from skills developed during two program years.

We selected the intermediate outcomes for this study based on prior evidence that they can affect or translate into improved behaviors and skills in additional outcome domains over time (Posner & Vandell, 1994). We expect these effects to be more evident when children attend programs more days. Our theory of change posits that evidence for the following outcomes will manifest itself within the **school and program settings** by the end of the first year of data collection:

- **Academic development** as measured by work habits and school attendance
- **Social development** as measured by social skills and positive relationships with peers
- **Psychological development** as measured by self-efficacy and task persistence
- **Behavioral development** as measured by diminished misconduct

The targeted long-term outcomes in our theory of change are the academic variables associated with continued schooling and long-term economic productivity, as well as long-term changes in social and psychological development associated with positive well-being. As with the intermediate outcomes demonstrated in the program and at school, the study will test the programs' effects on long-term outcomes by comparing results for treatment and comparison group members, as well as among treatment group members who participate at varying levels of intensity. In addition to maintaining the intermediate effects found in Year 1, we expected additional long-term outcomes to be evident in **school, program, and home settings** at the end of Year 2:

- **Academic development** as measured by grades, achievement test scores, and on-time promotion

- **Psychological development** as measured by a positive future orientation and positive emotions at home

- **Behavioral development** as measured by reduced engagement in antisocial or delinquent behaviors, and decreased use of alcohol, tobacco, and other drugs, by middle school students

Outcomes	Elementary Student Survey	Middle Student Survey	Parent Survey	Teacher Survey	Activity Leader Survey	School Records
Academic						
Work habits	X	X	X	X	X	
School attendance						X
Grades				X		X
Achievement test scores						X
On-time promotion						X
Social						
Social skills				X	X	
Positive relationships with peers			X	X	X	
Psychological						
Future orientation		X				
Positive emotion			X			
Efficacy	X	X		X	X	
Behavioral						
Misconduct	X	X	X	X	X	
Antisocial/delinquent behaviors		X				
Substance use		X				

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