UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

Mapping Behaviour Change Initiatives: Identifying and Assessing UBC's On-Campus Student-Run Behaviour Change Programs

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EXECUTIVE SUMMARY:

Our team partnered with SEEDS Sustainability program for our course, "Research Strategies in Human Geography" and used their expertise to help guide our project, titled "Mapping Behaviour Change Initiatives: Identifying and Assessing UBC's On-Campus Student-Run Behaviour Change Programs". This report will examine the spatial distribution of behaviour change initiatives across UBC's Point Grey campus in order to determine what issues are being targeted and where there is space for new programming to be added. We referenced Rachel James' article on Promoting Sustainable Behaviour, identifying the definition of "behavior change" as the "implementation of a persuasive message and use of strategies with the intention to foster change in existing behaviors" (James, 2010). We use this definition to identify relevant on-campus behavior initiatives taking place at UBC Vancouver campus, and classified behaviour change into various categories: Sustainability, Health & Wellness, Safety, Diversity & Inclusion and other.

Our methodology used observational fieldwork to locate where each type of behaviour change can commonly be found and analyzes the effectiveness of such behaviour change initiatives. Four locations on campus are observed: the AMS Student Nest, Buchanan complex, Irving K. Barber Learning Centre and the Geography building. The results are represented through aerial mapping of the data geographically and visually with a pie chart representing the frequency of the various categories of behaviour change. We were able to keep track of locations within buildings in which the photographs were taken and categorize the data into the following categories within the SEEDS requirements: location, the category of behaviour change, what is the change, who is engaged and how, picture, additional picture, and additional information. All four hubs have various behaviour change initiatives and poster locations, such as bulletin boards and TV screens. From the bar chart, we can observe that the Geography building has the largest number (15) of behaviour change initiatives, the AMS Nest has the least amount of initiatives (9). Regarding categories, from pie chart, diversity & inclusion occupies the majority of initiatives, which is 33%. Others are wellness (26%), safety (19%), sustainability (9%), waste (9%) and other (4%). However, the AMS Nest is a highly trafficked and populated location. What's more, from our research, the majority of promoters of Diversity & Inclusion are students or faculty organizations, and the content of their behaviour change initiatives are activities and events. Therefore, the University is not making enough efforts to promote behaviour change initiatives. To verify this statement, we made four more pie charts to illustrate the percentage of each category in each building. Only Irving learning center has all six categories of behaviour change initiatives. Apart of the AMS Nest, the group of Diversity & Inclusion still

occupied the largest percentage in each building of behaviour change initiatives. The AMS Nest has more Wellness initiatives, which is 33%, whereas diversity & inclusion is 22%. Spatially, behaviour change initiatives are most frequently seen in highly trafficked and populated areas, with the greatest variation in posters observed being in the Geography building.

With reference to the SEEDS Project Research Description Form, the main goal of this research is to gain "information about behaviour change programs run by various student and staff groups across campus", and find out who the key target groups are and the main communication channels used in order to gain exposure and encourage active participation. Based on the four locations that we conducted observational research on, we have identified that posters are the main channel of communication used to present behaviour change initiatives happening across campus.

Because there is a minimal amount of literature to be found on behaviour change initiatives across UBC's campus in general, this paper wishes to fill some of these information gaps and provide a basis of knowledge for overall campus culture to be improved in the long run. One of the main goals behind the research presented here is to begin to gather information as a basis for establishing a well thought-out strategy for tackling behaviour change on a university campus. We see our project as a baseline for creating a comprehensive framework and data set that will be able to aid in creating effective behaviour change initiatives for future projects and programs that the university is looking to implement.

ABSTRACT

This paper examines the spatial distribution of behaviour change initiatives across UBC's Point Grey campus in order to determine what issues are being targeted and where there is space for new programming to be added. Behaviour change is classified into various categories: Sustainability, Health & Wellness, Safety, Diversity & Inclusion and other. This paper uses observational fieldwork to locate where each type of behaviour change can commonly be found and analyzes the effectiveness of such behaviour change initiatives. Four locations on campus are observed: the AMS Student Nest, Buchanan complex, Irving K. Barber Learning Centre and the Geography building. The results are represented through aerial mapping of the data geographically and visually with a pie chart representing the frequency of the various categories of behaviour change. From the locations observed in this paper, it can be seen that initiatives targeting the cause of Diversity & Inclusion have the most prevalence. Spatially, behaviour change initiatives are most frequently seen in highly trafficked and populated areas, with the greatest variation in posters observed being in the Geography building. Because there is minimal literature to be found on behaviour change initiatives across UBC's campus in general, this paper wishes to fill some of these information gaps and provide a basis of knowledge for overall campus culture to be improved in the long run.

INTRODUCTION

Our study's aim is to collect and synthesize data of behavior change initiatives, broadly identifying behavior change initiatives across campus. Some questions that we are looking to answer include: what kinds of student-led and staff-run behavior change initiatives and programs are happening across campus? What are some of the methods most commonly used among groups targeting behavior change? What populations are targeted? How can this data be visualized?

With reference to Rachel James' article on Promoting Sustainable Behaviour, we have identified the definition of "behavior change" as being the "implementation of a persuasive message and use of strategies with the intention to foster change in existing behaviors" (James, 2010). We use this definition to identify relevant on-campus behavior initiatives taking place at UBC Vancouver campus, which can be applicable to concepts such as sustainability, waste, and diversity & inclusion. We will conduct manual fieldwork documenting the frequency of behaviour change posters across various student hubs. Then, we will compile our findings through an excel spreadsheet and use various charts to visualize our data. After mapping out behavior change initiatives across campus that fit the above definition, a comprehensive data set can be analyzed. This methodology could help us to identify initiatives across campus and establish an effective framework for promoting behaviour change programs, which are fit to our study's aim. These sources will allow us to compare the methodologies and effective initiatives on UBC's Vancouver Campus and identify common behavior change methods on university campuses overall.

STATEMENT OF THE PROBLEM

Currently, there is no updated compilation of data showcasing current behaviour change initiatives at UBC. The "AMS Clubhouse" is an online resource that provides a full listing of various student-run clubs, however its layout is arguably very hard to follow, and it lacks an ongoing list of initiatives on campus. Initiatives on this website are placed in various categories such as academic, community service, cultural or identity, grassroots and political and many more. Although the clubs main purposes are highlighted, the website provides little information regarding upcoming events, nor does it provide locations on campus in which the club regularly frequents or holds meetings at. Additionally, the listings on this website don't always explicitly mention their goals regarding behaviour change. This may be problematic, as the gaps in potential initiatives that could improve student wellbeing and the current campus culture are not easily identifiable.

BACKGROUND/LITERATURE REVIEW

Behaviour change initiatives have already been integrated into several of UBC's campus-wide action plans, showing the university's considerations for behaviour change as a viable form of new program implementation. The UBC Campus+Community Planning's Executive Summary for the Climate Action Plan 2020 lists behaviour change as a category targeted to reduce over 300 tonnes of CO_2 emissions. On October 3, 2014, UBC Campus+Community Planning also released a Zero Waste Action Plan (UBC Campus+Community Planning, 2014) outlining the context, vision, and implementation strategies for the university community. One of the main focuses when it comes to strategy is to 'implement cross-campus, effective, and consistent communications and outreach, in concert with the improved infrastructure' (p. 3). This focus targets behavior change initiative programs across campus as well. UBC boasts a student population upwards of 50,000, not including staff and faculty. The university campus is often used as a place to spearhead studies on effective behaviour change in British Columbia. The document stresses the need for 'an integrated, coordinated behaviour change program' (p. 5), subject to ongoing review and updating as the plan progresses. This targets practical and efficient initiatives and creates adjustments to these programs in order to ensure maximum performance.

Following the decision of UBC to adopt a sustainable development policy (Moore, 2005: p.67) in 1997, a large number of sustainability programs targeting environmental behaviour change were created around campus. These initiatives aimed to move towards this policy (UBC Policy #5) and resulted in the creation of new faculties—the Faculty of Agricultural Sciences, now known to students as the Faculty of Land and Food Systems (LFS)—and programs such as SEEDS (Social, Ecological, Economic Development Studies). Moore's article (2005) lists several pages worth of sustainability programs in detail, emphasizing how students and faculty are already beginning to take the steps towards making changes that benefit the climate and its inhabitants. A downside

is that the piece is effectively outdated in its descriptions and information, and the ever-changing debate about what produces significant and lasting changes when it comes to sustainability (as just one potential topic) is constantly being built on and challenged. This issue deals largely with a matter of the suitability of an initiative to target and affect the audience of the modern-day student. So what works at UBC today?

The recent trends of implementing initiatives has been moving towards web-based engagement and promotion through social media. The degree of accessibility can vary from online course material to social networks (Hodgson & Nyrose, 2008; Monroe, Lofgren, Sartini et al., 2015), but overall it seems that when dealing with modern-day campus communities, it is vital to consider aspects of the internet and how students, staff and faculty interact with the resource. In particular, comparisons between studies that incorporate an interactive educational aspect seem to result in a higher percentage of positive behaviour changes and habit formation when compared to similar studies that do not undergo these processes. The study situated in the University of Calgary (Godfrey M. et al., 2014) focused in on a dining hall as the centre for student interaction with their food and food-related behaviours. The researchers incorporated signage detailing water-footprint facts and exposed the subjects to the idea of "Eat[ing] Water Smart" over a three-week period. The post-test surveys indicated that immediately following the initiative, students felt less positivity towards low water-footprint food choices, directly disproving the group's third research hypothesis. Godfrey et al. goes on to describe some reasons why the study did not produce the results that were initially expected from the student group:

> *The failure of the campaign to achieve the predicted behavioral impacts may have occurred because of poor implementation of these two strategies or the contextual limitations such as time constraints or limited meal options placed on students in the dining hall. Future higher education foodservice initiatives to increase sustainability must ensure high visibility and accessibility of any communication materials. They should also tailor their communication and food presentation strategies around existing food choice patterns and preferences exhibited by the students they serve.*
> (p. 15)

But what about pre-emptive behaviour change strategies? The Green Eating Project (Monroe, Lofgren, Sartini et al., 2015) was conducted at an American university—the University of Rhode Island—and integrates student education in the form of online modules on the relevant topics relating to the desired behaviour change, which subsequently saw an increase in adoption of Green Eating behaviours on campus. Specifically, students reported a higher possibility of engaging in Green Eating behaviours when compared to a control group. Alongside the behaviour change, the article mentions the 'increase in knowledge' (p. 2374) that was produced through the study. This type of online module content targets at least two of the four barriers (lack of engagement and lack of communication) that will be identified in the section following. The

comparison of methodology and results from these studies suggest that more active forms of engagement and learning, as opposed to passive information, is more effective in producing changes in behaviour.

The lack of academic articles related to UBC behaviour initiatives does not mean that there are no initiatives being implemented across campus. In fact, there are reports published regarding sustainability in the SEEDs database. Sustainability, as one of the biggest topics being discussed throughout campus, also contributes a large part to the total amount of campus behavior initiatives. Various sustainability policies have been adopted by UBC since 1997; however, due to different barriers that hinder implementation, many of them were unable to change student behavior successfully. Such barriers include the lack of a supportive community, inconsistency in defining sustainability, and insufficient knowledge about sustainability (Hodgson & Nyrose, 2008). Definitions of sustainability across literature were specified using differing methods, creating an inconsistency in promoting sustainable behavior change. Inconsistency might lead to miscommunication and further limit successful implementation. As of 2015, UBC, as one of the leading institution of higher education in sustainability, is trying to integrate and develop sustainability learning pathways into their undergraduate programs. In the article by Marcus et al. (2015), UBC's sustainability education framework was outlined according to four student sustainability attributes: "holistic system thinking", "sustainability knowledge", "awareness and integration", and "acting for positive change". This framework is intended to provide a guideline to design and develop sustainability learning pathways within UBC's Point Grey Campus. Students under this education framework can learn about the concept of sustainability and then relate it to their intended field of study. Raising student's awareness of global sustainability issues through educational initiatives will let them think and act sustainably on campus.

The consideration for a survey-type methodology arose following a study conducted by Callewaert, Marans and Shriberg (2015) that measured student and faculty opinion regarding issues of climate change and sustainability. Their team also tracked student opinion to determine levels of sustainability knowledge, behavior, and attitudes. They stressed the need for a "focus on behavior change and culture [as] critically important" for driving progress goals and subsequent investment areas, showing that more assessments relating to behaviour change analysis being diverted to survey methods for gathering data. The results were comprehensive enough to be analyzed and the questions we divided into knowledge, behaviour and disposition which allowed for easier categorization. The article also touches on data collection as an ongoing process, not only for the completion of the results but also as norms and knowledge change, participant opinion will have to be reevaluated. The work aims to get a better picture of behaviour change by assessing these shifts through time. This is applicable largely to UBC's campus initiatives as well due to the fluidity of what is effective when it comes to student engagement. With new developments in technology and innovation, norms will shift and effective methods of

engagement will also be subsequently altered. Social media is just one example, but there are ever changing fields of science and psychology that also affect how we understand information processing in humans.

According to a study by Horhota et al. (2011), they conducted three studies using different methodologies to examine the barriers of behaviour change around the campus. The studies comprised of three different methods; one that was focus group-based, another using survey assessment and a third using behavioural assessment. Four main barriers are identified from these three pieces of research, which are a general lack of engagement, communication issues, lack of infrastructure and financial issues. Lack of engagement means that although faculty members and students may have an awareness of sustainability or environmental issues, they would not chose to act consistently on them. Communication issues present in institutions such as universities mean the need to gain more attention and awareness from students on campus regarding sustainability, and clearly address the reasons for sustainable behaviour change. A lack of infrastructure in the university means that the campus does not have the proper facilities to implement and coordinate sustainability efforts. And finally, the financial issues give an idea of how costly it is to maintain long-term sustainable institutions on campus. Similarly, Velazquez et al. (2005) also identified these four barriers using different terms. They called the barriers resistance to change (lack of engagement), lack of opportune communication and information (communication issues), lack of policies to promote sustainability on campus (lack of infrastructure) and lack of funding (financial issues). In addition to this, Sintov et al.'s (2016) research also identified different barriers of sustainable behaviour change. They mainly examined the energy-saving behaviour change in the University residences by conducting competition-based intervention research and using an intervention strategy in which students report the usage of electricity in their residences. Students compete with each other and are offered greater monetary incentives if they save more energy. First, researchers found that they only have a broad look of energy saving behaviour change on campus residence, meaning that they only know how much energy is saved within the context of this study. But they do not know how students act to save energy, since the study lacks individual behavior and action reports. Second, the psychological mechanisms of students in this research are not well understood by the researchers. The psychological mechanisms behind behavior change is important because changing the mindset is the first step of behavior change. It is also essential for us to understand how students achieve energy reduction. Further research could emphasize on these barriers to examine more details about behavior change.

METHODOLOGY/STUDY DESIGN

In this research project, our aim is to locate the behavior change initiatives across the UBC Vancouver Campus. However, behavior change is a very broad concept, and depending on how one defines it, the result might be different. Hence, our first step in conducting this research project is to build our

own behavior change definition. Since this is a research in project partnership with the SEEDS program at UBC, it was important to incorporate their objectives into our construction of our behavior change definition. Their main goal of this research is to gain "information about behavior change programs run by various student and staff groups across campus" (SEEDS, 2016). Eventually, we have identified the definition of "behavior change" as being the "implementation of a persuasive message and use of strategies with the intention to foster change in existing behaviors" (James, 2010). This definition was used to identify on-campus behavior initiatives within UBC Vancouver Campus based on the five prescribed categories of Sustainability, Health & Wellness, Waste, Diversity & Inclusion, and Safety.

The purpose of this research project is to locate the behavior change initiatives across the UBC Vancouver Campus. In order to achieve this goal, we have adopted two different approaches to conduct our research, one through an online survey and the other through observational research. Survey methodology became our primary approach for data gathering after review of Walter et al.'s book, *Implementing Campus Greening Initiatives* (Leal Filho, 2015). Conducting a survey was the most effective and efficient method of gaining information on different types of initiatives across the campus, because of the impracticality for our group to discover all ongoing initiatives available within the campus with limited time and labor. Also, some research studies published in this book were conducted in a university campus setting, and displayed a high coherency with our research guidelines as well.

Our first step was to identify the target participants for the survey. There is an enormous number of potential participants in this survey, however, the information provided may not be accurate to our study aims because of the potential lack of student understanding when it comes to behavior change concepts. We decided to narrow down our pool of participants to clubs focusing on sustainability to line up more closely with the SEEDs project purpose. We also suggested that information would be best gained from targeting the AMS clubs, since carrying out an initiative requires a bigger scale of involvement suitable to a larger student group, and these student clubs provide the platform for students to devote themselves to these initiatives more passionately. Beyond deciding on target participants, our next step was to look through the "AMS Clubhouse" page for a full listing of various student-run clubs. We determined the eligibility of the participating clubs by comparing their mission statement found on the site. Ultimately, there were approximately 70 clubs selected from the AMS listings to participate in this research project, and an Excel spreadsheet was created containing the club's contact information provided by the "AMS Clubhouse" page. Our next step was to email the main contacts (ideally the president, vice president or those with leadership roles specifically catered to the student engagement) of each targeted participants. For control and time-management purpose, they will be asked to fill out an online survey.

The survey was created using the UBC Survey Tool powered by FluidSurveys. It is composited with three parts, Basic Information, Goals of the

Club, and Ongoing On-Campus Projects and Initiatives. Some questions from our online survey include:

Basic Information
- What is the name of your club?
- What is your position within the club?
- How long has your club been established?
- What is the mission statement of your club?

Goals of Your Club
- Participants were asked to identify their programs according to 5 different categories
    - Sustainability
    - Health & Wellness
    - Waste
    - Safety
    - Diversity & Inclusion
    - Others

On-Campus Projects and Initiatives
- Are there any recent projects in your club that help promote campus behavior change?
- A Mapping section that allows participants to locate the area where they promote their program

In the last section of the online survey, our definition of behavior change was provided to the participants to accurately understand what is considered as behavior change in our project. As well, a mapping section with 25 prescribed areas was included to let the respondents locate which area of the campus they are promoting their projects. The prescribed areas were defined based on its function including, residential, schooling, and public areas. A week after sending out surveys to 70 different clubs, only 7 completed and 3 uncompleted survey feedbacks were received. Due to the small number of responses, there was no conclusion can be drawn from the result presented by the survey. Afterwards we reviewed our survey layout and believe that the feasibility of this survey decreased because of the extensive survey length and general confusion around behaviour change as a concept. As a result, due to time constraints and limited resources available, we decided to take another approach, which is observational study, to continue this research project.

Unfortunately, the online survey did not provide any valuable data about the on-campus behavior change initiatives, therefore, we have to collect data from another approach, observational research. Our first step was to target 4 different student hubs and document our findings, including any visuals such as posters. The student hubs we choose to observe were the AMS Nest, Irving K. Barber Learning Centre, Buchanan A, B, C, D, and the Geography building. The decision to focus on 4 main hubs was made by our team due to time constraints. Since this is an initial research study with a lot of room for additional data in the following years to come, we decided to start out by choosing places with the highest traffic. This results in a wider target audience (such as the AMS Nest and

Irving K. Barber Learning Center) from the general student population as well as building that are mainly situated for Liberal Arts student (such as Buchanan buildings, and the Geography building). Once we have decided on the target locations, we began our observational research by visiting all 4 hubs and taking pictures of the initiatives, especially posters and other physical objects that represent behavior change. We started from the AMS Nest (highest traffic), then Irving, K Barber Learning Center, then Buchanan Buildings, and lastly the Geography building (lowest traffic). When we were visiting the Buchanan buildings, we did not talk through the Buchanan C or E building as it was locked for security purposes. After visiting all 4 hubs, we gathered all the photographs and documented them onto an excel spreadsheet (see Appendix). Using the spreadsheet as our prime data, we were able to create a few pie charts and bar graphs to illustrate the result we found from our observational study and analyze it accordingly. In addition to the graphs, we also mapped the locations of the initiatives using the floor plans of the buildings.

ANALYSIS

After the completion of our observational fieldwork in 4 students hubs and gathering photographs, we documented our findings onto an excel spreadsheet. We also created additional types of visuals based on the results that we gathered, such as a bar chart representing the amount of behaviour change initiatives in each building, a pie chart that shows the percentages of each behaviour change category within the building observed, as well as visual maps showing the areas that have an abundance of behaviour change initiatives within each building. We were able to keep track of locations within buildings in which the photographs were taken and categorize the data into the following categories within the SEEDS requirements: location, the category of behaviour change, what is the change, who is engaged and how, picture, additional picture, and additional information. These seven categories could assist us in documenting data clearly and analysing data systematically. From our Excel spreadsheet, we can identify different categories of behaviour change initiatives and locations across campus. Additionally, we can also analyze who is being targeted, and the strategies used when promoting to determine the reason *why* people chose these specific behaviour change initiatives. For example, in the AMS Nest and Irving K. Barber learning center, we found several posters and TV screens showing students reminders to watch over their belongings and not leave anything unattended. This initiative promoter is the RCMP & the Government of Canada, and they are targeting anyone who walks through these posters and TV screens.

All four hubs have various behaviour change initiatives and poster locations, such as bulletin boards and TV screens. From the bar chart, we can observe that the Geography building has the largest number (15) of behaviour change initiatives, the AMS Nest has the least amount of initiatives (9). Regarding categories, from pie chart, diversity & inclusion occupies the majority of initiatives, which is 33%. Others are wellness (26%), safety (19%), sustainability (9%), waste (9%) and other (4%). However, the AMS Nest is a

highly trafficked and populated location. What's more, from our research, the majority of promoters of Diversity & Inclusion are students or faculty organizations, and the content of their behaviour change initiatives are activities and events. Therefore, the University is not making enough efforts to promote behaviour change initiatives. To verify this statement, we made four more pie charts to illustrate the percentage of each category in each building. Only Irving learning center has all six categories of behaviour change initiatives. Apart of the AMS Nest, the group of Diversity & Inclusion still occupied the largest percentage in each building of behaviour change initiatives. The AMS Nest has more Wellness initiatives, which is 33%, whereas diversity & inclusion is 22%.

Primary promoters of behaviour change are university organizations, faculties, and residents, such as AMS, UBC sustainability, and UBC Campus Security. However, some behaviour change initiatives promoters are unknown since we did not find enough information from their posters. Those who are typically targeted are students or those who frequent the facilities at UBC. With visual behaviour change initiatives, we summarized the reasons why they are promoting behaviour change across campus. In general, each poster seemed to be targeting a different type of behaviour change. For example, promoting particular behaviour change, which is mainly targeting several specific student groups. Some promoted positive behaviour changes, such as energy saving and reducing wastes, and others aimed to raise awareness and acceptance of safety, sexuality, sustainability and the LGBTQ community.

From our research and analysis, the poster was originally targeted as an efficient and simulating way to promote behaviour change initiatives. Posters are a common and widespread approach for promoters to appeal to their audiences through advertisements. Moreover, the poster uses the visual simulation to present information, which is intuitive and direct. People are able to acquire information easily and immediately. Promoters could use many strategies to make their posters more eye-catching as well, such as using bright colors and fonts. Also, UBC provides some posting spaces in each building. Therefore, the format of a poster is not only easily accepted by a lot of people but well made posters can attract interest to achieve promoters' goals. Overall, the visual stimulus through posters have made several contributions to promoting behaviour change initiatives on campus, especially those from student and faculty organizations. But, in general, UBC still needs to strengthen promoting behaviour change initiatives through other methods such as social and societal means.

LIMITATIONS

Our findings provide, for the most part, a general recommendation and a baseline for behavior change initiatives happening across campus. That being said, many other factors that do influence behavior change initiatives were not covered in this project. There have been three main limitations to our research, first of which is the time frame. Our research was conducted over a time span of approximately three months, from mid-January to the beginning of April.

Unfortunately, being a small group of researchers, we were constrained to only being able to observe a limited number of buildings. The time frame of our project only allows us to have enough time evaluating four on-campus hubs (The AMS Nest, Irving K. Barber Learning Centre, Buchanan A, B, C, D, and The Geography building). Secondly, congruent to this factor, were many seasonal variations. This study was conducted during a specific time of the academic year, therefore, we have only completed research and observations during the months of January to April. Hence, we are unable to get enough data for behavior change initiatives across campus during a different time, which may have had a completely different variation of initiatives targeted, which could potentially manipulate our end results drastically. The third limitation to our research is the variability in the definition of behavior change. The way we defined it was as being "the implementation of a persuasive message and use of strategies with the intention to foster change in existing behaviors " (James, 2010). However, this definition is quite ambiguous in this research, and when applied could lead to inconclusive results or varying interpretations. Therefore, due to our definition of behavior change, we did not include other possible behavior change initiative categories, and mainly stuck to the observations of posters, rather than more abstract methods of engagement.

SIGNIFICANCE OF PROPOSED RESEARCH

With reference to the SEEDS Project Research Description Form, the main goal of this research is to gain "information about behaviour change programs run by various student and staff groups across campus", and find out who the key target groups are and the main communication channels used in order to gain exposure and encourage active participation. Based on the four locations that we conducted observational research on, we have identified that posters are the main channel of communication used to present behaviour change initiatives happening across campus. A couple of more "unconventional" communication channels were used, such as the use of physical objects to convey emotional messages, which was used by SASC to represent impacts of violence and sexual assault. Another method was a project that was still in the process of being built, that being phone-charging bicycles that one could use in order to charge their electronics. In regards to groups being targeted, it was unanimous that all behaviour change initiatives were targeting a younger student audience, with many of the concerns addressing millennial students specifically. For example, the fentanyl education posters are seen across multiple locations observed. According to the BC Coroners Service statistics, 75% of illicit drug overdose deaths were among individuals between the ages of 19-49 years. Posters promoting phone privacy as well as the safe sex brochures and free assortment of condoms, and female hygiene products by the SASC are all being heavily correlated with campus culture. The findings in this paper provide a useful introduction to the exploration of common trends found in the behaviour change communication channels across campus. This research can then be expanded further to see not only where behaviour change initiatives are commonly found,

but where they are most frequented by those who pass by it, and which methods of behaviour change attract the most people that it wishes to target. Ultimately, this data begins to fill the gaps in literature regarding the University of British Columbia as a producer of behaviour change initiatives, and will create a baseline for where initiatives can be increased or changed in order to improve overall campus culture.

FUTURE RESEARCH DIRECTION

Further research could provide much more insight into campus initiatives, considering that this research was meant to serve as a starting point for gathering data campus-wide. To expand, providing emphasis on the long-term periods, adding locations and various classes of behavior change initiatives could produce a more well-rounded picture of UBC campus activities. Some immediate suggestions include the Henry Angus Building and the buildings towards the south side of campus like the Chemistry or Earth and Ocean Sciences buildings. Then once more findings are compiled on a cross-campus level, we can then look into which methods of behaviour change implementation are more influential towards who they are targeting than others. Being able to branch off and analyze other modes of behaviour change aside from visual signage and posters would diversify the data. In addition to this, one of the goals of SEEDS was to produce an "overall behaviour change strategic framework" in order "to understand how other groups across campus reach out to their target audiences, who those audiences are, and what behaviours are being targeted". A deeper understanding of targeted behaviours and their purpose could be analyzed in the interest of producing a more detailed report for framework development. Similar to Callewaert, Marans and Shriberg's (2015) research, there are ways to implement measures to ensure that data can be kept up to date for future changes. Other adjustments could be made to the methodology including the addition of a focus group or interviews of club executives. This would provide a much more detailed and in-depth look at who is running campus behaviour change initiatives and the reasoning for their implementation as well. Improvement and revision of the initial survey is also an option, potentially as a longer-term method of gathering information as it is a method that could be re-issued to gather and compare new data as effective methods change.

In a TED talk regarding the "Three Myths of Behavior Change", Jeni Cross speaks on the social and interactive aspects of behaviour change and the increased level of awareness that participants hold when exposed to these forms of behaviour change initiatives as opposed to visual stimulus. Cross was critical of posters and their level of effectiveness in promoting changes in their audience, speaking on both the information and how it is presented as having a big difference in how initiatives may be received. This concept of social behaviour change as well as information presentation is something that is relatively new territory that could be looked into for further research in the future. In hindsight, as researchers we should be critical in the ways that we chose to gather our data and present it to our audience. One of the main goals behind the research

presented here is to begin to gather information as a basis for establishing a well thought-out strategy for tackling behaviour change on a university campus. We see our project as a baseline for creating a comprehensive framework and data set that will be able to aid in creating effective behaviour change initiatives for future projects and programs that the university is looking to implement.

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