

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Biodiversity Business Case: Exploring The Attitudes of Undergraduate Students on Campus Greenspace

Charlotte Choi, Alicia Chow, Carol Hu, Amanda Kwan, Subinuer Paerhati

University of British Columbia

SOCI 380

Themes: Biodiversity, Land, Wellbeing

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Information about the proposal:

Title of Project: Exploring The Attitudes of Undergraduate Students on Campus Greenspace

Keywords: Biodiversity, sustainability, green spaces, campus, attitudes, students

Ethical considerations: The proposed project will target undergraduate students for responses on a questionnaire. Students under the age of 18 will not be included in the survey.

Furthermore, we do not expect any involvement of chemicals and pollutants, animals or psychological risks or discomfort in regards to the survey as the topic is not of a sensitive nature. Other ethical considerations would be students inadvertently revealing their identity on the survey in the open-ended question. We will screen all responses and remove any identifying elements before publishing the results. During data analysis, responses will be mismatched with the respondents' student numbers. Student numbers will only be used to provide the \$5 gift card incentive.

Project Summary:

This project provides exploratory research for Campus and Community Planning regarding the usage of green spaces on campus. This project attempts to examine student attitudes about green space. More specifically, to what extent do UBC undergraduate students appreciate green space on campus and which specific green spaces are most valued? Knowledge gained from this project would impact the future blueprint of construction on campus.

Project Description:

For our project, the independent variable under study is "Undergraduate Student Attitudes on Campus Greenspace". Our main dependent variables include "Knowledge of Greenspace", the current state of greenspace presence on campus and student characteristics such as year of study, faculty, gender, local or non-local student and those that live on campus compared to students living off campus.

This project will be based on a survey to collect statistical data for a large population. The study on the topic of campus greenspaces is currently in its preliminary stage, needing some initial exploratory results to guide further research. Using a survey will allow us to obtain cross-sectional data on current attitudes regarding the current state of greenspace on campus. This can then provide a starting point for our community partner to conduct further research using more in-depth methods such as interviews to further understand the importance of greenspace on campus. The survey offers a simple way to find potential correlations and including open-ended questions allows respondents to elaborate on their self-reports of attitudes towards greenspace. Distributing the survey online can reduce costs and be shared quickly to a large sample of students. This will also help speed up statistical analysis by keeping responses computer based. Limitations of using a survey method include the nature of self-reporting and potential variation in the interpretation of questions, the absence of a trained interviewer to clarify questions and the tendency for those more passionate about the topic to be

overrepresented in responses, skewing results. In addition, UBC students receive many invitations to complete surveys as well as emails and may disregard this one.

The population we are going to survey is UBC undergraduate students. The sampling frame will be constructed through an official list of UBC undergraduate students that our community partner, Campus and Community Planning will obtain. The sampling method we are going to use for this survey is probability sampling. This random sampling method allows us to obtain a representative sample of the population under study and make sure everyone has an equal chance of being selected. Random selection will be conducted through a computerized system to support a timely process with a population of 45,000 students, ensuring that students are listed in no particular order. Predicting a response rate of 30-40%, a sample of 2000 students will be chosen.

As students generally have busy schedules, the survey would be completed online to encourage responses through convenience. Students may be unwilling to complete the survey in person as they are often moving quickly or if they do complete it, it may be rushed and invite ingenuine answers. In addition, we hope to keep the survey under 15 minutes long in the interest of maintaining engaged and accurate responses. Distribution should also avoid holiday and exam periods to encourage higher response rates and conducted depending on the timeline of our campus partner. Ideally, students will be surveyed closer to the second half of the term to ensure that students have adequate experience of interacting with the campus. To further promote responses, at least 2 reminder emails should be sent within a month in which the survey will be open.

A letter of introduction will be included in the initial email that emphasizes the significance of their response and informs them of the incentive. It will also include a deadline to complete the survey, affiliated organizations, the purpose of the survey, how long it will take and steps to ensure confidentiality.

Depending on the available budget of our campus partner, this survey will ideally provide an incentive of a \$5 gift card in which each participant can redeem by providing their student number on the survey and in person at the office. However, with an anticipated response rate of over 600 students, this may be too costly for the project. An alternative would be to provide a chance of winning a \$25 gift card. When completing the survey, students will be given an option to opt-in to the draw by putting in their student number and email. The draw will then be taken from the students who provide that information (which will be kept separate from the survey results). It is possible to increase the prize amount or number of gift cards depending on the funding from the campus partner.

Pilot tests have been conducted using the retrospective interview method, where respondents were first given a chance to complete the survey and interviewed afterward by going through each question to see how they interpreted and arrived at their response. A second method used was the think aloud interview, where respondents were asked to vocalize their thought process for each question. Finally, the debrief and revise method was used where respondents completed the survey separately and then were brought together as a focus group to discuss their interpretations of the questions and how they answered each question.

Based on the results of the pilot tests, we found that some improvements to make the survey more clear to understand. Some respondents found it hard to answer the questions regarding specific green spaces when they were not aware of that green space at UBC in the first place and found that the survey did not provide them a category to express that. A few respondents also struggled with understanding the question "Please tick off the most appropriate response in the table below according to this statement: In the past 12 months, I am in ..." as they are confused on the division of sextants. There was also an overall uncertainty regarding the term "greenspace". Because the survey is exploratory in nature, including a section at the end for open ended questions and giving respondents to add additional comments or elaboration can provide more context to the survey results. The questioning containing the map and sextants will be removed as this was the biggest point of confusion for students. Instead, a student's faculty can reveal an idea of where students classes mostly are to inform their general proximity to specific greenspaces. For each specific greenspace, we will add a question that allows respondents to report not knowing or recognizing a certain space instead of assuming a basic knowledge of these greenspaces.

Project Goals and Outcomes

To gain a representative understanding of undergraduate students at UBC, our first goal is to receive a 30-40% response rate. Students within the sample will be incentivized with a small monetary reward in the form of a gift card. Within the introductory email, we hope to provide a compelling argument to communicate the significance of their input on actual UBC decisions.

A second goal is to identify potential categories of students who may value more or have more knowledge regarding greenspaces by finding correlations between student characteristics and level of appreciation. Some likely categories may be faculty or year of study. This can provide insight on the distribution of greenspaces on campus.

Using open-ended questions, our last goal is to provide an opportunity for students to share any thoughts they have on the topic of greenspace on campus. This may provide insight on specific impacts greenspaces have had on students, how students utilize greenspace or unanticipated attitudes students may possess to guide future research.

We hope to have two months to distribute our survey to collect responses from as many UBC undergraduates as possible. Ideally, we would administer the survey during January, so that students will have had at least the Winter term (Sept. - Dec.) to familiarize themselves with the campus if they are new to UBC. Given that time length, we will send 3-4 reminders to undergraduates to take the survey. We believe that we will be able to collect enough data. The collection and organization of data will take about one month. Within that time frame, we hope to find patterns and a strong correlation between the variables we are measuring.

Appendix:

Completed Surveys

We have attached a digital and a paper based copy of our completed surveys. These copies were pilot tested and have been updated and fixed to be used for the research study.

Digital Copy: https://ubc.ca1.qualtrics.com/jfe/form/SV_244OVYV3Qy7BxfD

Paper Based:

We are a group of sociology undergraduate students designing this survey to aim and develop a deeper understanding of the role green spaces on campus play on the experience of UBC undergraduate students. Questions asked will be used to operationalize the aspect of appreciation, in which we will define as the perceived feeling of importance students have towards green spaces. For the purpose of our study, green space will be defined as designated gardens and grass patches adjacent to buildings.

Survey length: 10 minutes

Q1: Are you a current undergraduate student of UBC?

- Yes
- No

If no skip to the last page of the survey

Q2: What is your gender?

- Male
- Female
- Other

Q3: What is your age?

- 18-24
- 25-36
- 37-49
- 50+

Q4: What is your ethnicity? (You may belong to more than one group)

- African Canadian/African/Black/Carribbean
- Asian
- Pacific Islander
- Caucasian
- Hispanic/Latino
- Indigenous
- Other

Q5: What faculty are you in?

- Applied Science
- Architecture
- Arts
- Audiology
- Business
- Community Learning and Planning
- Dental Hygiene
- Dentistry
- Education
- Engineering
- Extended Learning
- Forestry
- Journalism
- Kinesiology
- Land and Food Systems
- Law
- Library Information System
- Medicine
- Pharmacy
- Population and Public Health
- Public Policy/ Global Affairs
- Science
- Social Work
- Speech Sciences

Q6: How many years of study have you completed at UBC?

- Currently in my first year
- 1 year
- 2 years
- 3 years
- 4 years
- 5 years +

Q7: Do you live on campus?

- Yes
- No

If Yes skip to question Q10.

Q8: If no, What methods of transportation do you use to come to UBC? (Check all that apply)

- Public Transportation
- Car
- Walk
- Bike
- Other

Q9: Where do you commute from?

- West Van
- North Van
- Vancouver
- Richmond
- Burnaby
- New West
- Delta
- Surrey
- Langley
- Coquitlam/Port Coquitlam
- Pitt Meadows
- Maple Ridge
- White Rock
- UEL
- Port Moody

Q10: General questions about green spaces on campus (Please tick)

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
UBC has a sufficient number of green spaces on campus						
It is important for a university campus to have green space						
UBC has more than enough green spaces						
I enjoy being in campus green spaces						
I have not noticed many green spaces on campus						
It would not make a difference to me if there were less UBC green spaces						
It is important to me that there are green spaces around me to see						
It is important to me that there are green spaces around for me to use						
Green spaces at UBC contributed to my decision to study here						



Q11: Rose Garden

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I am aware of where the Rose Garden is located						
The Rose Garden is an important part of UBC campus						
I value the Rose Garden						
If the Rose Garden was removed for redevelopment, I would be upset						
Being in the Rose Garden makes me feel satisfied						
It does not matter to me if I can't go to the Rose Garden anymore						
I would recommend the Rose Garden to someone who's new to UBC						
I didn't know about the Rose Garden						



Q12: Nitobe Garden

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I am aware of where the Nitobe Garden is located						
The Nitobe Garden is an important part of UBC campus						
I value the Nitobe Garden						
If the Nitobe Garden was removed for redevelopment, I would be upset						
Being in the Nitobe Garden makes me feel satisfied						
It does not matter to me if I can't go to the Nitobe Garden anymore						
I would recommend the Nitobe Garden to someone who's new to UBC						
I didn't know about the Nitobe Garden						

The picture can't be displayed.

Q13: The Knoll

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I am aware of where the Knoll is located						
The Knoll is an important part of UBC campus						
I value the Knoll						
If the Knoll was removed for redevelopment, I would be upset						
Being on the Knoll makes me feel satisfied						
It does not matter to me if I can't go to the Knoll Garden anymore						
I would recommend the Knoll to someone who's new to UBC						
I didn't know about the Knoll						



Q14: Patient Park

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I am aware of where the Patient Park is located						
The Patient Park is an important part of UBC campus						
I value the Patient Park						
If the Patient Park was removed for redevelopment, I would be upset						
Being in the Patient Park makes me feel satisfied						
It does not matter to me if I can't go to the Patient Park anymore						
I would recommend the Patient Park to someone who's new to UBC						
I didn't know about the Patient Park						



Q15: Library Garden

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I am aware of where the Library Garden is located						
The Library Garden is an important part of UBC campus						
I value the Library Garden						
If the Library Garden was removed for redevelopment, I would be upset						
Being in the Library Garden makes me feel satisfied						
It does not matter to me if I can't go to the Library Garden anymore						
I would recommend the Library Garden to someone who's new to UBC						
I didn't know about the Library Garden						

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Q16: Bosque

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I am aware of where the Bosque is located						
The Bosque is an important part of UBC campus						
I value the Bosque						
If the Bosque was removed for redevelopment, I would be upset						
Being in the Bosque makes me feel satisfied						
It does not matter to me if I can't go to the Bosque anymore						
I would recommend the Bosque to someone who's new to UBC						
I didn't know about the Bosque						

Q17: Do you have anything you would like to add?

Thank you for taking this survey. We appreciate your time and effort.

Code Book

1. STUDENT AT UBC

[VAR: STUDENT]

<u>RESPONSE</u>	<u>PUNCH</u>
Yes	1
No	2
N/A	9

2. GENDER

[VAR: GENDER]

<u>RESPONSE</u>	<u>PUNCH</u>
Male	1
Female	2
Other	3

3. AGE

[VAR: AGE]

<u>RESPONSE</u>	<u>PUNCH</u>
18-24	1
25-36	2
37-49	3
50+	4

4. ETHNICITY

[VAR: ETHNICITY]

<u>RESPONSE</u>	<u>PUNCH</u>
African Canadian / African/ Black/ Carribbean	1
Asian	2
Pacific Islander	3
Caucasian	4
Hispanic/ Latino	5
Indigenous	6
Other	7

5. FACULTY AT UBC

[VAR: FAULTY]

<u>RESPONSE</u>	<u>PUNCH</u>
Applied science	1
Architecture	2
Arts	3
Audiology	4
Business	5
Community Learning and Planning	6
Dental Hygiene	7
Dentistry	8
Education	9
Extended Learning	10
Forestry	11
Journalism	12
Kinesiology	13

Land and Food Systems	14
Medicine	15
Pharmacy	16
Population and Public Health	17
Public Policy/ Global Affairs	18
Science	19
Social Work	20
Speech Sciences	21

6. YEARS OF STUDY

[VAR: YEARS]

<u>RESPONSE</u>	<u>PUNCH</u>
Currently in my first year	1
1 year	2
2 years	3
3 years	4
4 years	5
5 years +	6

7. LIVING ON CAMPUS

[VAR: HOUSING]

<u>RESPONSE</u>	<u>PUNCH</u>
Yes	1
No	2

Budget - Research Survey

Expenditure	Description	Estimated budget
Student Honorarium	Recognition for the volunteers' that dedicated their time and efforts to make the survey happen	\$500
Participants Incentives	To create an incentive for students to take our survey, every participant that finishes the survey will have a chance to win a \$25 gift card to the UBC Bookstore	\$25
Risk Allowance	Unanticipated costs may arise	\$50
Statistical Analysis Software	A program that will help the survey data collecting easier	\$500
Licensing for Qualtrics	To be able to use the web-based survey to conduct our survey research	\$500
Total		\$1,575

Grant Application

Applicant Information

- 9th December 2019
- Vancouver, BC V6T 1Z4, 7782336354
- University of British Columbia
- Survey to establish the appreciation of green space on UBC campus
- \$1,575
- SOCI 380, SEEDS.coordinator@ubc.ca

Proposal summary

This study aims to identify the appreciation of UBC students when it comes to campus green spaces. We strive in determining whether certain campus green spaces are more significant than others. The information we obtain from this study will impact the future construction of campus green spaces on UBC campus.

Narrative

Background - We are a group of 5 sociology students who aim in trying to create a survey for the SEEDS sustainability group at UBC to determine the appreciation of campus greenspaces. SEEDS vision is to have a more greenspace campus for UBC. This research will not be paid as this will be volunteer work.

Funding Request- Our goal for this research survey is to attempt to make UBC a more sustainable with green spaces. In order to do so, we will conduct a survey to rely on UBC undergraduate students' feedback.

We aim to provide incentives for those students who complete the survey. For every student that completes the survey, they will have a chance to win \$25 gift card to UBC bookstore. More costs include, student honorarium, risk allowance, statistical analysis software, and licensing for Qualtrics. We hope to honour the volunteers by awarding them with \$500 (split between five volunteers). Also, we would like to prepare \$50 for risk allowance incase of any other costs that arise that we did not plan for. Statistical analysis software and licensing for Qualtrics are the most expensive costs that we will need in order to make this research happen. We are aiming for the budget to be \$500 each. The overall budget for the research survey concludes to \$1,575 CAD. We are going to sample 2000 students and are expecting to get a 600 response rate. In terms of answers we expect to receive most people being positively happy about the current green spaces on campus at UBC is famous for its greenspaces and amounts of flora and fauna.