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PEDAGOGY

Reconnecting Youth to Nature: A Camp on Campus Model

Eddie Hill

Abstract

Day camps are a powerful context for youth development. The American Camp Association and Leave No Trace have been integral in supporting youth development by identifying outcomes associated with participation in outdoor recreation. Recreation majors in the programming class used the camp as a service-learning component of the class that offered them valuable hands-on experience in program design, program facilitation, working with youth, and program evaluation. Therefore, this study evaluated the impact of camp on identified youth outcomes. The outdoor recreation camp was a partnership from a private school and local university. The Youth Outcomes Battery provided measures that focus on common outcomes (e.g., affinity for nature). Thirty-one of the 32 campers completed the retrospective questionnaire. The sample was 61% female, with an average age of 9 years. On a scale of 1 to 10, campers scored a 9.32 on Level of Enjoyment. Findings show that over 50% of the campers learned "a little" or "a lot" about the desired outcomes (e.g., affinity for nature). This work provides an example of an evidence-based nature camp.

The framework for positive youth development (PYD) is an evolving model focused on guiding youth to be contributing members of society (Ahl et al., 2020; Hill et al., 2016). Children need guidance and support on their path to adulthood. The guidance and support they receive originate from a variety of contexts, groups of people, and organizations that help lay the foundation for children's

Eddie Hill, Department of Human Movement Sciences, Old Dominion University. Please send author correspondence to ehill@odu.edu

perception and reality of the world around them. Day camps can provide a powerful context for youth development (Hill et al., 2016; Kane et al., 2020). Day camps allow youth to engage with various individuals (e.g., teachers, recreation professionals, and college students) who provide a variety of supports that are generally related to academics or social skills (e.g., creating meaningful relationships) needed for continued development. These supports may include tutoring, athletic skills, creative expression (e.g., dance, music, art), and environmental awareness. Day camps are also positioned to provide essential services to families. These family supports are important throughout the out-of-school time such as when students are transitioning from one grade or environment to another (Hill et al., 2015). Programs that bridge or provide continuity between academic years are an essential part of youths' social-emotional development. Camp programs that are theory driven and use PYD embrace and actively implement programs that bridge academics and are prone to foster positive outcomes. Therefore, this study evaluated the impact of nature-based camps on identified youth outcomes.

American Camp Association

The American Camp Association (ACA) has been integral in supporting PYD by identifying and documenting outcomes associated with participation in organized camping. In its seminal outcomes study, four domains were comprised of 10 constructs of PYD, which included positive identity (positive identity, independence), social skills (leadership, making friends, social anxiety, peer relationships), positive values and spiritual growth (positive values/decision making, spirituality), and thinking and physical skills (adventure/exploration, environmental awareness; Henderson, Bialeschki, & James, 2007). The ACA-sponsored research is salient in that it provides evidence of what many practitioners already know: Getting youth reconnected with nature is beneficial to the development of youth (Ahl et al., 2020; ACA, 2013; Henderson, Bialeschki, Scanlin, et al., 2007; Marsh, 1999; Sibthorp et al., 2013).

As technology rapidly expands, coupled with the decline in time spent out-of-doors, children are becoming increasingly disconnected from nature (Ahl et al., 2020; Louv, 2006). Research supports the mental and physical benefits children experience when they spend time in nature and outdoor education opportunities (Berman et al.,

2008). Other studies have reported that children have a better quality of life when they are actively engaged and play in natural places (Pretty et al., 2009). Studies have provided valid and reliable measures to determine the impact of reconnecting youth with nature (Ahl et al., 2020; Miller et al., 2014). With the disconnect between children and nature on the rise, the review of the literature indicates a strong need to get children in the out-of-doors exploring, playing, and participating in purposeful environmental education programs that will enhance their physical and mental well-being. Organizations such as Leave No Trace Center for Outdoor Ethics provide valuable tools, trainings, and research to help mitigate this challenge.

Leave No Trace

Leave No Trace Center for Outdoor Ethics evolved from the lack of knowledge that user groups possessed about human impact on the environment during recreational use (Miller et al., 2014). Through a partnership between several organizations, including land management agencies (e.g., U.S. Forest Service, National Park Service) and the National Outdoor Leadership School (NOLS), the Leave No Trace Center for Outdoor Ethics developed principles and curriculum to help teach people ethical and low-impact practices when interacting with the natural environment. Although these practices were widely adopted by many agencies, and acted upon by adults in the outdoors, limited connections were made between these principles and youth in nature.

Leave No Trace recognizes the value of educating children about being stewards of the environment. In partnership with Recreation Equipment, Inc., the Promoting Environmental Awareness in Kids (PEAK) program was created to teach children about the environment and how to recreate responsibly in the out-of-doors (Leave No Trace, 2017). The primary goals of the PEAK program are to (a) increase awareness of Leave No Trace, (b) promote stewardship of public lands, (c) meet the demands of diverse youth populations, and (d) have fun (Leave No Trace, 2017). The PEAK program was used in programming each day.

Method

For this study, we partnered with a local private school serving K–8 students, located less than 1 mile from the university, to help

with recruiting campers. The outdoor recreation day camp was held on a university campus. It was a partnership between a local private school and a Mid-Atlantic university, specifically a recreation programming class in the summer semester. The camp functioned as service learning for college students majoring in recreation, by providing them with class experience in recreation programming, facilitation, evaluation, and working with youth in an outdoor recreation day camp. High-impact practices such as service learning are highly encouraged within higher education (Goff et al., 2014). Because this was a service-learning course, college students were unpaid camp counselors/facilitators who were responsible for leading the entire day camp experience.

To prepare, college students planned for the camp during class and identified facilitation variations, activity needs, and alternate activities based on the daily outcomes. With guidance from faculty, college students helped create an activity matrix that included an outdoor activity plan for each day of camp. These daily activity plans were similar to lesson plans and helped ensure daily objectives were met. The selected activities were practiced in class to allow new facilitators to gain confidence before camp began. The 1-week day camp took place from 9:00 a.m. to 3:00 p.m. Monday to Friday. The college students consider the outcomes and how those can be promoted through an engineered recreation experience. During the week, the campers kayaked, rock climbed, learned about Leave No Trace, participated on the challenge course, and participated in many other components tied to outdoor recreation through our partnership with the university's Outdoor Adventure Program (see Table 1).

Measurement

This study used the ACA Youth Outcomes Battery (ACA-YOB) at an outdoor recreation day camp to determine its impact on predetermined outcomes. The ACA-YOB provides camps and other youth-serving programs with different measures that focus on common youth outcomes (e.g., Affinity for Nature). Each measure is age appropriate and can be individualized for camps and other youth programs (ACA, 2011). In this study, we used the ACA-YOB 14-item Camper Learning Scale (CLS) and Affinity for Nature (AFN). These valid and reliable scales are age appropriate, short and concise, easily administered tools that can be individualized to a camp, after-school

Table 1
Outdoor Recreation Camp Example Plan

Day	Promoting Environmental Awareness in Kids (PEAK) activities	Outdoor activities (theory based)
Monday	Discovering the Leave No Trace Principles (all seven LNT principles covered)	Pool Day focused on competence by allowing campers to work on passing the swim test for the deep end
Tuesday	How Long Does It Last (principle covered: Trash Your Trash)	Service Project Beach Cleanup focused on autonomy by what area and what they cleaned up, as well as relatedness by campers working together
Wednesday	The Leave No Trace Draw (principles covered: Know Before You Go, Choose the Right Path, Leave What You Find, and Respect Wildlife)	Kayak/SUP on the Elizabeth River fostered competence with campers learning and improving new skills
Thursday	Watch Your Step (principle covered: Choose the Right Path)	Indoor Rock Climbing fostered relatedness with campers supporting and learning to help belay one another, as well as competence by a sense of mastery, and autonomy by campers choosing their climbs
Friday	What Principle Am I? (all seven LNT principles covered)	Choice Day campers were allowed to choose (fostering autonomy) various activities (e.g., basketball, rock climbing, arts & crafts) and travel independently through the facility to different activities

program, or other youth programs that are outcome driven (ACA, 2011). Both measures used a retrospective design, which eliminated response shift bias and a pretest.

The unidimensional CLS is a measure that focuses on seven common youth outcomes (i.e., Friendship, Family Citizenship, Teamwork, Perceived Competence, Independence, Interest in Exploration, and Responsibility). A sample question on the CLS scale is "At camp, did you learn how to be better at making friends?" The CLS uses a 4-point Likert-type scale ranging from 1 = *I didn't learn anything about this* to 4 = *I learned a lot about this*. The AFN scale has a long and short version. We used the short version for this study. Each item (e.g., liking nature) was prefaced by the phrase "How much if any, has your experience as a camper in this camp changed you in each of the following ways?" The 5-item AFN scale was scored a 5-point Likert-type scale ranging from 1 = *decreased* to 5 = *increased a lot, i am sure*. Campers were also asked demographic and open-ended questions about their favorite and least favorite activity during the 1-week camp. These data were used in the program evaluation in preparation for the following camp year.

Procedures

After IRB approval was granted, written consent was gained from parents when they dropped off their child at camp, followed by assent from the campers. The measures were administered to 31 of the 32 campers (one parent did not consent to the study). Camp counselors administered the questionnaire on the last day of camp (Friday). As recommended by the ACA-YOB protocol, camp counselors and staff sat in a quiet area with small groups of four to five campers to administer the questionnaire. Data were collected and entered into an Excel spreadsheet (available from ACA at www.ACAcamps.org/members/outcomes/tools). Data were then automatically calculated where we summed the scores for each item on that scale and found the average of students who learned *a little* or *a lot* about the outcomes. The open-ended questions (e.g., favorite activity) were tabulated in Excel for frequencies.

Results

The sample was 61% female, with an average age of 9. On a scale of 1 to 10 (with 10 being the most fun you have ever had at camp), campers scored a 9.32 on Level of Enjoyment. After data were entered into the ACA Excel spreadsheet, sum scores of the campers who learned *at least a little* about the seven youth outcomes were averaged. Findings from the CLS indicated that 53% of the campers learned *a little* or *a lot* about the seven outcomes. The second unidimensional measure used was the five-item AFN, which determines the knowledge that campers learned about nature or the environment while at camp. Results from the AFN indicated 68% of campers learned new knowledge about nature. The open-ended response about campers' favorite activity revealed specific camp activities of interest. The campers' top three activities from the week were the rock wall, kayaking, and the planetarium.

Discussion

University camp programs have the potential to positively impact a great number of youth. In fact, more university camps are actively seeking ACA accreditation. This research study has the potential to provide evidence-based practices on the learning outcomes of different types of camps (e.g., outdoor recreation). Though our study focuses on how camp can be effective at improving campers' skills and affinity for nature, indirectly it explored the service-learning opportunity for college students (Goff et al., 2014; Goff et al., 2020). From the university perspective, using a service-based component within a learning lab (e.g., this camp) provides a high-impact practice for the college students involved. High-impact practices on college campuses are in great demand (Hill et al., 2015).

The literature continues to highlight the need to reconnect youth with nature. This day camp and similar programs provide evidence that outdoor programming is effective (Miller et al., 2014). The results from the CLS and AFN measured in this study were higher than those in similar studies (Hill et al., 2016). Some of ideas from previous campers and counselors will be used to more specifically target the desired outcomes to increase the percentage of campers who learned *a little* or *a lot* about the intentional outcomes. Leave No Trace's newest resource, *Bigfoot's Playbook*, provides experiential

education activities specific to the seven principles that help children understand what it means to Leave No Trace in their lives and their community (Schwartz et al., 2018). Future studies should use the AFN measure when this new resource is used in nature-based camps.

The camp also effectively aligned with the ACA-identified outcomes (over half the campers left with knowledge of the original seven ACA outcomes). Camp directors and staff will need to determine their own measure of success using the ACA Excel template. Finally, asking the campers their favorite and least favorite activity allowed camp staff to better program for the next year. This has been done in the previous years of outdoor recreation camp, and each year we have modified the activities based on camper input. We believe this has helped to make camp more fun and a more effective learning environment.

Limitations and Future Research

A current limitation of this study is the small sample size and the average age of our respondents. Although the ACA-YOB is designed for this camp's age group, our campers may not have asked for clarification when needed. Future research should focus on outcomes using other metrics within the Youth Outcomes Battery as to not limit teasing out specific constructs. Future research should also begin to triangulate data by using feedback from counselors and parents, because youth self-reporting could be inaccurate. The ACA-YOB also offers a section dedicated to parent and staff perceptions to allow for a comprehensive view for all involved. This holistic assessment from staff, parent, and camper inputs will help to maximize data inputs and minimize the limitation of only using one perspective with the camper survey. Other recommendations are to explore additional measures of campers' interest in the outdoors such as the PEAK Assessment Scale (Miller et al., 2014). This measure was specifically designed to determine the effectiveness of campers' understanding after use of the PEAK program. However, due to the length of the PEAK Assessment Scale and the age of our campers, this metric was not used. As we continue to explore more robust measures, this and similar studies can help propel us forward as we reconnect children, arguably a missed generation, to outdoor recreation.

Conclusion

High-impact practices such as service learning, partnerships, and reflections are a fast growing and effective tool within higher education (Goff et al., 2014; Hill et al., 2015). The use of an outdoor recreation day camp as a learning lab for a college recreation course exposed college students to opportunities to bridge theory to practice. They were able work with youth, program, and evaluate just as they had read about in class. University resources and spaces allow for cost-effective opportunities that may not otherwise be accessible to camp hosts, while offering a unique camp environment and program offerings. For this partnership, results from camper surveys indicate it was a positive experience and the majority of campers demonstrated growth in the seven ACA outcomes and in their affinity for nature. As a great resource, the ACA-YOB allows for a practitioner-friendly way to collect, input, and evaluate data to improve programming and promote camp effectiveness. Future research using parent and staff perspectives will offer greater insight into the effectiveness of programming for each desired outcome. Other organizations can use this platform of service learning and collaboration to bring mutual benefits to camp-based partnerships, which ultimately impact the campers, families, and communities they serve.

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