Youth Targeted Urban Community-Based Conservation

Arielle C. Webster

Miami University - Project Dragonfly

Baja III - 2016

Introduction

Community based conservation seeks to protect biodiversity while balancing the needs of the humans that share the same areas. In this article, I seek to explore some of the basic strengths and weaknesses of urban community based conservation programs, specifically those that target urban youth communities. These programs can operate in conjunction with schools, families, or teachers by utilizing citizen science activities and education programming to engage communities. I hope to compare successful programming that develops the participants into environmentally responsible people. It is also important to consider how these programs fail to achieve their goals and look for potential ways to prevent these failings in the future.

When we look at the United States approximately 32% of the population is under the age of 18 (US Census Bureau, 2014). 82% of that population lives in urban settings, meaning that 25.8% of the total US population, or about a little over 60 million individuals, falls into the category of "urban youth." The struggle to raise environmentally conscious urban youth becomes immediately apparent when you consider that New York City has close to 2 million people under the age of 18 (NYC Dept. of City Planning, 2015), or that Philadelphia has almost 350 thousand people under the age of 18 (US Census Bureau, 2014), many of whom have limited access to the natural world or travel of any kind.

In 2005, author and journalist Richard Louv coined the term "nature-deficit disorder" in his book *Last Child in the Woods*. Nature-deficit disorder is the lack of a connection with nature, which many child psychologists connect with healthy mental growth (p. 10, 36, & 100). This book was credited with starting a national movement to re-introduce children to nature (Louv, 2008). It is a product of a changing world, where parents fear that their children are not safe outside or simply that children are more interested in indoor activities and have little to no desire to play outdoors. Louv noted that all communities were at risk of nature-deficit disorder and that it affected individuals, families, and their communities.

In this paper I consider case studies that identify the disconnect between people and the natural world as a major intervention point in working towards urban conservation. (Hashimoto-Maitel, McNeill, & Hoffmann, 2012; Ferreira, Grueber, & Yarema, 2012; Louv 2008).

Goals of Urban Community Based Conservation

While the main goal of community based conservation is to promote biodiversity and conserve the environment, in urban settings human construction is omnipresent. Richard Louv suggests that nature-deficit disorder is more common in places where access to the natural world is limited (p. 36). It is difficult to reach actual conservation without prior experience observing nature, therefore these experiences must be provided.

Urban conservation goals can be broken down into three basic tiers. The first is content knowledge, or concrete knowledge (Davies & Webber, 2004; Hashimoto-Martell, 2012; Myers 2012). Concrete knowledge can be something as simple as "What is a watershed?" This knowledge basis allows for the second tier, which consists of building awareness and appreciation. This is often achieved through creating connections from concrete knowledge to the local environment. In terms of watersheds, it can be people connecting storm drains emptying into the river near where they live. The third tier is action through environmentally responsible behavior. This could be achieved with participants building sand-bag barriers that prevent solid pollution from entering the watershed. Most of the cases cited this step failed to create the desired change. Frequently, people failed to connect how local issues impacted their daily lives, and therefore did not make any meaningful changes to their own behaviors and routines.

There are three major types of urban youth conservation programs: programs primarily targeting families, children in schools, and programs that provide professional development for teachers. In each of these types of programming, different people or groupstake on roles as stakeholders.

Family-Based Programming

Studies found that the family-based conservation programs were more likely to draw people who were already interested in conservation (Evely, Pinard, Reed, & Fazey, 2010). These families often have previous knowledge basis and appreciation for the natural world. Studies also found that including parents as more active stakeholders in programs increased the efficacy of the program greatly. It allowed parents and children to build a sense of community together and

to network with other families with similar interests. A major weakness for these programs was that some summer programs did not require parental involvement which caused regular attendance to suffer (Mikels-Carraso, 2010). Family and community based programs can reach larger goals though, tackling conservation issues such as habitat fragmentation through the creation of community gardens and other green spaces (Evely, 2010; Shandas & Messer, 2008). The mantra of "conserve biodiversity at home" can be seen in many urban programs, especially ones that promote gardening.

Family based programming seems to be better at deepening the connection of a small set of individuals than broadening the conservation community as a whole. The programs fostered environmental stewardship, empowered individuals and families, and offered recognition to people for participating. These voluntary programs tended to use end-of-program evaluations or surveys, which to have a heavy positive bias for the individuals involved, and environmental testing to measure ecosystem health, which also saw increases (Shandas & Messer, 2008). Participatory science, it turns out, ends up being a cost effective method for conservation projects (Evely, 2010).

School-Based Programming

Targeting urban schools allows programs to guarantee a steady population to work with, whether they are in school or after school programs. Type of school programs varied greatly due to both location and connected organization, but they usually had both classroom and field trip portions over the course of the school year. While length of time on a particular activity does not necessarily equate to better learning, more in depth and repeated involvement in activities does (Evely, 2010), meaning that programs that involve multiple facet. Students who have more opportunities to practice newly developed skills retained more information and created stronger connections with the work they were performing. Many schools have turned to community gardens as a means of establishing a stronger sense of community and provide green spaces within school grounds (Ferriera, 2012; Shandas & Messer, 2008).

During programming, students gained concrete knowledge during the course of their curriculum, but it had no noticeable impact on student environmental beliefs

(Hashimoto-Martell, 2012). The researchers noted, after a series of interviews, that students recognize TV programming, other school lessons, and parenting as impacting their own interactions with nature more than the presented programming. Since the programs were relying on the use of concrete knowledge and building an awareness of their environment, students were almost completely unable to make the connection to how their own actions impacted their surroundings (Ferriera, 2012).

Most researchers did note that programs with an established connection with a community organization or local college was more likely to have long term success and viability (Ferriera, 2012; Hashimoto-Martell, 2012).

Professional Development-Based Programming

Some programs targeted on the educators, and increasing their ability and confidence in offering stronger environmental education (Ferreira, Greuber, & Yarema, 2012). By connecting teachers with field professionals and offering both in class workshops and field research opportunities, teachers are able to better handle the presented materials when teaching it themselves and are able to answer a broader range of questions (Myers, 2012). They explained that when teachers utilized outdoor spaces for environmental education, the teachers noticed both a higher concrete knowledge in the students and a stronger sense of place and community. These programs measured their effectiveness through teacher evaluations. They revealed that teachers feel more confident, comfortable, and better prepared for teaching the materials after the professional development programs. This empowerment allowed the teachers to reach further into the field of conservation education; however, the programs did not measure student success before and after the professional development courses which is critical to draw any conclusions about the efficacy of the program. Research suggests that more knowledgeable teachers create a better learning environment for the students (Ferreira, Greuber, & Yarema, 2012; Myers, 2012) but the underlying assumption that this translates across disciplines is problematic until verified for urban conservation based learning.

Conclusion

Ideally, urban youth community based conservation projects would involve all members of a child's support group including parents, guardians, teachers, and community members, in outdoor green spaces that would empower children to develop a sense of wonder and appreciation for the natural world. Ideally this would spark interest, however many parents or guardians are unable to be involved at the classroom level of teaching, which allows the greatest access to urban youth.

A major failing of every program that I analyzed is that they did not measure long-term effectiveness of their programs. While difficult, this would provide a look at the viability of the lessons being taught in the programs. A more practical option would be to obtain data on how socioeconomic status impacts environmental views and behaviors. Cities have diverse socioeconomic problems which can cause otherwise well-planned programs to fall short due to social aspects of poverty or gaps in access caused by socioeconomic status of the target community, as shown in a (Dawson, 2014). Localized social research could help determine better programming by allowing program creators, whether they are teachers, community organizers, or educators, to better understand the community views surrounding important environmental issues (Davies & Webber, 2004; Evely, 2010). One option could be to run a conservation program that focuses on combating urban poverty. To my knowledge, there has not yet been a program yet that specifically targets reducing urban poverty through environmental conservation.

Compounding the complexity of the variability between urban settings is that there are no standardized metrics for measuring the effectiveness of environmental education programs. Nevertheless, concrete measurements on environmental impacts can be done for programs that perform specific tasks.

No single method works in all locations for spreading conservation. Socioeconomic factors as well as community culture play such a complex role in youth developing their sense of self and of place, that they must be taken into consideration when designing programs to appeal to these groups. The role of media and its ability to reach such a broad range of people should be utilized for community based conservation initiatives. Networking between conservation

initiatives with different methods and between poverty alleviation, social work, and other initiatives might be the most successful method to approaching urban community based conservation programs. The end goal, when it comes to community based conservation in urban communities, is to form an environmentally conscious generation who are empowered to create a stronger community built around environmental protection and sustainable development.

References

Davies, R. & Webber, L. (2004). Enjoying our backyard buddies - Social research informing the practice of mainstream community education for the conservation of urban wildlife. *Australian Journal of Environmental Education*, 20, 77-87. doi: 10.1017/S0814062600002329

Dawson, E. (2014). "Not designed for us": How science museums and science centers socially exclude low-income, minority ethnic groups. Science Education, 98(6), 981-1008. doi: 10.1002/sce.21133

Evely, A. C., Pinard, M., Reed, M. S., & Fazey, I. (2010). High levels of participation in conservation projects enhance learning. *Conservation Letters*, 4, 116-126. doi: 10.1111/j.1755-263X.2010.00152.x

Ferreira, M. M., Grueber, D., Yarema, S. (2012). A community partnership to facilitate urban elementary students' access to the outdoors. *School Community Journal*, 22 (1), 49-64. ISSN: 1059-308X

Hashimoto-Martel, E. A., McNeill, K. L., & Hoffman, E. M. (2012) Connecting urban youth with their environment: The impact of an urban ecology course on student content knowledge, environmental attitudes and responsible behaviors. *Research in Science Education*, 42 (5), 1007-1026. doi: 10.1007/s11165-011-9233-6

Louv, R. (2008). Last child in the woods: Saving our children from Nature-Deficit Disorder. New York: Algonquin Books:.

Mikels-Carrasco, J. (2010). Nature in our own backyards: Urban ecology and children. *Children, Youth and Environments*, 20 (2), 190-199. http://www.jstor.org/stable/10.7721/chilyoutenvi.20.2.0190

Myers, M. R. (2012). A student and teacher watershed and wetland education program: Extension to promote community social-ecological resilience. *Journal of Extension*, (4), IAW3. http://www.joe.org/joe/2012august/iw3p.shtm

NYC Department of City Planning. (2016). *New York City population*. Retrieved from http://www1.nyc.gov/site/planning/data-maps/nyc-population/population-facts.page

Shandas, V., & Messer, W. B. (2008). Fostering green communities through civic engagement: Community-based environmental stewardship in the Portland area. *Journal of the American Planning Association,* 74(4), 408-418. doi: 10.1080/01944360802291265

United States Cencus Bureau. (2014). *American community survey.* Retrieved from https://www.census.gov/programs-surveys/acs/

United States Census Bureau. (2015). *QuickFacts, Philadelphia County, PA.* Retrieved from http://www.census.gov/quickfacts/table/PST040214/42101