

Massachusetts After-School Research Study (MARS) Executive Summary

Intercultural Center for Research in Education (INCRE) Arlington, MA National Institute on Out-of School Time (NIOST) Wellesley Centers for Women • Wellesley College

A report of the Massachusetts After-School Research Study

# Acknowledgements

**The authors would like to thank** the many individuals and organizations that contributed to the Massachusetts Afterschool Research Study (MARS). The staff of the major funding partner—United Way of Massachusetts Bay—worked hand in hand with us throughout the entire process, from conceptualizing the study to working through the inevitable challenges of carrying out a project of this scope. We would especially like to thank Don Buchholtz, Lisa Pickard, Peg Sprague, Jane Feinberg, and Mary Kay Leonard. In addition, Fran Barrett of the Massachusetts Office of Child Care Services and Karyl Resnick of the Massachusetts Department of Education played key roles, providing contacts, context, funding, and feedback, as the need arose. The Barr Foundation provided substantial support and the Nellie Mae Education Foundation contributed funding for the middle school youth survey, which allowed us to include the voices of the participants themselves.

We would also like to acknowledge our Advisory Group. The members included Sheri Adlin, Bob Monahan, Jennifer Davis, Maryellen Coffey, Maria M. Del Rio, Adrian Haugabrook, Dishon Mills, Karyl Resnick, Blenda Wilson, Lynn D'Ambrose, Fran Barrett, Eric Buch, Jude Goldman, Jim Horne, Marion Kane, Kerry Herlihy Sullivan, Robert Wadsworth, Gwynn Hughes, Janet McKeon, and Ellen Gannett. These committed individuals contributed invaluable advice, questions, and suggestions from their many different perspectives, strengthening the research design, implementation, and analysis.

The following staff members of INCRE and NIOST served on the research team: Tom Breen, Julie Dennehy, Georgia Hall, Kristin Lewis-Warner, Beth M. Miller, Joyce Shortt, and John Zuman. In addition, the following individuals conducted site visits at participating programs: David Alexander, Ruth Bowman, Claudette Fongkong-Mungal, Lynn Hatch, Luis Melendez, and Erika Moldow. A number of other researchers assisted with the study in a variety of important ways and we thank them for their support: Nancy Barra, Tahisha David, Mareike Every, Ellen Gannett, Diane Gruber, Laura Israel, Fern Marx, Loreto Ruiz, Wendy Surr, and Allison Tracy.

The MARS project was only possible through the collaboration of ten school districts and a multi-district collaborative. School superintendents, Office of Child Care Services administrators, Department of Education 21st Century Community Learning Center Grant Coordinators, and other key afterschool stakeholders across the state, from Boston, Fall River, Framingham, Greenfield, the Hampshire Educational Collaborative, Holyoke, Lowell, Northampton, South Hadley, Turners Falls, and Worcester, all took time out of their extremely busy schedules to help us in selecting sites, collecting data, and understanding our findings.

Last but certainly not least, we give our heartfelt thanks to the hundreds of individuals connected to the 78 afterschool programs that took part in the MARS study. While we continue to protect their confidentiality, we also want each of them to know how much we appreciate their contribution. The afterschool administrators, program coordinators, program staff, middle school youth, school teachers, and principals who participated in MARS did so without any compensation or direct benefit. They hosted our visits, collected consents from parents, filled out surveys, tracked down school teachers, and much more. They did it for one reason: their belief in the field, and their dedication to the children who will benefit from our increased understanding of how afterschool programs contribute to healthy learning and development. This study truly would not have been possible without them.

We thank all those who helped in every way and we hope that this report does justice to their contributions. At the same time, all the findings, interpretations, and errors herein should be attributed solely to the authors.

### **Pathways to Success for Youth:**

What Counts in After-School A report of the Massachusetts After-School Research Study

### Overview

This is a time of both promise and peril for afterschool programs across the nation. Ten years ago, it was enough for a program to provide a safe space, some time to do homework, and a variety of recreational activities. Now programs are expected to achieve many of the goals of schools, families, and communities, as we increasingly look to programs to boost academic achievement, stem youth crime, increase children's health and well being, and support working families. This recognition of the importance of out-of-school time in children's development is overdue, but if we are to meet the needs of today's youth, we need to understand what it will take to reach these worthy goals. As a result, many leaders in the field are increasingly focused on finding ways to improve and sustain quality programming.

Much of the increased interest in afterschool programs over the last decade has been fueled by the idea that participation can enhance children's academic achievement. However, research on the direct academic effects of program participation has been mixed, with some studies finding increases in academic achievement measures such as grades and test scores while others find no such effects.

On the other hand, a growing body of research suggests that afterschool programs can have positive effects on a variety of outcomes, such as motivation, engagement in learning, expectations of success, teamwork, conflict resolution, social competence, improved behavior, and leadership skills. Research indicates that children who have these "intermediary" skills do better in school and are more successful as adults.

We know that simply having a program in place is not enough to result in positive outcomes for youth, yet many questions arise. The Massachusetts Afterschool Research Study (MARS) was designed to help us answer these questions.

- How does participating in an afterschool program affect a child?
- What factors are likely to lead to high quality programs?
- Which aspects of programs are most likely to result in positive outcomes?

#### MARS has two major goals:

- (1) to explore the complex relationship between youth experiences and youth outcomes, and
- (2) to identify those program characteristics that are most closely related to high quality implementation.

The study focuses on afterschool programs serving elementary and middle school youth from ten communities across the state, including urban, suburban, and rural areas. It is the largest study of its kind in Massachusetts.

The afterschool field is very diverse; programs exist in a wide variety of settings and serve a wide variety of programmatic purposes. Measurable aspects of programs include program characteristics, staff characteristics, and program quality. Program characteristics include structural aspects of programslocation, size, schedule, years in operation, ages of children served, program goals, ratio of staff per youth, auspice, etc.- and staff characteristics, such as the experience, educational background, pay, and training of those working in programs. Program quality is a result of how all these factors play out in the ongoing interactions between staff and youth, and between youth and their peers, as they engage in a variety of experiences and activities over the course of an afternoon. The MARS study is unusual in its ability to look at all these components of programs and make sense of their relationship to each other, as well as their links to the effects that programs have on the youth they serve.

This is a critical time to build our understanding of how to create successful afterschool programs. If afterschool programs do not meet today's high expectations, they are in danger of losing the public support that has resulted in substantial growth in the field. The MARS study is designed to add to our knowledge base, providing much-needed information based on a close investigation of afterschool programs located throughout the state of Massachusetts.

### **Pathways to Success for Youth:**

What Counts in After-School A report of the Massachusetts After-School Research Study

# Methods

**The MARS study focuses on** 4,108 children in 78 afterschool programs. The Research Team visited each program in the fall of 2003 and again in the spring of 2004. The methods used in the MARS study included interviews with program directors, youth surveys of middle school participants, observations by trained research staff, and afterschool staff surveys.

To measure youth outcomes, we utilized the Survey of Afterschool Youth Outcomes (SAYO),<sup>1</sup> a research based survey tool of teachers and afterschool staff that captures youth changes over the course of an academic year in a range of academic and developmental areas. The SAYO-S (completed by afterschool staff), which we used for our analyses, includes information on five outcomes:

#### **Youth Outcomes**

- Homework (including completion and effort)
- Initiative (including motivation & persistence in effort)
- Behavior in the program
- **Relations with Peers** in the program
- **Relations with Adults** in the program.

To measure program quality, the MARS study developed and used a new program observational assessment tool, the Assessment of Afterschool Program Practices Tool, Research Version (APT-R). This instrument was specifically designed to capture aspects of programming related to the SAYO outcomes, so that the results could help us understand the relationship between program quality and youth outcomes.<sup>2</sup> Using the APT, we were able to obtain information on the quality and practices of the 78 programs in the study. Based on our in-person observations of the programs using the APT, we created six Program Quality Indicators (see box below).

#### **Program Quality Indicators**

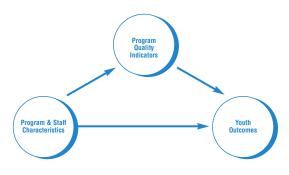
- Staff Engagement with Youth (staff are actively engaged with youth, give positive cues, encourage and listen to youth, have positive and respectful interactions)
- Youth Engagement (youth are respectful of each other, responsive to staff, have positive behavior, listen and cooperate with each other)
- High Quality, Challenging Activities (Activities are appropriate, challenging, and stimulate critical/higher order thinking, are part of a larger project, have evidence of prior preparation, and have clear instructions)
- Quality Homework Time (staff provide individual help, focus on youth, are encouraging, help youth think through problems)
- Family Relationships at Pick-up Time (staff greet and chat with parents, acknowledge youth when they leave, parents and staff express positive nonverbal cues)
- Appropriate Space (environmental items related to comfortable heat, ventilation, noise, and light levels, well organized, clean, materials in good order)

coordinators were asked to provide information about program features and characteristics that were not observable. These program characteristics included program organization, enrollment, relationships with the schools, relationship with families and staff experience, education and salary.

To measure program characteristics, program

Using this information, we are able to describe three types of connections. The MARS study looked at the relationship between:

- 1. Program quality and youth outcomes,
- 2. Program characteristics and youth outcomes, and
- 3. Program characteristics and program quality.



<sup>2</sup> A self-assessment version, the APT-R, is currently under development.

<sup>&</sup>lt;sup>1</sup> Further information on the development of the SAYO is available at www.doe.mass.edu/as/reports/asost\_03.pdf.

### **Pathways to Success for Youth:**

What Counts in After-School A report of the Massachusetts After-School Research Study



## Program Quality and Youth Outcomes

The critical question in our research, and for the field, is: What role does program quality play in creating positive results for children and youth? The MARS researchers began with the idea, based on previous research on afterschool programs, education, and early childhood programs, that higher quality programs would have more positive effects on youth outcomes. When we looked at the relationship between the quality indicators and youth outcomes (using a sophisticated statistical technique called hierarchical linear modeling), we found that the quality indicators formed a pathway, with some serving as the "prerequisites" for others, as shown below. Our interpretation of the path is that adequate space creates a context in which "good things can happen." When staff have the skills to engage actively with youth, the quality of the program's activities, youth engagement, and homework support will increase. However, as noted in the model below, we did not find direct statistical connections between higher quality homework time and youth outcomes, or between higher quality activities and youth outcomes. These results may be a result of the lack of variation in practices we observed in these areas, or simply reflect that youth engagement has primary importance.

#### Model of Significant Relationships between Quality Indicators and Youth Outcomes



We did not expect the effects of the quality indicators to be the same for all youth outcomes. In the analyses, we found the following:

- Adequate Space was associated with higher quality Staff Engagement for all five SAYO-S youth outcomes.
- Staff Engagement did not have a direct effect on youth outcomes, but it had a significant effect on Quality Homework Time, High Quality Challenging Activities and Youth Engagement. This relationship held true for all five outcomes we tested.
- **Youth Engagement** had strong, statistically significant direct links to all the youth outcomes.
- Relations with Families, which captured interactions between staff and parents at pickup time, was linked with positive increases in youth's Relationship with Adults in the program.
- Higher Quality Activities and Quality Homework Time were not linked directly to changes in youth outcomes and suggests further research in this area would be helpful.

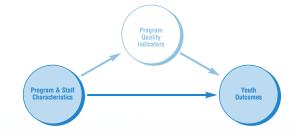
4

### What counts

The major pathway uncovered by MARS was that staff engagement is significantly related to higher quality activities and homework assistance and is, in fact, the prerequisite for having fully engaged youth, which ultimately becomes the key factor leading to positive youth outcomes.

- Staff engagement is a critical component in the pathway to program quality and youth engagement. Youth engagement in the MARS study is linked to having staff who treat the children and youth in the program with respect, engage actively with them in activities, listen to youth, and enjoy their work.
- Youth engagement in afterschool programs is very important to achieving youth outcomes. Youth engagement includes positive interactions with adults, friendly relationships with peers, and focused participation in activities.
- Programs may benefit from focusing on their communication with parents. Children who showed the most improvement in their relations with adults were significantly more likely to attend programs where there was good communication with parents at pickup time.

VVNAL COUNTS IN ATTER-SCHOOI A report of the Massachusetts After-School Research Study



# Program Characteristics and Youth Outcomes

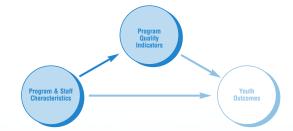
**Our in-person interviews** with program coordinators provided additional information about program features and characteristics that were not observable. We looked to see whether program characteristics have any direct relationship with youth outcomes. This is a more complex and distant relationship, since youth outcomes are likely to be affected by a host of other factors as well. As expected, we found a higher degree of relationship between program characteristics and program quality, which we report on in the next section. We did, however, find the following significant correlations to youth outcomes.

### What counts

- Staff with the skills and continuity to engage in a positive, productive manner with youth is associated with positive youth outcomes. Programs where staff and directors had higher educational backgrounds, and where more staff were certified teachers had higher youth outcomes in some areas. Youth who participated in programs that had a higher percentage of staff with a college degree as well as those with a director with higher educational attainment were more likely to improve in their homework efforts. In addition, youth in programs with a higher percentage of certified staff had more improvement in their relations with peers. In programs with higher staff turnover during the year, youth made less progress in their homework improvement.
- A positive relationship with school personnel can be helpful. Programs that reported the strongest relationships with principals had more improvement in four of the five youth outcomes: Homework, Initiative, Behavior, and Relations with Peers. Programs that reported good relationships with school teachers had more improvement in Homework and Initiative.



VVNAL COUNTS IN ATTER-SCHOOI A report of the Massachusetts After-School Research Study



## Program Characteristics and Program Quality

**The MARS study enables** us to see the relationship between program characteristics and program quality through its rich dataset. These findings can guide us in creating and sustaining high quality programs.

### What counts

- Programs need enough staff to provide youth with small groups and individual attention. Programs with smaller group sizes for activities, as well as those with fewer children for each staff member (lower ratio) were higher in quality.
- Staff who have strong preparation and good working conditions provide higher quality programming. Programs with more highly educated and highly paid staff, as well as those with more highly educated program directors, typically had higher quality programs. Programs with certified teachers, and those with lower turnover in their staff also had higher quality in some areas. Programs that provided more training had higher scores on staff engagement with youth.
- Programs with certain characteristics can be high in one aspect of quality and low in another. In particular, larger programs, those with certified teachers, and those with a greater emphasis on structured activities tended to rate higher on the quality of their activities, but lower in their communication with the families of participating children and youth.
- Programs with good relationships with school personnel tend to have higher quality, especially in the activities they offer. Program directors who reported stronger connections with the school(s) that their children attended, including understanding school objectives and having good relationships with principals and teachers, had higher quality activities for youth.
- Good pacing supports quality. Programs that were well paced throughout the afternoon, not rushing children from one activity to another, were more likely to have high staff engagement, youth engagement, and better communication with families at pickup time. Programs that focused on academic improvement were less likely to have a relaxed, flexible pace.
- Some things don't matter. Where a program was located—in a school or in the community—had no relationship to the quality of the programming it provided. Program goals also had only a weak relationship to program quality.



A report of the Massachusetts After-School Research Study

# Program Quality in the MARS Programs

With our observations of the MARS programs, we can also note areas of higher and lower quality in the sample of programs. While areas of strength and weakness varied, in general, we found the following positive attributes at the MARS programs:

- The highest ratings were on items related to a general positive climate in the programs. Most programs had friendly staff who were relaxed and familiar with the children in the program. Most interactions between staff and youth were positive. Low staff:youth ratios meant that there were enough staff available to meet the needs of participants.
- Youth seemed relaxed and friendly with each other; there were very few conflicts between youth during the afternoons that we visited the programs.
- Most programs had an appropriate space or spaces in which to conduct the afternoon activities.
- **Activities** were appropriate for the age group being served.

Other areas, linked by research to positive outcomes for children, were less evident. These areas provide some guidance for what is needed in the field. They are ripe for further discussion and planning and for change through program improvement and professional development activities. We had few observations of:

- Staff facilitating youth engagement in learning, using facilitative questioning, group reflection, or project-based learning
- Opportunities for youth leadership or peer learning
- Activities that built on the cultural or ethnic backgrounds of the children attending the program.
- Prior planning or intentionality (although in some cases, this probably existed and simply wasn't observable). Many of the activities were quite simple, and required little or no planning by staff.
- Intentional goals or learning connected to activities.

These generalizations can guide attention to areas of the field that may benefit from increased training and technical assistance. Of course, it is important to note that not all programs we observed followed these patterns—some were struggling with basic organization while others stood out as examples of the environment that well-designed programs can create for youth.



A report of the Massachusetts After-School Research Study

# Conclusion

**MARS is one of the first studies** to explore the relationships between program characteristics and program quality, as well as identify key quality indicators that help produce positive outcomes for youth. Unlike previous studies that compare youth who attend afterschool programs with those who do not, MARS looks at the types of experiences and relationships that children and youth have during their participation in afterschool programs, as well as how the quality of these experiences are linked to a range of youth outcomes. While the data is correlational in nature, and therefore we cannot demonstrate that the quality indicators cause positive outcomes, the findings do suggest avenues for programs, policy, and further research.

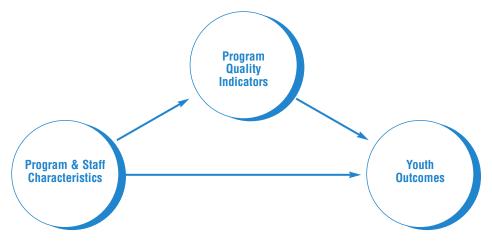
The MARS study offers many useful insights into the connections between high quality afterschool programs and improved outcomes for the young people attending these programs, as well as approaches to providing high quality experiences for youth. MARS tells us afterschool programs can help youth achieve important, positive outcomes. It also suggests that substantial support over a sustained period of time is necessary to meet the high expectations we have for afterschool programs. It will take that support to build a sustainable system staffed by professionals with the capacity to create and maintain quality programs.

**Further information on the MARS study** can be found in the MARS Brief Report and the MARS Policy Brief. Both are available at www.uwmb.org.



What Counts in Atter-School A report of the Massachusetts After-School Research Study

## Summary



### What Counts

#### What Program Quality Indicators lead to Youth Outcomes?

- Youth Engagement in Programs
- Staff Engagement with Youth
- Communication with Families

#### What Program and Staff Characteristics lead to Youth Outcomes:?

- Staff Skills to Engage Youth
- Educational Background of Staff & Director
- Lower Staff Turnover
- Communication with School Personnel

#### What Program and Staff Characteristics lead to Quality Programs?

- Small Group Sizes for Activities
- Lower Staff-to-Youth Ratios
- Staff who have Strong Preparation and Good Working Conditions
- Lower Staff Turnover
- Programs with Professional Development Opportunities for Staff
- Programs with Structured Activities
- Communications with School Personnel
- Programs that are Well-Paced, Not Rushed

Where a program is located- school or community-based - does NOT impact quality

A report of the Massachusetts After-School Research Study (MARS)

**This project was developed and funded by** United Way of Massachusetts Bay, the Barr Foundation and the Nellie Mae Education Foundation in partnership with the Massachusetts Department of Education and the Massachusetts Office of Child Care Services.

The Executive Summary was prepared by Beth M. Miller, Ph.D., Senior Research Advisor to the National Institute on Out-of-School Time.

#### November 2005



