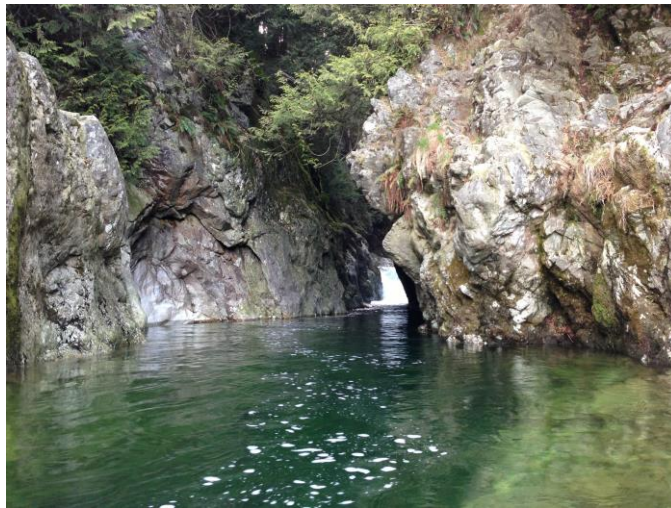


Environmental Engagement:

What insights can lower mainland nature organizations provide the Lynn Canyon Ecology Centre with regards to program development and social media outreach?

Gurtej Tung
April 3, 2013
GEOG 419
UBC



Lynn Canyon on a sunny spring evening. (March 29, 2013 *Photograph by Kelvin Poon*)

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Executive Summary

The planet is facing many environmental challenges. One way to address these challenges is through environmental education and engagement. In this report, 6 nature organizations from Greater Vancouver were interviewed in hopes of improving environmental program development and delivery at the Lynn Canyon Ecology Centre (LCEC).

Several commonalities emerged from the interviews. First, funding for these organizations comes from multiple sources including governmental and corporate. A lot of this funding is directed at youth development. All organizations focused on providing skills and career development to youth. Second, most of the organizations run their programs in multiple locations. These locations are bound by municipal jurisdictions but, in one case, programs run province wide. Finally, all organizations said that their social media presence was lacking but, nevertheless, social media was cited as a valuable outreach tool.

In this vein, it is recommended that the LCEC shift focus to youth and young adult skills/career development. There is grant money available for this, such as a Human Resources and Skills Development Canada (HRSDC) grants. Further, the LCEC should increase its sensitivity to multicultural programming by partnering with local organizations, such as the Green Club (<http://www.greenclub.bc.ca/>), which routinely conducts tours of Lynn Canyon. Also, it is recommended that the LCEC increase its social media presence. This can be done by pursuing creative engagement techniques such as creating online polls, asking timely questions to spark discussion or conducting a photo contest. Additionally, the LCEC should decentralize their outreach presence throughout the District of North Vancouver. For example, consider bringing elements of LCEC's youth programs, such as *Canyon Quest* and *Rainforest Biodiversity Study*, to nearby high schools.

Given the organizations interviewed and literature engaged, this study focuses on broad strokes environmental program development. It provides an overview of 'best practices' regarding environmental engagement. In the future, it is recommended that research be dedicated to one of the following topics; multicultural environmental engagement, youth skills/ career development within environmental organizations or social media usage amongst environmental organizations.

Introduction

The planet faces numerous man-made environmental challenges that need to be met in order to have a sustainable and equitable future. These challenges range from climate change to desertification. The potential tools to address such challenges range from technological innovations to economic incentives. However, an underutilized and, I would argue, an underappreciated tool is environmental education and community engagement. Environmental education has proven to have an appreciable return on investment with regards to increasing environmental stewardship and, in some cases, can be more cost effective than tools such as enforcement. For example, environmental outreach and education efforts in Raja Ampat, Indonesia, proved more cost effective than enforcement efforts with regards to ensuring compliance with marine protected area (MPA) regulations (Leisher et al., 2012). The goal of this research is to curate information from other nature organizations in hopes of improving environmental outreach and community engagement programs at the Lynn Canyon Ecology Centre (LCEC).

The LCEC has been open since 1971. Located in Lynn Canyon Park, North Vancouver, the park is home to exemplary flora and fauna from the west coast of British Columbia (BC). Each year over 100,000 people visit the park and learn about local ecology and environmental challenges through the various programs and exhibits offered at the LCEC (Lynn Canyon Ecology Centre, 2013).

Research Question

- ❖ The LCEC is interested in knowing what other nature organizations around the lower mainland are doing with regards to community engagement programs that focus on hands on work. The LCEC would like to know how these programs run. This would include criteria such as program length, goals, integration, funding, geography and so forth.
- ❖ The LCEC is interested in knowing how social media factors into the engagement initiatives of these organizations and how it may inform and enhance community engagement at the LCEC.

Literature Review

The following literature review addresses some potential gaps and, at the same time, bolsters some components of my research. This review is divided into two sections. The first section focuses on ‘on the ground’ programs and the second section focuses on social media.

A) On the Ground Programs

Community engagement is fundamental to the success of community based environmental monitoring. In the following I highlight two exceptional case studies of monitoring programs and then emphasize additional components that are important to keep in mind when developing an effective community engagement program.

As explored by Şekercioğlu (2012), bird monitoring programs have proven to be very effective for a number of reasons. Birds act as excellent environmental indicators, are an easily recognizable organism, can be traced relatively easily, and are a charismatic flagship species that can galvanize the general public.

Şekercioğlu’s (2012) exploration of the Ethiopia Bird Education Project (EBEP) reveals several components or points of interest that are relevant for the LCEC. Firstly, EBEP provides hands on ornithological education, to students and youth, through a unique research-outreach framework. Birds are banded and measured by a team of trained ‘citizen scientists’. Where appropriate, the banding team hands over a bird to the educator who “demonstrates the bird to the students, answers their questions, and teaches a different student each time how to properly hold and release a bird” (Şekercioğlu, 2012, p.4). Secondly, given Ethiopia’s limited transportation resources, EBEP is decentralized in nature. Banding sessions are held near elementary schools and in partnership with tourism bureaus. Proximity and accessibility to banding sessions has proven to be very important for youth attendance numbers (see Figure 1).

Along these lines, the Imbovane Outreach Project (IOP), an ant monitoring program in South Africa, is an exemplary model for economical community education and engagement (Braschler, 2009). The IOP is imbedded into the 10th grade curriculum for schools in the Western Cape Province. Much like EBEP, the IOP is a decentralized project. Schools receive inexpensive pitfall traps and beakers with catching fluid which are inserted into the ground to capture ground

dwelling insects, such as ants. Each school is provided with reference keys/ collections along with at least one microscope. Scientific staff visit schools for the purposes of verifying the data collected in addition to providing relevant environmental lessons which foster transferable skills amongst the students. The IOP has been very successful with over 3000 students participating across 13 schools.

Although the contexts (cultural and economic) of these projects are different from that of North Vancouver, both can be used as inspiration for future community engagement programs at the LCEC.

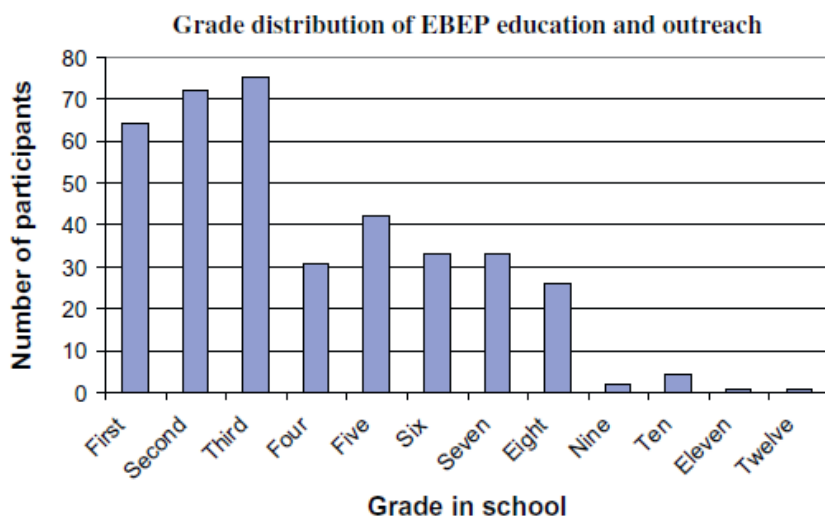


Figure 1. “Number of primary and secondary school students who visited the Wondo Genet bird banding station of EBEP in 2008. The primary school within walking distance was for students in grades 1-8” (Şekercioğlu, 2012, p.4).

Things to keep in mind...

There are two rather obvious considerations I’d like to highlight with regards to community engagement program design at the LCEC. Firstly, it is important that the programs are intuitive in their design and delivery and secondly, that the programs are culturally inclusive.

Boyes & Stanisstreet (2012) examine the efficacy of an ‘action’ versus the ‘willingness to undertake it’. The study investigates the usefulness of environmental education and whether or not it leads to behaviour change that can combat global warming. Across the UK, 961 secondary students completed a survey designed to gauge the effectiveness of an action (such as planting a

tree) versus the degree of willingness to perform that action (i.e. actually plant a tree). The results indicated that the more intuitive an action, such as driving a smaller car or planting a tree, the greater the willingness to perform that action. On the other hand, actions that were not as intuitive, such as consuming less meat, were not embraced as conveniently. There are two important points this article raises as they pertain to potential program development at the LCEC. Firstly, it is important to keep in mind the demographics participating in the education programs. Secondly, it is important to keep in mind the convenience or ‘actionability’ of the information that is being taught. In other words, is it information for its own sake or information that can be acted upon? The LCEC successfully addresses these points through their secondary school programs like *Canyon Quest* and *Rainforest Biodiversity Study* which focus on things such as soil testing and stream velocity measuring. However, it is recommended that the LCEC expand these program offerings to first and second year post secondary students and subsequently, apply for grants geared towards youth skills development such as those offered by HRSDC.

Next, Clarke & Agyeman (2011) examined the cultural and ethnic interpretation of environmental issues amongst black and ethnic minorities. The authors conducted structured/semi-structured interviews and focus groups with community members of African and south Asian decent in two UK counties. The two major themes that emerged were of ‘different mindsets’ and ‘self-empowering spaces’. This information illustrated the different perspectives blacks and ethnic minorities (mostly first generation immigrants) have with regards to environmental issues. Although the study focused on a narrow socioeconomic demographic, it did highlight the concern of white ethnocentrism in environmental community engagement. Given the multicultural population of the Vancouver region, this is important to keep in mind with the implementation of community programs at the LCEC. For example, The Green Club of Vancouver (<http://www.greenclub.bc.ca/>), an environmental education group that caters to Taiwanese and Chinese Canadians, is an example of a cultural organization that the LCEC can collaborate with. They routinely have walks at Lynn Canyon.

B) Social Media

In brief, *social media* is the set of technologies that allow us to connect and build relationships with one another. Much like physical social spaces such as bars, community centers

and religious institutions, social media spaces act as venues where people connect, share thoughts and ideas and foster a sense of community.

Social media is not simply a new venue for pontificating; it is a venue for community engagement. As Briones et al. (2011) put it; it is a “two-way communication loop” (p.39). A large scale study conducted by Obar et al. (2011) found that all 53 advocacy groups, of varying sizes that took part in the study, admitted to using social media. The study found that Facebook and Twitter were the most effective tools, while Youtube¹ proved slightly less popular amongst the participants. In some ways, social media allows for a form of passive participation (no physical involvement, but still the satisfaction of knowing they contributed) which can translate into active participation (attending programs, workshops, etc) (Hartwell & Shafer, 2011). For example, The Stanley Park Ecology Society (SPES) held a photo contest (<http://stanleyparkecology.ca/2013/04/25/and-the-winners-are/>) that was promoted through social media tools, such as Facebook, and where the winning photos were published on the SPES website. In some ways, this form of passive participation (taking pictures to submit or submitting pictures already taken) could possibly lead to more active participation with SPES (such as volunteering for an ‘invasive species’ removal event). Having said that, there are no definite metrics for gauging the success of social media campaigns (Ruchter, Klar, & Geiger, 2010). Put another way, what a view, like or comment translate into (in practical terms) is unknown. Yet, there are many tools that can provide fairly comprehensive insights into the success of social media. For instance, Facebook Insights (<https://www.facebook.com/FacebookInsights>) provides information of the demographics engaging with your Facebook page.

Method

I conducted semi-structured interviews with local environmental groups. As discussed by Flowerdew & Martin (2005), an interview is “a conversation with a purpose” (p.111). In this sense, I believe it was best method to use with nature organizations. It allowed for a comfortable discussion that uncovered nuanced information that would otherwise have been overlooked using other methods such as surveys. Organizations were recruited through targeted cold calling and contacting via email. Originally, 12 organizations were contacted, however only 6 responded (see

¹ The LCEC could consider creating a Youtube Nonprofit account: <http://www.youtube.com/nonprofits?gl=CA>

Figure 2). The length of the interviews was between 15-25 minutes. The interviews were structured around the questions in Figure 3.

Richmond Nature Park: <http://www.richmond.ca/parksrec/ptc/naturepark/about.htm>
 Stanley Park Ecology Society: <http://stanleyparkecology.ca/>
 FUN Society: <http://www.funociety.ca/Home.html>
 BC Wildlife Federation- Wetlands Education Program: <http://www.bcwf.net/index.php>
 Surrey's Natural Areas Partnership (SNAP): www.surrey.ca/snap
 Salmon Habitat Restoration Program (SHaRP): www.surrey.ca/sharp

Figure 2. Vancouver based environmental organizations that responded and were interviewed.

- * Tell me about your organization
- * What is the program?
- * What are the program's goals?
- * Does the program encourage people in monitoring and conservation in their own neighbourhoods, or does it focus on contributing to the space this organization operates?
- * How long has it been running?
- * When does it run (summer, during a school term, etc)?
- * What have its successes and challenges been so far?
- * What staff support is required?
- * Who volunteers for the program?
- * Do volunteers help manage the program?
- * What funding do these programs receive?
- * Where does this funding come from?
- * How are these programs contributing to scientific research projects or broader restoration programs and goals?
- * What role, if any, does social media play in facilitating the aforementioned programs?
- * Is there anything else you would like to mention?

Figure 3. Potential questions that were asked during the interview.

Results

The results of each interview are organized into two sections. The first section is a brief overview of the program and the second section is a pertinent highlight that I believe is useful for the LCEC.

Friends Uniting for Nature (FUN) Society

Program Overview:

The FUN Society has been running day camps that focus on education regarding local ecology, sustainability and leadership skills in Victoria and Vancouver since 2008. The camp maintains a 10:1 ratio of children to leaders. There are roughly 30 kids in Vancouver that are involved with the camp at any given time and 20 in Victoria.

Highlights:

The FUN *Champ* program is in its 3rd year. Campers, aged 6-16, compete for a \$500 grant which is allocated towards their passion project. During their time at camp they work on a project that combines their passion (eg. bike riding) with an environmental cause (eg. stemming climate change). In this sense, as highlighted in the Boyes & Stanisstreet (2012) study, the FUN Champ program successfully produces intuitive programming since it is designed and developed by youth themselves. The camper with the most inspired passion project receives a \$500 grant to implement that project, let's say a 'bike to school' program at their local school. Each recipient of the grant has a mentor from the camp providing them guidance and overseeing expenditures. This program has been a huge success with over 90% completion of projects ranging from community gardens to water bottle refill stations. More importantly, it has provided invaluable skills for future 'green' leaders.

BC Wildlife Federation's Wetlands Education Program (WEP)

Program Overview:

WEP focuses on community outreach and citizen engagement programs. They have been running full force since 2002 with programs located throughout BC. Programs range from teaching global positioning systems (GPS), pollution reporting methods and invasive species identification.

Programs run throughout the year but are most active during the summer. WEP collaborates with

other non-profits, community and naturalist groups and first nations groups throughout British Columbia. WEP's pursuit of wetlands education in combination with field-based restoration makes this program very effective at fostering environmental stewardship.

Highlights:

Three components of WEP are worth highlighting. Firstly, WEP has an excellent social media presence, but, more importantly, is at the forefront of being able to measure the success of social media. They utilize tools such as Facebook Insights and Blog Insights which allow you to track comments, likes, view and so forth. According to the representative from WEP, ever since they began focusing on social media outreach, their program registration has increased. However, it is unclear whether this relationship is causative or just correlative. Secondly, many of the volunteer opportunities with WEP are geared towards providing tangible skills such as GPS usage and plant identification. Hence, there are a lot of young adults that volunteer with WEP. Finally, components of their funding structure are daring. For example, WEP is funded in part by Shell. This has meant that the program has received some backlash, but, at the same time, has meant that WEP is able to increase its community engagement capacity.

Surrey's Natural Areas Partnership (SNAP)

Program Overview:

SNAP is a partnership between Green Timbers Heritage Society, Sunnyside Acres, White Rock and Surrey Naturalists Society and the City of Surrey Parks Department. The program, since 2001, has been hiring post-secondary students who conduct environmental outreach in neighbourhoods and public events at various parks. Additionally, a section of the team does habitat restoration in Surrey parks. There's also a volunteer coordinator who coordinates a team of volunteers that promote ecological stewardship within Surrey parks and provide support to the outreach and habitat restoration teams.

Highlights:

The program emphasizes youth career development. Many post-secondary students that find employment with SNAP have previously volunteered there in some capacity and some students that were employed with SNAP go on to find careers within the City of Surrey or other environmental organizations.² Apart from youth development being a good thing, the SNAP representative alluded to the fact that there's a lot of money available to organizations that emphasize enhancing the skills of people in the 15-30 year old age group. For instance, Canada's Human Resources and Skills Development (HRSDC) branch is where a portion of SNAP's funding comes from.

Salmon Habitat Restoration Program a.k.a SHaRP

Program Overview:

SHaRP is a City of Surrey initiative that hires post secondary and high school students who conduct habitat restoration and public outreach. In this sense, it is similar to SNAP. However, SHaRP's program goal is to mitigate the impacts to salmon habitat from development and pollution. The program has been running since 1995 and is funded largely by the City of Surrey Engineering Department.

Highlights:

SHaRP's riparian restoration programs cross municipal, residential and agricultural boundaries. For example, the agricultural stewardship and habitat restoration teams will partner with local farmers to restore salmon bearing streams that run through their properties. In this sense, although not without challenges, SHaRP has been able to successfully engage multicultural communities in their programs. Due to SHaRP's relatively large and ethnically diverse staff, many of the concerns raised by Clarke & Agyeman (2011) regarding ethnic interpretation of environmental issues are being addressed through communication (in person and print) in

² The representative that I spoke to from the Stanley Park Ecology Society use to work for SNAP

multiple languages. Another challenge of the program, as pointed out by the representative, are the communications inefficiencies between the City and SHaRP. SHaRP is contracted out to Dillon Consulting, so project barriers that occur are, at times, not efficiently relayed back to city staff; this can be a point of frustration.

Stanley Park Ecology Society (SPES)

Program Overview:

SPES's education branch has been performing activities such as habitat restoration and public events full force since 2007. All these activities occur within Stanley Park. The organization is a partnership between different branches of the City of Vancouver, such as the parks board and school board. Programs run all year but are busiest during the fall and spring because of the seasonality of biophysical inventory and wildlife surveys.

Highlights:

SPES's partnerships with post secondary institutions allow SPES to provide unique volunteer opportunities. These opportunities build on technical skills. Examples include mapping research and soil sampling. In this sense, by focusing on technical youth skills development SPES is providing a service that other organizations are not. Consequently, this type of work has fed into greater research goals and initiatives at post secondary institutions and municipalities, like Vancouver's Greenest City Initiative. SPES also has a strong social media presence, in particular on Facebook, which remains up to date and topical.³

³ SPES recently did a 'Harlem Shake' video: <http://www.youtube.com/watch?v=liEBAZzgcBE>

Richmond Nature Park (RNP)

Program Overview:

The program is a joint venture between the City of Richmond and the Richmond Nature Park Society. The nature park has been providing educational programs since 1970. The program plays a key role in the school system. Many school groups go there and learn about local ecology. There are also staff work parties that occur here. The nature centre is funded by the City of Richmond, grants and donations.

Highlights:

Gauging the success of any community outreach program is difficult because you can't see the long term effects of your engagement efforts. This is where the nature centre is slightly different given how long it's been around. When I asked the RNP representative about some of the nature centre's successes, a unique answer was given. She said that seeing parents bring their kids to the nature park and reminiscing about how the parents as children enjoyed their time in the park and now wanted their children to experience the same thing was a measure of success. Put another way, a generational return of people, knowledge and attitudes which develop and change is one way to measure success. Beyond this, the nature park operates as an open facility where anyone can come and explore the park during operational hours.

Commonalities Between the Organizations

- ❖ **Partnership:** funding comes from multiple sources including governmental and corporate. A lot of this funding is from geared towards youth development
- ❖ **Decentralized:** many of the organizations run their programs in multiple location throughout a municipality (ex SNAP & SHaRP) or even throughout BC (ex WEP)
- ❖ **Social Media:** all organizations said that there social media presence was lacking but nevertheless, social media was a valuable outreach tool
- ❖ **Youth Development:** All organizations focused on providing skills and career development to youth

Summary Table

Organization	Challenges	Successes	Staff Support	Volunteering	Funding
FUN Society	-Camp leaders try to do too much -FUN Champ mentors would like more time with camper	-90% passion project completion -provide valuable skills to children	-10 campers to 1 leader ratio -1 camp coordinator in each city - 1 FUN Champ Coordinator -1 executive director	-upwards of 30 adult volunteers for supervision purposes -social media volunteers -3 grant writers	- Canada Summer Jobs, camp registration, grants, donations
WEP	-getting more young people involved	-provide tangible skills through workshops -portion of Sea to Sky HWY wetland restored; 80 participants	-most staff in the summer -1 program coordinator -1 communications director -3 children's coordinators -3 media/PR	-focus on youth but everyone welcome -welcome input from volunteers about program direction	-government funding, corporations, community groups <i>See below for complete list:</i> http://www.bcwf.net/index.php?option=com_content&view=article&id=88&Itemid=190
SNAP	- the nature of the partnership results in challenging communications -no recognition of indigenous culture -funding model is restricted by federal guidelines	-meaningful employment experience for each student - amount and quality of habitat restoration and outreach work	-1 city technician per team (3 in total) -3 city manager level support	-directed at high school youth; habitat restoration, public events, eco-ranger (park information delivery)	- Human Resources and Skills Development Canada, Vancity, City of Surrey, Green Timbers Heritage Society, Sunnyside Acres Heritage Society, White Rock and Surrey Naturalists Society
SHaRP	-program not run directly by the city; done through Dillon Consulting; communication challenges	-meaningful employment experience for each student -lots of streams resorted, native planting	-1 coordinator on the city side	N/A	-City of Surrey Engineering, School District 36, Habitat Conservation Trust Fund
SPES	-limited funding	-positive impact on Stanley Park ecology, strong relation with parks board, lots of ecological research generated, youth skills development	-4 staff members in the conservation program	-min age is 14 up to senior -post secondary students gaining skills in mapping research, soil sampling etc -volunteer board of directors	-grants, park board, federal and provincial funding, program revenues, popcorn sales, corporations <i>See below for complete list:</i> http://stanleyparkeecology.ca/get-involved/donor-information/our-sponsors/
RNP	- limited resources and funding, for programming; basic level of staffing	-connecting people with the environment - teachers build nature walks it into their curriculum, people stopping by, having lunch, taking photographs	- 1 coordinator - 1 Community Facilities Programmer -1 Recreation Leader -additional city staff for janitorial, trail maintenance etc	-high school age to seniors; learn about nature -partner with Vancouver Green Club, Telus, Starbucks staff parties - volunteer board of directors	-federal grants, revenue sharing with contract work (ex yoga instructor), Evergreen, donations, program registration

Recommendations

Focus on the 15-30 year old demographic:

The LCEC has programs focused on young children and adults but overlooks the young adult demographic. Focus on this age group by providing tangible skills development much like WEP and SPES does. Besides being inherently positive for society, there are two knock-on benefits associated with shifting emphasis to this age group. Firstly, there are grants, such as HRSDC ones, that are available for organizations that emphasize this demographic. In turn, this would boost LCEC's overall program delivery capacity. Secondly, the 15-30 year old group can bolster LCEC's social media capacity which could result in increasing park visitors and donations. This can be done by creating a poll, asking a timely question or conducting a photo contest. SPES provides one example a successful photo contest (<http://stanleyparkecology.ca/2013/04/25/and-the-winners-are/>). The contest was conducted through social media and the winner was showcased on the SPES website. Moreover, the LCEC should focus on engaging multicultural groups. The Green Club of Vancouver (<http://www.greenclub.bc.ca/>), an environmental education group that caters to Taiwanese and Chinese Canadians, is an example of a cultural organization that the LCEC can collaborate with. They routinely have walks at Lynn Canyon.

Having said that, I would encourage the LCEC to focus on the 15-18 year old demographic by decentralizing the LCEC's programs. Taking programs to local schools, much like the Ethiopia Bird Education Project and the Imbovane Outreach Project did, would help engage more young people. Nearby schools to the LCEC include, Upper Lynn Elementary School, Ross Road Elementary School, Lynn Valley Elementary School, Argyle Secondary School (<http://www.nvsd44.bc.ca/Schools/CatchmentAreas.aspx>).

Future Research/Conclusion

This research took a step back from the specifics and focused instead on more broad strokes community engagement programs. In the future I would recommend a research question with a dedicated focus on one of the following; multicultural environmental engagement, youth skills/ career development in environmental organizations or social media usage amongst environmental organizations.

Environmental education and engagement is an important component of ensuring a sustainable future. However, given the jurisdictional and financial limitations of the LCEC (and most other nature organizations) it is important to be creative in program design and delivery. In many ways, there needs to be an urgency that embodies environmental programs. It isn't enough to conveniently repeat programs that have worked in the past; look for ways to enhance those programs and get more people involved with them.

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