

Institutional Influences on the Provision of After-School Nature Programs

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Abstract

This study examines the institutional factors that affect organizations' decisions to offer after-school nature programs. Data are from interviews of 31 staff and administrators of after-school programs in San Diego, CA. Results show support for the importance of nature education experiences in general, and that such activities are more likely to be offered if they directly support the agency's mission, if the on-site supervisor and/or a staff person has an interest or knowledge in that area, if delivery and cost issues are overcome, and if they have evidence that the children like the activity. After-school nature education providers can ease some of the logistic challenges by understanding the social dynamics and organizational issues involved.

Keywords: nature education, after-school programs, social influences, agency decision making, agency mission

Introduction

The focus of this study is after-school programs where children's activities at least occasionally include nature-based experiences and education. In particular, our attention is on the institutional factors that influence how and when after-school nature program opportunities occur in San Diego, California and argue that these factors can greatly affect the prevalence of nature-based programs. After-school nature programming is part of a broader movement to make natural areas accessible. In a study recently completed for The San Diego Foundation (2010) called "Parks for Everyone," an inventory was made of all "green spaces" in San Diego, including parks, natural open spaces, beaches, playing fields, trails, and recreational facilities. They found that the presence of green space alone is not enough to achieve nature education goals, and that youth must have access to green space and use it in meaningful ways. We have investigated such access only in an after-school program context, and seek to better understand how these programs might benefit from some institutional or cultural guidance to make these experiences more meaningful.

Further, our study is limited to after-school programs which are conducted on school grounds or off-site at nearby parks and nature reserves. After-school providers in our study area (San Diego) have some guidelines to follow in both program choices and on-site activities. However, these guidelines are less stringent than might be found in classroom settings, and often the provider (agency or community organization) can choose from among alternative activities, which may or may not be strictly considered nature education, but serve a broader purpose of engaging youth in nature-focused activities.

The study objectives were to assess:

1. Individuals' and organizations' decision-making processes about whether to offer nature experiences for children
2. awareness and attitudes about nature experiences for children among organization staff.

Background and Related Work

Access to Natural Areas

In his book, *The Nature Principle*, Richard Louv (2011) holds that a reconnection to the natural world is fundamental to human health, well-being, spirit and survival; and that its restorative powers will transform how and where we live, learn, work and play. Others, such as Sobel (2012) reiterate part or all of this position and continue to argue for direct nature experiences by youth in their formative years. While this is inspiring, we think this is an oversimplification of the processes involved. Contact with nature *might* positively influence the lives of children when they spend time there, but such outcomes are not preordained. The scientific literature is more circumspect and points to a complex picture. In addition to concerns that arise from educational processes or learning theory, there are many challenges that reflect the organizational context at individual, institutional, and community levels that need to be understood.

Although a thorough review of the literature about the benefits of outdoor play, nature education and environmental interpretation is beyond the scope of this paper, we concur with this literature and seek to contribute to it by focusing on how to engage youth with the natural world and construct meaningful programs (note especially Ham 2013; Frumkin and Louv 2007; Kellert 2005). Practitioner-focused research corroborates some of these claims for long-term effects. For instance, Hamilton-Ekeke (2007) used a more rigorous post-test control design to show that first-hand experience with organisms on school field trips pays off with better ecological learning later. Asah and colleagues (2012) found some strong connections between adults' environmental behaviors and their experiences earlier in life. While their work is not definitive, it points to the importance of looking beyond program-specific pedagogical issues to enduring lifestyle effects. Other work by Chawla (2001; 2007) and Wells and Lekies (2006) corroborates these points, showing how programs can affect environmental literacy, stewardship and adult environmentalism. Noteworthy is Chawla's (2007) suggestion of a theoretical framework that includes various social and cultural factors that affect these outcomes. Again, however, her emphasis is on the development of individual environmental competence and lifestyle issues, not on the contextual issues that affect the provision of opportunities in the first instance. This leads us to conclude that there are very important understudied contextual factors that not only may affect the success of after-school nature programs but also the original decisions about whether to offer them at all and how to structure them: namely the social and institutional factors within which various youth nature engagement programs operate.

We investigated only after-school programs in the San Diego area. Previous research, more broadly based, (Ardoin and Heimlich 2013) showed that although practitioners and educators in the conservation education field may not see environmental education in the same way, they generally agree on the value and purpose of conservation education efforts, especially as they relate to achievement of their respective mission-based goals. The researchers further noted that adults and community members may lack an understanding of the social and professional milieu of program designers, which in turn may result in challenges for mission success. Nature education programs are offered to children in many settings and are often implemented by enthusiastic educators sharing their knowledge with children and adults. As children themselves rarely choose their activities, the supervising adults (parents, teachers, after-school providers, and others) actually decide whether children have nature experiences. Numerous studies have concluded that parents are likely to be supportive and value the benefits that can be derived from nature education experiences for their children (e.g., Larson, Whiting and Green 2013).

Using an evidence-based approach, Rickinson et al. (2004) pointed to the multiple benefits of environmental education and also revealed constraints that limit the amount or effectiveness of outdoor learning, including some institutional and logistical factors. Dillon et al. (2006) and Dymont (2005) provide comprehensive reviews of this work and suggest other studies to consider. Dymont identifies further barriers in her work on green school grounds. She noted that in her

Canadian context, too often their use is limited in scope (e.g., science classes), and concluded that “it seems a profound loss to have them remain underused.” Riemer and colleagues (2014) have argued for a “systematic approach to the development and evaluation of youth-based non-formal environmental engagement programs.” Ernst and Tornabbee (2012) found that perceived difficulty in using natural areas and participants’ “nature-relatedness” were linked to the use of outdoor settings, and recognized lack of access and safety concerns as barriers. Malone and Tranter (2003) suggest that, although there may be large variations in both the physical properties and the sociopolitical context of school grounds used for nature education, there are many ways to address and overcome such barriers.

Factors Relating to Individuals Making Program Decisions

Several factors appear to contribute to a child’s exposure to nature-based and environmental education. One centers on the individual attributes of supervising adults. Regardless of their role—parent, teacher, or after-school staff member—an adult who values nature highly and has a commitment to learning about nature will make efforts to have children learn about and experience nature (Hart 1996; 2003; May 2000; Shuman and Ham 1997). Another factor relates to personal history. The life stories of environmental educators and conservation professionals often reveal that they spent considerable time in nature as a child. This suggests that a noteworthy life experience that included nature significantly contributes to one’s commitment and motivation to provide environmental education and to expose children in their care to nature activities (Chawla 1998; 2001; Corcoran 1999; Palmer 1993).

Chawla (2007) draws on ecological psychology and attachment theories to explain why active care for the environment in adulthood is frequently associated with positive experiences of nature in childhood or adolescence. Wells and Lekies (2006) examine connections between childhood involvement with the natural environment and adult environmentalism from a life course perspective. They interviewed 2,000 adults ages 18 to 90 living in urban areas throughout the United States regarding their childhood nature experiences and their current, adult attitudes, and behaviors relating to the environment. They found that “wild nature” participation in childhood such as trips to nature preserves is positively associated with environmental behaviors, while “domesticated nature” experiences such as flower gardening at home are marginally related to environmental behaviors.

Among those who provide interpretive or educational programs a countervailing tendency has also been observed. Several researchers (Cutter-Mackenzie and Smith 2003; Ham, Rellergert-Taylor and Krumpal 1988; Ham and Sewing 1988; Spork 1992) have found that those who feel they do not have enough knowledge about the environment do not provide environmental education. Hanna (1992) found that teachers are less likely to provide environmental education if they lack at least one of the following characteristics: knowledge, attitude or skill related to nature-based programs. Ham and colleagues (1988) found that teachers who perceive environmental education as low in importance are likely to lack the commitment required to provide and/or sustain it over time. The literature above suggests that staff recruitment and training may be a key issue in the success of

environmental education efforts.

Generally, however, nature education is highly valued. In a national survey, Americans were asked whether environmental education should be taught in the school and whether the government should support teaching about the environment in schools (Coyle 2005). Overwhelmingly, 95 percent of respondents stated that they support environmental education in the schools and 85 percent felt that the government should be supportive of such education. Additionally, Coyle noted that these results shed light on an increase in public opinion in support of environmental education over the last 20 years. Not only are these compelling results for providing environmental education in the schools, but they may be extended to other settings such as after-school programs.

Factors Relating to Institutional Decisions about Programs

Institutional factors influence childrens' exposure to nature in schools. Hart (2003) reported that nature activities and programs were much more likely to thrive in schools if administrators and school district personnel were supportive of the program. Staniforth (2006) found that nature activities are more likely to become embedded in the school curriculum or offerings if an administrator gives curriculum support, recognizes teachers, students, and volunteers, provides funding, and involves the community.

Even with the positive traits that contribute to nature activities, teachers report that within schools a huge deterrent to providing such activities is time (Cutter-Mackenzie and Smith 2003; Ham and Sewing 1988; Staniforth 2006). This is closely followed by curriculum restraints and resource constraints including limited funding and logistical barriers ranging from transportation and equipment to risk and liability issues. These school-related constraints suggest an even more significant role for after-school nature education opportunities.

There is a growing body of literature focused on successful non-school programs, although this work does not necessarily focus on nature or environmental education. The "community of interest" for after-school programs includes the After-School Alliance (2009) (www.after-schoolalliance.org) and the "Best of Out-of-School Time" (BOOST 2015) national and regional conferences (www.boostconference.org). A Rand Corporation study (2005, 72) summarized program factors associated with positive outcomes in the non-school setting:

The youth-development and education literatures both emphasize the importance of having high expectations of youth, be it with respect to their conduct, learning, or achievement. The school-age-care and youth-development literatures highlight the need to offer opportunities that are age-appropriate and challenging, that provide opportunities to develop or master new skills, and that emphasize the importance of trying to integrate community, program, and family efforts to support youth, including coordination with formal schools, use of volunteers, and community services and organizations. The school-age-care and education literatures each mention two quality characteristics, which, of all the indicators, have the

strongest empirical support: limiting the size of the program or classroom and staff or teacher training. Additionally, both the school-age-care and education literatures emphasize the importance of having clear objectives and frequent assessment of how and whether the organization is achieving its objectives.

Reports documenting the nature-focused after-school work at a variety of organizations (e.g., Ratz and Schuster 2011; Earl 2013) conclude that efforts to connect children with nature have been moderately successful but constraints from staffing, along with parents' attitudes, practical issues, state educational standards, and funding may exist. Similarly, work done to assess a major metropolitan area nonprofit's youth programs suggest that the involvement of community members made a huge difference in their success (San Diego Children and Nature Collaborative and San Diego Audubon Society 2012).

Evidence suggests that institutional decisions will affect the opportunities and success of after-school programs and thus they require further study. Rather than just accepting organizational goals and objectives as givens, it is important to better understand—and perhaps change—organizational support for after-school nature programs.

Methods

As noted above the objectives for this study are to look more closely at decision-making, staff attitudes and related institutional factors in after-school nature programs. We identified a range of programs where children's activities include nature experiences, drawing from a community asset inventory conducted in 2010 that described organized youth program providers that offer programming beyond the traditional school day in San Diego County (DeSoto 2010). The inventory broadly categorized programs as extended school day, camp, scouting, youth clubs, classes, and alternative youth services. Baseline information included their programs, communities served, and contact information, and was consistent with similar inventories done elsewhere (Children & Nature Network 2008; U.S. Environmental Protection Agency 2002).

Interviews

We used the contact list from the community asset inventory (DeSoto 2010) to identify the after-school program sites and organizations. The original list identified 23 different organizations that included camps, scouting and extended school day programs. Many are "umbrella" organizations. Some were listed with multiple subset organizations like YMCA (19) and Boys and Girls Clubs (21), and others were single listings even though they had multiple subgroups, e.g., Girl Scouts of America. Interviewers made phone calls to schedule an interview with one person (program director, site supervisor, or staff) who had responsibility for decisions about enrichment activities in after-school programs from each of the organizations or subgroups that were known to offer after-school programs and. This resulted in 29 organization-level contacts. In addition, six staff from separate sites were interviewed from one provider not on the asset inventory, the after-school OutdoorExplore! nature walk program offered by the San Diego Audubon Society.

From this convenience sample of leaders involved with after-school programs, in-person and phone interviews were scheduled with 35 staff and experienced youth program providers from organizations that, when combined, reach 45 percent of the county's youth and thus display great potential for increasing opportunities for children's activities in nature.

Because there is limited understanding of the factors that influence decision-making in the after-school setting, we used a qualitative design. Each interview was exploratory with an open-ended interview protocol linked to the research objectives above. Questions were broadly stated with selective probing, e.g., "In the time that you've worked here, has your agency offered an enrichment activity or program related to nature or the outdoors?" with "If yes: Tell me about the nature activities that have been offered or are being offered. Thinking about all of these activities, tell me about your favorite nature activity."

The interviews were recorded, transcribed, and tabulated. We analyzed the data file using NVivo8 qualitative analysis software. A nested set of similar ideas and concepts emerged from the transcripts. After review and concurrence by all authors, we arrived at the 20 factors reported below as a parsimonious and comprehensive set that reflects the respondents' views about the concerns in the study's objectives.

Of the 35 interviews attempted 31 yielded sufficient information to be useful for this analysis (Table 1). Interviewees were mostly females (74 percent) with daily or frequent contact with students (74 percent). Eight of the 31 (26 percent) reported only administrative roles.

Table 1. Sample and respondent characteristics, n=31

Sample	Individuals	Percent
Interviews scheduled	35	--
Incomplete	4	--
Usable interviews (total sample)	31	100
Gender:		
Female	27	74
Male	8	26
Role:		
Daily contact with students	10	32
Some contact with students	13	42
Administrative role only	8	26

Results

Decision Processes for Scheduling Nature Experiences

First we report on the factors that contributed to the after-school program choices made by the agencies or their staff. The organizations' possible activities to fill child-centered activity time slots are numerous and widely varied, and include

dance, art, presentations, sports, and hikes. Thus, this set of responses is broader than just nature experiences, but is inclusive of them because all the respondent groups selected for the study offered some nature activities. To ascertain how these activities are chosen, respondents were asked which factors are used to determine whether an activity is offered. Thirteen distinct factors were identified and are summarized in Table 2. Note that six of them are mentioned by over 50 percent of the respondents, and another four by 39 percent or more. Each factor is further elaborated with a brief explanation and/or exemplar quotes below.

Table 2. Factors that contribute to activities offered in after-school settings, n=31

Factor	% Stated
Student experiences	100%
Cost	87%
Process for approving new activity	61%
Institutional guidance	62%
New to students	62%
Time	58%
Vendor	45%
Liability	44%
Transportation	42%
On-site staff interest	39%
School personnel interest	29%
School district guidance	13%
Group management	3%

Student Experiences

All interviewees noted that one factor plays heavily into programming decisions: that the students *like* the program. Independent of institutional setting, everyone stated that whether students like an activity is a key factor in programming decisions. After-school personnel used such words as “enjoy,” “engage,” and “fun” to express that the students should like the activity. For instance, one staff person stated, “what we try to do is something that the kids will go ‘Wow, that was great’.” That said, personnel shared different ways they use to determine whether the children like an activity. These methods included looking at attendance rates, observation, surveys, and positive student and parent comments.

Cost

The cost of an activity is another contributing factor in whether a program is offered. This was stated by 27 of 31 interviewees (87 percent). For the majority of programs, program budgets were tight with little room for additional activities. A free activity by an outside provider was more likely to be considered, as compared to a fee-based activity. One agency previously allowed any number of activities to be offered even if there was a fee, but in that school year, site supervisors were only allowed to choose three activities. Comments included:

Sometimes it [cost] weighs very heavily. We like to see what types of

agencies are out there that might be able to either volunteer or just do a nominal fee, but depending on what it is, we have had to pay for certain people to come in.

A lot of it goes back to budget... what's it going to cost? What's going to be the return on our investment?

To be honest, cost is enormously important. It's the first factor, because very few of our parents are able to pay anything for an after-school program.

It costs a lot of money to pay the staff, buy the program supplies and all that. It's expensive.

New Activity Approval Process

Previously unscheduled activities must follow a different path in order to reach the children in the after-school setting. For new activities, there are initial factors that must be met before an activity is introduced. Nineteen (61 percent) stated that a new activity must be approved by upper management and/or be aligned with the agency mission. According to 11 after-school personnel, the mission of the agency contributes to the programming that is offered. For instance, ten personnel stated that the mission of the agency for whom they worked had specific target areas within which the activities offered must fall. Comments included:

We target, through [agency name] our parent organization—we have five core program areas. So we develop programs through those five core program areas.

With our overall national programming they pretty much have different target areas and so we try to make sure we are offering programs that fit into all different core program areas.

[We consider] whether it plays into our mission, the budget, and whether we have the capacity to be successful with the program.

We're part of a national organization and so our national organization is continually doing research and writing curriculums and looking at trends and issues and developing programs...

Institutional Guidance

The 19 respondents (61 percent) that stated that activities must be aligned with the agency mission also mentioned a strong institutional role in programming decisions. The role of the institution at large was indicated by staff at all levels of contact with the students. However, staff from four of the six agencies shared that the agency had the final say. Staff at two of the six agencies reported that they had full decision-making autonomy, making this level of staff independence the exception rather than the rule.

New to Students

It was important to many respondents (20 out of 31, or 65 percent) that after-school activities be different from a typical school day, and that children be encouraged to learn about something new. According to staff interviewed, an activity that offers a child a novel experience positively contributed to the programming decision. Children attending after-school programs come directly from a day at school, where they have often spent time in a passive manner, sitting at a desk and working. The after-school environment provides a chance for children to do something different and learn in an active way. Respondents stated that this may be the only place that children are exposed to activities such as sports, dance, nature, arts, or another culture. The purpose is thus to provide students a novel experience that increases their exposure to life's opportunities.

The kids really seem to enjoy it and they don't get a lot of that in the schools.

[We're] giving these students experiences that they've never experienced before. That's why I don't want after-school to be an extension of the school day. They are learning different skills and different activities that are completely different from pen and paper. They learn more by actually doing and kinesthetics.

Time

Not surprisingly, 58 percent said time was a factor. After-school programs begin at the end of a school day and typically continue until the child is picked up at 6 p.m. This translates into programs running from two and a half to four and a half hours. If there are academic objectives, and with time for logistic elements like a snack, the remaining time for additional programming can be sparse. This is compounded during winter when it gets dark around 5 pm. Programs with short hours, then, have fewer time slots for an outdoor activity to be implemented.

Additionally, if it is going to be a repeated activity then the consistency of the program needs to be considered. One staff person shared why the consistency of the activity is important: "...we had a program that was every two weeks and these kids just lost interest in the week in-between."

Vendors

Fourteen respondents (45 percent) mentioned that they evaluated the quality of the programs or vendor. If a facilitator is known to be effective at, or has a good reputation for, engaging the group while also managing the group (not allowing disruptive behavior or children not listening) and maintaining the interest of the varied ages of the population, this is an important factor in choosing which programs to offer.

If it's a positive experience, if the staff that is coming aboard... is friendly and knowledgeable and flexible.

Especialy someone with a high knowledge of how to work with kids. ...it's

someone who can be dynamic and creative with how they are relaying the information. Getting the kids as physically involved as possible...that is what I would look for.

Liability

After-school personnel are responsible for their participants' safety. Liability concerns were mentioned by seven staff (44 percent) as a factor when choosing a program.

Whenever we're inviting anyone onto a school campus we need to make sure they have liability insurance that would cover our students for any incidents that might happen during an assembly or in-service from an outside program.

Transportation

Logistics can be an issue: 13 staff (42 percent) stated that transportation was a problem. Thus, the activity would need to be brought on-site rather than having to pay for transportation to a locale. Also, one organization stated that they do have vans available for transporting their students. Vans, however, are only used when the school is out of session and the hours of operation are full-day.

On-Site Staff Interest

Although 12 respondents (39 percent), reported that staff ideas for new activities based on personal interest or knowledge were contributing factors to programming decisions, as stated above, 19 respondents pointed out that an activity is not going to be offered until upper management gives approval. Once approved, staff are then given a choice of whether to provide that program.

So, although approved and recommended by upper management, on-site supervisors often have the say as to which of these approved activities are chosen. This was also a practice at a local non-profit that services 55 schools in the San Diego region. Each site supervisor is given a list of approved programs, whether in-house or not, that they can offer to their students. This suggests that several members of an organization contribute to the activities offered at each program site. Comments included:

It's a collaboration between myself, the supervisor, my assistant and... I often ask for opinions from teachers and the administration on whether they feel that assembly or in-service was worthwhile.

Each site chooses with their staff input and input from the kids what they do on campus.

School Personnel Interest

Not only do the on-site staff, upper management, children, and school district contribute to the programming decisions, but the school itself does as well. Seven staff (29 percent) stated that the considerations of the school principal and teacher are also taken into account. These could include offering programs that are along

the curriculum of a magnet school, providing a program that the school cannot offer, or a topic that the school does not have in their curriculum and even hiring teachers to assist with students' learning. At one local agency where staff were interviewed together, all five of the staff agreed that collaboration with the school is vital. Indeed, one person stated that monthly meetings are conducted where they "usually talk to the teachers to see what they're doing and to see if there's something I can touch on that might support what they are doing in the classroom."

School District Guidance

At times, the agency alone is not making the decisions about programming. For some of the after-school programs, interviewed personnel stated that activities must first be approved by the school district with whom the agency is contracting. For instance, staff from two agencies (13 percent) stated that the district has rules as to the type of activities offered at the school sites. To assure that these guidelines are being followed, the district approves or disapproves each activity that an agency is planning to offer. This is an additional step that must be met prior to the agency choosing which activities their after-school sites can offer. In sum, based on the responses from this sample, it appears that for a new activity to be offered it must be institutionally approved for some by the school district and for all by the agency through upper management and adherence to the agency mission. Here are some examples:

I choose the ones here for my school site and there are 25 other school sites, so each supervisor chooses any type of program to come in as long as they are cleared and have insurance through risk management and the school district.

In the admin office we set the minimum standards and program requirements for all the sites, but the actual site directors have oversight of the programs that they do at their site as long as it falls within the guidelines that we've established.

The district has an ongoing list of approved assemblies and trips and so sometimes it's just a check off. If it's new sometimes it has to go all the way to be approved at the Board level.

Group Management

Closely tied to these factors is group management. Although only one staff member stated that behavior management was an important factor in choosing a program, it is potentially a critical factor. Milieu management is a necessary skill when working with groups, particularly when safety is a concern. This staff member shared the following thoughts:

As the site supervisor my main concern is safety, control of the group and whether the activity is high risk.

With 125 kids that was always a factor. Not all of the sites are that large.

Most of the sites should have some kind of monitoring system so the kids are doing everything they are supposed to be doing and aware we are being rewarded. That's the kind of stuff I'm thinking about... [to] ensure that behavior is being managed without affecting the enrichment activity.

Personal Beliefs about Importance of Nature in Children's Lives

Thinking about their personal beliefs, respondents were asked to "rate the importance of nature in a child's life". Twenty-seven staff responded to this question. With 10 being the highest and 1 the lowest rating, on average, respondents rated the importance of nature in a child's life as an 8. Personnel were then asked to explain why they choose this rating. This gave us an additional five factors to consider. These are summarized in Table 3.

Table 3. After-school personnel's beliefs about nature's importance for children, n=27

Importance Beliefs	% stated
Nature is good for children	96%
Connection to the environment	43%
Nature is good for well-being	39%
Contrast to technology	21%
Nature reduces obesity	11%

Good for Children

All but one respondent (96 percent) stated that children will benefit from having nature be a part of one's life. Comments included:

I feel as the human race we need to preserve the earth and for me it's really disappointing to see them [developers] cut into a wildlife preserve. They cut into more and more of it and it just destroys the balance of animal life and they have nowhere to go. I think it's really important and it teaches the kids respect as well.

Because nature is going to be part of them and they are going to be part of nature for their entire lifetime. It's something if they learn when they're young, like empathy, then you're able to implement it and use it as you go along in life.... Those things are really important for children to understand.

Connections to Nature

Eleven respondents (43 percent) stated that they felt nature should have a role in a child's life because it heightens a child's connection to the environment. These statements suggest that a child who is more connected to nature would have a greater understanding and concern for one's natural surroundings including plants, animals, and the whole earth. For instance,

I do like the bare foot walking in a grass field, and you know, at first I had

one kid who would try it and then, you know, all of a sudden I had like twenty kids and they didn't want to put their shoes back on. So, it's just a matter I think of believing in it, and believing in them. [They need] to be exposed, to be out here and get dirty a little bit, which is awesome.

On the other hand, two staff personnel shared conflicted thoughts about the role that children should have in nature. Although they felt a personal connection to nature and shared fond memories of nature experiences as a child and as an adult, they shared that the children they were working with needed to first gain basic abilities that included social and life skills that they were probably not receiving at home because their parents were also struggling to make sure the life basics of shelter, food and clothing were being met.

It's vital that we at least know enough about nature that we are good to her. Is it more important than other things? I don't know. Is it more important than having food, clothing and shelter? Feeding kids healthy snacks is more important. Keeping at-risk kids out of trouble. These things have it over nature programming.

And that's just because of the service area we live in. There is need [for] life skills... before even an understanding of nature and the environment.... I would say a good portion of our families are running on crisis mode every day. Where basic needs of survival are first and foremost before recycling.

Contributes to Well-Being

Further review of the "connection to nature" statements suggested that after-school programs also can enhance a child's health. Ten after-school personnel (39 percent) considered nature to contribute to a child's overall well-being. Two people thought that a child connected to nature would have better physical health. For instance, one person stated, "I think having the experiences in nature is mainly beneficial to kids physically and mentally, and emotionally and spiritually. I think it's very important."

Contrast to Technology

While discussing why nature should be a part of a child's life, four individuals (21 percent) shared that it would be better for children to spend time in nature especially now that so much of their time is spent in indoors passively watching TV, or playing a computer or video game. Responses emphasized the different skills and "realities" that outdoor activities can instill:

They get so much more [from] being outdoors because when you see kids indoors, most of the time they are just sitting there watching TV, playing video games. They can explore outdoors.... whether they are digging in the dirt, finding little bugs, whatever it might be.... just drawing chalk on the sidewalk. And then I have them out there watering plants and stuff like that. I think it's really good for them to be outdoors.

There's a calmness and a serenity when you are out in nature. We grow up with computers and Nintendo. When I was out playing, I just used my imagination. There's learning about it. I heard from Audubon society that the students would go out and automatically think they saw wild animals because that's just what they've seen on TV. They should know their environment. They should know that we're trying to preserve the animals. There is not anything that can replace it. I think it's very, very important.

Nature Reduces Obesity

Others gave more specific examples about why they thought children should have nature in their life. Repeating a commonly held belief, three respondents (11 percent) stated that connecting to nature would be a positive deterrent to childhood obesity although the connection was not well articulated beyond being less sedentary. For example, one staff person stated, "I think it's essential for kids to have a healthy lifestyle. I think that nature needs to be strongly incorporated."

Institutional Views about Importance of Nature in Children's Lives

After-school personnel were asked, "How do you think your agency would rate the importance of nature in a child's life?" Using a 10-point scale, with 10 being the highest rating and 1 being the lowest rating, the average rating was 6.6. For all but two of the respondents, the ratings of perceived agency importance was lower than their personal rating of the same thing. This result suggests that the agencies in question felt nature had some importance in a child's life but was not of the utmost importance, and there were other factors to consider. These data form the final two factors in the study.

Agency Policy/Mission

Eleven of the respondents (35 percent) based their rating on agency policies and subsequent programming decisions. In support of their rating, staff shared that the nature activities being offered or that have been offered were not as prevalent as other activities. Others stated that policies about activities and/or the agency mission did not mention nature activities specifically. This, in turn, suggested to them that nature activities were important but not of the highest importance. Comments included:

I would say it's not our strength and it needs some development. I would say it's in its early stage of development. Definitely not up to speed with our bread and butter, which are our sports and recreation. We're definitely not the outback and wilderness type programs.

Our vision... is more health and education and raising test scores.

On the other hand, seven staff (23 percent) stated that their agency did put nature as a high priority in a child's life. Two stated that it was in their agency's mission, values, or goals. Four cited several examples of nature activities that supported their rating. This subset of seven personnel gave higher ratings when compared to others' ratings.

Executive Director is very supportive of these sort of activities and I think that makes a huge difference, you have to have buy-in from your leadership.

Our agency right now is huge on wellness and promoting wellness, not only with our families, but also within ourselves. A lot of people get their wellness and their serenity and their stress relief by going hiking and being in nature and getting away from the city life and stress that we have, so I think they would think it's very important.

Role of Co-Workers

Co-workers were another reason for the ratings provided by four after-school personnel (13 percent). These respondents said that others working for the agency may not feel the same as they personally did about nature's role in a child's life. One staff member stated that though she supervised staff and she personally felt that nature should be a strong contributor in a child's life, it was difficult to get those who worked for her to put this vision into action. Specifically, she stated:

Sometimes it's hard to translate a vision to other people. Not everybody has the same feelings, so as much as I may want it I'm not at every site. I have nine school-age programs and three pre-school programs, so I can't be at every one translating my vision.... I can't make them put it into practice. They do understand the vision of getting science into the program. I think for the most part there is a fairly good connectedness, but I don't think everyone has the same vision.

Discussion and Implications

This study focused on factors affecting adult professionals' decisions about children's nature activities and provided insights into promoting and conducting after-school nature education programs. Altogether we found 20 factors that respondents said influenced program offerings in a substantive way. Results arose from questions aimed at two objectives: the role of nature education in the agencies' mission, including scheduling decisions by program staff or administrators; and awareness and attitudes about the importance of nature experiences for youth among organization staff. The data obtained provide substantive results, and the qualitative analysis of the interviews yielded distinct barriers, concerns and constraints of interest to program managers and researchers alike.

All agency staff stated that students "liking" an activity is a key factor in decisions about what programs to offer, so this seems to be a *sine qua non* for after-school programs of any sort.

Most youth-serving agencies do not have nature education in their agency mission, so expecting them to place high priority on such after-school programs may set unrealistic goals for developing broadly available nature education offerings. However, our results suggest that this is not a complete barrier. More broadly focused community organizations may be encouraged to develop a line of

programming and hire or train staff to successfully run such programs.

Most staff perceived that their personal rating of the importance of nature in a child's life is higher than their organization's view. They acknowledged that in general, organizations considered nature to be important in a child's life but not compelling enough to offer more programs. Some staff noted that nature activities were not as prevalent as other activities, and that agency policies and/or mission did not mention nature activities. This suggests that some of the growth in after-school nature programs will have to start with community, board or executive leadership changes to affect policy and organizational goals. This change can come from within organizations (e.g., program staff) or be driven by external factors, such as funding or community recognition opportunities.

Further staff development may also be useful. Co-workers or other agency staff may not personally feel that nature should be a strong contributor to a child's life and may not endorse nature activities. However, agency staff stated that nature will heighten a child's connection to the environment, be a positive deterrent to childhood obesity, and improve physical health and overall well-being. Recognition of this relationship suggests that making connections to other social and lifestyle issues may be a useful avenue to assist in developing more after-school nature education programs.

Activities that directly support the mission of an after-school program provider are more likely to be offered by the provider. Although nature activities are generally seen as valuable for youth there are other, competing choices. New nature activities often must be approved by "upper management" in the agency, as well as the school district in some cases, and be relevant to the agency mission. Once a list of activities is approved, the on-site supervisor may consult with agency staff and choose the activities that will be offered. Activities are more likely to be offered if the on-site supervisor and/or a staff person have an interest or knowledge in that area, and personal experiences in nature. Thus, developing staff members' awareness of the importance of nature in children's lives, as well as its connection to other important areas, is essential for increasing the number of nature activities offered.

Moreover, it is important for the provider's staff to be known for conducting engaging and well-run programs. If a facilitator is known to be effective at engaging and managing a group of children, he/she would be more likely to be selected to offer programs. Finally, because program budgets are tight, any nature education activity from an outside provider that has either reduced costs or is delivered on site (e.g., walking to the site instead of bus transportation) is more likely to be scheduled.

Despite the general sense of positive values associated with outdoor or nature experiences, some agency staff felt their agency was most interested in meeting the basic needs of those with whom they work. Some children lack so many basic social and life skills that after-school programs are focused on these skills and nature experiences may be considered secondary. Thus, nature-focused programs

need to show how they can make positive contributions to other, basic areas of children's lives as well.

Conclusions

Nature experiences can be important contributions to healthy child development and foster the future stewardship of the environment. This study provided insight into the factors affecting the offering of nature activities in after-school programs, elements of successful nature experiences, and ways to better communicate the benefits and practicalities of nature activities in this setting. While the potentials seem wide-ranging, the structural relationships underlying program offerings are not well understood, and likely vary considerably across different communities and cultural contexts. This study is but a first step to engage these issues for both those who see nature education as a primary objective and those who see it as secondary or tangential to their mission. Our results suggest that, with attention to some very practical issues, youth-serving agencies can augment the nature programs offered in camps, schools, and other settings to substantially expand and improve after-school nature program opportunities.

Many governmental and nonprofit agencies have developed and implemented after-school programs that have a nature education component. In order to better serve urban youth we feel these organizations need to positively address the embedded personnel and institutional factors that affect decisions about conducting nature programs for youth in non-school settings. Program administrators will need to work across diverse sets of values and potentially conflicting programmatic goals held by their staff or agency. In addition, program evaluations can be used to demonstrate where, when and how after-school nature education programs benefit their client groups the most.

As evidenced by the results above, there are structural barriers and limitations to after-school nature programs. A more thorough understanding of the social and institutional factors will improve both the formation and delivery of such programs and foster better outcomes. We encourage agencies to consider how these results might apply to them, and hope we will engender additional research to add to our findings about after-school nature programming decisions. Access to local nature through after-school programs can help to ensure that an increasing number of children will experience learning in nature with the attendant benefits to them and society.

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