

UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Synchronizing Sustainability Education Across Higher Education Community Orientations

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University of British Columbia

APSC 461

Themes: Community, Climate

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THE UNIVERSITY OF BRITISH COLUMBIA

APSC 461

Synchronizing Sustainability Education Across Higher Education Community Orientations

June 25, 2020

Project Sponsor: UBC Social Ecological Economic Development Studies (SEEDS),
UBC Campus and Community Planning

Group 3: Sustainability Education

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MEMORANDUM

To: Dr. Paul Winkelman, APSC 461 Instructor

Cc: Tawnee Milko (Sustainability Engagement Lead in Campus & Community Planning), David Gill (SEEDS Project Manager), Meryn Corkery (SEEDS Coordinator)

From: Nicolas Navarre (NN), Steve Farra (SF), Sunjot Singh Hunjan (SH)

Subject: Synchronizing Sustainability Education Across Higher Education Community Orientations

Date: June 25, 2020

Background

With increased concerns surrounding the global climate emergency, the need to address the issue emerges across individuals and large organizations alike. The University of British Columbia is one of the world's leading institutions in pushing the envelope of sustainability literacy amongst its staff, students, and faculty through various sustainability-focused workshops and zero-waste education initiatives. There is still, however, a strong opportunity to explore integrating more centralized, high-level sustainability education into student, staff and faculty orientations so that every new member of the UBC community receives a basic/introductory level of education around sustainability. By exploring how other higher education institutions have successfully approached and implemented such programs, UBC can consider a scan of alternatives when implementing their own.

Purpose

The objective of this report is to present the findings of the project, Synchronizing Sustainability Education Across Higher Education Community Orientations, and serve as partial fulfilment of APSC 461 course requirements. This project is sponsored by David Gill, project manager of UBC SEEDS (Social Ecological Economic Development Studies) and was carried out over the duration of the second half of the course. This project entails:

- Situational analysis to identify the context and issues at large
- Planning and identifying key milestones with UBC SEEDS
- Literature review to understand the practices of sustainability education imparted to newcomers at other post-secondary institutions leading in AASHE STARS Ranking
- Phone interviews and email exchanges with Sustainability Officers at these post-secondary institutions for further clarifications
- Assessing and comparing UBC's current approach to sustainability education during orientations of students, staff, and faculty
- Recommending cross-campus sustainability education methodology to implement at UBC

The findings of the project are presented in this report and a presentation delivered on 25 June 2020. Given the strict time constraints and absences of Sustainability Officers from their respective offices due to social distancing (COVID-19), a number of institutions were unable to share their responses with the project team. Contacts from those institutions have been shared within this report for UBC SEEDS to consider upon continuing this project later on. Hence, the results of this report should not be considered as complete as the team has managed to sample only a few high-ranking institutes from a plethora of worthy institutions worldwide. The recommendations presented in this report are for UBC SEEDS and the Campus and Community Planning department to consider. We kindly ask UBC SEEDS and the Campus and Community Planning department to consider the findings of this report and issue their feedback to the project team.

Executive Summary

Apart from being a prominent player in the field of education and having produced Canada's "who's who" ranging from Nobel laureates to previous prime ministers, the University of British Columbia (UBC) has been proactive in its sustainability initiatives. UBC signed Talloires Declaration in 1990. It became the first university to adopt a sustainability development policy in 1997 and open an office devoted to campus sustainability in 1998. With the advent of recent worldwide calls for climate change emergency, UBC understands its place in society, industry, and politics and realises its ethical responsibility and the role it can play towards producing agents of change – students, alumni, industry, government partners, etc. – for environment sustainability. To realise its ethical responsibility, UBC has produced its 20-Year Sustainability Strategy that provides an insight into the vision and aspirations of the university to attain its long-term sustainability goals. UBC is excelling in most of the objectives laid out in its sustainability strategy, except for the ones that are heavily reliant on the sustainability habits of UBC community members.

The Campus and Community Planning (C+CP) department at UBC recognises that improvements can be made to increase positive collaboration of its community members to fulfill UBC's sustainability objectives. C+CP wants to use this opportunity to assess the state of sustainable education imparted during orientations for the new members at UBC. The C+CP and Social Ecological Economic Development Studies (SEEDS) department at UBC are undergoing a joint planning process for increasing sustainability literacy across students, staff, and faculty at UBC. To address sustainability education at UBC, C+CP and SEEDS aim to create effective orientation programming for students, staff and faculty.

The purpose of this study is to investigate the implementations of other institutions' sustainability orientation programming or initiatives in order to identify what sort of implementations might be a good fit for UBC's education on sustainability. This investigation involves the selection, filtering, and contacting of several universities, based on clear evidence of sustainability orientation programming or commitment to sustainability. Following the final filtering, the institutions are contacted to set up an interview. Both lists for shortlisted universities and interview questions can be found in the Appendices section.

The questions in the interview aim to identify key aspects of the orientation programming:

- Orientation organizing bodies
- Type of sustainability content
- Funding for sustainability programming
- Successful sustainable development metrics

The three interviews from the University of Victoria, the University of Auckland, and McGill University provided details on their sustainability orientations that was used to create a set of recommendations for UBC's own strategy:

- Operationally high-level sustainability office regulating content
- Mandatory orientation content for students included in student handbook
- Mandatory training modules included in staff on-boarding
- Feedback forms included in orientation events
- Orientation content based on UBC Climate Action Plan

Contents

1	Introduction	1
2	Purpose of the Project	3
3	Partner Organization, Participants and Community	4
4	Goals and Objectives of the Project	5
5	Approach and Methods	5
6	Results	6
6.1	Preliminary Web-Search	6
6.2	University of Victoria	6
6.3	McGill University	7
6.4	University of Auckland	10
7	Discussion	11
8	Conclusions and Recommendations	12
	References	13

1 Introduction

As one of the most prominent universities in Canada, the University of British Columbia (UBC) has produced eight Nobel Prize winners in addition to three Canadian prime ministers, 20 National Teaching Fellows, 58 Olympic medallists, 71 Rhodes Scholars, and 266 Royal Society of Canada fellows. In addition to being a prominent player in the field of education, UBC is perceived as an embodiment of social betterment in community with strong industry and government ties both locally and internationally (“Overview and Facts — UBC”, 2020). The sustainability initiative forms an important part of the community at UBC (“Overview and Facts — UBC”, 2020). Such an outlook is a work of decades of initiatives at UBC ranging from the signing of the Talloires Declaration, a 10-point action plan for incorporating sustainability into higher education, in 1990 to being the first university in Canada to adopt a sustainability development policy in 1997. Moreover, UBC was the first university to open an office devoted to campus sustainability in 1998 (“Who We Are — UBC”, 2020). A product of these initiatives is the UBC Sustainability Initiative, which acts as a curator and facilitator of a wide breadth of sustainability programs and activities across campus. A derivative of the UBC Sustainability Initiative, UBC’s 20-Year Sustainability Strategy, provides an insight into the vision and aspirations put forth by UBC for its long-term sustainability goals on campus and beyond (“20-Year Sustainability Strategy”, 2018). The Campus and Community Planning department is a team of urban planners, designers, public consultation professionals, and sustainability experts that forms a part of the UBC Sustainability Initiative. Some of the key responsibilities of the department include long-range planning, land use regulations, campus and landscape design, licensing and permits, managing programs that cover sustainability initiatives to transportation and community-building activities. Through the work of various stakeholders – like the Campus and Community Planning – under the UBC Sustainability Initiative, UBC, currently, ranks as the seventh best university in the world on the Times Higher Education Impact rankings that assesses post-secondary institutions as per the United Nations’ Sustainable Development Goals (SDGs) (“Impact Ranking”, 2020).

UBC’s sustainability strategy mentions three components: 1) teaching, learning, research, 2) operations and infrastructure, and 3) UBC community. The first component focuses on integrating sustainability into the core UBC teaching, learning, and research activities - students are provided with courses, skills, and experiences to pursue alongside their disciplinary major. This serves the university’s purpose of creating agents of change who can work for the betterment of the environment worldwide. Second pertains to operational and infrastructure sustainability on campus with quite ambitious targets to reduce greenhouse gas emissions by 100 percent by 2050. Third is associated with creating a sustainable Vancouver campus community at an urban neighbourhood scale (“20-Year Sustainability Strategy”, 2018). Since the implementation of the first component is under UBC’s direct

control, UBC is meeting its targets. UBC offers around 800 sustainability related courses across its Vancouver and Okanagan campuses. These courses are open for enrolment to students/staff/faculty who are interested in the subject. However, it is lagging behind in the metrics for the second and third component which are directly affected by the actions of UBC members – students, staff, and faculty. For example, in the latest sustainability report, the following metrics suffered (“UBC Annual Sustainability Report”, 2019):

1. Overall waste diversion rate saw a decline of five percent in comparison to 2010
2. Operational waste disposed increased by 11 percent in comparison to 2010
3. Annual waste disposed increased by seven percent in comparison to 2010
4. Trips to/from campus by single occupant vehicle increased by five percent in comparison to 1997

Metrics like these are directly dependent on the actions of the community members at the UBC – e.g. UBC community members can alter the annual waste disposed at UBC that can affect the metrics either positively or negatively.

With over 15,000 employees and 10,000 new students from various backgrounds starting at UBC each year, UBC is incurring a significant number of new members who are incognisant of UBC’s sustainability objectives. Hence, the university understands the need for continued sustainability education through proper orientation for its patrons as soon as they start their campus life. UBC seeks to instil the concept of sustainability amongst all its students via sustainability focused workshops and zero waste reduction education. However, on the faculty and staff front, such efforts are lacking. For staff and faculty, the introduction to sustainability education is limited to a short blurb in UBC orientation materials and participation at sustainability orientation events (Gill, 2020).

Community-based experiential learning (CBEL) is a programme at the UBC that focuses on community-based pedagogical practices, with emphasis on mutual benefits of both students and community partners: students apply their academic learning in a community context to deepen their understanding of disciplinary content and community partners draw on students’ talents as a contribution to the work of their organisation (“A Brief History of UBC — University Archives Blog”, 2018). Another programme that forms a part of the UBC sustainability initiative is called the UBC SEEDS (Social Ecological Economic Development Studies) Sustainability Program. This programme creates partnerships between students, faculty, staff, and community partners to learn collectively through research projects that are tested on campus, and applied in real-world settings (“SEEDS Sustainability Program”, 2020). The Campus and Community Planning utilised CBEL and UBC SEEDS programme to present this project to address issues it faces in imparting sustainability education in orientations and to explore practices, successfully implemented at other institutions, it can adopt to

ensure basic level of sustainability education for each of UBC’s new members (“A Brief History of UBC — University Archives Blog”, 2018).

The Campus and Community Planning has identified shortcomings of its sustainability education programme for the new members at UBC during orientations. The department believes that due to involvement of only a handful of properly trained staff members in UBC’s sustainability programme, the dissemination of the sustainability education content to target audience relies too heavily on departmental partners like Centre for Student Involvement and Careers, Graduate Student Society, and UBC Human Resources. This model of information dissemination is prone to content dilution, mixed messaging, lack of sustainability content prioritisation, and offers limited reach to audience recipients (Gill, 2020). As such, the new members at UBC are likely unaware of sustainability practices across campus contribute adversely to UBC’s sustainability initiative.

A team of three final year engineering students at UBC, namely Nicolas Navarre, Steve Farra, and Sunjot Singh Hunjan, is leading the research to examine the state of sustainability education at orientations at UBC to help the Campus and Community Planning department to address gaps in its sustainability education programme.

2 Purpose of the Project

UBC believes in sustainability as it is necessary to counter the devastating ramifications of human abuse of the environment through unsustainable practices. Moreover, UBC believes it is ethically correct and desirable in itself to pursue the possibility of a better life for people and the planet. UBC aims to create agents of change who can work for the betterment of the environment worldwide (“20-Year Sustainability Strategy”, 2018).

The purpose of the project is to ensure proper sustainability education of UBC members - students, staff, and faculty - such that they can be agents of change for environmental sustainability worldwide.

3 Partner Organization, Participants and Community

A number of stakeholders have been selected for this project:

1. **UBC SEEDS and Campus and Community Planning.** The findings and recommendations of this report will be delivered to UBC SEEDS and the Campus and Community Planning for consideration. Since they are ultimately responsible for implementing the changes in the UBC sustainability education through orientations, they are the primary stakeholder of this project.
2. **UBC students, staff, and faculty.** Since the recommendations provided in the project, if implemented, will affect the sustainability education component of the orientations at UBC for the new members. The students, staff, and faculty will be trained in sustainability practices which will be ingrained in them throughout their lives on campus and beyond.
3. **UBC community and the larger society.** After acquiring proper education on sustainability, the effect of the sustainable actions of the new members at UBC will be first evident in the UBC community. Hence, the UBC community will be a bona fide stakeholder of this project. Next, as some of the students, faculty, and staff will move out of UBC to various parts of the world, they will carry their sustainable behaviour with themselves and, in turn, positively affect the sustainability initiatives in the communities they ultimately reside in.
4. **Other post-secondary institutions.** Since the findings of this project will be made public, unless asked otherwise by a stakeholder, the policies and actions of these post-secondary institutions will highlight the work done at their respective institutes to impart sustainability education to their peers. Patrons from other universities, who read this project report, can become interested in the sustainability programmes run by these post-secondary institutions and can result in a joint project or a collaboration that benefits all parties involved.

4 Goals and Objectives of the Project

The objective of this project is to conduct an environmental scan of post-secondary institutions assessing how other colleges and universities have embedded sustainability education in orientations for incoming staff, students, and faculty, in order to provide best-practice recommendations for UBC's own orientations. In particular, the project aims to do the following:

- Determine which higher education institutions have implemented successful sustainability orientation programs
- Determine their process for developing and integrating that programming across the broader university, as well as the parties responsible for ongoing management and coordination
- Determine the specific sustainability content being delivered, their format and medium of delivery, and the metrics of progress in sustainability education used to measure its success
- Determine any organizational, operational, financial or cultural barriers or opportunities were present at successful institutions comparative to UBC

5 Approach and Methods

Based in the kind of information that needed to be collected for this investigation, much of it is scarce to the institution's web-pages and published reports. For this reason, scheduling a set of interviews with internal contacts related to sustainability was the ideal approach for this study. Using a set of questions as outlined in Appendix B, the questions pertained to their general sustainability orientation programming. The hopes for interpreting this information are to identify what were their successful implementations, if any, or any innovative or interesting programs. Additionally, identify, if there are there other parts of orientation programming in need of further research.

The following list details the process for achieving the objectives identified in the previous section:

1. **Conduct high-level scan of best-practice universities.** Initial considerations were based on sustainability rankings, namely by Times Higher Education ("Impact Ranking", 2020) and the Association for the Advancement of Sustainability in Higher Education. ("STARS Participants and Reports", 2020). If the institution is recognized as a global leader in sustainability, there is a high likelihood they have implemented some sort of sustainability programming for staff faculty and students.
2. **Shortlist universities.** Look for mentions of sustainability education in orientations on their websites, articles, and brochures. Prioritize institutions that make a direct mention and record

whatever information is available. Otherwise, make a judgement based on other factors, e.g. objectives outlined in their climate action plan, clear and accessible contacts listed. See Appendix A for shortlist table.

3. **Reach out to shortlisted universities.** Two email templates are used for initial contact: One for institutions that are known to have sustainability programming in their orientations, and another for institutions that show promise. The former template has a phone interview request as they are higher priority, while the latter opts for an email interview.
4. **Generate interview questions.** These are based on the objectives determined in the previous sections and made in collaboration with the project stakeholders. See Appendix B for question list.
5. **Schedule an interview following an interest from the institutions.** Request to record the interview (kept confidential) in order to transcribe the desired information, otherwise take notes.
6. **Report findings.** As has been defined by the project sponsors, some of the criteria that was necessary to report on: Interesting or innovative programming ideas, successful implementations of orientations, and other pieces of information that require more investigation.
7. **Make recommendations.** Extract and combine the best initiatives garnered from interviews. These will be programs that could very well be adopted by UBC, or provide a description of how it can be incorporated into UBC's programming.

6 Results

6.1 Preliminary Web-Search

The original web search to identify potential institutions to contact consists of the relevant information pertaining to the sustainability programming at the universities. The complete table of information of the investigated institutions can be seen in Appendix A.

6.2 University of Victoria

The University of Victoria takes an integrated approach to sustainability education in orientations by making it a part of existing programming. Incoming students are given a student handbook during their orientation which contains sustainability tips (e.g. transit options), initiatives, and clubs as well as some highlights (e.g. green buildings). For staff, sustainability is one module in a series of online

courses all new hires must complete as part of their on-boarding. The module contains many of the same tips and initiatives as the student handbook, in addition to promoting the Staff Sustainability Network.

Content is primarily made by the Office of Campus Planning and Sustainability, who work with the Office of Student Life and HR to integrate their materials into student and staff orientations, respectively. All content is produced to be consistent with UVic’s five-year Sustainability Action Plans. Campus Planning and Sustainability allocates staff resources to the student life office and HR in order to produce the content, who finalize the content and fund the delivery themselves. While there are no metrics currently measuring the success of these orientations directly, the Office of Campus Planning and Sustainability measures the success of their sustainability orientations through indirect means: website & social media analytics, engagement metrics at in-person events, and behavioural metrics during campaigns (e.g. number of bus passes sold, number of staff who join the Staff Sustainability Network).

6.3 McGill University

McGill has three pillars of sustainability: economic, environmental, and social. (“Sustainability Workshop”, 2020) At McGill University, sustainability education on campus is mainly undertaken by the McGill Office of Sustainability and Campus Life and Engagement Office. The McGill Office of Sustainability (MOOS) provides the strategic guidance, support, and resources to advance McGill in its sustainability endeavours of sustainable research, education, connectivity, operations, and governance. MOOS has six main operations (“About Sustainability”, 2020):

1. Training

MOOS provides a sustainability education to the university members via a number of events on campus such as staff Lunch and Learns and student leadership in sustainability programmes (PRAXIS) (“PRAXIS: Training for Change Agents”, 2020)

2. Connection

MOOS is also responsible for digital communication, external partnerships focused on sustainability, and organising the Catalyst Awards – honouring students, staff, and faculty for their contributions to sustainability movement at McGill. (“The Catalyst Awards”, 2019)

3. Cultivation

Campus wide sustainable events, workplace certification, and applied student research pertaining to sustainability are undertaken by MOOS.

4. Strategy

MOOS is responsible for drafting McGill's Climate and Sustainability Strategy, Waste Strategy, and Unit-level Action Plan with input from the Advisory Council on sustainability formed of faculty, staff, students, and external representatives.

5. Monitoring and Reporting

Each year MOOS publishes an annual report on the highlights or the sustainability initiatives it has undertaken at McGill. ("MOOS Annual Report 2017", 2017)

6. Funding

MOOS maintains the Sustainability Projects Fund (SPF) that provides seed-funding for interdisciplinary, sustainability focused projects. SPF has an estimated yearly total of \$1,000,000 making it the largest fund of its kind in Canada. Half of it is funded by student fees and the other by administrative matching. ("Sustainability Projects Fund", 2020)

Campus Life and Engagement Office (CLEO) at McGill is a member of Student Services and is the "go-to hub" for connecting students to resources across McGill. Campus Life and Engagement Office organises Discover McGill Orientation for students

At Discover McGill Orientation, students are introduced to sustainability initiatives at McGill. On the other hand, as an ongoing effort, CLEO provides sustainability workshops throughout the year to interested students. Additionally, volunteers working across the campus are trained in proper waste sorting for events on campus, including orientations, such that the incomers interacting with them are properly educated about Montreal's waste management protocols. The staff and faculty, however, does not have a centralised orientation and have to rely on their respective unit/department/faculty for orientations. McGill is in the development phases for implementing a sustainability online module that will be mandatory for students, staff, and faculty to complete upon starting at the university.

McGill follows a centralised approach in development and management of sustainability education material that is delivered across campus. Most of the messaging is managed by MOOS and in line with McGill's Climate and Sustainability Strategy for 2020-2025 (the Strategy) ("Vision: Climate & Sustainability Action Plan", 2017).

The Strategy aims at reducing the university's carbon footprint and introduces two long-term targets: achieve carbon neutrality by 2040 and attain a Platinum sustainability rating by 2030. To attain these goals, the Strategy defines 22 priority actions that are separated into two spheres: climate and sustainability. Some of these priority actions are addressing Green House Gas emission from air travel, institutionalise McGill's sustainable labs practices, assess student's knowledge of sustainability,

etc. Once the goals are drafted, the actions are distributed amongst different units to execute e.g. actions pertaining to waste management are assigned to Buildings & Grounds.

Though students, staff, and faculty are introduced to a consistent messaging on sustainability as illustrated in the Strategy, calls to action, however, can be different based on the audience. Educational material is distributed digitally through various mediums like website, articles, social media, campaigns, etc. Additionally, MOOS hosts various events and engagement programmes like McGill Sustainable Events and McGill Sustainable Workplace Certification that trains the university members in sustainability initiatives aligned with the goals and definitions outlined in the Strategy. Topics provided in sustainability education are made developed such that they align with the 22 priority actions listed in the Strategy. Sustainability education topics include, but are not limited to, the following information:

1. Sustainable Commuting
2. Waste Reduction
3. Waste Sorting
4. Economic Benefits of Sustainable Behaviour
5. Mental Health

As mentioned earlier, in McGill's three pillars of sustainability, McGill not only focuses on environmental sustainability, but also on social and economic sustainability.

Since CLEO organises Discover McGill Orientation for students, it pays for the event through its operational budget. However, part of the funding pertaining to sustainability education in orientation comes from SPF. Units/departments/faculty aiming to educate their staff and faculty on sustainability initiatives at McGill can also apply for SPF for additional funding and resources.

MOOS organises a campus wide survey on sustainability before drafting the next Climate and Sustainability Strategy to assess sustainable literacy amongst McGill members. These surveys also help highlight the sustainability programmes and institutional goals that the community is most familiar with. Additionally, MOOS will conduct a sustainability literacy survey starting this year as part of their STARS submission to AASHE. CLEO, on the other hand, uses feedback questionnaires, Likert scale, and open ended questions to gauge the understanding of their audience. MOOS identifies limited staff capacity as the major barrier in implementing sustainability initiatives as per the Strategy. MOOS encourages its staff members to share ideas to work as effectively as possible within their teams and campus allies to reduce the effect of limited capacity. Recently, MOOS has moved up in McGill's hierarchy (directly under the VP Administration & Finance) so that it can move through

organisational barriers more effectively. Also, recently, during the drafting of the latest Climate and Sustainability Strategy, the role of Climate Officer was institutionalised for MOOS.

In the wake of recent developments due to COVID-19, both departments have changed their interaction practices with their stakeholders. The community consultation process and meeting with topic experts/stakeholders on campus for the next Climate and Sustainability Strategy was hosted virtually by MOOS. The effects of social distancing will affect the launch of the next Strategy in Fall 2020 - MOOS is planning to have a virtual gathering. Some sustainability education projects to be implemented across campus have been paused or postponed. However, MOOS has identified opportunity to deliver some new projects virtually. Additionally, all sustainability events and engagement activities hosted by MOOS have also shifted to a virtual platform. Similarly, CLEO is hosting this year's orientation virtually, including virtual sustainability workshops for the incoming students. CLEO sees this as an opportunity to better interact and teach the students online compared to an in-person session. For example, interactive activities such as "matching the waste to its proper bin" and Kahoot with trivia offers better interaction with students and gauge their understanding.

6.4 University of Auckland

While the University of Auckland does not have any centralized orientation, there is still sustainability programming for both incoming students and faculty, most of which revolves around the UN Sustainable Development Goals. On orientation day, a volunteer-run stall informs students how they can get involved in sustainability on campus. Additional opportunities are available for students in residence, who can participate in the Green Your Room challenge at the start of the term. On the staff side, most position descriptions have a sustainability section, which briefly details the university's sustainability aspirations and asks staff to contribute towards sustainability efforts. There is work being done to have a speaker at formal orientations for staff as part of their new environmental sustainability strategy.

The managerial work and funding for the orientation day stall is headed by the central Sustainability Office (SO), while the Accommodation Halls manage and pay for anything that they need to promote Green Your Room with some support from the SO. The SO also works with HR to include sustainability in the staff position descriptions. There are no metrics currently measuring the success of this programming directly, but there is an effort to work more in partnership with faculties and via formal courses. Previous attempts at using a mailing list used by a student volunteer initiative turned out to take a lot of time to manage. The SO's primary barrier to growth is team size; a mention was made of how student interns would help ramp up efforts to engage students more.

7 Discussion

Each interview provided valuable insights that UBC could take something away from, be it a certain methodology to replicate or a possible pitfall to avoid.

One key takeaway was the University of Victoria's highly integrated approach to sustainability education in orientations. Since every student already receives a handbook during their orientation and every staff member completes an on-boarding procedure, their sustainability office can engage with every single newcomer and focus on developing their programming while all other logistical and managerial work is managed by other departments. The trade-off between accessibility and engagement should be noted; reading a brief passage in a booklet does not take a lot of effort, but the reader does not have to commit to making a large or memorable change in their thought process and behaviour.

This analysis is especially applicable to UBC to when the organizational, cultural, and environmental similarities between UVic and UBC are considered: their sustainability office (Office of Campus Planning and Sustainability) is somewhat of a mix of UBC SEEDS and Campus and Community Planning, their Sustainability Action Plan has a lot of overlap with UBC's Climate Action Plan, and much of their existing sustainability tips and metrics are applicable to UBC with how close in proximity the two institutions are.

The University of Auckland has a peculiar choice of framework to base much of their sustainability content on. While the UVic and McGill orientations use the Sustainability Action Plan as a foundation for much of their sustainability programming, UOA bases a lot of their content around the UN Sustainable Development Goals. The advantages of using an external and more universal framework like this is that the institution's sustainability objectives become clearer, and their ability to generate suitable content gets easier, as the average student, staff, or faculty member is more likely to recognize the SDGs than their institution's internal sustainability policy.

An important note about McGill's sustainability programming is that it is based upon their Climate & Sustainability Strategy and Ethnicity, Diversity and Inclusion (EDI) Plan which are mandated by multiple sustainability units. Additionally, McGill's Sustainability Project Fund seems to be an excellent resource for creating orientation programs whose goals are based upon the aforementioned Climate & Sustainability Strategy. On an operational perspective, McGill's sustainability office is now managed directly under the VP Administrations & Finance which aids in overcoming organizational barriers. McGill's Sustainability Project Fund Seems to be an excellent resource for creating orientation programs whose goals are based upon the aforementioned Strategy.

With a sample size of three institutions and the fact that each university varies substantially in both structure and strategy, trends are few and far between. However, similarities were found in UVic

and UOA's organizational structure. Both universities have a centralized sustainability office that manages most of the programming and reaches out to external departments for funding, delivery, and other logistical needs. Furthermore, no university has direct metrics for measuring orientation success so far as common approaches can be difficult to fit the chosen mediums of delivery. It is therefore likely that indirect metrics would (at the very least) have to be incorporated, i.e. measuring the success of sustainability targets instead of the orientations themselves.

8 Conclusions and Recommendations

To conclude this study, the final step is to compile a list of recommendations that will help UBC's sustainability orientation programming move in the direction of the purpose of creating a better environment for people and the planet to live. Of the initiatives described by the interviewed institutions, the best ones suited to this purpose are the ones that objectively assist in completing the original purpose. Measurable forms of organization and response from the sustainability initiatives are what are going to help UBC organize and plan its sustainability educational programming.

Based on the initiatives that were discussed in Section 7 the most notable elements of the universities are compiled into this list of recommendations. With each recommendation the origin of the inspiration for the recommendation is stated.

Final Recommendations:

- Operationally high-level sustainability office regulating content (McGill)
- Mandatory orientation content for students included in student handbook (UVic)
- Mandatory training modules included in staff on-boarding (UVic)
- Feedback forms included in orientation events (McGill)
 - Likert Scale
 - Open-ended questions
- Orientation content based on UBC Climate Action Plan

Uvic's approach theory streamlined and integrated, but is not very interactive. McGill's orientation approach benefits from active event planning and funding. They benefit from having multiple event organizers with a separate funding system as a semi-decentralized organizational structure with an overhead office regulating sustainability goals. This provides some context for how UBC can look to organize its sustainability content both in organization and delivery.

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Appendices

Appendix A: Shortlisting Results

University Name	Rankings	Comments
Arizona State University	Platinum on ASHEE	<p>https://asunow.asu.edu/20180913-asu-top-performer-2018-campus-sustainability-ratings</p> <ul style="list-style-type: none"> STARS recognizes ASU's efforts to empower and engage the campus community in sustainability via University Sustainability Practices' efforts including student educators and integrating sustainability throughout orientation. <p>Highlights of sustainability work: https://sustainability.asu.edu/sustainability-2018-highlights/</p> <ul style="list-style-type: none"> The first sustainable food systems degree programme Global Engagement - e.g. Global Locust Initiative, drylands, etc. Local solutions e.g. waste management, sustainable tourism planning for local communities Climate change - sustainable rice production with solar power Energy initiatives - multiple grants <p>https://asunow.asu.edu/20180913-asu-top-performer-2018-campus-sustainability-ratings https://reports.aashe.org/institutions/arizona-state-university-az/report/2020-03-05/FN/campus-engagement/FN-2/</p>
Stanford University	Platinum on ASHEE	<p>No mention of any explicit orientation on sustainability education https://sustainable.stanford.edu/campus-action/university-living-lab</p> <ul style="list-style-type: none"> Carbon free energy supply in 2021: aggressively reducing its carbon footprint - reliance on renewable energy Sustainable Water Management: conservation projects, retrofits, capital improvements, and behavior changes have reduced potable water use by 44% in 2019 compared to 2001 Aggressive Energy Demand Management as a Smart Campus <p>https://reports.aashe.org/institutions/stanford-university-ca/report/2017-06-28/FN/campus-engagement/FN-8/</p>
McGill	Gold on ASHEE	<p>Has a highly-detailed orientation integrating sustainability and is a (relatively) local pick The Sustainable Orientation project aims to introduce and mainstream sustainability to new students by raising awareness and modelling best practices during orientation through more sustainable programming and materials https://www.mcgill.ca/sustainability/sustainable-orientation-sp0165</p>
University of Auckland	#1 THE Impact Ranking	<p>No explicit mention of an orientation, but their high ranking, clear commitment to sustainability and mention of sustainability being embedded more and more in their everyday practices makes them a strong choice.</p>
Vrije Universiteit Amsterdam	#39 THE Impact Ranking #2 in Climate action THE Impact Ranking	<p>https://fsuu.com/vuuniversity/docs/vu_instellingsplan-eng/42 (Detailed programming for education and sustainable integration) Making deliberate efforts to include sustainable programming.</p>
Pontifical Bolivarian University	#10 In climate action	<p>Different culture, social customs, economy https://copocimiento.upb.edu.co/informacioninstitucional/Portal/Reporte%20de%20Sostenibilidad%20UPB%20MUL.TICAMPUS%202018-%20Portal.pdf Sustainability report outlining their goals making clear intentions of reshaping campus life and engagement towards sustainability. https://www.upb.edu.co/es/blogs/upb-sostenible Its own sustainability blog (medium to spread sustainability information)</p>
University of Victoria	#4 in climate action (THE)	<p>High rank and close proximity to UBC. From their 2018 Strategic framework: "Strategy 5.2: Over the next five years we will continue to move toward a comprehensive and integrated approach."</p>
University of Helsinki	#6 in climate action (THE)	<p>Owens the Helsinki Institute of Sustainability Science. In the 2019-2020 HELSUS Strategy document, action plan includes "creating a basic understanding of sustainability in all fields" with associated metrics.</p>
University of Sydney	#2 overall rank (THE)	<p>University of Sydney Environmental Sustainability Policy 2015, Section 2: Integrate environmental sustainability into teaching, learning and research, through: (a) integrating environmental sustainability themes into curricula.</p>

Appendix B: Interview Questions

Attribute	McGill University	University of Victoria	University of Auckland
Sustainability Education in Orientations	Students: Mandatory sustainability orientation during Discover McGill Orientation. Staff: Orientations mandated by team heads.	Students: Integrated into new student handbook Staff: One of their online training modules (part of core competency) https://www.uvic.ca/hr/manager-support/perform-ance-coaching/competency-model/	Staff: most staff position descriptions have a section detailing university's sustainability aspirations and asks staff to contribute towards sustainability efforts Students: Stall at orientation run by sustainability & student volunteers. On-campus students have an optional Green Your Room programme
Content Management by?	Students: Campus Life & Engagement plans the "Discover McGill" orientation Staff & Faculty: McGill Sustainable Events, McGill Sustainable Workplace Certification are responsible for other sustainability events open to all audiences. Unit heads decide the need for sustainability orientation for staff.	Office of Campus Planning and Sustainability, who work with HR, Res & Student life to integrate it into booklets and courses (respectively)	Central Sustainability office manages the process for orientation day, Accommodation Halls manage Green Your Room
Paid by?	Unit heads may apply to the Sustainable Projects Fund (SPF) to run events for staff. "Discover McGill" has its own operational budget with help from SPF.	Engagement materials for communications & marketing: funded directly by the Office of Campus Planning and Sustainability. Work for HR or ResLife and student affairs: allocate staff resources for content, and they fund the delivery	Orientation day stall: Central sustainability office Green Your Room: Accommodation Halls
Consistent Content Delivery?	Campus Life & Engagement provides interactive workshops, mostly for students. Most content is orientation program focused.	All programming consistent with the sustainability action plan, which breaks down further to engagement and communications plan	Most programming revolves around the SDGs; quite targeted, but not highly prescriptive.
Medium of Content Delivery? In-person, videos, PDF, course, quiz? Specify examples.	High-Level content distributed generally with websites, social media and articles. First year students receive targeted sustainability messaging as distributed by orientation leads.	Student: Physical handbook Staff: Online course Classroom presentations Expanding into video to promote sustainability highlights	Mostly in person
Contents of educational material	Proper waste sorting in Montreal. How to be a more sustainable commuter; Social sustainability and wellbeing. Content all based on Climate & Sustainability Strategy.	Student handbook: outlines sustainability tips (e.g. transit options) initiatives, and clubs, highlighting green buildings Staff: same as staff but instead of student clubs, staff sustainability network	Currently in a planning phase to develop key strategic priorities for the institution, but SDG framework is used as a prompt
Success measurement metrics - Progress Tracking	Campus-wide survey on sustainability before developing the C&S Report. Did a sustainability literacy survey this year as part of the STARS submission. Feedback questionnaires for sustainability events.	Not directly tracked for orientations Office-wide: Google & social media analytics, in-person metrics for campaigns In-person: num. people engaged with at the event Campaign: behaviour metrics Number of staff who join sustainability network, number of bus passes sold	Previously used a mailing list within a student volunteer network, dropped it due to amount of maintenance required. Now trying to work more with faculties and courses
Initiation of sustainability education programme	Sustainability office is responsible for drafting the Climate & Sustainability Strategy and monitoring/reporting on its progress. The goals are distributed across different Units on campus.		Driven primarily by the sustainability office, with help from colleagues within Accommodation Halls. Office engaged HR to include sustainability in position descriptions
Barriers - social, economical, cultural, etc.	Moved MOOS higher up in the operational hierarchy to better facilitate project organization		Team size; e.g. student interns would help ramp up efforts to engage students.