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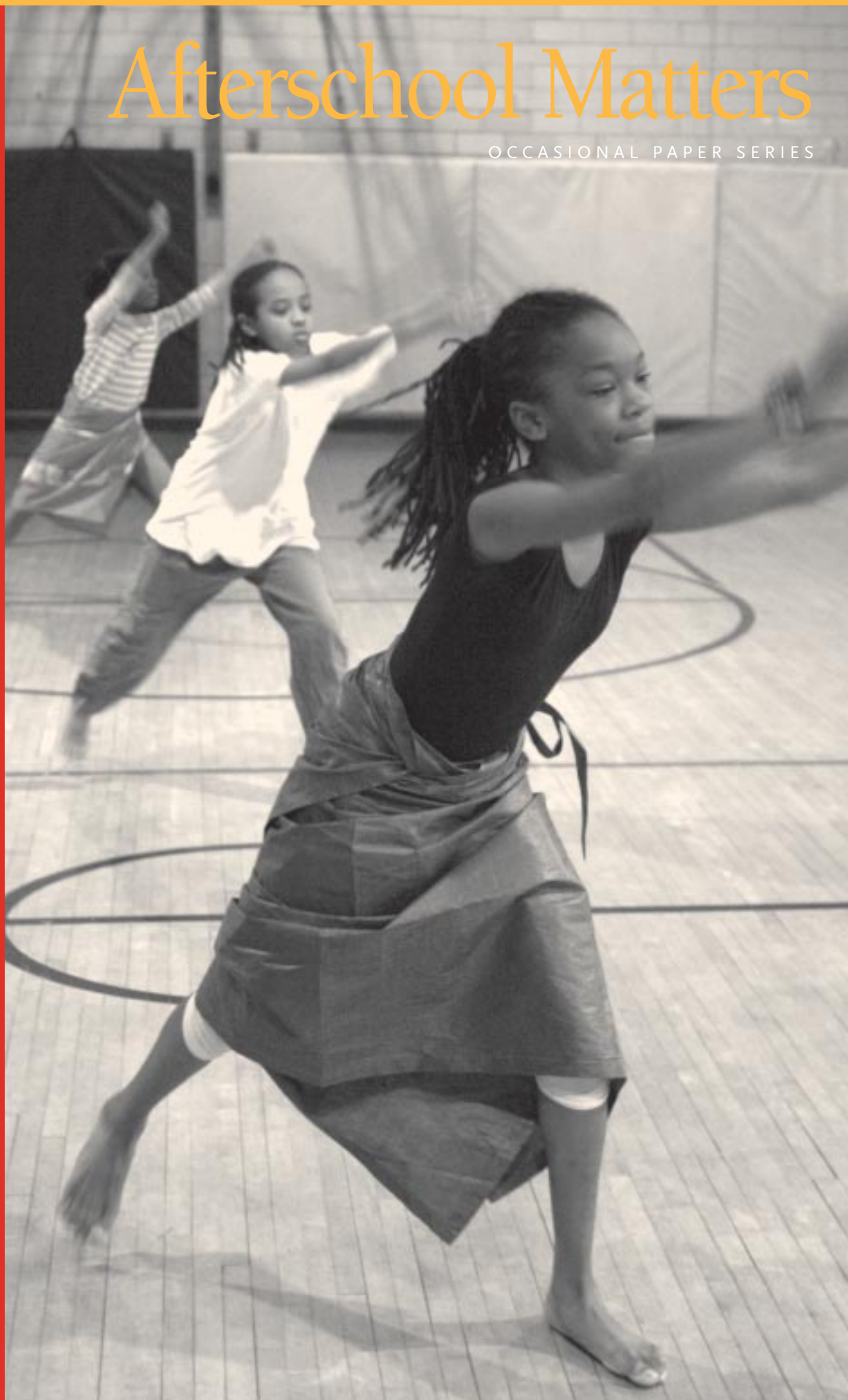

From Promise to Participation

Afterschool Programs through the Lens of Socio-Cultural Learning Theory

Meredith I. Honig and
Morva A. McDonald

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The Robert Bowne Foundation publishes Afterschool Matters *Occasional Papers twice a year. This peer-reviewed series provides a venue for publishing research that explores key issues in the theory and practice of afterschool programming, youth development, and learning during the non-school hours.*

TABLE OF CONTENTS

Afterschool Matters Initiative ii

From Promise to Participation:
Afterschool Programs through the Lens of Socio-Cultural Learning Theory 1

References 22

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AFTERSCHOOL MATTERS INITIATIVE

The Robert Bowne Foundation (RBF), seeking to have a long-term and substantial effect on the field of out-of-school education, launched several new initiatives to accomplish this mission. Afterschool Matters is one of the initiatives, the goals of which are to:

- Generate and disseminate research about community-based organizations serving youth during out-of-school hours
- Build a network of scholars studying community-based organizations serving youth
- Contribute to basic knowledge and the improvement of practice and policy in the area of community-based youth programs

AFTERSCHOOL MATTERS/OCCASIONAL PAPERS

One of the projects of the Afterschool Matters Initiative is the journal *Afterschool Matters*, a national, peer-reviewed journal dedicated to promoting professionalism, scholarship, and consciousness of the field of afterschool education. The journal serves those involved in developing and running programs for youth during the out-of-school hours, in addition to those engaged in research and in shaping policy. Articles for the journals are solicited from the field, and a range of academic perspectives are considered along with personal or inspirational narratives and essays, book reviews, artwork, and photographs.

The RBF Occasional Papers is a peer-reviewed series published twice a year. The goal of the Occasional Papers is to provide a venue for publishing research that explores key issues and topics in the practice and theory of afterschool programming, youth development, and learning during the non-school hours. In addition, the Occasional Papers address key policy issues in the area of youth development. The intended audience for this series includes researchers, university staff, afterschool program managers and practitioners, and policy makers. Prospective papers are solicited by the RBF.

Copies of both *Afterschool Matters* and the Occasional Papers are available on the RBF website, www.robert bownefoundation.org.

RESEARCH GRANTS/RESEARCH FELLOWSHIP

The RBF sponsors a national Research Grant competition. Four grants of $10,000 are awarded to support either original empirical research in or about community-based youth programs during the non-school hours or research syntheses or policy analyses of community-based youth programs.

Now in its third year, the RBF Research Fellowship is dedicated to building the capacity of youth program staff to design and conduct research in the areas of youth development and education during the out-of-school hours. The goals of the Research Fellowship include generating and disseminating research in the area of education in community-based organizations serving youth during the out-of-school hours, building a network of scholars, contributing to basic knowledge and the improvement of practice, and informing policy in the area of community-based youth programs.

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From Promise to Participation: Afterschool Programs through the Lens of Socio-Cultural Learning Theory

Meredith I. Honig and Morva A. McDonald

Executive Summary

Studies of the effects of afterschool programs on student learning have yielded equivocal findings. This paper argues that such findings stem from weak conceptualizations of the relationship between afterschool programming and learning. The authors use socio-cultural learning theory to reveal specific dimensions of afterschool programs that have positive impact on learning, drawing on almost 200 documents from the afterschool literature to substantiate and elaborate these dimensions. Findings illuminate why afterschool programs that provide "more school after school" significantly limit students' opportunities to learn.

Research on the relationship between afterschool programs and student learning outcomes is riddled with conflict. Some researchers have found that afterschool programs achieve positive results, such as improving students' problem-solving abilities, strengthening students' interest in school, and shrinking achievement gaps between African-American boys and their white counterparts (Fashola, 2003; Fleming-McCormick & Tushnet, 1996). Other research suggests that afterschool programs have no such impact (e.g., Mathematica Policy Research & Decision Information Resources, 2003). What explains these seemingly conflicting findings, and what are the implications for researchers and practitioners interested in conducting and using afterschool research?

The time is ripe to address these questions. Within the past ten years, "afterschool" as a distinct service and policy sector has mushroomed politically, fiscally, and programmatically (DeAngelis & Rossi, 1997; National Association of Elementary School Principals, 2001; Rossi, 1996; Samuelson, 2003; Schwartz, 1996). Best described as a faint blip on education policy radar screens in the early 1990s, afterschool programming, through the federal 21st Century Community Learning Centers initiative, appropriated $993.5 million to promote afterschool partnerships, up from $800 million. In recent years, state educational agencies in Maryland, Kentucky, and California have invested $10–85 million annually in their own afterschool initiatives (Miller, 2001; National Governors' Association, 1999; Perry, Teague, & Frey, 2002). National and local private foundations such as the Charles Stewart Mott Foundation have stepped up their grant making in the afterschool arena. Likewise, research on afterschool programs has increased from a handful of studies in the 1980s to a substantially larger body of documentation reports, evaluations, and basic research studies. This research provides an empirical basis for investigating the relationship between afterschool programs and student learning.

We conducted such an investigation using a comprehensive review of the growing afterschool literature. In all, we reviewed almost 200 documents, the majority of which addressed connections between afterschool programs and learning. "Learning" is defined here by traditional measures of school performance such as grades, standardized test scores, and graduation rates, as well as by related indicators such as whether youth reported increased interest in particular subject matter or demonstrated improvement in critical thinking and reading.

We found that the performance of afterschool programs appears mixed in the research literature in part due to at least two conceptual problems in the research base itself. One problem is that many scholars have drawn conclusions about the extent to which

Socio-cultural learning theory highlights how programs differ at the level of participation in ways that help explain differential learning results.

afterschool programs affect student learning without grounding their analyses in learning theories that can help explain both what constitutes a productive learning environment and the extent to which afterschool programs support such an environment. We argue that socio-cultural learning theory helps "sort" programs by their impact on learning and demonstrates the less equivocal finding that afterschool programs with certain features tend to strengthen student learning while others demonstrate less or no success in this area. Secondly, socio-cultural learning theory also suggests that afterschool research in general may focus on the wrong units of analysis—that is, on the effectiveness of afterschool programming as an entire sector or on the performance of programs differentiated by their main activities, such as arts, sports, recreation, or homework help. However, afterschool programs and other environments affect learning not as an entire sector or at the program level but at the level of staff and youth participation—what staff and youth do day to day in programs. Socio-cultural learning theory highlights how programs differ at the level of participation in ways that help explain differential learning results.

In the first section below, we briefly discuss the debate in the afterschool research literature concerning the relationship between afterschool programs and student learning outcomes in order to elaborate the conceptual limitations of the literature that we believe underlie these debates. After a brief discussion of our review methods, we then elaborate features of strong learning environments evident in socio-cultural learning theory. In the next section, we use these features to organize and interpret afterschool study results. This study reveals that, at the level of youth and adult participation, afterschool research reflects significant agreement that certain types of learning environments in afterschool programs do indeed strengthen students' learning. We conclude with implications for afterschool practitioners and researchers, highlighting the importance of including theory-based examinations of implementation processes in discussions of the relative merits of various supports for student learning.

LIMITATIONS OF THE RESEARCH

As noted above, studies that have examined the impact of afterschool programs on such student learning outcomes as school grades, attendance, graduation, standardized test scores, motivation to learn, and problem solving have, on the whole, yielded equivocal findings (Shumow, 2001). Some studies associate certain afterschool programs and experiences with improved or otherwise positive learning outcomes (Fiske, 1999; Lamare, 1998; Lauer et al., 2004). For example, elementary school students participating in the START program in Sacramento, Natomas, and other California school districts posted statistically significant improvements on standardized tests; classroom teachers credited the program with supporting their students' achievement gains (Lamare, 1998). Findings from 25 evaluations reviewed by the Harvard Family Research Project linked afterschool programs with better student attitudes toward school, school performance, and attendance; the findings also showed that participants had more positive aspirations toward higher education than did students who did not participate in afterschool programs (Little & Harris, 2003). Some afterschool programs have helped to shrink the achievement gap for African-American males (Fashola, 2003). In related studies examining youths' experiences in community-based youth organizations over more than a decade, Heath, Soep, and Roach (1998) and McLaughlin (2000) found that, though participants faced significant barriers to positive school performance and completion, they significantly outperformed their non-participating counterparts in both areas.

Other studies make contradictory claims (e.g., Hollister, 2003). For example, the national evaluation of 21st Century Community Learning Centers found no difference between participants and non-participants in performance in reading, math, and other subject areas (Mathematica Policy Research & Decision Information Resources, 2003). Local evaluations of individual 21st Century Community Learning Centers programs have substantiated this claim (e.g., Wahlstrom, Sheldon, Anderson, & Zorka, 2001), though the U. S. Department of Education has claimed that the program is successful (de Kanter, Williams, Cohen, & Stonehill, 2000). A review of various large-scale evaluations of afterschool programs, including Kentucky's statewide program Every Student Succeeds, uncovered sporadic school attendance by afterschool program participants and no statistically significant

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impact on achievement test scores after one year of participation (Kane, 2004). Various research reviews have suggested not only that afterschool programs have negligible benefits but also that the supply of programs significantly exceeds demand, so that increasing funding for afterschool programs will not, as afterschool advocates promise, address students' pressing social and learning needs (e.g., Olsen, 2000).

Researchers have offered various explanations for these variable effects, mainly on technical methodological grounds (Little & Weiss, 2003). For example, some critics argue that studies do not adequately adjust for selection bias—that stronger students may select particular afterschool activities and thereby inflate the programs' reported impact. Others point out that researchers have failed to create or assign adequate control groups and therefore stand on shaky ground when it comes to attributing particular effects to program participation (Scott-Little, Hamann, & Jurs, 2002; Vandell, 2003). Similarly, the length of time for data collection allowed by many studies may be too short to capture impacts on learning (Fashola, 2003).

Our review suggests, however, that the limitations of the literature are not only methodological but also, and perhaps mainly, conceptual: They stem from weak conceptions of how programs are implemented and organized to support learning outcomes. As a result, researchers have had few guides for interpreting the raw results of their own studies and for sorting through the broader literature to draw grounded conclusions for the field.

First, the research by and large does not indicate how programs are actually implemented, thereby omitting information essential for interpreting results (Bouffard & Little, 2003; Little & Weiss, 2003). In particular, some studies describe the design of a particular program and report the program's impact without clarifying whether or not the program was actually implemented as designed. Such studies cannot clarify whether positive or negative program results stemmed

from the afterschool program as designed or as implemented. Second, many studies that do chronicle implementation focus on broad program categories, such as arts and recreation, and obscure the *types of participation* within these categories—what staff and youth actually do day to day—that may help explain variations in results (e.g., ERIC Clearinghouse on Urban Education, 1998; Fashola, 1998; Marshall et al., 1997; for related concerns, see Kahne et al., 2001). For example, some studies distinguish afterschool arrangements with broad terms such as "self-care" versus "supervision" or by general topical focus such as "arts" or "educational enrichment" (Otterbourg, 2000). In these terms, youth who stay home after school with a parent would be classified as being in a supervised care arrangement, while those at home without an adult would be classified as being in self-care. However, as Belle (1997) has noted, if a parent is at home but asleep or otherwise occupied, youths' actual experiences after school may be similar to those of youth who are at home without an adult caregiver. Similarly, afterschool programs labeled as focusing on "educational enrichment" vary widely, from those that mainly offer youth time to do their homework with no assistance to those that engage youth in developing and implementing community service projects that aim to strengthen their reading and math abilities. Asking whether such broadly defined types of afterschool settings achieve particular learning outcomes seems significantly less informative than asking how what actually happens in programs can explain the programs' impact on student learning.

Afterschool studies tend to focus on programs rather than on youth, thereby missing the broad ecology of factors beyond the individual program that can affect youths' afterschool experiences and help explain program impact.

Similarly, afterschool studies tend to focus on programs rather than on youth, thereby missing the broad ecology of factors beyond the individual program that can affect youths' afterschool experiences and help explain program impact (Holland & Andre, 1987). Many program evaluations, for example, focus on the effectiveness of single programs. However, researchers have found that youths' experiences after school typically involve a combination of care arrangements—at least two such arrangements for elementary school students and more for high school students (Bates, Laird, Bates, & Dodge, 1997). Such findings suggest that youths' experiences across afterschool care arrangements may affect their experience in any one program. Furthermore, because most studies provide snapshots of youths' afterschool arrangements at fixed points in time, they obscure how such arrangements may change over time in ways that may help explain the programs' effects (Adler & Adler, 1994; Bates et al., 1997). Likewise, the value added by programs may be relative to youths' needs at the outset, so that nuanced descriptions of how specific afterschool program activities interact with youth and their other experiences would be important to our understanding of program results (Cosden, Morrison, Albanese, & Macias, 2001).

Most importantly, the research we examined is largely atheoretical; it is not based on strong theories that help reveal implementation processes, patterns of participation, and connections (or lack of connection) between program processes and particular outcomes. Those studies that do draw on theory for such purposes tend to rely on theories of pro-social youth development. Such research reveals the value of strong theoretical frameworks in helping to answer important questions about the relationship between afterschool programs and such youth developmental outcomes as social and emotional well-being (e.g., Larson, 1994). However, these studies by design shed limited light on links between afterschool programs and academic learning.

Accordingly, one essential question that guided our research was how to sort through the literature and explain program effects in ways that reveal program implementation at the level of day-to-day participation and that link participation patterns to learning outcomes.

RESEARCH METHOD

To address this question we conducted a theoretically grounded review of research on afterschool programs. This review proceeded in several phases. In the first phase, we located studies of afterschool programs. Given our specific focus on learning outcomes, we first searched the ERIC database using broad search terms such as "afterschool programs," "out-of-school

Rocking the Boat

time," and "extra-curricular programs." We focused on relatively recent studies: those published in the late 1980s through the present. In this first phase, we also scanned websites and publication lists managed by organizations with national reputations for producing or synthesizing afterschool studies, including the Harvard Family Research Project, the National Institute for Out-of-School Time at Wellesley College, Public/Private Ventures, the Mott Foundation, and the U.S. Department of Education. This review yielded a total of 199 documents: three published or dated prior to 1990, 17 between 1990 and 1994, and 179 between 1995 and 2004.

In the second phase, we sorted studies in terms of the extent to which they reported learning outcomes, whether positive, negative, or negligible. We defined learning outcomes using terms common in contemporary public school accountability systems—standardized test scores, grades, and graduation rates—and other frequently reported indicators of school performance, such as attendance, attitudes toward school and subject matter, and critical reading and writing skills. Which outcomes and indicators should constitute measures of learning is a hotly debated topic. We focused conservatively on learning outcomes typically in use in public schools as a starting point, in part because those outcomes arguably are among the ones most frequently reported in studies that aim to uncover afterschool programs' learning impacts. We take up the question of ways to measure the impacts of afterschool programs in the concluding section of this paper.

Of the original 199 documents, we identified 108 that addressed these learning outcomes either directly or in combination with other study documents; we included papers that did not themselves report learning outcomes but described the components of programs whose outcomes were reported in other documents. This first pass revealed the equivocal findings summarized above, which provided the basis for our critique of the literature and suggested our choice of socio-cultural learning theory as conceptual frame.

In the third and final phase, we used concepts from socio-cultural theory to organize and code information from the subset of articles that described learning outcomes. The codes we used included the features of learning environments outlined in our examination of socio-cultural learning theory in the next section. We also included the category "other" for any design features not captured by socio-cultural learning theory. We coded only those activities that papers claimed had actually been implemented; we also combined multiple reports from single projects—for example, formative and summative evaluation reports—to help link learning outcomes with activities.

SOCIO-CULTURAL LEARNING THEORY AS CONCEPTUAL FRAMEWORK

We turned to socio-cultural learning theory as the conceptual framework to guide our review for several reasons. First, socio-cultural theory stems from examinations of a variety of settings that seem to foster youth and adult learning. This theory addresses the conceptual gaps noted above by positing that implementation process and participation patterns are

Rocking the Boat

essential to understanding environments that achieve learning results. Second, a small number of afterschool researchers have begun to use this theory to guide their own research and to explain individual study results (e.g., Heath, 2001; McLaughlin, 2000). We build on and extend their work by using this framework to organize our review and to synthesize lessons *across* studies.

Socio-cultural theorists acknowledge that youth and adults learn continually across a variety of settings, regardless of whether those settings formally aim to enable learning. However, certain environments are stronger than others when it comes to supporting learning (Rogoff, 1994). Socio-cultural learning theory helped us identify key features of environments that support learning; we used those features to organize our findings on the learning outcomes reported by the research on afterschool programming. While many of these features relate closely to and are interdependent with the others, we present each separately here.

Socio-cultural theorists acknowledge that youth and adults learn continually across a variety of settings, regardless of whether those settings formally aim to enable learning. However, certain environments are stronger than others when it comes to supporting learning.

Social Interactions

At its most basic level, socio-cultural theory views learning as a social endeavor—an endeavor that occurs through social interactions among youth and between youth and adults as they all engage in various activities (Boaler, 1999; Engestrom & Miettinen, 1999; Greeno & MMAP, 1998; Lave, 1993; Lave & Wenger, 1991). This conception of learning contrasts sharply with traditional cognitive and psychological theories that view learning as involving a relatively solitary learner acquiring a body of knowledge. To emphasize learning as a collective enterprise, some refer to the setting for learning as a community (Brown, Collins, & Duguid, 1989; Cobb & Bowers, 1999; Rogoff, 1994) or a community of practice (Lave & Wenger, 1991).

Participation in Genuine, Meaningful Work

Afterschool studies typically use the term *participation* to indicate whether or not youth attend afterschool programs. By contrast, in socio-cultural learning theory, participation refers to deep engagement in particular activities in programs—in particular, to deep engagement in genuine, meaningful work. Genuine, meaningful work takes different forms in practice. However, across settings such work may be defined as that which:

- Is valued, relevant, and authentic
- Involves joint enterprise
- Engages youth in central and valued decision-making roles
- Includes cycles of planning, performance, and assessment

Genuine, meaningful work involves youth in activities that are valued in their own right—not merely activities that prepare youth for valued, relevant, and authentic endeavors down the road.

Valued, Relevant, and Authentic Activities

Genuine, meaningful work involves youth in activities that are valued in their own right—not merely activities that prepare youth for valued, relevant, and authentic endeavors down the road (Lave & Wenger, 1991). For example, a program that drills students in basic arithmetic skills in preparation for using those skills to manage the budget of a dance troupe or to keep basketball team statistics does not reflect the principle of learning as participation in meaningful work. This example would better reflect the concept of authenticity if youth were engaged in managing the troupe or keeping the statistics as an opportunity to learn the basic arithmetic.

Joint Enterprise

A joint enterprise is one in which individuals see their efforts as tied to the work of others. Such interdependencies help individual learners understand that their participation is integral to others' work and often to the survival and growth of the organization itself, whether it is a family, a youth gang, or an afterschool program (Wenger, 1998).

Youth in Central and Valued Decision-making Roles

Genuine, meaningful work engages youth in decision making in relation both to their own learning and to the joint enterprise more broadly (Rogoff, 1994). Such decision-making roles do not necessarily require that youth formally design and run an activity. Rather, when youth are engaged in central and valued decision-making roles, they direct or provide significant input into the activities in which they are involved. Such roles may be distributed across one activity or multiple activities. For example, a service-learning project based on a survey of community residents may not allow youth to choose the overall focus of their service but may ask youth to direct their participation in meeting the needs identified by the survey.

Cycles of Planning, Performance, and Assessment

Through integral participation in planning, youth may develop a deep ownership of and personal responsibility for their own learning. Performances—be they public performances or demonstrations for their peers—help communicate that the work is of interest, and therefore has value, to others. When youth are engaged in assessment, they practice exercising judgment about, among other things, the need for their work as well as its contribution and quality. Engaging in assessment reinforces that the learner and other participants in the activity are mutually accountable for results (Wenger, 1998; Bransford, Brown, & Cocking, 1999).

Youth as Co-constructors of Knowledge

Youth learn when they actively engage material and participate in activities in ways that allow them to integrate new knowledge into their own understanding and experiences (Brown & Campione, 1994; Cobb & Bowers, 1999; Greeno, Collins, & Resnick, 1996; Toulmin, 1999). Specific opportunities for co-construction include tasks that are guided by collaboration among learners in a process of inquiry. In this sense, the cycles of planning, performance, and assessment are important to the co-construction process. Through planning and assessment in particular, youth may engage challenging questions about how to respond to particular needs or interests, how to develop criteria by which their work might be judged, and how to evaluate the extent to which their work and the work of their peers meet those standards (Rogoff, Baker-Sennett, Lacas, & Goldsmith, 1995). In such

communities, conflicting conceptions of how to organize or solve problems appear as opportunities for, rather than barriers to, learning (Achinstein, 2001; Westheimer, 1998).

This orientation departs significantly from traditional linear conceptions of learning as primarily a process whereby students passively acquire a relatively fixed content, as when students are asked to memorize and recite multiplication tables or to perform mathematical algorithms with little understanding of the underlying concepts. Co-construction also re-emphasizes that learning is a social process—rather than an individual endeavor—by turning attention to the relationships both among learners and between learners and the activities in which they engage. For these and other reasons, the socio-cultural perspective considers learning to be "situated," in that it is not an inherent property of an individual across settings but an individual's ability to exercise expertise in particular settings (Greeno, Moore, & Smith, 1993).

Apprenticeship Relationships

Socio-cultural learning theory is not alone in recognizing the importance of mentors in learning. However, it moves beyond whether or not designated mentors are present to focus on the extent to which youth are engaged in apprenticeship relationships that have specific features (Lave & Wenger, 1991). In apprenticeship relationships that foster learning, mentors are able to demonstrate the activities or knowledge to be mastered. The mentors are also accessible and available to those learning the activities, so that apprentices have multiple and varied opportunities to observe and otherwise interact with the mentors. Mentors provide close supervision and support that help the learner participate in the practice to be mastered, as opposed to simply receiving information about it or observing others engaging in it. Mutual trust and respect undergird the relationship: Apprentices trust that they can make mistakes with little or no penalty, and mentors respect that, with adequate support and time, apprentices are capable of demonstrating mastery.

Strong, Valued Identity Structures

Communities of practice operate with multiple, clear, and valued roles or identities for individual participants and for the collective. Structures that support such identities include markers of membership in the community, such as titles ("Girl Scout"), dress (the Girl Scout uniform), and rituals and routines (the annual selling of Girl Scout cookies) (Rogoff et al., 1995). Through identifying with a particular community and with progressively more advanced or mentor-like roles within the community, youth come to see themselves as having particular expertise and begin to develop the habits and skills such expertise requires (Holland, Lachicotte, Skinner, & Cain, 1998). In fact, socio-cultural theory posits that learning has occurred when a youth transforms his or her identity from that of apprentice to mentor or from novice to expert. Accordingly, important identity structures include those that indicate when an individual participates as a novice or an expert. For example, the Girl Scout badge system helps mark girls' progression to more advanced roles in the troop. In some Boys and Girls Clubs, youth over time shift their participation from, for example, playing recreational basketball to taking responsibility for organizing and coaching teams.

Another important aspect of the novice-expert structure is what theorists call "legitimate peripheral participation" (Lave, 1993; Lave & Wenger, 1991; Wenger, 1998). This concept reflects the fact that communities of practice are inclusive rather than exclusive—they feature valued roles for all learners regardless of their level of mastery. Even those roles on the periphery furthest from the activity to be mastered operate in legitimate positions within the community and are important to its functioning. For example, youth not yet ready to participate in performances of a dance troupe might work backstage where they can assist and observe the performers in roles that hold as much value among troupe members as the role of performer. In this sense, "peripheral" does not mean marginal but rather indicates that an individual is moving toward full participation (Lave, 1993; Wenger, 1998).

In effective learning environments, youth are supported to negotiate learning through different routes and at different rates, rather than having to conform to a particular pathway.

Multiple Valued Avenues into the Work of the Community

In effective learning environments, youth are supported to negotiate learning through different routes and

at different rates, rather than having to conform to a particular pathway. For example, a swim team that does not reflect a strong, valued identity structure would include as members only those youth who demonstrate a particular level of proficiency upon entry. A swim team organized to provide multiple valued avenues into the team would develop roles through which youth less proficient at swimming could join the team in capacities that are nevertheless viewed as essential to the team's functioning, so that all youth can engage in understanding and practicing the activity to be mastered. Such peripheral roles might include "competition scout" or "practice partner" for members who compete in meets. In other words, such an environment provides multiple opportunities for legitimate peripheral participation (Brown & Campione, 1994; Wenger, 1998). Importantly, this feature operates at the level of youths' participation, not of program options. For example, an afterschool program that provides a variety of programmatic options, such as the arts, sports, and academics, but that does not provide multiple avenues for youth to participate in each activity would not reflect this design feature.

Such multiple avenues stem from the assumption that each learner enters a community with a level of expertise on which to build deeper understanding. By providing multiple avenues, communities of practice enable youth to tap into and demonstrate their expertise, thus assisting them in drawing on their strengths as they learn to become full participants (Moll, Amanti, Neff, & Gonzalez, 1992). Accordingly, in such settings, knowledge is viewed as being distributed across members so that it is best tapped when every member has multiple opportunities to demonstrate and integrate what he or she knows into the collective wisdom of the group (Brown & Campione, 1994; Toulmin, 1999).

Transfer of Knowledge across Settings

A community of practice is also characterized by structures that enable individuals to transfer their expertise across settings—that is, to apply what they learn in one setting to another. Some argue that a learner's ability to "transfer" is a hallmark of higher-order thinking

StreetSquash Book Club

and problem solving (Pea, 1987). The precise nature of the structures that enable transfer is an emerging area of theoretical development (Hatano & Greeno, 1999). Nonetheless, work to date helps elaborate aspects of environments that seem to enable transfer.

First, on a basic level, such environments are connected to, rather than isolated from, other settings; they help learners engage in those multiple settings. As ecological perspectives on learning have long emphasized, learning results from the interactions between individuals and their multiple contexts (Villarruel & Lerner, 1994). Accordingly, afterschool programs that have some connection to schools, for example, would be expected to have stronger impact on student performance in schools than those that do not.

Second, such environments support transfer by building on the assumption that transfer is an active, interpretive, and selective activity. In this view, the learners themselves are the main points of connection between various settings; they are the primary agents in interpreting and selecting which lessons apply to new settings (Pea, 1987). Specific supports for transfer would focus on the learners themselves and provide opportunities for those learners to consider the relevance of lessons across settings and to practice applying them across those settings.

The view of transfer as an active, interpretive, and selective activity moves away from questions of the structural similarities of environments to ask whether youth themselves have opportunities to grapple with how to use what they learn in one setting in another.

This view departs starkly from the perspective that learners transfer lessons learned across settings that are structurally equivalent. An afterschool program developed on such structural assumptions would aim to extend the school classroom environment by, for example, hiring classroom teachers, using the school curriculum and pedagogical techniques, and otherwise providing "more school after school." However, this assumption that identical or largely similar structures facilitate transfer is a common misappropriation of learning theory (Pierce, Hamm, & Vandell, 1999). Socio-cultural learning theory in particular elaborates that structurally equivalent environments may actually conflict with the other features highlighted above—namely, those that call for providing multiple avenues into an activity (and therefore differentiated learning environments) and that view youth as active constructors of how lessons apply across settings. The view of transfer as an active, interpretive, and selective activity moves away from questions of the structural similarities of environments to ask whether youth themselves have opportunities to grapple with how to use what they learn in one setting in another.

APPLYING SOCIO-CULTURAL THEORY TO AFTERSCHOOL LEARNING

We used the above features of effective learning environments posited by socio-cultural theory to guide our review of afterschool studies. In particular, we coded study findings that reflected these features or seemed to exemplify the opposite. In all, we coded 108 studies. We found that programs associated with positive learning outcomes tended to include at least some of these features, while those that reported limited or no impact on learning outcomes reflected contradictory features. In this section, we array selected findings from our literature review by each of the features to substantiate and extend this overall finding.

Social Interactions

Most afterschool programs recorded in the literature we reviewed appeared to promote social interactions in the sense that most of their activities involved several youth working together in the same setting on shared materials or equipment. Social interactions vary in ways that matter to the strength of the environment as a support for learning, as our examination of subsequent features will show. However, on a basic level, afterschool programs in which youth work on their own in relative isolation appeared as weaker supports for learning than those that promote interactions. For example, Halpern found that in some afterschool programs, "The typical pattern is for children to do their homework by themselves and then seek out the group worker's attention primarily to check the correctness of responses. A more effective but less typical pattern is for a group worker to circulate among the children, providing continual correction, suggestions, and praise" (Halpern, 1992, n.p.). Likewise, Fashola and

others chronicled various disappointing results from afterschool homework centers that involve substantial time for youth to complete their homework on their own (Cosden et al., 2001; Fashola, 1998, 2003). By contrast, others observed that group engagement in materials such as novels can help sharpen youths' critical-thinking skills (Alvermann, Young, Green, & Wisenbaker, 1999). In over a decade of research on arts-based organizations, Heath has concluded that afterschool learning contexts have significant "commonalities with collaborative workplaces such as science laboratories. The work of language and thinking that goes on in such environments takes place in 'communities of practice'" (Heath, 2001, p. 11).

Participation in Genuine, Meaningful Work

Afterschool programs whose studies reported generally positive learning outcomes seemed to enable specific forms of social interactions: those that provide opportunities for youth to participate in what theory calls meaningful work. As noted above, meaningful work in afterschool settings is valued, relevant, and authentic in its own right, not in preparation for other work. Examples of valued, relevant, and meaningful work in the afterschool program literature were those that engage youth in a joint enterprise through which youth see their participation as important to others. Such joint enterprise places youth in central and valued decision-making roles in programs and organizations.

For example, evaluators of the New York City Beacons initiative, a long-standing citywide effort to strengthen learning environments during non-school hours, attributed positive results to youths' participation in organizational maintenance activities such as helping to organize and implement programs (Warren, 1999; Warren, Feist, & Nevárez, 2002). In a study of more than 60 youth organizations operating in the non-school hours, researchers found that participating youth were more likely than their counterparts to face multiple barriers to educational achievement but were ultimately more likely to graduate from high school and to receive various academic honors (McLaughlin, 2000; McLaughlin, Irby, & Langman, 1993). Heath (2000) attributed such success to a focus on meaningful work—work that "depends upon members assuming numerous roles" in sustaining and growing the organization. "Whether acting as receptionist answering the phones late in the afternoon, wearing organizational T-shirts to city arts events, or mediating between two participants whose tempers have flared, youth

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members have to sustain everyday life in the organization" (p. 36). The work of such programs is also considered meaningful in the sense that it provides "multiple roles and responsibilities that tie closely to those business and civic groups identified as essential for the future" (Heath, 2000, p. 39)—thereby demonstrating that the work is considered valuable by those external to the organization.

Other programs such as those of HOME, a community-based organization in the San Francisco Bay Area, feature youth as program and organization directors. For HOME youth, each academic year begins with a planning meeting at which youth participants and other community members generate HOME's priorities for that year. In recent years, planning contributors agreed that youth safety and engagement in positive activities would be strengthened if the neighborhood provided a safe and dedicated place for youth to skateboard—a skate park. Over the course of that year, the youth most interested in the skate park worked together to plan, raise funds for, and ultimately build their county's first skate park. Other youth participated in large events associated with the project, such as park construction days, but otherwise focused their attention on other community priorities chosen during the planning meeting (Deschenes, McDonald, & McLaughlin, 2003).

Youth also seemed to benefit from more modest decision-making roles such as those that engaged them in providing input on program design. For example, compared to their counterparts, students who participated actively in the nationally recognized LA's BEST afterschool program have posted better attendance rates, significant improvements on standardized tests, and other positive school-related outcomes. Program designers and evaluators attributed this success to program designers' efforts "to develop activities around students' interests" (Heckman & Sanger, 2001; Huang, Gribbons,

Rocking the Boat

Kim, Lee, & Baker, 2000). Likewise, one feature of promising programs in a national review of such programs in low-income schools is the extent to which programs were tailored to individual student interests and needs (Meehan, Cowley, Chadwick, Schumacher, & Hauser, 2004; Policy Studies Associates, 1995). An afterschool program in Seneca, Missouri, incorporates state learning objectives into programs but allows youth interests, rather than the standards, to drive choices of activities. For example, program directors ask students to sign up for classes in activities they "love," such as cake decorating. "Once an activity is chosen, the teacher examines the list of state goals to find out which ones can be incorporated into the class. Then we find a way to get the state learning objectives into the course" (Yost, 1999, p. 3). Reflecting the importance of building on youth interests, the U.S. Department of Education argued that quality afterschool programs "give children the opportunity to follow their own interests or curiosity, explore other cultures, develop hobbies, and learn in different ways such as through sight, sound, and movement" (U.S. Department of Education [U.S. DOE] & U.S. Department of Justice [DOJ], 1998, p. 35).

Meaningful work also engages youth in cycles of planning, performance, and assessment, through which youth take leadership roles in and responsibility for their own learning. Acknowledging this feature, a 1998 literature review by the U.S. Department of Education reported that "challenging [extended-time] curriculum… focuses on more than remedial work.… [Q]uality after-school curricula integrate learning and enrichment through clear cycles of assessment, feedback, and evaluation that meet students' needs" (U.S. DOE & DOJ, 1998, p. 35). Such summary findings stem from work by Heath, Roach, Soep, and others on learning in community-based arts organizations. These researchers found that community organizations that create positive learning environments exhibit the same features as authentic workplaces—places where work unfolds "within a 'temporal arc' with phases that move from planning and preparation for the task ahead; to practice and deliberation along with ample trial-and-error learning; to final intensive readiness for production or performance; and ultimately to a culminating presentation of the work that has gone before" (Heath, 2001, p. 12; see also Heath & Roach, 1999; Heath et al., 1998).

Assessment is a central feature of this cycle—in particular, processes by which work is held to a standard of "excellence in performance or production with community youth support" (Heath, 2001, p. 12). Such standards help create environments in which youth are both expected to perform at high levels and supported in the process (Heath & Roach, 1999). This aspect of the assessment process communicates to youth that they are valued and that with proper support they can achieve high standards. This value is communicated in part through the connection between performance and assessment; youth demonstrate their mastery of a particular activity before live audiences of their peers and others and receive feedback in ways that shift the importance of the task from compliance with a standard to youth ownership over and interest in achieving a standard (Soep, 2005a, 2005b).

Meaningful work in afterschool settings may also be characterized in ways not fully captured by theory but nonetheless consistent with the definition of the term in socio-cultural learning theory. Meaningful work in afterschool settings may also include work that grounds youth in issues that reflect the realities of, and concerns important to, their own lives and their local communities. According to Villarruel and others, programs that are "contextually responsive" in this way support learning by promoting "responsive communities which in turn build strong families in the interest of youth" (Villarruel & Lerner, 1994, p. 6). For example, researchers attributed the success of such programs as the Jesse White Tumbling Team to ways in which the team roots its work in the socio-economic realities of the youth participants by, for instance, providing participants with a share of the fees collected for performances (Irby & McLaughlin, 1990; McLaughlin et al., 1993). Programs organized in these ways provide meaningful work because they are "enmeshed in the lived realities—not imagined conditions or construed circumstances—of urban youth" (McLaughlin, 1993, p. 36). Studies of youth gangs as out-of-school activities highlighted how youth learn complex mathematical skills and finance concepts because the work at the core of the group helps address participants' economic needs (Vigil, 1993). Service-learning activities, often rooted in addressing community concerns, were the activity most strongly correlated with positive school performance in McLaughlin's national review of community-based youth organizations (McLaughlin, 2000; see also Grineski, 2003; Hammrich, 1998; Honig, Kahne, & McLaughlin, 2001; Miller, 2003).

Youth as Co-constructors of Knowledge

Certain arts-based organizations have been observed to integrate written and spoken dialogue into the creative process in ways that enable a particular artistic performance while also strengthening youths' critical thinking and linguistic abilities. According to Heath and her colleagues (1998), such integration seems to involve "three pairs of verbal activities:
1. Theory building and checking out the possible…
2. Translating and transforming… 3. Projecting and reflecting." In short, "posing problems and asserting the hypothetical constitute the kind of language that young artists habitually use during periods of planning, preparing, and practicing" (p. 5). Language changes as vocabulary, question structures, and if-then conditional statements become natural to the process of the work—all activities essential to the linguistic and cognitive abilities that undergird higher-order thinking (see also Ferreira, 2001; Hynes, O'Connor, & Chung, 1999). Soep has demonstrated how youths' engagement in the critique of their performances further helps youth integrate new forms of verbal expression and understanding into their current understandings in ways that expand their knowledge (Soep, 2003, 2005a, 2005b).

Meaningful work in afterschool settings may also include work that grounds youth in issues that reflect the realities of, and concerns important to, their own lives and their local communities.

Research on afterschool programs in areas other than the arts did not use the term *co-construction* but emphasized analogous activities in which youth engage as active interpreters of materials and develop agency with regard to their own learning. For example, one afterschool program reported significant improvements in girls' attitudes toward and performance in science (Hammrich, 1998). Researchers attributed such success in part to distinct program features including multiple opportunities for youth themselves to investigate and identify the root causes of environmental problems. Specific activities

> included such things as developing community environmental awareness campaigns, conducting surveys of the schools' and neighborhoods'

> recycling plans, testing… levels of pollution in their … homes, identifying pollutants found in garbage, air, water, and elsewhere, and creating an environmental newsletter that engaged in reflection activities designed to help them better understand their personal learning, challenge stereotypical notions about science, and to develop critical thinking skills. These reflection activities included writing, interactive discussions, and creative expression through the arts…. The activities clearly connect subject matter, ways of making sense of the subject matter, and real-world issues. (Hammrich, 1998, pp. 24–25)

Similarly, an afterschool book club brought high-school-age youth together to promote reading and critical thinking. While the report we reviewed did not post discrete outcome measures, researchers suggested that the club was successful in reaching its goals. Researchers identified *negotiations* as a key to the club's success. Negotiations involved opportunities for youth to analyze their positions within the club, to choose which texts to read and how to discuss them, and to examine how issues of authority—including gender and race—affected their own and their peers' ability to participate. Through such negotiations—what socio-cultural learning theory might call *opportunities for co-construction*—youth made explicit otherwise taken-for-granted perceptions of literacy, schooling, adolescence, and gender that "position individuals differently." These negotiations in turn mediated the youths' success in school and other arenas (Alvermann et al., 1999).

Youth seem to seek out and excel in afterschool settings that support apprenticeship relationships based on mutual respect and on protection from failure and other negative outcomes.

Apprenticeship Relationships

Although apprenticeships have long been a feature of afterschool programs, socio-cultural learning theory prompted us to look beyond whether individuals in afterschool programs were designated as formal mentors in order to focus instead on the extent to which apprenticeship relationships had particular features: mentors who can demonstrate mastery, who are accessible and available, and who promote an apprenticeship relationship undergirded by mutual trust and respect as well as supports against failure.

In some programs, adult professionals work often alongside youth "to monitor and support" and to provide "ample opportunities … for practice, apprenticeship, and talk with older youth who previously held these roles or remain as staff members" (Heath, 2000, p. 38). Female engineers served in this role in an afterschool science program that improved girls' performance in and attitudes toward math (Ferreira, 2001). Expertise may also transcend particular activities to include social and cultural capital that helps expand youths' participation in particular activities. For example, McLaughlin has described how mentors' relationships with employers and colleges may enable youths' employment and further education by connecting youth to individuals in those settings. Mentors also may model for youth the types of behaviors—dress, speech, handshakes, and other conventions—that may help youth access such opportunities (McLaughlin, 1993; McLaughlin et al., 1993).

The impact of mentors with expertise may hinge on their availability and accessibility. For example, Halpern studied a network of afterschool programs in Chicago and found that effectiveness of mentoring relationships varied. While the researchers suggest that mentors typically were present on site, some were largely absent in the sense that they did not always "notice and act to include children in various activities" (Halpern, 1992, n.p.). Fashola argued that afterschool programs on the whole do not contribute significantly to learning outcomes. However, she highlighted several programs that buck these trends; these programs seem distinguished by the relatively high availability and accessibility of knowledgeable adults in mentoring roles (Fashola, 1998; see also American Youth Policy Forum, 2003; Cooper, 2001).

Youth seem to seek out and excel in afterschool settings that support apprenticeship relationships based on mutual respect and on protection from failure and other negative outcomes. For example, the I Have a Dream program in inner-city Chicago posted graduation rates for participants that were double those of their non-participating counterparts. Researchers associated this success with the "creation of strong, trusting, and sustained relationships with youth" (Kahne &

Bailey, 1999, p. 328). "Through interviews and observations, it became clear that whether youth showed up for tutoring often depended more on how they felt about the person telling them to come" than on other factors (p. 329). The program coordinators' ability to help depended significantly on their "ability to connect" with participants. Similarly, the success of Big Brothers/Big Sisters programs in improving youths' relationships to school along a variety of indicators has been attributed in part to substantial training for mentors in how to establish strong, caring, and supportive relationships (Tierney & Grossman, 1995). Some have noted that youth gangs sustain youth engagement and help youth learn complex skills in financial and personnel management; such success seems to hinge in part on the extent to which the gangs provide role models who offer respect and protection—including protection from failure (Vigil, 1993).

Many have noted that respect for youth is communicated not only by individual mentors but also by the way the work at the core of the apprenticeship relationship is organized. Specifically, programs that organize their activities in ways that amplify youth problems such as delinquency or drug use "too often only reinforce youths' views that they are somehow deficient and that they are problems" (McLaughlin, 1993, p. 59). Afterschool programs that promote learning put youths' strengths at the center of their activities and apprenticeship relationships (Heath & McLaughlin, 1994a, 1994b).

Socio-cultural learning theory does not specify that the mentors should be adults; in fact, it suggests that youth and adults alike may serve as mentors, depending on who has expertise related to particular work. Research on afterschool programs as learning environments in recent years has begun to reveal the important role youth themselves play as mentors in apprenticeship relationships. For example, while an examination of the 4-H Youth Experiences in Science project did not link youth as mentors to learning outcomes, the study did demonstrate that adolescents were able to help initiate exploration, the testing of ideas, and other activities key to science learning (Ponzio & Peterson, 1997). In other words, youth themselves demonstrated mastery in science and made their expertise accessible and available to other youth. Even though youth may not be designated in formal mentoring roles, afterschool programs as learning environments sometimes feature youth assuming those roles and alternating as mentors, depending on the nature of the work at hand and who has expertise. (For a paper that supports this important point but that does not report learning outcomes, see Hill, 2000.) Through such "turnover teaching," older youth learn as they help younger members access particular knowledge and skills (Heath, 2001, p. 13).

Strong, Valued Identity Structures

The discussion above suggests that afterschool programs strengthen learning by providing strong, valued identity structures, in part through legitimizing positions on the periphery of expertise and mentor-apprentice relationships. Such programs also either intentionally or unintentionally build on the notion that developing expertise involves a process of transforming identity from peripheral to more central participation in an activity; opportunities to practice more central roles can support this identity transformation process. For example, some arts organizations provide opportunities for youth to practice using professional artists' "vocabulary, techniques, strategies, and models

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of innovative practices" in their own work (Heath et al., 1998, p. 7). In such organizations, youth "learn to work and talk as practicing artists" (Heath et al., 1998, p. 7) and find multiple opportunities to take on various valued roles (Heath & McLaughlin, 1994a, 1994b). These relatively recent findings reinforce those of classic studies on extracurricular activities that found that such activities produce various benefits for youth when they "provide opportunities for acquiring, developing and rehearsing attitudes and skills from which status goals evolve and upon which future success is grounded" (Otto, 1976, p. 1361; see also Spady, 1970). Such rehearsal opportunities help youth understand that their position in a given community matters, thus sparking their motivation to learn.

Identity structures may include not only those related to expertise but also those that help learners

StreetSquash Book club

link their own experiences and understandings to new activities, as discussed above with regard to co-construction of knowledge. For example, an afterschool book club seemed to strengthen girls' abilities to read critically by focusing discussions in ways that enabled youth to express their racial and personal identities in their interpretations of novels. In this way, girls demonstrated strong abilities to understand, relate to, and criticize texts while collaborating with others in making sense of those texts (Smith, 1997).

Identity structures also support learning indirectly by helping youth develop a sense of belonging to a community of learners that facilitates their participation regardless of their level of expertise. For example, girls participating in a science program that strengthened their interest and performance in science identified themselves as "sisters in science," after the name of the program (Hammrich, 1998). Fine and Mechling have discussed the important function of Boy Scout uniforms and rituals, such as handshakes and signals, in helping young boys engage in that community (Fine & Mechling, 1993). Similarly, youth gangs provide "recruitment and initiation, goals and roles" and various ranked identities that communicate clear expectations for success in those communities and help youth understand where they stand (Vigil, 1993, p. 107).

The afterschool literature we examined also referred to the importance of program routines in communicating expectations about "successful" and "productive" participation. Such routines help guide youth in strengthening their own learning. For example, the Boy Scouts provide a system of activities and badges that help youth gauge their progress toward mastery in a given arena because they understand specifically what they must do to progress (Fine & Mechling, 1993). As another example, one afterschool program had a 100 percent high school graduation rate—a rate significantly higher than the regional mean—and its students posted higher school marks than non-participating peers. Researchers attributed these results in part to strong routines governing, for instance, how to address staff and to move between activities. These routines helped youth feel they under-

stood what was expected of them and what it meant to do well in that setting. Furthermore, such an approach focuses on promoting positive forms of engagement rather than on correcting deviations, thus strengthening youths' willingness to participate (Beck, 1999).

Multiple Valued Avenues into the Work of the Community

Socio-cultural theory suggests that strong learning environments support youth in accessing expertise through multiple valued routes; in this view, participation in an activity is not only for those who are already proficient but for all. Certain afterschool programs cited above build on this principle to the extent that they both invite youths' participation based on their interests, not necessarily their present abilities, and provide mentoring and other support to enable youth to participate immediately in meaningful roles. For example, an urban 4-H program in Kansas City, Missouri, attributed gains in participating students' grades and attendance in part to its diversified and holistic approach to learning in which success in academics, sports, and work with others, among other arenas, are given equal value. These nonacademic areas, which are nevertheless seen as learning activities, are offered to youth as gateways to activities youth might not choose for themselves (Resources Development Institute, 1998; see also Minicucci Associates, 2001). Other studies indicated that whether or not offering multiple programmatic options ensures that multiple valued avenues into the work of the community are available depends on how roles are structured within those activities (Holland & Andre, 1987; Schinke, Cole, & Poulin, 2000). The designers of the 21st Century Community Learning Centers program in San Francisco attributed early program success to ways in which the program is not "a simple extension of the school day but rather an enrichment of the overall school experience" (Trousdale, 2000). Assessment of individual youth learning needs may help programs create suitable opportunities for youth to participate even within the same program (Cavanaugh, 1997).

As one contrary example, the national evaluation of 21st Century Community Learning Centers posted virtually no impact on student learning in its aggregate national sample. Information on the first two years of implementation suggested that these programs mainly provided a narrow range of academic activities often resembling those already available during the school day without offering multiple valued avenues into the work of the program. For example, the program hired classroom teachers to serve as primary afterschool staff and used school curriculum and pedagogy as the basis for the afterschool program. Alternative activities such as the arts and sports were used as rewards for students' completion of their homework or tutoring but generally not as opportunities to create new avenues for youth to access expertise in various arenas (Mathematica Policy Research & Decision Information Resources, 2003).

> For youth who are already performing poorly in school, extending the regular school day's activities into non-school hours may actually explicitly build on what students do not do well.

Transfer of Knowledge across Settings

When the afterschool studies cited above and elsewhere linked youths' experiences after school to students' school performance outcomes such as grades and attendance, they implied that knowledge has transferred across those two settings. As noted above, socio-cultural learning theory suggests that certain features of learning environments may enable such transfer between afterschool and school settings—in particular, acknowledgment that youth themselves are important agents of transfer. Structural similarities may limit learning, and ultimately transfer, if they curtail youths' avenues into various activities.

Many studies reported that linkages between schools and afterschool programs are important but did not specify or justify what counts as a productive linkage or the extent to which afterschool programs in practice support such linkages (e.g., U.S. DOE & DOJ, 1998). Some reports characterized the challenge of transfer as one of bringing education into the non-school hours in ways that depart starkly from socio-cultural learning theory's suggestion that afterschool programs themselves already constitute settings for learning (U.S. DOE, 1999).

Other studies support socio-cultural learning theory by negative example—in particular, by demonstrating limited impacts of school-linked afterschool programs that mainly replicate the school program. To take one prominent example, the national 21st Century Community Learning Centers evaluation reported limited to no impact on various school performance measures such as grades and standardized

test scores. While individual programs vary, programs nationwide tend to provide academic tutoring in the school curriculum, to hold students accountable for the same high-stakes standards to which they are held in school, and, at many sites, to hire classroom teachers as the main afterschool program staff. Some programs explicitly aim to use their afterschool program to provide students with more time on school tasks (Mathematica Policy Research & Decision Information Resources, 2003). Socio-cultural learning theory helps explain that these features of the in-school/out-of-school link are unlikely to be associated with learning gains because they emphasize increasing the similarity of core structures or activities across both settings in ways that limit the range of avenues through which youth might participate, either in school or after school. These findings are supported by research on extended school-day programs. In a review of research on such programs, researchers found that "although extending time in school might have non-instructional benefits, there was little evidence that it would elevate the level of student achievement" (Evans & Bechtel, 1997, p. 1). More critical than how much time is spent in school was the issue of how the time is used (Carnegie Council on Adolescent Development, 1994; Evans & Bechtel, 1997). For youth who are already performing poorly in school, extending the regular school day's activities into non-school hours may actually explicitly build on what students do not do well.

Such programs may have particularly deleterious consequences in the many resource-poor and underachieving urban districts across the country. Many have reported that in such districts the school curriculum itself has been narrowed to limit the types of experiences schools provide by, for example, eliminating electives or individualized curriculum. These curricula increasingly rely on "'teacher proof' scripted teaching materials" that emphasize "'the basics' in their attempts to raise test scores" (Quinn & Kahne, 2001, p. 18). Aligning afterschool programs to such environments may significantly curtail youth participation in learning in ways that further explain the limited impacts of afterschool programs in such settings.

Various researchers have warned against such structural linkages (National Institute on Out-of-School Time, 2002) and have called for reducing the duplication between the out-of-school and in-school environments in order to enhance learning (Brown & Theobald, 1998). Socio-cultural learning theory helps elaborate the importance of establishing school-afterschool links that focus on the youth themselves; a few afterschool studies in our review helped support this point. For example, none of the more than 60 youth organizations in Heath and McLaughlin's (1994a, 1994b) research had a formal, structural connection to a public school. Rather, program staff helped youth to see themselves as able learners and to translate that learning into school performance by pointing out connections between, for example, managing the business of the tumbling team and high school math requirements. Such programs help youth adopt the identity of "successful learner" in multiple out-of-school settings so that youth ultimately adopt and exercise that identity in school as well. In other words, youth themselves enable transfer through the transformation of their identity, which they bring with them across school boundaries (Soep, 2005a, 2005b). As Heath and colleagues (1998) observed, "Having spent so much time posing problems, asking questions, considering possible solutions and evaluating how the arts communicate, young artists take up some of these habits as 'second nature' in other domains of their life" (p. 8). Such experiences also may be transformative for classroom teachers when they are invited to participate in alternatively structured afterschool programs. "In the more informal setting of an after-school program, students can connect with teachers and other adults as they explore an interest in hip-hop music, Mexican folk dancing, community service, or autonomy" (Heath, 2001, pp. 8–9). By participating in such activities, teachers have opportunities to see youth succeed, so that they may reform their attitudes about youth capabilities in ways that matter to youths' school performance.

Such youth-focused linkages may also operate on a cultural level as afterschool staff help youth understand and practice the norms and behaviors to which they are expected to adhere in school and to carry those behaviors into school settings. For example, a study of an afterschool fine arts program in an urban Michigan district associated improvements in participating African-American youths' grades and attitudes toward school to the discipline and social cues learned in their afterschool program. Researchers concluded that these youth under-performed in school not because they lacked the mental capabilities but because they did not display what adults in school viewed as "responsible behavior." The afterschool program taught the youth not only alternatives to risky behaviors but also how to reflect the cultural norms of their schools in ways that helped improve teachers' perceptions of them. This learning influenced their

willingness to participate in school and ultimately their performance there (Walker, 1995).

These findings do not suggest that programs should refrain from including certain school structures, such as tutoring or an expressly academic format, or from hiring school teachers as staff. Rather, the essential design question becomes: To what extent do such features support youths' participation in a community of practice? For example, the 21st Century Community Learning Center in Palm Beach County Public Schools, like programs nationwide, reported that it hires classroom teachers to provide reading and math assistance in order to improve students' grades and standardized test scores. However, perhaps unlike other programs nationwide, the Palm Beach program associated participation with positive impacts on such outcomes as grades and standardized test scores. While, on a programmatic and structural level, the Palm Beach program appears similar to others nationwide, it may differ consequentially at the level of participation. Researchers reported that teachers use materials different from those used in their classrooms, that the program encourages alternative teaching methodologies, and that guidance counselors and community agency staff also participated in various aspects of the program (Lacey & LeBlanc, 2001). Likewise, the Sisters in Science program in Philadelphia was designed explicitly to support the district's Children Achieving initiative and to link to Philadelphia's National Science Foundation initiative in math and science; however, its activities deliberately did not replicate school activities (Hammrich, 1998). Most of the successful academic afterschool programs chronicled by Fashola (1998, 2003) rely on intensive curriculum linked to but different from what students experience during school. These programs feature strong mentoring relationships, individually tailored instruction, resources and assistance from non-school organizations, and paid work activities (Fashola, 1998, 2003).

In their own review of such school linkages, the North Central Regional Education Laboratory found that:

> High-quality after-school programs seek to create connections with the curriculum and instruction offered by the school during traditional hours. However, they do not duplicate or repeat. When a child gains competence in sports, music, or gardening, the confidence and skills that come from that experience are transferable to academic skills. Positive experiences in recreational programs and the development of strong relationships with staff and peers may motivate a child to get excited about learning and to do better in school. (Caplan & Calfee, 1998, n.p.)

SHAPING RESEARCH AND PRACTICE

This paper aims to contribute to afterschool research by highlighting the importance of developing stronger conceptualizations of what afterschool programs do and achieve. In particular, we have argued that socio-cultural learning theory captures important features of afterschool programs that positively affect student learning. Socio-cultural learning theory helps us elaborate these connections between afterschool programs and learning in part by prompting us to look beyond broad program categories such as the arts or academics to examine the patterns of youth and adult participation by which programs may be more meaningfully distinguished. From this review we have drawn several implications for research and practice.

Implications for Research

The research base on afterschool programs would be greatly enhanced by better documentation of implementation practices and by use of appropriate theoretical frameworks to ground data collection and analysis. Our review proved particularly challenging in part because too many researchers assess program impact without documenting the patterns of participation that can begin to explain those outcomes. Accordingly, program features important to this review may have been omitted here, even though they may have been supported in practice, because they were not reported in the research literature.

When a child gains competence in sports, music, or gardening, the confidence and skills that come from that experience are transferable to academic skills.

Furthermore, far too many researchers draw conclusions about the relationship between programs and learning without drawing on theories of learning that can help substantiate such a connection. Longitudinal, qualitative, and theoretically grounded case studies that deeply probe program practices and youths' experiences seem essential to expanding the knowledge

Researchers also can use socio-cultural learning theory to ask essential questions that go beyond the examination of afterschool program features. One such question is, what counts as learning?

base about afterschool programs. Socio-cultural learning theory provides an important conceptual framework to guide future research. Socio-cultural learning theory helped us mine research reports for evidence that seemed to explain positive and negative or negligible learning impacts. Future researchers can further test the applicability of this framework by using it to guide their data collection and analysis from the outset of their original empirical research.

Researchers also can test and extend the applicability of socio-cultural learning theory to afterschool programs by further mining the theory for additional concepts that affect how afterschool program implementation unfolds. For example, a significant strand of the theory suggested by but not highlighted in this paper relates to how different learners mediate learning outcomes as co-constructors of knowledge and agents of transfer. Older youth in afterschool settings may have different opportunities for learning than younger youth. Youths' race and class may matter significantly when it comes to learning after school, particularly given that afterschool programs are increasingly targeted to low-income youth and that contemporary afterschool programs tend to operate in settings of deep deprivation and discrimination (Fashola, 2003; McComb & Scott-Little, 2003; McLaughlin, 1993). Future research might do well to elaborate the variations among the youth served by afterschool programs.

Researchers also can use socio-cultural learning theory to ask essential questions that go beyond the examination of afterschool program features. One such question is, what counts as learning? While our review focused on conventional school-related learning outcomes, socio-cultural learning theory does not. This theoretical tradition embraces a range of learning outcomes related to acquiring mastery, such as developing expertise in swimming, community service, leadership, business, and other arenas of afterschool program life. Given the importance of youths' identity and agency to the transfer of learning across settings—including through the schoolhouse doors—researchers might consider how to include these nonacademic learning outcomes as at least interim measures of program success.

Second, what factors help or hinder afterschool programs in becoming learning environments and sustaining their effectiveness? Various afterschool studies offer lists of resources that can support the implementation of afterschool programs. These lists typically refer generically to "training," "funding," and other resources important for any organization's survival, but they do not necessarily indicate what it takes to implement effective learning environments. Researchers should consider using the features of learning environments presented here as the basis for site selection—that is, to choose a program that already seems to demonstrate these features—and then focus their work on the conditions under which those features may be constrained or enabled.

Research of this kind—deeply theoretical and focused on day-to-day participation patterns and on youth as central agents in the learning process—is labor intensive. Such studies, if done well, typically require extensive observations and interviews over time. Those who fund afterschool research may add the most value to the field if they invest more resources in fewer intensive, qualitative studies with significant, rigorous, and strategic case study designs.

Implications for Practice

Socio-cultural learning theory raises many questions that practitioners might consider when implementing afterschool programs that aim to strengthen student learning. For instance, the socio-cultural framework can be translated into a diagnostic tool to help staff of afterschool programs investigate the extent to which their programs reflect the features of effective learning environments. Such investigations would require staff to have detailed information about the program's day-to-day practices in order to explain various results. Program staff might consider how to build such data collection into their daily work and require that their evaluators provide such information.

Creating school links that focus on youth, rather than on similar structures, may run counter to the guidance of policymakers and other educational leaders who would focus afterschool programming on school curriculum and performance standards. Afterschool program directors should weigh carefully the potential benefits and hazards of entering into formal school partnerships and of accepting public education dollars for their work. Socio-cultural learning

StreetSquash Book Club

theory suggests that afterschool programs can improve student school performance by focusing on the youth themselves. Those who design afterschool programs might consider using the features of effective learning environments outlined in socio-cultural theory as their primary research-based program guide.

Clearly, crafting communities of practice is labor- and relationship-intensive work, and day-to-day implementation may appear messy. As some afterschool researchers caution, implementing meaningful work and other aspects of communities of practice is non-linear and at times chaotic. "At a basic level, students who authentically engage in the arts frequently make a mess" (Quinn & Kahne, 2001, p. 24). Such observations suggest that some degree of non-linearity and messiness is par for the course in implementing afterschool programs as strong learning environments. In addition, programs may simply not have the capacity to implement all the learning environment features to equally high degrees all at once, at least in the first few years. Program staff and policymakers might consider how to accommodate such program development in their evaluations and, at a minimum, not jump to premature conclusions that a program is failing because implementation is difficult. Implementation may be difficult precisely because the program is going well.

Those who design afterschool programs might consider using the features of effective learning environments outlined in socio-cultural theory as their primary research-based program guide.

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PHOTO CREDITS

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Ifetayo Cultural Arts Facility, Inc.

Ifetayo is a community-based arts and cultural organization dedicated to supporting the creative, educational, and vocational development of youth and families of African descent living in Brooklyn and surrounding communities. Through its experience with this underserved population, Ifetayo has created an innovative model for self-healing and life preparation through the arts and cultural activities. Since its founding in 1989, Ifetayo has sought to improve the lives of young people by providing programs in the performing and visual arts, as well as academic instruction, health and wellness education, and professional and personal skills development through six major programs: the Cultural Arts performing and visual arts training program; the professional youth company Ifetayo Youth Ensemble; I Am My Brother and Sisters in Sisterhood rites of passage programs; the Arts in Education program for public schools; and the Marcus Garvey Cultural Heritage Program, which includes an international studies component. For more information, visit www.ifetayoculturalarts.org, email info@ifetayoculturalarts.org, or call 718.856.1123.

Rocking the Boat

Rocking the Boat is a program in wooden boatbuilding and on-water education for high-school-aged students in the southwest Bronx of New York City. Through a hands-on, multi-faceted approach to education and youth development, Rocking the Boat addresses the need for inner-city youth to achieve practical and tangible goals related to both everyday life and future aspirations. Rocking the Boat runs intensive afterschool and summer programs that serve 150 young people annually, as well as Bronx River community environmental programs that serve another 600 students during the school day. For more information, visit www.rockingtheboat.org or contact Adam Green, Executive Director, adam@rockingtheboat.org or 718.466.5799.

StreetSquash

Launched in September 1999, StreetSquash is an intensive youth enrichment program encompassing academic tutoring, college preparation, literacy enrichment, squash instruction, community service, mentoring, and cultural exposure. StreetSquash will serve over 140 children this year, a significant increase from the 28 with which it started six years ago. StreetSquash's mission is to provide consistent and reliable support to Harlem's children, families, and schools. By exposing children to a variety of new experiences and by maintaining high standards, StreetSquash aims to help each child realize his or her academic and personal potential. StreetSquash believes that long-term, intensive work is needed to reach its goals, so it requires a six-year commitment from all participants in its core afterschool program. For more information or to volunteer with StreetSquash, contact George Polsky at george@streetsquash.org, call 212.949.4030, or visit www.streetsquash.org.

Your Program in Pictures

Does your youth development program have photos that you would like to contribute to the Robert Bowne Foundation's Occasional Papers? If so, please submit high-resolution photos of youth, staff, and community members in a range of activities during the out-of-school time. We will ask you to fill out a form indicating that you have permission from all participants who appear in the photos. Send to:

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